How Much Money Does an Economy Need?

Solving the Central Economic Puzzle of Money, Prices, and Jobs

Hunter Lewis

Why should unemployment exist? Why should people willing and eager to work not be able to find good, fairly paid jobs? Why should families, including children, suffer as a result? And why should even successful economies experience boom/bust cycles, with frantic hiring succeeded by even more desperate lay-offs and unemployment?

Unemployment and boom/bust cycles together are perhaps the greatest unsolved problem of economics. Most economists agree that the problem is connected to money, the way that money comes into being and flows through the economy. Prices also seem to play a large role. Most economists think that stable prices help to keep an economy stable, but not everyone agrees. Some believe that inflation helps create jobs; others that the whole point of the market system is to bring prices down so that goods and services are more affordable.

How Much Money Does an Economy Need? takes a subject that most people find difficult to decipher and makes it easy to understand. Not only easy, but fascinating, with startling insights in every chapter. This book is recommended for informed readers and public policy makers who want to get to the bottom of economics so that they can make better choices, and especially for students of economics, whether inside or outside a classroom.

If you have read Lewis's earlier book, *Are the Rich Necessary?* (Axios Press, September 2007) along with *How Much Money Does an Economy Need?*, you have become economically literate and will be able to understand and evaluate the key economic issues of our time.

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Introduction

Are the Rich Necessary? presented a series of fundamental economic arguments, beginning with the title argument and proceeding on. Parts Five and Ten discussed the interrelationship of money and jobs, but only began to explore that very complicated and important subject.

How Much Money Does an Economy Need? picks up where *Are the Rich Necessary?* left off. It is intended, not to provide a complete account, but at least to explore further the subject of money and jobs. In addition, its three appendices provide essential background information relating to money and jobs that students of economics need to know.

Are the Rich Necessary? is intended to be read by anyone, especially anyone who might be a voter, a future voter, or have an interest in the forces that directly affect his or her economic future.

How Much Money Does an Economy Need? is intended for anyone who, having read *Are the Rich Necessary?*, wants to know more about money and jobs, and is especially intended for students of economics, whether inside or outside a classroom. The first book offers a taste of economics. The two books taken together provide an introduction to the subject that can either replace or complement a standard introductory textbook.

Like its predecessor volume, *How Much Money Does an Economy Need?* is written in language that is meant to be clear. Whether the author has succeeded in accomplishing this, only the reader can judge. Clarity should not, however, be confused with simplicity. Many of the ideas and arguments presented are not simple, because the subject of money and jobs is not simple. But for the most part, they are quite interesting, well worth the effort required to understand them, and essential information for anyone interested in where the economy is going.

Are the Rich Necessary? describes economics as a kind of battlefield where interests, ideas, ideals, and values all swirl in perpetual conflict, and notes that nothing is more exciting than entering a battlefield. The author hopes that the reader felt this excitement in reading *Are the Rich Necessary?* and will continue to feel it in *How Much Money Does an Economy Need?*

Part One

What Kind of Prices Do We Want?

Should Prices Be Stable?

Is it better for money to:

- keep its value over time, so that goods and services, on average, always cost the same (price stability),
- lose value over time, so that average prices rise (inflation), or
- gain value over time, so that average prices fall (deflation)?

The simplest answer to the question just posed is that money should be stable in value. The argument

might run as follows. When we weigh something, we want standard units. We do not want pounds or kilograms to mean one thing today, another thing tomorrow. Similarly, when we measure time or ask the distance between one point and another, we depend on standard units, and commerce would be difficult without them. Why then do we tolerate fluctuating currency units? Why should money not be fixed in value, so that we can know exactly what it will buy from year to year, and absolutely rely on its value?

This would give us many tangible benefits. For example, if we knew that it would cost us X dollars to live in retirement, we could be reasonably sure that it would still cost us X dollars ten or twenty years later. Business owners and investors could also plan ahead with more certainty.

It would admittedly be difficult to fix the value of the dollar on a day to day or month to month basis. But long-term stability against a basket of goods and services such as the U.S. consumer price index (C.P.I.) is not so far-fetched a concept. Indeed, records suggest that American consumer prices in 1939 were about where they were in 1749, when records were first kept. This was true even though the consumer basket had changed, and there had been some periods of inflation (rising consumer prices) and deflation (falling prices) in-between. If one excludes the deflation and price recovery of the Great Depression in the 1930s from the calculation, prices in 1929 were still about the same

as in 1800.[1] Similarly, British consumer prices in 1914, at the start of World War One, had not changed much for two hundred years, despite interim turbulence.[2]

Should Prices Fall?—Yes

So far, stable prices sound good. But there is an alternative view that stable consumer prices make no sense at all. According to this view, we should want falling prices (deflation). This argument might run as follows.

When automobiles were first invented, they were too expensive for any but the rich. As production increased, manufacturers learned how to make better cars more and more cheaply, until most people could afford them. In the meantime, millions of people found well-paid jobs in making cars. The same story has been repeated in industry after industry, most recently and perhaps most dramatically in computers and consumer electronics, where prices seem to plunge every year while employment grows steadily.

The whole point of free markets is to keep reducing prices, so that more and more people can afford to buy. Why, then, should we want overall prices in our economy to remain stable? If most prices fall, as we should hope they will, stable prices overall can only mean that some prices are steeply rising. These rising prices make everyone poorer, but especially retired and poor people, because both retirees and the poor are often

unable to increase their incomes to catch up with the rising prices. So if you really want to help those who most need help in our society, the goal should be falling, not stable consumer prices.

Should Prices Fall?—No

What would proponents of stable prices say to the proponents of falling prices? They would say that the last thing we should want is falling prices on average, that is, deflation in the economy. In their view, deflation is dangerous; it threatens everyone's job.

In a healthy economy, some prices (e.g. computers) will be falling and others rising. But one should want a stable or moderately rising consumer price level on average. In fact, moderately rising is better than stable. There are several reasons for this, but the main reason is that a falling average price level (deflation) is too hard on people who have borrowed money.

A moment's reflection will show why this is so. Assume that we borrow $1,000 to be paid at the end of twelve years. If inflation increases prices at 6% a year, the $1,000 borrowed will buy less and less with the passage of time. By the twelfth year the borrowed sum will represent only $500 in true purchasing power. In effect, we have borrowed $1,000 and have to repay $500, an excellent deal for the borrower, especially if the interest rate was fixed at the beginning of the loan at a low rate.

Now assume that consumer prices fall 6% a year rather than rise during the twelve year period. In this case, we have borrowed $1,000 in purchasing power and at the end of the twelve years have to pay back $2,000 in purchasing power—ouch. In a modern economy, very few debtors can afford to pay interest plus twice what they borrowed (measured in purchasing power).

Deflation will thus greatly increase the probability of large-scale default and bankruptcy. As more and more people fall into deflation–induced bankruptcy, the likely result will be severe recession or even depression. A severe recession or depression caused by falling prices, which in turn leads to massive bankruptcies among people who have borrowed money, is often referred to as a *debt deflation* or *a debt deflationary downward spiral.*

In the last years of the twentieth century and the early years of the twenty-first, American debt levels surged to a level equal to three times the annual output of the economy (gross domestic product), according to government statistics. Concern about the potential for a debt deflationary downward spiral led Alan Greenspan, chairman of the U.S. Federal Reserve Bank, to warn about deflation in late 2002, "Although the U.S. economy has largely escaped any deflation since World War II, there are some well-founded reasons to presume that deflation is more of a threat to economic growth than is inflation."[3]

Similar worries led economist Paul McCulley to say that, "Deflation is the beast . . . that capitalism cannot bear alone, and when deflation surfaces, it is democracy's job to take decidedly anti-capitalist [steps] to save capitalism from its deflationary self."[4]

What McCulley meant was that, whenever deflation threatens, the government should start "printing" more and more new money and inject that money into the economy. All the new money should stop prices falling and thus avert the economic risks of deflation.

To see why this would work, consider the following example. If two people lived on an otherwise deserted island and owned only four apples, along with one dollar, each apple might reasonably be priced at 25¢. If, however, a bottle washed up with another dollar inside it, there would then be $2, but still only four apples, so the price of the apples would probably rise to 50¢. Hence, as a general rule, injecting additional money into the economy will make prices rise.

Should Prices Fall?—Yes Again

Our argument is not, however, by any means over. Proponents of falling prices do not accept the above, but rather respond that any interference with deflation is a serious mistake. In their view, deflation is always good, although it may be gentle and pleasant at some times (with prices on average falling one or two percent a year) and quite painful at other times (with

prices falling rapidly). Pleasant or painful, it is the economically efficient way. The more we try to interfere with it, the more we jeopardize our economic future.

As the pro-deflationists see it, the very language that people use, the tendency to say "deflation" and "depression" interchangeably, as if they were synonyms, is a sign of complete intellectual confusion. Yes, the economy did experience severe deflation at the onset of the Great Depression and President Roosevelt did end the deflation in 1933. But the depression, as measured by unemployment, lingered for seven more years until World War Two. Notwithstanding this fact, some economists misleadingly label the entire 1930s the "Great Deflation" and others even more misleadingly refer to the Depression ending in 1933.

The case for mild deflation has already been explained. Mild deflation just makes more and more products affordable for the average person. A case for rapid deflation, of a sudden downward spiraling of prices, might at first seem impossible. Is it not unarguable that rapidly falling prices are exceptionally hard on debtors, may bankrupt businesses which would have survived well enough in ordinary times, along with millions of individuals and families, and can thus turn economic recessions into depressions? Can this possibly be acceptable, much less desirable?

The first point to be made in rebuttal to the deflation rejectionist case, which is the conventional view, is that rapidly falling prices are a symptom, not an illness.

Like fever, they make the patient feel sicker, but they also serve a useful purpose. The real illness, the infection that needs to be shaken off, is the economic mistakes of the preceding period of prosperity. These mistakes, such as borrowing money to fund bad investments, are inescapable, given human frailties. Unfortunately, they multiply, especially during booms, when people get carried away by over-confidence, and they accumulate, gradually choking the system with only half breathing businesses, businesses that tie up money and energy that could be better spent elsewhere.

A period of recession or depression liquidates these past mistakes, clears the ground for future growth. Rapidly falling prices, it is true, make the liquidation deeper, the margins of safety slimmer. But they also make the liquidation faster, so that the economy can get it over with and resume upward progress. A drawn-out liquidation may seem less painful, because it gives us time to adjust our lives and attitudes, but it is far less efficient as a purgative. Bad businesses, investments, and debts will just linger on, may never be fully liquidated, or new mistakes may be piled on old in efforts to save what should not be saved.

The best policy for government when recession begins is to stand back, to leave alone. But if an activist policy must be pursued, the logical one would be to drive prices, including wages, down not up; to raise interest rates, not lower them as is currently done, so that the necessary liquidation can pass as speedily as possible.

Nor are economic safety nets helpful. If we know for sure that the government will not let investors fail, because their fall would destabilize the economy, then investors will quite rationally take on more and more risk, until even the government may not be able to bail them out. This is what economists call "moral hazard" and it is one more reason that stabilization policies are usually destabilizing.

Moreover, what steps can government take to "stabilize" the economy that will not quickly be subverted by politicians seeking votes or private parties seeking personal gain? For example, the U.S. government in the 1930s chose to "guarantee" bank deposits in order to "stabilize" the banking system. The amount guaranteed grew and grew, until it far exceeded what the government could actually make good in crisis without recklessly "printing" dollars and hopelessly debasing the currency. But who imagined that by the year 2004 a Florida bank would be offering federally insured world currency accounts in person or on-line through the worldwide web? In these accounts, depositors could speculate on the future value of Mexican pesos, South African rands, even Chinese renminbi, with the account guaranteed up to $100,000 by the U.S. taxpayer.[5]

Should Prices Fall?—No/Yes

Are proponents of stable prices through government intervention ready now to change their minds?

Not at all. They respond that a policy of laissez-faire, of keeping government out of the economy, even in the midst of a debt/deflationary downward spiral, is neither politically realistic nor economically workable.

Laissez-faire is unrealistic because voters will not stand for government inaction in the face of a falling economy. They will demand that steps be taken and, if the government does not respond, they will change the government.

Nor does laissez-faire work. Once the economic machine has been shut down by deflation, it will not right itself. Laissez-faire advocates hope that, if prices fall sharply, employers will be able to reduce the wages they pay. In theory, this might solve the problem. Businesses would earn less, because prices would be lower, but their costs (including wages) would be lower too, so profits need not fall. Workers would not necessarily be harmed either. They would have less money because of their lower wages, but the goods they bought as consumers would also cost less, so their ability to buy goods would remain unchanged.

This is all theoretically possible, but far from realistic. Modern workers will not accept lower wages, anymore than they will accept a passive government. The only realistic response therefore is for government to "print" enough new money to put a stop to the deflation. This relatively simple step will solve everything by bringing prices back up to where they started. As economist John Maynard Keynes correctly observed,

"Only a foolish . . . [or] unjust person . . . would prefer a flexible wage policy to a flexible money policy."[6]

Proponents of falling prices are again ready with their response. In their view, a flexible money policy will not work. To see why this is so, one must look deep inside the economy. When both prices and employment are collapsing, it is not a general wage reduction that is needed. It is rather a series of specific industry by industry and company by company adjustments.

Consider the following. If an inflationary policy raised all prices by the same amount, some industries, where prices already well exceeded costs, would experience a windfall of extra profits (assuming that production costs did not rise as fast as prices). Other industries, where costs have already overtaken prices, might not receive enough of a boost to survive. In real life, inflation does not arrive at the same time, at the same places, or in the same amount. Consequently, it may or may not strike industries that may or may not need a readjustment of prices and costs at a time that may or may not be helpful. Given the haphazard nature of the process, it would not be a surprise if much more harm than good is done.

We must also remember that it is not just the quantity of employment that counts. As it is with investment, so it is with employment: quality ultimately counts for as much as or more than quantity. As the economist W. H. Hutt observed, we can have full but "sub-optimal" employment, by which he meant millions of people in

jobs that do not make best use of their particular skills. The most common reason for "sub-optimal employment" is inflexible wage rates, which lead employers to lay off workers when demand falls instead of reducing wages. This in turn means that workers must seek out and accept second best jobs, that is, jobs where their own productivity is less, where they can contribute less to the economy, and where their wages may be considerably less than what they could have earned in a more flexible system. As Hutt warned, "Chronic unemployment is conspicuous. . . . Yet the wastes implied under 'sub-optimal employment' are, as I see things, normally the most virulent form which wastes can take. . . ."[7]

In the end, however, none of these telling criticisms get to the bottom of the matter. What is most wrong with an expansionary monetary policy is not that it produces sub-optimal results, whether measured in economic recoveries or in the distribution of jobs. What is most wrong about "printing" more and more dollars to raise prices is that—ironically—it causes the very debt deflations and economic slumps that it is meant to cure. After all, it is "easy money" that lures people into too much debt in the first place, from which the debt deflationary downward spiral eventually follows.

Economist Ludwig von Mises was for many decades prior to his death in 1973 the leading figure of the "Austrian" school of free market economists. He argued that easy money is always treacherous, but especially

so during those periods, such as the 1920s or 1990s, when the availability of cheap imports and robust productivity growth are gently tugging prices down. Those should be golden eras of "good deflation" with incomes rising, prices falling, and poverty gradually eradicated. If government mistakenly reacts by trying to pull the price level back up, it will "print" far too much money, and keep "printing" it, because inflation will seem to be under control.

The apparent control of inflation under these circumstances is quite illusory. If prices, left alone, would fall three percent, but instead rise three percent, the true inflation rate is six percent, not three. In any case, "printing" too much money, especially when it fuels a stealthy and disguised inflation, will lead to too much borrowing, much of it wasted on bad investments, and thence to an economic bubble. In time, the bubble will pop, the boom will be revealed for the fraud it is, and the economy will slump. When this happens, debt deflation is indeed hard to avoid.

If government then reacts by trying to flood the economy with still more money, it will only make matters worse, at least in the long run. As economist Joseph Schumpeter, who was Austrian by birth but not doctrinally a free market "Austrian" economist, said during the Great Depression:

> Any revival which is merely due to artificial stimulus leaves part of the work of depressions undone and adds, to an undigested

> remnant of maladjustment, new maladjustment of its own which has to be liquidated in turn, thus threatening business with another crisis ahead.[8]

Should Prices Rise?

So far, we have explored arguments for stable and falling prices. But this does not exhaust the possibilities. There are also arguments for vigorously rising prices. In this view, more, not less, inflation is good for the economy and government should be prepared to "print" as much new money as necessary to accomplish this purpose.

Gentle inflation is good because it provides a hedge or cushion against deflation. If consumer prices are growing at, say, one or two percent a year, there is less chance that the price index will fall back into negative territory. But if gentle inflation is good, then a more vigorous inflation is better. If one or two percent provides a cushion, then five or six percent provides genuine insurance.

Moreover, inflation has other benefits. As we have already noted, it makes life easier for borrowers, since they can pay back their loans in a depreciated currency. Interest rates may rise high enough to compensate creditors for this, but then again they may not. Since modern economies are run on credit, anything which eases the lot of the borrower is on balance helpful. It is

always helpful to keep the borrower from harm's way and to encourage new borrowers.

Rising prices help the economy in another important way as well. As economist Irving Fisher pointed out in 1926,[9] economy wide prices tend to rise somewhat faster than business costs. This is because prices float, while salaries, wages, and debt service are adjusted less frequently (annually for most salaries, less often for some contractual labor wages, and less often still for fixed interest rate debt). If prices rise a bit faster than costs, business profits will be boosted. This in turn will encourage businesses to invest more in plant and equipment, to hire more, and generally to stimulate the economy. Should the economy show signs of faltering, a dose of inflation may be particularly timely and helpful in boosting both business and employment.

Do these arguments for more inflation make sense? Not to proponents of stable or falling prices. They respond that inflation will only work as a tonic for the economy if people are deceived, and people will not be deceived for long.

It may seem a good idea to help people who borrow at the expense of people who lend by inflating prices, until one realizes that (apart from banks) rich people and corporations borrow the most. Poor people lack the credit to borrow or at least to borrow much. Middle class people borrow, but they are creditors through their savings and retirement plans, and as a group their lending generally exceeds their borrowing.

It is also important to understand that inflation may indeed boost profits and employment, but only if it is unanticipated. If inflation persists, comes at regular intervals, or might come at any time, workers and creditors respond by demanding extra wages or interest income to protect themselves. For example, if a labor union is signing a three year contract, it will want to be sure that the contractual increase covers any future consumer price rise—over and above whatever real wage gain is sought.

The tendency for inflation to boost an economy for a short while, but not for long, is appropriately called *money illusion*. Money illusion is temporary at best, although some think that government can utilize it to "fine-tune" the economic cycle by holding back inflation when growth is brisk, letting it run when growth slows. This kind of fine-tuning assumes that government policy-makers know what is best for the nation as a whole, do not try to manipulate the process to win the next election, are able to move prices at will, and are always able to stay one step ahead of business owners, workers, and lenders. In real life, none of this is likely.

Moreover, to keep inflation or at least the degree of inflation unanticipated, the government must be stealthy. It cannot clearly signal its intentions in advance. But this kind of stealth is dishonest and therefore unethical. For example, is it ethical to entice small savers to buy U.S. government savings bonds or open

a bank savings account, to encourage these people to put money away in these vehicles over the years, when the purchasing power of their savings will ultimately be devastated by a government-induced inflation?

Malcolm Bryan, president of the Federal Reserve Bank of Atlanta, expressed his personal discomfort with this prospect in 1957, "The integrity of our conduct is crucial. . . . If a policy of active or permissive inflation is to be a fact . . . we should have the decency to say to the money saver, 'Hold still, Little Fish! All we intend to do is to gut you!'"[10]

Given that inflation can only boost production temporarily, may ultimately lead to a downward spiral of debt deflation, and is unethical to boot, why do governments inflate so persistently? One reason may be that they are genuinely persuaded by the arguments for expanding the money supply that we have covered so far. But a more likely reason is that they see the "printing" of new money as an easy way to raise revenue.

Any government can of course raise revenue by taxing. But that is the hard way. It can also borrow, which is certainly easier. On the other hand, borrowing on capital markets may increase interest rates, which will make loans more expensive for both government and businesses. If new money is "printed" and injected into the economy, this may help keep interest rates down while the government borrows. Even better, the new money can be used directly to buy back the bonds which were issued in the first place.

It might be objected that this is unnecessarily complicated. Why should government "print" new money to buy back bonds it has just sold to the public? It would be more straightforward for the government simply to "print" the extra money it wants. But, in this instance, governments do not want to be straightforward. They want to "fly under the radar screen" of press and public scrutiny so that they can appear to be financially responsible even when they are not.

In any case, when governments "print" new money, they are engaging in taxation, albeit indirectly and clandestinely. Some math may illustrate this. Imagine an economy consisting of one dollar and some goods and services. The government might take 25¢ in tax revenue or "print" 33.3¢ for its own account. In either case, the money will buy 25% of all goods and services (25¢ is a quarter of $1.00 and 33.3¢ is a quarter of $1.00 plus 33.3¢). The government now controls 25% of goods and services and private individuals have 25% less, although they will be much more aware of what has happened if directly taxed.

Inflation as a "tax" is usually assumed to affect everyone. But inflation actually helps some and hurts others, depending on who gets the new money and in what order. Those who receive new money directly from government or who borrow it fresh from banks can spend it before the new money has a chance to raise prices. These early recipients therefore do well.

Once the new money leaves the hands of the first

recipients, it will circulate throughout the economy. The auto-maker will pay the tire-maker who in turn will pay the rubber-maker who in turn will pay the corner grocer, and so on ad infinitum. Some unlucky people will already be paying higher prices long before they ever get some of the new money. And some very unlucky people will never get any income boost from the inflation even though they will have to cope with higher, perhaps much higher costs. As noted previously, these unlucky people are often poor or retirees.

What Makes Prices Unstable?

In the previous chapters, we have asked whether stable, falling, or rising prices are best. We have also discussed how "printing" new money and injecting it into the economy can raise prices. In this chapter, we will take a closer look at all the factors that might make prices go up and down and why price stability, whether desirable or not, is so difficult to achieve.

To explore all the factors contributing to price changes, we will begin with a very simple example. Assume once again that an economy consists of only two people, one of whom (person A) owns four apples and the other (person B) one dollar. Assume also that Person A, the owner of the apples, sells to Person B, the owner of the money, two apples for 25¢ each or 50¢ in total. That way, both parties would end up with equal shares of apples and money.

Now assume that demand changes. Person B decides that he or she prefers apples to cash, and offers to buy one of Person A's remaining apples. Unless Person A suddenly prefers cash, Person B will probably have to offer more than 25¢ to induce Person A to give up the third apple.

There are of course other ways that the price of an apple might rise. If one of the apples is eaten, we now have three apples and one dollar. In that case, each apple might be worth a bit more than 33¢ rather than 25¢. Or the two people could find an additional dollar. Then the price of each of the remaining three apples might rise to just under 67¢.

As the preceding illustrates, any combination of rising demand, more money, or falling supply may individually or together raise prices. We must, however, keep in mind what turns out to be an important proviso, namely, that it is not the total supply of cash which matters, but the portion of cash people can and will use. If Person A and Person B are shipwrecked on a deserted island, cash they have back at home does not count.

We should also be wary of attempts to describe price formation in highly mathematical terms. Relative prices in the end always reflect people's choices, preferences, or fears, all of which help shape demand, and these are inherently changing and unpredictable. Just knowing the number of apples, the amount of money available, or other mathematical relationships will not

in itself suffice to tell us for sure what will happen to prices. Economists are not wrong to discuss these matters on an "all else being unchanged" or "all else being equal" basis. There are occasions when people's preferences shift radically, especially when they begin to worry about rapidly rising or falling prices, and then "all else is not equal."

We will now proceed to test prevailing ideas about inflation against our parable of the apple, and we will find many of them deficient. One popular idea is that prices rise because business owners are "greedy." A variant of this idea is the *oligopolistic* theory of inflation: "greedy" business owners band together into cartels so that we have to accept their inflated prices. Alternatively, business owners may blame "greedy" unions for demanding excessively high wages. Both business owners and unions may in turn blame "greedy" oil producers for cartelizing and raising global oil prices.

The parable of the apple should, however, remind us that greed alone cannot raise prices. Prices only rise if demand increases because of a change in consumer preferences, supply shrinks, or the supply of money used in transactions increases, and greed per se cannot affect any of these things.

Assuming that available money remains the same, price increases devised by "greedy" business owners, unions, or global oil producers will lead to falling sales. The falling sales will lead to lower profits and employment, and lower profits and employment to lower

prices and wages again. It is only when government "accommodates" rising prices by "printing" and circulating more money that the higher prices can "stick" and result in inflation.

Another common and closely related idea about inflation is that it is caused by economic *overheating*, that is, by a too rapid increase in economic growth. In particular, it is assumed that such growth will lead either to production bottlenecks (in which producers' goods become scarce and expensive) or to escalating labor wage demands.

There is something wrong with this logic. Economic growth as a whole does not decrease society's supply of goods. On the contrary, it increases the supply of goods. And we know that an increase in the supply of goods should reduce rather than increase prices. Here again, the answer to our conundrum lies in the supply of money. If the supply of money remains constant, bottlenecks and wage demands may raise some prices, and these price increases may in turn slow the overall rate of growth. But nothing should show up in the general price level. It is only if additional dollars are "printed" and circulated, in an amount exceeding the increase in production, that general inflation should arise. When economists say, as they often do, that "growth must be curtailed lest it lead to inflation," they really mean: "growth will lead to inflation if more money is printed, that is, in the jargon of the trade, if current monetary policy remains expansive."

Yet another explanation of inflation is offered by critics of government intervention in the economy. As these critics see it, government intervenes in certain industries, notably health care, education, and housing, to ensure that everyone has access to these critical products and services. The initial method of intervention is to provide financial subsidies. Because these subsidies tend to increase demand without increasing supply, prices rise, so that access is actually restricted rather than improved.

These problems then lead to government controls. But controls typically shrink supply even more, in addition to causing inefficiencies. Also, as free markets are hobbled, innovation is thwarted, which inflates prices further, all of which leads to more demands for government to "fix it." As prices in the quasi-public sectors of the economy grow and grow, these sectors represent more and more of the economy, so that it is increasingly difficult for the efficient private sector, with its steady price decreases, to bring down the overall consumer price index.

Expressed in terms of a three factor model of inflation (demand, supply, and money), the case is rather simple. Demand for something like health care is potentially infinite. Supply, however, is limited. Markets would normally sort this out by identifying a price that held back demand sufficiently to match supply.

Government intervention is intended to help those who cannot pay the market price, but changes neither

infinite demand nor limited supply. It simply introduces more money into the equation and thus raises prices. If government paid for its subsidy by raising taxes, demand would be reduced elsewhere in the economy, so that overall prices should not rise. If the subsidy is instead covered by "printing" more dollars, overall prices would be expected to rise.

Based on the above, it is easy to see why economist Milton Friedman famously said that, "Inflation is always and everywhere a monetary phenomenon."[11]

And added that:

> "Just as an excessive increase in the quantity of money is the one and only important cause of inflation, so a reduction in the rate of monetary growth is the one and only cure for inflation."[12]

These are exaggerations. As we know from the parable of the apple, inflation may come from any of three sources: demand, supply, or government engineered money supply changes. But, very often, money does lie at the root of the problem.

If excessive monetary growth, that is, government "printing" and circulating too many dollars, is the principal cause of inflation, it might then follow that inflation is relatively easy to manage. "Print" more dollars, and it will go up. "Print" fewer, and it will go down. Friedman, at least, seemed to think so. But it is not so simple, for a number of reasons.

In the first place, the money supply cannot be reliably measured. It could not be measured in years past, and it is inconceivable that it can be measured today when so many new financial instruments have been devised. If I can borrow at any time against the equity of my home, does that make home equity money? And what about futures and other derivatives capable of transforming a long-term bond into cash and back again in the flash of an eye?

In the second place, inflation itself cannot be reliably measured. The accuracy of the government's consumer price index is much disputed. Even if we agree with how it is constructed, it is just one number: it does not attempt to capture the complex interrelationship of prices, which is arguably more important for the economy than the overall level. In addition, are we sure that it is right to focus solely on consumer prices? When government "prints" new money, does not a portion of it "leak" into home prices, stocks, bond, other assets, "credit spreads,"* and such? Should our concept of inflation be more comprehensive?

We must also keep in mind that a change in the quantity of money, as important as it may be, is really less important than people's expectations about where the quantity of money is headed. In an extreme case, if people think that the government is going to run

* The difference between interest rates: short-term versus long-term, low quality versus high quality, etc.

its currency "printing press" faster and faster, they will try to convert their cash into tangible assets or goods, thereby changing the demand mix of the economy and ensuring that tangible asset and goods prices will rise even faster than the quantity of money. In this sense, the quality of money, or at least perceptions about quality, count for as much or more than quantity, which is why inflation rates during the German Great Inflation of the 1920s ultimately outstripped the actual rate of currency printed, even with the printing presses going full throttle.

As a general rule, governments try to keep their inflationary intentions as cloaked as possible. They do not take the direct route of "printing" additional currency and distributing it directly to citizens (deciding who gets how much would be interesting). Nor do they "print" and then spend the new cash for public purposes, with full public disclosure of what they are doing. In fact, they do not run printing presses at all, except to supply relatively small amounts of cash to banks, which is why we have used quotation marks when we wrote about "printing" money.

As alluded to previously, the usual method of increasing the money supply is to issue bonds, collect existing money from investors in exchange for the bonds, then have the country's central bank buy back some of the bonds from banks using fictitious central bank "checks." Logically, one would think that these two steps, the selling and buying of bonds, would cancel each other

out, and it would be as if the government had simply written itself a check. But for reasons too complicated to discuss at present (see the chapter on banking and the appendix on The Federal Reserve Board), the process actually injects much more cash into the economy than the bonds are worth.

Such a circuitous, virtually opaque way of creating new money is indeed confusing. But even with this smokescreen, business owners, workers, and investors do get some sense of what government is doing, do form their own conclusions about the likely direction of prices. And it is their conclusions, along with their actions, that ultimately determine the future of prices, even more than the government's actions in expanding or contracting the money supply.

Because of these and other complexities, Friedman's "quantity theory of money" does not turn out to be a reliable tool for forecasting or controlling inflation. One cannot calculate what government is doing and then derive what inflation will be. Yet, having said this, there is a close link between the amount of new money injected into the economy by government and the amount of subsequent inflation. During the second half of the twentieth century, U.S. consumer prices quintupled. This simply could not have happened if the government had not fueled the inflation with a great deal of new money.

Part Two

How Much Money Do We Need?

Does the Economy Need More Money?—Yes

The simplest answer to the question posed above is that an economy should have as much money as possible. After all, why should people suffer from a lack of money? Why should money be scarce?

Economist Milton Friedman has provided a useful illustration of this kind of thinking. Assume that the government decides to construct a road. Rather than levy taxes to meet the expense, public officials simply start up the printing presses and run off some currency.

Everyone seems to benefit. Workers get jobs. The community gets a road. No one had to pay for it. It seems like "magic."

Arguments of this kind for more money in the economy are often couched in populist terms. The most direct way to help poor people, workers, or farmers is to increase the money supply. This is what presidential candidate William Jennings Bryan meant when he said, "You will not crucify mankind upon a cross of gold."[13]

At the time, the gold standard restricted the supply of money, because there was a limited amount of gold. The bi-metal gold and silver standard favored by Bryan would have dramatically increased the supply of money, because silver was plentiful in the United States. Other relatively simple plans for monetary expansion were proposed in the early twentieth century by Silvio Gesell and Major C. H. Douglas, each of whom developed a large following.

Opponents of Bryan, Gesell, and Douglas respond that their schemes are not just simple. They are naïve. In particular, they confuse money with wealth. This is a fundamental error. If you have four apples and a dollar, the dollar may help you price and trade the apples. But adding another dollar will not increase wealth; it will simply raise the price of the apples. To increase wealth, one must add an apple or some other commodity, product, or service. This is the real meaning of Milton Friedman's parable of a government planning

to build a road. If construction is paid for by printing money, it will not be free, because the new money will raise the price of other goods.

Economist John Maynard Keynes was anything but a simple monetary expansionist. He knew all about apples and money, what constituted real wealth, how easy it is to trigger a ruinous inflation by printing too much money. He had even warned, in a celebrated passage written early in his career, about the evils of an "easy" money policy:

> Lenin is said to have declared that the best way to destroy the Capitalist System was to debauch the currency. By a continuing process of inflation, governments can confiscate, secretly and unobserved, an important part of the wealth of their citizens. By this method they not only confiscate, but they confiscate *arbitrarily;* and, while the process impoverishes many, it actually enriches some. . . . As the inflation proceeds . . . the process of wealth-getting degenerates into a gamble and a lottery.

Lenin was certainly right. There is no subtler, no surer means of overturning the existing basis of society than to debauch the currency. The process engages all the hidden forces of economic law on the side of destruction, and does it in a manner which not one man in a million is able to diagnose.[14]

Notwithstanding his authorship of this passage, Keynes eventually became a proponent of aggressive government monetary expansion. As a sophisticated advocate of more money in the economy, he did not accept Bryan's, Gesell's, or Douglas's formulations, although he said of Gesell that he was "an unduly neglected prophet . . . [with] flashes of deep insight";[15] and of Douglas that he, "at least, has not been wholly oblivious of the outstanding problem of our economic system."[16]

Unlike simple monetary expansionists, Keynes did not want to see a greater quantity of money circulating in the economy for its own sake. He wanted to see more money in the economy for a very specific reason, namely that it would reduce interest rates. It would reduce interest rates because there would be more money to lend. Reduced interest rates would in turn promote more investment, and more investment would promote more employment. If all went well, the supply of goods and services would rise fast enough to prevent much inflation, although some inflation was a modest price to pay for a robustly growing economy. In any case, we will listen to what Keynes himself says about this in *The General Theory of Employment, Interest, and Money*:

> The rate of interest is not self-adjusting at a level best suited to the social advantage but constantly tends to rise too high. . . .[17] There was wisdom in [16th and 17th century economists'] intense preoccupation with keeping [interest rates] down. . . .[18]

> The austere view, which would employ a high rate of interest to check . . . [a booming economy lest it "overheat" and cause inflation has] no foundation at all apart from confusion of mind. . . .[19] The remedy for the boom is not a higher rate of interest but a lower rate of interest. For that may enable the so-called boom to last. The right remedy for the trade cycle is not to be found in abolishing booms and thus keeping us permanently in a semi-slump; but in abolishing slumps and thus keeping us permanently in a quasi-boom. . . .[20]

Keynes continues:

> The owner of capital can obtain interest because capital is scarce, just as the owner of land can obtain rent because land is scarce. But whilst there may be intrinsic reasons for the scarcity of land, there can be no intrinsic reason for the scarcity of capital [since government can always "print" and distribute more of it]. . . . Thus we might aim in practice . . . at an increase in the volume of [money] until [investment capital] ceases to be scarce, so that the functionless investor will no longer receive a bonus. . . . [This] would mean the euthanasia [that is, the death, but the medicated or painless death] of the rentier, and, consequently, the euthanasia of the cumulative oppressive power of

> the capitalist to exploit the scarcity-value of capital. . . .[21]
>
> [An] evil is supposed to creep in if . . . increased investment has been promoted by a fall in the rate of interest engineered by [government through] an increase in the quantity of money [rather than by a fall in the rate of interest caused by an increase in normal business or consumer saving.][22] [But monies injected into the system by government are] . . . just as genuine as any other savings.[23]

Does the Economy Need More Money?—No/Yes

Keynes' arguments had their critics. They responded that if we pour water into our milk, it will look as if we have more milk, but we will not. Similarly, if we pour more money into our economy, we may feel richer, but we will not be richer. In this view, the ultra-sophisticated Keynes has fallen into the same fallacy that gripped Bryan, Gesell, and Douglas. Money has value only as a claim against real goods and services. "Printing" money cannot multiply real goods and services and therefore cannot make us wealthier.

It is true that increased investment can make us richer, but only if it helps us to become more innovative or productive. A society that discourages thrift,

encourages profligate spending, and encourages borrowing by "printing" more and more money may succeed in driving interest rates lower for a time. But it will reap a whirlwind of reckless gambling, speculation, and inflation rather than the legitimate investments that will make us richer.

In the 1970s, U.S. inflation approached double-digit levels, and some economists thought that money supply growth had indeed gotten out of hand. Jay and David Levy, however, took a different tack. They thought the government had other options than curtailing the growth of the money supply. It could instead work with business and labor to develop wage standards and thereby slow wage growth directly. As the Levys explained:

> The central bank (should do) its job—make . . . sure that an ample supply of [money in the form of] credit is available to take care of the needs of business. . . .[24] [There should not be] government-imposed scarcities of money.[25]

> Our Economy is ailing. . . . The doctors... ought to . . . fight . . . the disease, not the patient. . . . The disease is excessive pay raises. As long as wages and salaries rise substantially faster than worker productivity, inflation will persist....[26] Elected officials must set forth a program for limiting pay increases.[27]

This too drew its critics. They noted that the historical record of wage and price controls, whether mandatory or "voluntary," had been dismal. The Roman Emperor Diocletian's edict of 301, backed by the death penalty, the French kings' and then the French revolutionaries' edicts, the Nixon administration's "temporary" controls of the early 1970s in the U.S. had all produced the same result: disruption of normal economic activity only tempered by massive non-compliance. Controls have succeeded during wartime, but only because varied economic objectives are replaced by a single mission, and because people voluntarily comply when facing a common enemy.

Controls are imperfect, Keynesians acknowledge, but are arguably better than the traditional economic nostrum for controlling inflation: putting the economy through the wringer of a recession or even a depression by shrinking the money supply and/or government spending. Recessions and especially depressions serve no useful purpose; sound policy should aim to eliminate them. Just because we want to eliminate slumps does not, however, mean that we should also try to limit booms. On the contrary, we should seek to prolong them and turn them into a new equilibrium.

Booms may falter for any number of reasons. Very often, it is simply a failure of "animal spirits." The way investors feel matters a great deal, because it leads them to keep investing, or alternately, to draw back. Consumers are rarely a problem; they can be counted

on to keep buying. But investors are easily "spooked." When they stop investing, prices start to fall. Businesses might prefer to respond to falling prices by reducing wages, but wages in the modern era have become "sticky." Even when workers are not unionized, they will not accept a pay cut. Hence the only way left to reduce costs is to fire workers. Firings and lay-offs in turn reduce consumer demand, which sends the downward spiral ever lower.

Two adjustments are required to arrest this kind of unwelcome self-destruction. The first is for government to "print" money and inject it into the banking system. This reduces interest rates and thereby "jump-starts" investment. In addition, as the new money pours out of banks and into the economy, it should arrest the general fall in prices. Once prices begin to rise again, the *real* (price-adjusted) value of wages will fall. But nominal wages (the wages that people actually see in paychecks) remain unchanged. Because nominal wages are not affected, workers cooperate and equilibrium is restored.

If the new money fails to revive investment, it is because investors are too frightened to use it (a *liquidity trap*). In this case, or if the economy just needs an additional "tonic," the government should increase demand directly by spending more and more without raising taxes, that is, by running a fiscal deficit. When government acts in this way, it is spending, not investing; but government spending of this kind may be

thought of as a kind of investment. 2004 U.S. Democratic presidential candidate John Kerry alluded to this when he said, "We're not spending to be able to invest in new jobs."[28]

In one respect at least, government spending has a decided advantage over business investment. When businesses hire new employees, the wages count as costs, costs immediately reduce profits, and lower profits generally mean less investment, at least temporarily. The employees will spend their wages, which will increase demand, but they may not spend all their wages. This should all work out, because unless something goes wrong, the business investment will in due course produce its own profit, and thus further investments. But an increase in business employment will not immediately increase economic demand. By contrast, when government hires employees, payroll costs do not reduce profits, so the employees' consumption represents a free and clear increase in immediate business demand.

Critics of Keynesianism again demur. As they see it, flooding the economy with new money will not solve unemployment. It will only make matters worse. As previously touched on in Chapter Four, unemployment means that wages are too high. It can only be solved by adjusting them down until they reach an economically sustainable level.

Both economic theory and common sense tell us that more people are able to afford a $10,000 automobile

than a $100,000 automobile. By extension, if we cannot sell the $100,000 automobile, we might be able to sell it by dropping the price to, say, $95,000. So, in general, a lower price may stimulate demand.

Most classical (18th and 19th century) economists thought that what was true for commodities and products was also true for human labor. If people were chronically unemployed, the problem was probably that their labor was too highly priced. If employees in general demand too much, employers will be unable to earn a profit, and must stop hiring or lay off workers to forestall bankruptcy. A reduction in wages should "clear" the labor market, restore potential profitability, and thus lead to a resumption of hiring. The implicit moral assumption here is that a person is not a commodity, but a person's labor is indeed a commodity like any other.

Some economists try to explore this question by studying labor *elasticities*. Labor wages are deemed *elastic* if reductions increase employment and *inelastic* if they do not. In the past, Keynes' old teacher Arthur Pigou studied labor price elasticity,[29] as did Paul Douglas,[30] an economist who was generally sympathetic to Keynes. Both found that, contra Keynes, labor prices are fairly elastic, so that lower wages will increase the number of jobs, and most economists have generally agreed with this finding.

Classical economists further believed that even the kind of mass unemployment characteristic of

depressions could best be cured by wage and other costs reductions. Their thinking, greatly oversimplified, went something like this. Assume, once again, that our economy consists of four apples and a single dollar with each apple selling for 25¢. Assume further that the available money supply suddenly shrinks, a key feature of depressions caused by people hoarding cash out of fear, by banks calling in loans, and by other factors that need not detain us here. In this case, the money supply shrinks by half to 50¢.

If the price of each apple remains at 25¢, only two of the four apples can now be sold. With half the produce unsold, many apple workers will lose their jobs. If, however, wages and other costs can also be shrunk by half, then each apple can be sold for 12.5¢ rather than 25¢. All four apples can once again be sold, no one need be laid off, and everyone is really as well-off as before, because producers and consumers can enjoy just as many apples (that is, just as much real wealth) as previously.

In this simple example, all prices and costs have been lumped together. In real life, of course, there are millions of prices, costs, and wages, and the classical economists thought that what really mattered was the relationship between these factors in specific industries and businesses.

Is it possible that the classical economists were right —that unemployment cannot be cured without wage adjustment? Logic suggests that the profit motive

(along with the whip of bankruptcy) drives business owners to do everything in their power to bring non-labor costs, wages, and prices into profitable alignment. Wage rate flexibility should make this considerably easier. And we know that profits are the wellspring of hiring and investment, both of which are essential to curing unemployment.

Beyond logic, there is also the historical record. Nineteenth century depressions, when wages were flexible, tended to be severe but brief. The last American depression with flexible wages occurred just after World War One and followed the same pattern: severe unemployment, a large drop in wages, followed by almost immediate recovery, including wage recovery. By contrast, wages were not allowed to fall after 1929, and the depression lingered until World War Two.

At the beginning of the Great Depression, President Hoover vigorously strong-armed business not to cut wages. President Roosevelt increased this pressure, both through the commands of the National Recovery Administration and through a vast legislative expansion of the power of labor unions. He also sharply inflated the money supply by revaluing the dollar relative to gold. This last step did raise prices, which according to Keynes' theory should have brought prices and wages back into balance and thus restored employment. Instead, unemployment remained at unprecedented double digit levels.

Keynesians are again ready with their response. As also noted in Chapter Four, wishing for wage reductions during an economic slump will not make them happen. They are "unjust," an unfair burden to place on workers and their families.[31] Why should workers have to pay the price for economic adjustment and stabilization? And why should anyone expect them to? As Keynes remarked:

> To suppose that a flexible wage policy is a right and proper adjunct of a system which on the whole is one of laissez-faire, is the opposite of the truth. It is only in a highly authoritarian society, where sudden, substantial, all-around changes could be decreed that a flexible wage-policy could function with success. One can imagine it in operation in [Fascist] Italy, [Fascist] Germany or [Communist] Russia, but not in France, the United States or Great Britain.[32]

In a free society, modern workers will not cooperate with wage cuts, even if prices and other costs are falling, and some will lose their jobs. But why cut wages at all, even in this dire scenario? Why not instead "print" and circulate more money, so that prices and non-labor costs stop falling? Once deflation has been arrested, wages can stay where they are or even rise without threatening the stability of the system.

Keynes' critics return to the attack. Asking workers to reduce their wages during a slump is not unfair.

Consider this: was it fair that workers during the Great Depression who did not lose their jobs saw their wages soar in purchasing power, because consumer prices were falling without corresponding wage cuts? While this was going on, and as a direct result, millions of the lucky ones' former colleagues drew the unlucky straw, were fired by business owners desperate to cut costs, and in many cases ended up on the streets or in breadlines. Is it morally just to keep some lucky workers' nominal wages high even if this results in lower total wages as more and more people are fired?

There is more. Is it reasonable to advocate wage freezes when prices plummet, but permit unlimited wage increases when prices soar? Why should wages be inflexible only on the downside? Are all current wages equally sacrosanct? Does it matter what recent wage increases have been? For example, if wages in one industry have expanded far faster than in others, should these be equally immune to cuts? Why should we adamantly oppose wage cuts, but generally applaud setting up worker profit sharing or profit participation plans that result in variable compensation, that is, compensation that can fall as well as rise?

Why do we especially worry about wages as opposed to other costs? Do we not realize that all costs are someone's income, whether or not the cost takes the form of a wage? For example, if I am an automobile manufacturer I probably buy tires from another company, but my tire payments still pay the wages of the

tire manufacturer's employees. The tire manufacturer in turn buys rubber and thereby contributes to the wages of rubber company employees, and so on. Any falling price, whether it is a wage or another price, reduces someone's income, but efforts to thwart this natural process will harm rather than help workers.

It must be acknowledged that not all unemployment is caused by inflexible wages. Other prices or costs may play a role. Business owners may fear to invest because they do not know what government will do, especially with respect to the value of money and currencies. Investors who are afraid of inflation or devaluation may build up cash balances or buy gold, even though the latter pays no interest and actually costs money to store securely. But, as important as these other factors may be, inflexible wages are still the chief cause of unemployment. As Henry Hazlitt has stated:

> The truth is that the only real cure for unemployment is precisely the one that Keynes's whole "general theory" was designed to reject: the adjustment of wage-rates to the marginal labor productivity . . . level. This does not mean a uniform *en bloc* adjustment of "the wage level" to "the price level." It means the mutual adjustment of specific wage-rates and of prices of the specific products various groups of workers help to produce. It means also the adjustment of various wage-rates to each other and of various prices to each other.

> It means the *coordination* of the complex wage–price structure.[33]

Perhaps all this can be best summed up with a few words spoken by Albert H. Wiggin, chairman of the board of Chase National Bank during the early 1930s, "High wages [do not] make prosperity. Prosperity makes high wages."[34]

Keynesians may agree with at least one strand of the preceding argument. It is unreasonable for wages to be protected on the downside but never restrained on the upside. That would be unfair and unwise. There are, however, Keynesian ways to restrain wages on the upside. The first is an *incomes policy*, a direct government intervention to restrain wages, an approach already described. The second way is to apply the same monetary stimulus that works so well in a slump to control workers' demands during a boom.

To understand how this latter approach might work, assume for a moment that the economy is accelerating. Demand is surging, production expanding, employers are competing more and more aggressively for workers, wages are rising. If wages rise too rapidly, profits will be threatened, investment will fall, and the boom may falter.

To prevent this, the government need only "print" enough new money to offset some of the wage gains with new inflation. For example, imagine wage gains are running at six percent, labor productivity gains at two percent. Such a large gap between wage and

productivity growth might threaten profits, but not if consumer and business prices rise four percent. In that case, the worker has a zero real (inflation adjusted) wage gain, which should pose no threat to profits. In short, the same deliberate inflationary policies that protect workers when their jobs are in jeopardy can be used to discipline and restrain them when jobs are plentiful. Viewed in this light, management of the national money supply is the ultimate economic tool, useful for pulling us out of threatening slumps, but also for managing and prolonging booms.

Does the Economy Need More Money?—Sometimes

It should come as no surprise that Keynesian critics are not of one mind. Some reject each and every Keynesian plank. Others pick and choose. For example, some self-described critics agree with Keynes that government should try to stop a recession from turning into a depression. They also agree that the best way to do this is to "print" large quantities of new money to prevent prices from falling, and, in so far as possible, to maintain the previous price level. They think he was wrong, however, to recommend monetary stimulus during normal times. And they think that some of his followers have been very wrong to try to "inflate away" workers' wage gains during booms.

In this view, monetary growth should be moderate, never exceeding the underlying real growth of the economy, and absolutely regular, except during true economic emergencies, which should be rare. Inflation is not a good, but rather an evil. By upsetting the system, it leads eventually to deflation. If it cannot be prevented entirely, it should at least be as predictable as possible and buffered by built-in price adjustments such as wage escalators. In general, the "holy grail" of monetary policy should always be stable prices. Stable prices and stable prices alone will ensure a stable economy.

This particular economic advice comes from Milton Friedman and the monetarists. Monetarism was sometimes called the "price-cycle theory"[35] in the 1930s, and was given its modern form at that time by the American economist Irving Fisher. Keynes was originally a monetarist himself, as his *Treatise on Money* of 1930 makes clear. Friedman attacked Keynes relentlessly for leaving the monetarist fold, but was at the same time deeply influenced by Keynes.

By the end of the twentieth century, most central bankers and government policy-makers seemed to favor a Keynesian-monetarist synthesis. Keynesian demand management was routinely implemented, but with a monetarist bias that inflation should be kept in a moderate (2–3%) range. The key monetarist idea that price stability would guarantee economic stability was widely embraced by economists (although not by all, as we shall shortly see).

Monetarists may seem somewhat inconsistent in their stance toward government. As avowed free-marketers, they are supposed to be suspicious of government interventions in the economy. Milton Friedman in particular waged a highly publicized campaign against "big government" in speeches, popular books, and television programs, as well as in his scholarly work. Yet Friedman and other monetarists wanted government to intervene deeply into the economy if deflation threatens and to "print" as much new money as it takes to keep prices from falling. Nor were they generally supportive of proposals to take control of money and short-term interest rates out of government's hands by returning to a gold standard, although Friedman was willing to discuss proposals for "free" banking.[36]

As we have just noted, Keynesians and monetarists absolutely agree on the need to "print" and circulate more money when prices are falling and depression threatens. That is all well and good. But what about when the economy slumps, but prices do not fall?

This situation is called *stagflation* and is inconsistent with Keynes' theory. His General Theory suggested that recession is caused by too little demand, inflation by too much. Since the two are opposites, one would not expect them at the same time. But in the 1970s, they did strike at the same time.

Monetarism is quite clear what it would do about this. Since price stability is all important, the money supply should be decreased, even if the economy is

weak. The Keynesian answer was different: ease monetary policy to help the weak economy, but cut government spending to restrain inflation.

The correct answer, says a group of supply-side economists led by Robert Mundell, is just the reverse. Under conditions of stagflation, one should tighten monetary policy ("print" less new money) and simultaneously ease fiscal policy (run a government budget deficit). Moreover, one should not let government borrow and spend more, the Keynesian recipe for easing fiscal policy. One should instead ask government to cut taxes without cutting spending, and then cover the resulting budget deficit by borrowing. If everything goes as hoped, the tight monetary policy will quell inflation while the tax cuts strengthen the economy. If the economy is sufficiently strengthened, tax revenues will rise again, even with tax rates kept low.

Supply-siders think that Keynes went wrong by putting so much emphasis on demand (spending) when dealing with a weak economy. The right answer is to strengthen producers (the so-called supply side) by reducing taxes. If producers do well, their profits will pay for more hiring and investment, and demand (spending) will follow, an idea that we have already seen in earlier chapters.

Perhaps the most important point about supply-siders, however, is that they still hew to the basic Keynesian/monetarist policy synthesis framework. Inflation is regarded as an evil, but deflation as an even greater

evil. If deflation threatens, government must aggressively intervene to prevent it. The quarrel is over the kind of stimulus to apply to slumps, not whether such stimulus is a good idea in itself. In succeeding chapters we will proceed to a group of economists who draw a real line in the sand and completely reject the entire Keynesian/monetarist/supply-side policy synthesis framework.

The Problem of Banks

Contrary to Keynesians and monetarists and supply-siders, the economy does not need more money. The truth is that the boom/bust cycle which has bedeviled capitalism for centuries cannot be solved by "printing" and circulating more money, for the simple reason that monetary expansion is the cause of the cycle in the first place. This is even true if the new money does not lead immediately to inflation.

This argument, which is often referred to as the Austrian or Misesian theory of the business cycle in honor of its principal progenitor, the Austrian economist Ludwig von Mises, has many facets. We can best present it step by step through a series of assertions, beginning with:

Assertion A: Free markets are especially vulnerable to a boom/bust cycle because of how the banking industry is organized.

To see why this might be so, we need to step back for a moment and consider the rather curious way in which banks operate. A bank takes in deposits, promises to repay the money at any time requested (although in the case of time deposits early payment is penalized), and then lends the money out. Since bank loans are typically repayable at a fixed date or dates, it will be obvious that the promise to repay depositors on demand is only possible because depositors do not usually want all their money back at the same time.

If depositors do want all their money at the same time, it is probably because they have lost confidence in the bank. In that case, there is said to be a *run* on the bank, and the business may fail. In some sense, therefore, all banks are technically "insolvent" all the time, because they never keep enough money in their vaults to meet their promise to repay depositors on demand.

Building free markets on a foundation of banks that are in some sense "insolvent" all the time is clearly a chancy undertaking. If people lose confidence in a specific bank and start a run, the bank will call in all the loans it can. That will cause borrowers to try to withdraw deposits from other banks, and both the sudden need for cash and the panic that usually accompanies

it can easily lead to runs on many banks and a complete interruption of normal business activity.

This problem was recognized as soon as gold depositories began to evolve into modern lending institutions. The question was what, if anything, to do about it. At least in early nineteenth century Britain, at that time the banking capital of the world, informed opinion fell into three broad camps. In order to follow the debate between the three camps, we need to know that British banks made their loans in one of two ways. Very commonly, they printed their own bank notes, gave them to the borrower, and these then circulated from hand to hand as money. Alternatively, they set up a checking account for the borrower, who then wrote checks against the account.

One group of informed observers, known as the "currency school," thought that it was too risky to allow banks to issue their own bank notes unless every note was backed by a corresponding amount of money (gold) in the vault. If this principle were abandoned, what would keep banks from flooding the country with notes? Another group of observers, loosely allied with the currency school, went further and held that banks should be required at all times to maintain reserves worth 100% of all deposits, so that depositors would always be assured of getting their funds back on demand as promised.

According to this line of thought, maintaining *fractional reserves*, (that is, less than 100% reserves to back

up a promise to pay on demand) was inherently fraudulent, and should therefore be illegal. Restricting the issuance of bank notes would solve part of the problem, but only part of it, since banks could still expand their loans beyond reserves through the checking account mechanism. A third group, known as the "banking school," thought that banks should be allowed to do as they pleased, since the fear of a run should provide sufficient discipline.

An effort to require banks to maintain 100% reserves against all deposits failed in British courts in 1811 and 1816. The House of Lords also confirmed the right to maintain fractional reserves in 1848.[37] In some respects, these decisions were anomalous, since grain depositories were always required to keep all deposits on hand, and were not allowed to enter the grain lending business. Sir Robert Peal's Bank Act of 1844 did end most private banks' issuance of notes, but loans through checking accounts were not similarly restricted, and the modern pattern of banking was set.

If the courts had decided otherwise, modern banks would operate on entirely different lines. They might lend their owners' capital, act as agents for others' capital, or offer absolutely fixed time deposits (so that the depositor's repayment date could be matched with a borrower's repayment date). However banks operated, they would not promise to repay on demand money that they did not have or expect to have, and could not therefore be described as in some sense perpetually "insolvent."

The technical "insolvency" of banks mattered enormously in the Great Depression of the 1930s, when bank runs proliferated, and the entire banking system was temporarily shut down by the Roosevelt administration. It is usually argued that government deposit insurance (in which the Federal Government guarantees repayment of deposits up to a specified amount) has solved the problem of runs. But the Federal guarantee is itself not quite what it appears.

In the event of a cataclysm the government could only make bank deposits good by "printing" vast sums of new money, which would then debase the value of existing money, and thus debase the value (as expressed in purchasing power) of the deposits. Furthermore, even if the threat of runs has receded, which is far from certain, the existence of fractional reserve banking introduces another element of potential instability into a free market economic system. To see why this is so, we need to delve more deeply into the methods through which new money is "printed" and injected into an economy.

When people commonly speak of the government "printing" new money or "expanding the money supply," they usually think of this as a government operation, however mysterious it may be. But a fractional reserve bank can also "print" new money and thus expand the money supply. In the early nineteenth century, when banks made loans by issuing bank notes, this was more apparent, because the bank notes went

hand to hand and were directly substituted for gold coin. But bank checks today function very much like the bank notes of old, and banks lending far beyond their reserves through check-book accounts are also creating what functions as new money.

To illustrate how this works, let us assume that depositors put $1,000 into a bank. The bank keeps $100 as a reserve and loans out $900. Because the depositors still have $1,000, and the borrowers now have $900, the amount of money in the economy has increased from $1,000 to $1,900. Nor does the story end there. The borrowers may use the new money to pay other people who then deposit it in their banks. The original $1,000 deposit may thus move from bank to bank and, assuming a 10% reserve requirement, keep ballooning until it has increased to $10,000. Note, however, that this is not the Gospel parable of the fishes and loaves. As the money increases, so do people's debts, so no new wealth is created.

In effect, then, the government can print new money on its printing presses. Or banks can increase the money supply by deciding to loan more, at least until they reach whatever reserve limit the government has imposed on them. Or, most importantly, government indirectly "prints" money by inducing banks to lend more, which is done in a variety of ways.

For example, an easy way to do this is for the government's central bank (e.g. the United States Federal Reserve Bank) to reduce the loan reserve imposed

on commercial banks. If the reserve requirement is reduced from 10% to 5%, a bank can lend twenty times its reserves instead of ten times, or twice as much. This is not the preferred method, however. The preferred method is for the central bank to engage *in open market operations*, which means the central bank will write one of its own checks to repurchase government bonds previously purchased by banks. Since central bank checks are in reality drawn against nothing, this is the functional equivalent of the government actually printing new money, new money which will then be multiplied by the banks. Contrariwise, if the central bank decides to reduce the money supply, it can simply reverse course by selling rather than buying government bonds, and the process will operate in reverse.

Open market operations are not only reversible. They also possess the considerable advantage (in the eyes of public officials) of being more discrete, less noticeable, than running currency printing presses. The money enters the economy almost invisibly, and goes to whichever sectors are willing to borrow. Best of all, even small amounts of central bank intervention may accomplish what is desired, because the central bank's phantom checks will expand themselves through the *money multiplier*[*] of the commercial banks' lending operations. Quite appropriately, central bank bond

[*] Not to be confused with the so-called Keynesian multiplier which relates to government spending.

purchases and sales are referred to in financial circles as *high-powered money*.

Governments and central banks do not, however, always have their way. In the first place, the two must agree, and central banks may be sufficiently independent of other government officials to go their own way, at least for a time or to a degree. In the second place, and importantly, commercial banks may have minds of their own.

Assume, for example, that the government wants to expand the money supply and that the government central bank, in complete agreement, begins to buy government bonds from banks with phantom checks. This will only succeed if the banks which receive the new cash are willing to lend it. If banks are fearful at the moment when the central bank wants to expand, or ebullient when the central bank wants to contract, the government's hopes may be at least partially thwarted.

The upshot of all this is that fractional reserve banking introduces more than a risk of bank runs and failures. It also introduces a money supply that may fluctuate sharply, with or without government intervention and manipulation, depending on banks' willingness to lend. None of this could be characterized as a recipe for economic stability.

Keeping Prices Honest

The idea that fractional reserve banking is inherently destabilizing leads us to further assertions of the Austrian or Misesian business cycle theory:

Assertion B: The continual pouring of new money into the economy and draining of old money out of the economy (mostly the former) by governments and government influenced banks takes an unstable situation and makes it far worse. It does this by misleading and deranging the price system.

The principle job of prices is to convey reliable information to business owners and consumers, information needed to reconcile supply and demand in the most efficient way. Because new money engineered by the government pours into the economy in completely unpredictable ways, entering first into this sector, then into that, the price system is increasingly distorted. As Richard Ebeling has written, "Monetary increases have their peculiar effects precisely because they do not affect all prices simultaneously and proportionally."[38]

If the money flows first into housing, it will seem that demand for housing has increased, but this will be a false signal. If it flows into additional computer sales, business owners may increase computer production capacity in the mistaken belief that consumers' preferences really have shifted toward computers. John Stuart Mill explained all this in the nineteenth century:

> An increase of production . . . takes place during the progress of [money expansion], as long as the existence of [money expansion] is not suspected. . . . But when the delusion vanishes and the truth is disclosed, those whose commodities are relatively in excess must diminish their production or be ruined: and if during the high prices they have built mills and erected machinery, they will be likely to repent at leisure.[39]

It is not infrequently stated by economists that monetary expansion leads to price inflation which then leads to an overheated economy, that is, an economy growing at a disruptively rapid rate. But this is not correct. As economic writer Henry Hazlitt has explained:

> Say's Law [referring to the 19th century French economist Jean-Baptiste Say], properly understood, . . . tells us that general overproduction is impossible. What is possible [and to be expected with monetary expansion by banks and governments] is unbalanced production, misdirected production, production of the wrong things. . . .[40] [all of which lead inexorably] to unemployment and malemployment.[41]

Assertion C: Money supply fluctuations through bank credit especially distort the single most

important price in the economy: the price of money itself as reflected in interest rates.

Interest rates tell us what money costs, or, technically, what the ability to borrow money (i.e. credit) costs. If we think about it, the cost of money mostly depends on how people value time. If I want to persuade a teenager to lend me money, I will probably have to pay a very high rate of interest, even if I am a sure bet to repay the loan at the agreed upon date. This is because teenagers tend to focus on the here and now and accordingly prefer to buy something at once rather than to defer the purchase in the hope of having more money later.

By contrast, if I want to induce a middle-aged person to lend me money, I might be able to pay a lower rate of interest because middle-aged people are often thinking about saving for retirement rather than splurging on purchases. There will always be many exceptions to these stereotypes, but they illustrate that our valuation of money depends on our valuation of time. In finance at least, the old saw that "time is money and money is time" is especially apt.

Money (and time) is of course involved in virtually every economic transaction, so it should be obvious that the price of money (and time) is a critical price, arguably the most critical price. If interest rates fall, it should tell us that consumers are valuing future money more highly, consequently more has been saved, and

the increased supply of savings has in turn reduced the cost to borrowers. Lower borrowing costs should mean that some investment projects which previously looked unprofitable now look profitable. This would be especially true for projects that are expected to take a long time to bring to fruition, since interest (actual or implied) represents a large part of the expected cost in these cases.

Finally, if lower money market interest rates are accompanied by lower bond rates, as they often are, investors may find stock dividends more attractive. If so, they may be willing to pay higher prices for stocks. In addition, borrowed money may be used by a company's management to buy in the company's stock, which should further boost stock prices. Companies will then find that financing costs less, whether it is obtained by borrowing or by selling stock. In the jargon of finance, it will be said that the cost of capital has fallen.

It is observable that employment levels are closely linked to investment levels. If the cost of capital falls, the number of viable and thus sound investments should increase; most investments require employees, and workers directly benefit. But the same cannot be said when interest rates fall for artificial reasons. In this case, interest rates fall, not because people have shifted their time preferences and increased their savings, but rather because governments are "printing" more money and distributing it through banks, deliberately

driving interest rates down and easing credit terms. The result is a false boom. This false boom will encourage, not sound investment, but rather malinvestment and malproduction, which must eventually end in bust.

As we have stressed, the money market interest rate is the pivotal economic price. All prices are ultimately connected to each other in a seamless web, but this is the price that most resonates through all other prices. Tampering with it is particularly dangerous and foolhardy. Governments not only attempt to manipulate it through bank credit; they attempt to manipulate it and other interest rates in a great variety of other ways as well, most notably through housing and educational loan subsidies. As a result, business owners and consumers are blinded about the real state of economic affairs, and everyone pays a price in misdirected and stunted economic growth.

Assertion D: Manipulating and distorting interest rates is bad enough. But governments also manipulate and distort international currency prices.

When a government "prints" more and more money, prices will tend to rise. If prices would normally be falling, the rise in prices may not register as a significant increase in consumer prices, because much of the inflation is hidden. Hidden or not, however, inflation will raise wages and business costs above what they otherwise might have been. This in turn will make the goods and services of the country in question less

competitive in global markets, which will mean lower levels of employment. If this situation begins to bite hard, the country may decide to devalue its currency.

Devaluation seems to be an easy way out. If Ruritanian goods will not sell abroad, reduce the value of the Ruritanian ruble and, presto, the overseas price will fall, overseas sales will rise. With luck Ruritanian voters will not much notice that they must now pay more for imported goods, since they do not generally see international prices. A devalued currency may increase domestic inflation (not only because imported goods cost more, but also because domestic producers may take advantage of this to raise their prices). It may also raise interest rates because foreigners who have lost money in Ruritanian bonds as a result of the devaluation may refuse to buy any more. If so, cause and effect should still be sufficiently obscure to protect political incumbents.

Now imagine, however, that other countries refuse to accept a Ruritanian devaluation. They refuse to accept it because they do not want their currencies to become more expensive, which would make their goods less competitive in global markets. The Ruritanian government is printing rubles and selling rubles on international exchanges, all designed to reduce the ruble price, but other governments now respond by printing more of their own money and using it to buy rubles.

As this proceeds, the price of money (in this case the price of money itself, not of credit) is more and more

distorted, and less and less able to communicate and balance supply and demand in the world economy. Business owners and consumers already have a hard enough time reading genuine price signals, especially in a global economy where production may be in one currency and sales in another, a situation that is already confusing and financially risky. The more government intervenes for its own opportunistic reasons, the more business owners and consumers have to stumble forward without any genuine or reliable price signals.

In the early nineteenth century, the British reformer Richard Cobden stated that:

> I hold all idea of regulating the currency to be an absurdity. . . . The currency . . . must be regulated by the trade and commerce of the world; I would neither allow the Bank of England nor any private banks to have what is called the management of the currency. . . .[42]

Now that governments have decisively rejected Cobden's advice, is it any wonder that so-called free markets, which are in truth hardly free at all, should be so subject to instability?

The Boom/Bust Cycle

Having sketched the mistakes, we are now ready for the consequences according to Austrian business cycle theorists:

Assertion E: Pouring in new money, reducing interest rates, and confusing the price system may produce a temporary boom, but it will sow the seeds of its own destruction.

The grain of the idea that printing too much money leads to an artificial boom and then inexorably to bust was first formulated by Ludwig von Mises in his 1912 book, *Theorie des Geldes und der Umlaufsmittel (The Theory of Money and Credit)*. The grain was then developed into a complete theory in later works. The first presentation to English speakers, however, came in two books by Mises' student Friedrich Hayek, one written in English and the other translated into English in the early 1930s. Partly because Mises correctly anticipated the Great Depression, he and Hayek dominated economics until John Maynard Keynes' *General Theory of Employment, Interest, and Money* arrived in 1936 and swept everything else away.

Hayek eventually won a Nobel Prize in economics in 1974. But it seemed to "Austrians" that the recognition was grudging, because it came so late, and because it was shared with another economist of diametrically opposed views. There was also speculation that the Nobel Committee had waited until the unfashionable and unpopular Mises had died a year earlier in 1973, since the prize could not be awarded posthumously.

In trying to explain the business cycle, Mises and Hayek stressed that the attempt to lower interest rates through monetary expansion would initially create a

business investment boom as more and more projects became feasible because of reduced lending costs. This would in turn create an employment boom in those industries that sold to businesses rather than directly to consumers. The new and better-paid employees of these producer industries would, however, want to spend their earnings on consumer goods. Consequently the new money would in short order stimulate demand both in producer and consumer industries, and everyone would feel richer.

A problem would then present itself. Although new money can stimulate additional demand, it cannot conjure up the supply required to meet the demand, the extra iron ore, lumber, oil, or even, after a point, the additional skilled laborers. As demand begins to exceed supply, business owners must start bidding against each other at higher and higher prices to get the supply needed. Printing more and more money can keep final goods' prices rising as fast or even faster than underlying costs. But eventually governments will lose their nerve and print less, or alternatively consumers will finally catch on, will become afraid to hold money as it depreciates before their eyes, and the "crack-up" stage of the artificial boom will unfold.

As Mises sums up:

> Boom . . . followed by . . . depression, is the unavoidable outcome of the attempts, repeated again and again, to lower the gross

> market rate of interest by means of [money and] credit expansion. There is no means of avoiding [this]. . . . The [choice] is only whether the crisis should come sooner as the result of a voluntary abandonment of further credit expansion, or later as a final and total catastrophe of the currency system involved.[43]

Mises' analysis of business cycles, while new, drew upon the work of many earlier economists including the Currency School in early nineteenth century England, the Swede Knut Wicksell, who differentiated between natural and artificial interest rates, and the Austrian Böhm-Bawerk. Some glimmers of it can be seen in even earlier thinkers such as Etienne Bonnot (Abbé de Condillac), David Hume, and David Ricardo. For example, Condillac clearly identified government manipulation of money as the source of a boom/bust episode in pre-Revolutionary France:

> People found it very easy to borrow. This ease deceived incautious merchants who thought they must seize this opportunity to form some new enterprises. They took this money that was offered them, and they bought, but dearly, either because their competing demands raised prices, or because they paid with money which, from one day to the next, was to fall in value.

> However, . . . the king . . . began to lock up the silver in his strongboxes. . . . Merchants who had borrowed it did not have enough for everyday essential expenditure. Then, forced to empty their warehouses and to sell at a 50 or 60 per cent loss, they saw how they had been deceived in their speculations. The majority became bankrupt.[44]

If inflation accelerates immediately during an easy money and credit induced boom, and if governments and banks respond promptly by printing less money, harm will have been done, but the damage contained. There are times, however, as previously noted, when monetary inflation will creep in "under the radar screen," will hardly register at all in the closely watched consumer price index, and these times are especially dangerous.

For example, in both the 1920s and 1990s in the United States, new productivity-enhancing technologies and a great influx of cheap imports from abroad tended to drive costs and prices down. Without any monetary inflation, these would have been eras of "good deflation" with workers and business owners, but especially workers, benefiting from lower prices. Unfortunately, governments and banks together printed so many new dollars that prices rose rather than fell, but rose so slowly and stealthily that alarm bells did not sound and there was no check on easy money.

For a time, indeed, nearly everyone was euphoric. All the investment that came pouring out increased productivity even further. In the 1990s, as consumers earned more, many of them left rental properties and bought homes. Since the important housing component of the government's consumer price index (CPI) was calculated based on rental, not home, values, this helped to slow the CPI's rise and made inflation seem even lower than it actually was. The CPI was also distorted by new government calculation techniques (hedonic adjustments) that sought to capture quality improvements in consumer goods.

By the end of the 1920s and 1990s, financial and business "bubbles" had formed, commodity and labor bottlenecks were common, speculation was rampant, and huge sums had been wasted in malinvestments of every kind. Most observers were puzzled, at a loss to explain what had happened, but in each case the "Austrians" had both predicted and explained it.

As noted earlier, John Maynard Keynes said in *The General Theory* that the proper policy for booms was to prolong them indefinitely, not to try to arrest their speculative excesses, and the way to prolong them was to keep reducing interest rates until money became virtually free. If Keynes' policy had been followed in the late 1920s or in 2000, the U.S. Federal Reserve would have eased further rather than tightening ("printing" fewer dollars) as it did. But it is not clear how further easing could have succeeded in economies that were

already severely capacity constrained, that had temporarily run out of readily available commodities and highly skilled labor of every kind, just as von Mises, Hayek, and their Austrian successors had forecast. The problem then, as always, is that real wealth does not consist of money, but rather of goods and services and the ability to produce goods and services. If we temporarily exhaust our capacity to produce, "printing" money and reducing interest rates can only produce higher prices, not additional wealth.

There are a number of criticisms of Mises' business cycle theory that need to be considered. The first is that banks were a primary source of business capital in the 1920s, but are no longer so today. This is indeed a valid observation, especially after the advent of the junk bond market made it possible for more and more companies to borrow from sources other than banks. If banks play a much smaller role in corporate finance, can government/bank credit creation really explain the contemporary business cycle?

The answer in a word is yes. Although the banks do play a reduced role, other, new factors tend to reinforce even more strongly the trends that government/bank credit creation sets in motion. For example, in Mises' day, consumers did not have credit cards or home equity loans. Consequently, a reduction in interest rates primarily affected businesses, especially, as noted, businesses producing capital goods. Now consumers respond to lower interest rates as well, both

by borrowing and spending more, and by saving less. Thus the consumer side of the boom, and the competition of producer and consumer industries for inputs and workers gets off to an even faster start.

Another factor is the proliferation of financial institutions that in some respects mimic banks. For example, banks are said to "borrow short and lend long." This means that they accept deposits which (except for time deposits) are payable on demand without penalty, and then lend this money out for longer periods. When it is clear that central banks are committed to keeping rates low by "printing" more money, investment pools and other financial institutions also borrow at low money market rates, and then invest the borrowed money in longer bonds in order to capture the longer bonds' higher interest rate.

The net effect of these transactions, which are known as the *carry trade*, is to reduce longer bond rates. In effect the carry trade provides central banks with a way to influence longer bond rates that are outside their (customary) direct control. If both short and long interest rates are reduced by central bank monetary manipulation, then a credit fueled boom can proceed on an even more runaway course.

Yet another factor increasing the potential for runaway booms, followed by wrenching busts, is the very "safety net" that central banks are assumed to have placed under the economy. If central banks will step in with stronger and stronger doses of easy money

whenever a major financial institution, market, or country gets into trouble, then it becomes more rational to speculate, to take excessive risk, and not at all rational to save, to take precautions, to be prudent. In this respect, as we have previously discussed, so-called stabilization is actually de-stabilizing.

Another objection to the Austrian theory of the business cycle is that business owners cannot be so foolish as to be repeatedly gulled into expanding operations by government/bank credit expansion. A rational business owner might very well fall for central bankers' tricks the first time that interest rates were artificially lowered, but why would this happen over and over again?

This is a good question, but it does have an answer, or rather two answers. First, a business owner may know that today's interest rate is artificial, unsustainable, and misleading. But he or she cannot know what the rate would be without government interference, and without this vital information can only guess at the best course.

Moreover, once a boom gets underway, most businesses cannot choose to stand aside. Assume that company X's industry market share (share of customers' purchases) is 20% before the boom starts. Interest rates then fall and competitors start to expand. If company X refuses to expand, its share may fall to 15%, 10%, or less. Long before the boom is over, company X may have been virtually wiped out, and, if so, will not be

able to regain its share after the boom collapses. At best, all company X can hope to do is to be somewhat more prudent than its competitors, to borrow and expand less, and thus to stand firmer when the weather turns and the wind begins to howl.[45]

Assertion F: When easy money and credit lead directly to hyper-inflation, as in Germany in the early 1920s, governments may finally be forced to stop running their monetary printing presses.

As previously noted, however, there are times when easy money and credit are partially offset by deflationary factors such as productivity gains or cheap imports. In this case, inflation is masked and larger and larger economic bubbles inflate. Governments may then tighten money for a time, out of fear of inflation, but will typically try to cure the ensuing bust by starting up the printing presses all over again.

After economic bubbles such as those in the U.S. in the 1920s and 1990s and Japan in the 1980s finally burst, businesses inevitably retrench. Having borrowed and invested far too much, often in overpriced or unrealistic projects, they typically cut borrowing and investing to the minimum, knowing that they have been left with excessive production capacity, unproductive investments, and excessive debt. Since business investment is so closely linked to employment, joblessness begins to rise, and central banks begin to worry about deflation. Given the prevailing Keynesian and monetarist

view that any kind or amount of deflation is dangerous and unacceptable, it seems necessary to reflate, to start pumping money once again into the economy.

In post-bubble Japan, new yen were aggressively printed and credit expanded, but this did not prevent years of recession and a mild deflation. By 2002, total debt had reached an amount equal to six times gross domestic product, business as a whole arguably had liabilities exceeding assets, and banks had a negative net worth equivalent to a trillion dollars. Some observers, including U.S. Federal Reserve economists writing years after the fact, felt that monetary expansion should have come even sooner and faster. But Japanese such as Eisuke Sakakibara, former vice finance minister, vigorously deny that the response was slow or half-hearted. Sakakibara, at least, argues that the monetary measures would have worked better if they had been more targeted. For example, the government might have done better to inject new money directly into banks and companies, thereby wiping out their bad debts.

In the United States, the Federal Reserve chose an easy money policy in 1998 and 1999, even as the bubble became increasingly apparent, then tightened, which almost immediately precipitated a mild recession or at least a pause, then began to loosen again to forestall deflation. Altogether between 1998 and June 2002, net Federal Reserve bond purchases (high powered "new" money) totaled $170 billion dollars. Assuming

that this was multiplied ten times through bank credit, an additional $1.7 trillion entered an economy with a then gross domestic product of about $10 trillion, an amount of new money equal to the total money supply (as measured by M3) only two decades earlier at the beginning of the Reagan administration. Simultaneously, the Federal Government began to run large budget deficits and the dollar was encouraged to fall (not openly, but discretely) on international currency exchanges. All three steps were deemed stimulative, but the last was also designed to protect business sales abroad as inflation kept increasing the prices of American goods.

These measures were widely hailed. Barton Biggs of Morgan Stanley, at the time the dean of U.S. financial commentators, wrote that:

> When bubbles burst, the risk always becomes deflation. . . . What the world needs now are deflation hawks. . . .[46] Before becoming too bearish, it is well to remember that the Authorities in the West have provided massive amounts of fiscal and monetary stimulus, which reduces the probabilities of an apocalyptic outcome.[47]

Another respected commentator, Bill Gross of Pacific Investment Management Company, spoke for many when he expressed the view that the Federal Reserve's stimulative measures would at least buy the economic

system "some more time" in which to recover. And time did seem to have been bought. Although companies largely ignored all the new money and credit banks were offering, thanks to Fed largesse, consumers did borrow at a hectic pace. They borrowed to buy homes especially, or to take money out of their homes through home equity loans, and the resulting consumer spending produced what appeared to be a fairly normal business recovery, albeit one with slower than usual employment growth.

Would the new early 21st century monetary expansion be recorded in history as a brilliant response to perilous economic times? Not if the Austrians are right. In this regard, we should remind ourselves of some comments made by Friedrich Hayek in the 1930s:

> The same stabilizers who believed that nothing was wrong with the boom and that it might last indefinitely because prices did not rise, now believe that everything could be set right again if only we would use the weapons of monetary policy to prevent prices from falling.[48]
>
> ... Instead of furthering the inevitable liquidation of the maladjustments brought about by the boom during the last three years, all conceivable means have been used to prevent that readjustment from taking place; and one of these means, which has been repeatedly tried

> though without success, from the earliest to the most recent stages of depression, has been this deliberate policy of credit expansion.[49]

Laissez-faire Redux

We are now ready to try to summarize the Austrian, laissez-faire, or free market point of view:

- A fractional reserve banking system, with its over elastic but generally expanding money supply, makes the economy especially prone to boom and bust.
- Business errors proliferate when money and credit are inflated and interest rates artificially reduced by government, because some of the most critical price signals are distorted. An economic system sick from easy money and credit will benefit from more easy money as much as a drug addict will benefit from more drugs.
- Recessions, even depressions, are critical to liquidate past errors. If liquidation is not permitted, growth will be retarded, as in a garden choked with weeds.
- Economic pain deferred is not pain avoided, but rather pain compounded.

If one accepts this thesis, one can still ask whether government can or should take any action as boom

collapses into bust. Not unexpectedly, Austrian economists are not of one mind about this. The most orthodox view is expressed by economist Murray Rothbard:

> What the government should do, according to the Misesian analysis of the depression, is absolutely nothing. . . . Anything it does will delay and obstruct the adjustment process of the market; the less it does, the more rapidly will the market adjustment process do its work, and sound economic recovery ensue.

The Misesian prescription is thus the exact 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.[50]

For Rothbard, two conditions must be met for a real recovery to take place. First, the mistakes of the past must be liquidated. Second, prices (including wages) must fall until they are again in approximate balance with the amount of money in circulation. Since the money supply will contract as people take fright and stop buying and borrowing, prices must be flexible enough to adjust to whatever money supply exists. Government intervention will thwart both liquidation and flexible prices.

Wilhelm Röpke, a German who was "Austrian" in spirit but an admirer rather than a follower of Mises, thought for a time that easy money and credit creation

might be justified if applied at the bottom of a severe and intractable depression. But he came to reject this judgment, in part because it would be impossible for public officials not to cheat and use the prescription too liberally, in part because he finally decided that easy money would hurt more than help.

Some other Austrians think that, if the government intervenes at all in the bust phase of the boom/bust cycle, it should raise rather than lower interest rates. The presumption is that this will speed up the liquidation process, and the sooner liquidation is over the better, no matter how intense the momentary pain. The respected financial analyst Ned Davis, who does not describe himself as an "Austrian," wrote in 2003, after the U.S. bubble of the 1990s had burst, that, "Our biggest problem, in my opinion, is insufficient savings and excessive debt."[51]

He then went on to note that a policy of raising interest rates and eliminating the tax deduction on interest payments would most directly encourage savings. He further suggested that the *economic drag* produced by less borrowing might be offset by eliminating the current double tax on corporate dividends (paid once at the corporate and again at the personal level) and by making it easier to write off investment losses on tax returns. If these measures were adopted, "The tax code [would no longer] favor . . . debt over equity."[52]

This echoes economist Wilhelm Röpke's comment that "The attempt to make good the shortfall of

genuine savings by inflationary credit creation . . . is one of the main causes for the insufficiency of saving. . . . This vicious circle has to be broken through."[53]

Austrians would presumably agree that the worst way for government to intervene after the collapse of a bubble is to induce businesses, already overindebted and over-expanded, to take on even more debt and expand even more. The U.S. Federal Reserve's policy in 2000–2004 of inducing the consumer to borrow instead might seem to be less harmful economically. But it is morally suspect, because consumers are the least financially sophisticated players in the economy. And it is dangerous, because consumers represent two thirds of gross domestic product. If consumers become too burdened with debt, everything may come crashing down. On balance, if the government is determined to intervene, to make things better for a while at the cost of making them worse in the future, the most honest and least harmful strategy is to borrow on its own behalf, to run government deficits and expand the Federal debt while leaving businesses and consumers alone.

Whatever government does, the bottom line is that government intervention cannot cure business cycles, because it has caused them in the first place. As Murray Rothbard states:

> The business cycle [is not] a mysterious series of random events to be checked and counteracted by an ever-vigilant central government.

On the contrary, the business cycle is generated by government: specifically, by bank credit expansion promoted and fueled by governmental expansion of bank reserves.[54]

... [One might object that] if banking is the cause of the business cycle, aren't the banks also a part of the private market economy, and can't we therefore say that the free market is *still* the culprit, if only in the banking segment of that free market? The answer is No, for the banks, for one thing, would never be able to expand credit in concert were it not for the intervention and encouragement of government. For if banks were truly competitive, any expansion of credit by one bank would quickly pile up the debts of that bank in its competitors, and its competitors would quickly call upon the expanding bank for redemption in cash. In short, a bank's rivals will call upon it for redemption in gold or cash in the same way as do foreigners, except that the process is much faster and would nip any incipient inflation in the bud before it got started. Banks can only expand comfortably in unison when a Central Bank exists, essentially a governmental bank, enjoying a monopoly of governmental business, and a privileged position imposed by government over the entire banking system.[55]

Such a pure laissez-faire position is very uncommon among economists today, but it once was dominant, and it appears to be finding its voice again. As financial writer James Grant has noted, "In time, Austrian economics could be again seen as the mainstream theory. It should be."[56]

To which Rothbard, blunt as ever, adds:

> We will never break out of our economic stagnation or our boom–bust cycles and achieve permanent prosperity until we have repudiated Keynes as thoroughly and as intensely as the peoples of Eastern Europe and the Soviet Union have repudiated Marx and Lenin. [We should] hurl all three of these icons of the twentieth century into the dustbin of history.[57]

Keynes Redux

During his lifetime, Keynes had little or no contact with Mises, Rothbard's mentor. But Keynes and Mises' protégé Hayek knew each other well, and their rivalry for dominance in economics was intense. Keynes' biographer Robert Skidelsky has described the relationship:

> In Hayek's view, *The General Theory* was not a general theory of economics at all but rather a dressed-up specific theory to get around a political impasse in Britain. Keynes was no

> less slashing in his rejoinders. Hayek, he said, had started in one article "with a mistake" and then proceeded to "bedlam." Another Hayek article, he said, was "the wildest farrago of nonsense." In 1933 Keynes wrote his wife about seeing Hayek in Cambridge. Keynes sat next to him at dinner and also lunched with him the following day. "We get on very well in private life. But what rubbish his theory is."[58]

But was Keynes, after all, a true Keynesian? Could Hayek be right that *The General Theory* was really a work of propaganda, designed to sell a particular policy prescription for the Great Depression, rather than the theoretical treatise on economics it purported to be. There is some evidence for this in the book itself. It seems to have been written in haste, as evidenced by its sloppiness, its shifting definition of key terms, its many ambiguities and structural and logical deficiencies, its long passages of opaque and execrable prose (albeit interspersed with sparkling gems). These lapses were uncharacteristic of Keynes, who was generally a clear expositor and a master of the English language. Perhaps *The General Theory* could be regarded as a kind of lawyer's brief, hastily incorporating any argument that might convince the jury, without too much regard for consistency or other logical niceties.

There are also a few hints that Keynes himself thought he had overstated his case, had inadvertently

encouraged others to go too far. In his last journal article, written almost a decade after *The General Theory*, he somewhat mysteriously referred to "much modernist stuff, gone wrong and turned sour and silly."[59]

A friend also reported that:

> In my last talk with Keynes . . . [he] complained that the easy money policy was being pushed too far, both in England and [the U.S.], and emphasized interest as an element of income, and its basic importance in the structure and functioning of private capitalism. He was amused by my remark that it was time to write another book because the all-out easy money policy was being preached in his name.[60]

Whatever Keynes came to believe, what is now called Keynesianism continues to flourish. Its most contemporary academic form is called "New Keynesianism," about which economist Paul Krugman had this to say: "In reality Keynesianism *is* basically right, so it's nice to have a [new Keynesian] theory that lets us admit it."[61]

Deep-dyed Keynesians, new or old, are especially appalled by the heretical Austrian idea that the seeds of an economic bust may be found in the preceding boom. In their view, booms are good; they do not lead to malinvestment. Even bubbles do no lasting harm, and printing extra money to nourish the boom or restart a new

one does not distort prices, derange the system, or create a destructive addiction as the Austrians have alleged.

Not every Keynesian, it should be said, agrees with this. Wynne Godley, a former professor at Keynes' university, Cambridge, and self-described "unabashed Keynesian," thinks that, "The entire expansion [of the 1990s] was based on an unsustainable foundation and will have to be completely unraveled."[62]

But, in offering this opinion, Godley is departing from Keynes. As economist Axel Leijonhufvud has written:

> Keynes' reaction to the overinvestment theory of Hayek . . . was . . . that overinvestment in the past . . . should [not] cause any problems in the present; the only result would be to leave us with more capital in the present—and so much the better off for it. . . .[63]

The main object, always, is to keep the deflationary wolf from the door. Both Keynesians and monetarists deny any suggestion that the Federal Reserve set in motion events that led to the Great Depression by "printing" too many dollars during the 1920s boom. Monetary policy in the1920s had been just right, as reflected in the general price stability.

If anything, the Fed erred by tightening too abruptly in 1929, and thereafter failed to "print" enough new dollars to prevent the falling prices that precipitated depression. Since interest rates fell sharply after the

Crash, and neither money supply nor outstanding credit fell for the next year,[64] the charge is not exactly that the Fed was "tight." It is rather that policy was "loose," but not "loose" enough (although there is uncertainty about how much "looser" the Fed could have been under then existing law).

Robert Mundell, the supply-sider, has yet another hypothesis about what caused the Great Depression. In his view, the transition from a pure gold standard to a gold-based standard after World War One had been botched. Most world currencies (not just the British pound as is often alleged) had been pegged at the wrong price in gold. This idea should not be confused with the notion that the gold standard caused the Depression, because it acknowledges that the pure gold standard had been abandoned several decades earlier.

In any case, all of these interpretations—Keynesian, monetarist, supply side, or Austrian—have one thing in common: they stress the role of money. By contrast, one of the leading economists of the time, Joseph Schumpeter, said that, "I do not think that . . . Federal Reserve Policy . . . made much difference [in the years before the Depression]."[65]

This underscores Mundell's comment that "[so many] years after its beginning, there is no general agreement on the causes of the [G]reat [D]epression."[66]

Conclusion

As we have seen, the question: How much money does an economy need? lies at the very heart of both economics and politics. The attempt to answer this question leads to monetary policy, and today's conventional wisdom about monetary policy, largely Keynesian in inspiration, may be summarized as follows:

- Monetary policy is almost as complicated as Einstein's physics.
- It should be left to experts who have the training and tools needed to know what sound policy is.
- The experts, whatever their political views or affiliations, will generally agree on sound policy.
- Even politicians should not be expected to master the subject of money, despite its central importance for everyone's economic future.
- The development and execution of monetary policy must inevitably be carried out behind closed doors, using methods that intentionally obscure, both because of the complexity of the subject and because of a legitimate need for government secrecy.
- Monetary policy is best developed and executed by an "independent" central bank such as the U.S. Federal Reserve.

- Central bankers should never let a country's overall price level fall; falling prices (deflation) are the primary cause of depressions.
- In order to avoid a fall in an average price index (such as the U.S. Consumer Price Index), a degree of inflation in the index is desirable.
- To achieve this, a central bank should "print" and inject into the economy sufficient new currency to ensure that the index price always rises.
- If money growth fails to rise faster than economic growth, or worse, falls behind, an economy will start to fail for lack of "liquidity."
- A little more inflation will quicken the rate of economic growth, but too much should be avoided because it is destabilizing.
- An "easy" monetary policy with plentiful liquidity helps the poor especially by keeping economic and job growth moving up.
- Central banks should stand ready to be "lenders of last resort."
- This usually means rescuing large financial institutions that have gotten into financial trouble and might otherwise face bankruptcy.
- Recessions, which are often triggered by financial failures, are not necessary and should be avoided.

How correct is this conventional wisdom that we have just summarized? At the very least, readers will see, from the prior chapters, that each of these points

is debatable. The author of this book believes that the best evidence and arguments are contrary to the conventional wisdom on every single point:

- Monetary policy need not be complicated.
- It should be carried out in public, not in secrecy.
- It should not be left to the discretion of so-called experts who actually rely on the flimsiest of analytical tools to "fix" and "refix" prices (interest rates) that affect all commercial activity.
- Inflation is always a sign of economic failure.
- Healthy markets, free from government price fixing, will tend to deliver, on average over time, gently declining prices.
- Such mild deflation is consistent with the steadiest economic and job growth and is especially beneficial for the poor, who can buy more and more with their limited income.
- The efforts of central banks to act as "lenders of last resort" and guardians against recession ultimately backfire.
- These efforts produce more and more instability, not less, because they remove market disciplines and thereby encourage excessive speculation and risk-taking.
- Central banks' "easy money" policies also lead, over time, to excessive and destabilizing debt levels, with much of the debt unsupported by sound commercial investments.

So who is right? That is for the reader and, in the long run, history to decide. If this book and its companion volume, *Are the Rich Necessary?* have served their purpose, the reader will by now be equipped to reach an independent judgment.

Appendices

Appendix One

The U.S. Federal Reserve Board

IN MONETARY THEORIES of the business cycle, whether Keynesian, monetarist, supply side, or Austrian, central banks play a dominant role. It is vitally important to understand how they work, and the best way to do that is to look at the operations of a particular central bank, in this case the U. S. Federal Reserve.

Historical Background

The framers of the U.S. Constitution gave responsibility for money to the national government rather than to the states. Since money was primarily

gold, this responsibility was expected at the time to be limited. In time, however, the Federal Government exercised more and more control. Extensive paper money was issued during the Civil War, gold was supplemented at times by silver, the nineteenth century gold standard was abandoned during World War One (in favor of paper money backed by gold), private ownership of gold was outlawed by the Roosevelt administration in April 1933, and the official link between the dollar and gold was finally severed in 1971 by the Nixon administration, although private citizens could again own bullion. The de-linking of money and gold put the U.S. on what is called a fiat money system.

Many people thought that the outlawing of private ownership of gold (and concurrent devaluation of the dollar in terms of gold) in the 1930s would be ruled unconstitutional by the Supreme Court. But in a February 1935 decision the Court held that Congress has full power, "To regulate the currency and to establish the monetary system of the country."[67]

As a general rule, however, Congress does not directly regulate the currency. In 1913, it delegated that power to a Federal Reserve System that came into being the following year, just prior to World War One and the collapse of the nineteenth century gold standard for global money.

Organization and Duties

The Federal Reserve System (often called the Fed) consists of a Federal Reserve Board in Washington D.C. and twelve regional Federal Reserve Banks. Board members, presently called governors, are appointed by the president for fourteen year non-renewable terms, subject to confirmation by the Senate. The board's chairman is appointed by the president every four years, again subject to Senate confirmation, and is arguably the most powerful person in the United States, or at least the second most powerful after the president.

One of the Federal Reserve System's duties is to supervise banks, and much of this is carried out by the regional Federal Reserve Banks, each led by a president. Monetary policy, which principally focuses on the level of short-term interest rates and the quantity of money in the economy, is largely determined by an Open Market Committee led by the board chairman and comprised of the seven board members, the president of the New York Federal Reserve Bank, and four other presidents chosen in rotation from the other eleven regional banks.

Operations

The Open Market Committee has a choice. It can try to fix the price of money (technically the price of credit), that is, the level of short-term interest rates. Or it can try to fix the quantity of money (technically the quantity of credit). This is true of any market. One can fix price or supply but not both. In other countries, arguments rage about whether the central bank should try to fix interest rates, the price of the country's currency on global markets, or money supply. But in the U.S., the argument has largely centered on interest rates versus money supply, and the Fed has generally focused on interest rates.

The only interest rate that the Fed directly controls is the Fed funds rate, the rate the banks charge each other for inter-bank borrowing. But, by controlling this rate, the Fed can generally set short-term interest rates in general. The way the Fed controls the Fed funds rate is by buying and selling notes, bonds, repurchase agreements, and other securities. When it buys, it uses Federal Reserve checks, which draw upon nothing and thus create new money. Buying securities from banks directs this new money to banks. This in turn "liquefies" the banking system, reduces the Fed funds rate, and also creates additional reserves to support bank loans. Banks multiply this new money by being able to lend $10 for each $1 of reserves, and the new money is further multiplied as it moves from bank to bank.

The Money Multiplier

We have already covered this ground in our earlier chapter on banking, but will briefly review it again here, since the multiplier is such an important part of what the Fed is and does. Assume that person A deposits $1,000 in a bank. The bank keeps $100 for reserves and lends $900 to person B. Since person A still has $1,000, but person B now has $900, the total amount of money in the system has almost doubled. Wealth, of course, has not increased, because the $900 is a debt which must be repaid, but credit has increased the money supply to $1,900. If person B then deposits his or her $900 in another bank, that bank may keep $90 for reserves and lend out $810, which will increase the money supply further. All told, the money supply may increase through this process by as much as ten times (based on a 10% reserve).

The so-called money multiplier (referring to bank credit) must be distinguished from the Keynesian multiplier. The Keynesian or fiscal multiplier assumes that government can multiply spending throughout the economy by borrowing and spending funds over and above what it has received in taxes. Whether the Keynesian multiplier exists is doubted by many economists, and virtually all economists agree that there are circumstances under which it would either not be operative or not be desirable. The money multiplier by contrast undoubtedly exists, although there is debate about how it works.[68]

Open Market Operations

In the example above, we have considered only private depositors, borrowers, and banks. In this simple case, reserves are obtained solely from depositors. Credit (and money) levels rise or fall solely based on private demand, without any intervention by government. But bank reserves legally consist of Federal Reserve deposits as well as vault cash. When the Fed buys securities from banks with its fictitious checks, these deposits increase, reserves increase with them, and banks can then lend more. In effect, putting aside all the complexities, it is as if the Fed had simply "printed" new money and given it to banks to lend, thus expanding credit and money, or, conversely, had demanded some of the new money back, thereby contracting credit and money.

The Fed can also buy or sell securities from parties other than banks. If it buys, it will increase the money supply, but without the multiplication effect of working through banks. In the parlance of the trade, when the Fed works through banks it is creating high powered money. If the Fed buys bonds from the government, it is said to "monetize [the government's] debt." In that case, government has borrowed from itself, which is equivalent to "printing" more money, but is less likely to be noticed by the press and public.

If the Fed were to set specific money supply targets, it would generally buy securities to increase the

monetary base* and thence the money supply and sell them to decrease it. In practice, this has proved to be nearly impossible, because it is too difficult to define what money is, much less monitor how much of it there is on a real-time basis. A dollar bill clearly is money, but what about short term money market investments such as treasury bills? Might not even the equity in our homes count as money, since it can be turned into cash almost overnight through a home equity loan? What about common stocks? These do not seem to be money, but can also be turned into cash readily. On balance, a realistic definition of money today would at least include all debt as well as the broadest government measures of money per se such as "MZM" or "MOM."

If the Fed targets short-term interest rates, it is usually using these as a kind of proxy for money supply. After all, if rates fall, it means that there is more credit (and money) available, since price falls as supply increases. Conversely, if rates rise, it means that the supply of credit (and money) has fallen. By extension, if the Fed announces that it wants the federal funds rate to fall, it usually means that the Fed will be buying securities (with its fictitious checks) to create more bank reserves, credit, and money. If it wants the federal funds rate to rise, it will do the reverse.

These are good rules of thumb, but no more. Sometimes, the Fed will announce a cut in the federal funds

* Currency held by the public and banks plus bank deposits at the Fed.

rate, but keep selling securities; or an increase in the rate, but keep buying. It may also allow the rate to drift significantly above or below its stated target. Indeed, the Fed only began to reveal its target in 1994. Prior to that, it generally had a target, but refused to disclose it.

Recall, also, that other countries' central banks may use open market operations, the buying and selling of securities, for other reasons. For example, assume that a country sells much more abroad than it buys. As the foreign currency floods into the country, it will be exchanged for the local currency. Since the demand for the local currency will increase relative to the supply, its price would be expected to rise. A central bank can prevent this by "printing" additional local currency, but only at a risk of triggering local inflation (because the supply of money may grow faster than the supply of goods). To avoid or reduce the inflation, the central bank may sop up or "sterilize" the new money by selling government bonds. In this case, the open market operations are not directly tied to interest rate targets.

In the U.S., regional Federal Reserve Banks put in requests for a higher or lower federal funds rate based on their local conditions. The Open Market Committee meets every six weeks and decides. During some periods, there is much dissent among the members. During other periods, the chairman has been dominant, or consensus has otherwise been achieved.

The Fed and Capital Markets

Whatever federal funds rate is selected, the impact of the decision may be amplified in a variety of ways. For example, if rates are lowered, this may stimulate the home mortgage market, and thus home purchases, but low rates may also be greatly amplified by mortgage subsidies offered by quasi-government agencies such as Fannie Mae and Freddie Mac.

If the Fed signals that it can be relied upon to keep rates low for a period of time, this will encourage banks, along with investment funds known as hedge funds and other financial institutions, to borrow billions of dollars in the money market (short-dated securities), which are then invested in the bond market (longer-dated securities). Because bonds normally offer a higher interest rate than money market securities (a spread), the hedge fund can earn a large profit with the borrowed funds. The important point from a macro-economic perspective, however, is that the Fed has encouraged large-scale purchases of bonds, which should lower bond rates relative to where they would have been. By encouraging the carry trade, as it is known on Wall Street, the Fed has gained a degree of control over long- as well as short-term interest rates.

The power of the Fed does have limits. If official short-term interest rates fall, that does not mean that consumer rates will necessarily follow. Credit card

interest rates, for example, may rise with the federal funds rate, but then not fall. In general, they are almost always very high. Other factors may thwart the Fed as well. For example, the stock market may fall just when the Open Market Committee wants to stimulate the economy. When stocks fall, stock owners feel poorer, and they spend less. Or the value of dollar may rise, which will reduce exports, and thus reduce employment opportunities.

Contrarily, the Fed may so strongly influence the stock and currency markets that they further amplify whatever the Fed is doing. In the 1990s and early 2000s in the U.S., stock and bond markets seemed to be much more concerned with likely Fed actions than with fundamental economic indicators. If economic growth statistics looked weak, the market tended to mark up stocks and mark down bonds, the opposite of what might be expected, because of anticipation that the Fed would ease, that is lower, short-term interest rates. If growth quickened, the market similarly tended to mark up bonds and mark down stocks, again the opposite of what would have been expected. The ability of the Fed to move markets has become increasingly important as the years have passed, because less and less business financing is done through banks, and more and more through markets.

The Fed has other "traditional" tools at its disposal besides the federal funds rate and open market operations, but rarely chooses to use them. It can raise

or lower the loan reserve requirement for banks. It can raise or lower the discount rate, the interest rate charged banks that are too weak to borrow in securities markets and therefore come to the Fed as a "lender of last resort." It can change margin requirements, the amount of collateral demanded when customers borrow from brokers. But, in a world of derivative securities such as futures and options, speculators can generally get all the leverage they want, and impecunious plungers can often get it on exactly the same terms as powerful financial institutions.

The Fed's Mission

Congress has delegated control of money and banks to the Fed, and this broadly defines its mission. Beyond that, the picture is somewhat murky. Congressional debate leading up to the Federal Reserve Act of 1913 suggested that proponents of the new institution expected it to make the money supply elastic, that is, to ensure that the money supply grew at least as fast as the real economy, if not faster. The underlying theory, much disputed by "Austrian" economists in particular, is that an inelastic money supply will cause deflation, and deflation will hold the economy below its full potential. Another objective of proponents was to stabilize the banking system and prevent bank failures by providing both a regulator and "lender of last resort."

After the nineteenth century gold standard collapsed and paper (fiat) money became the norm, the idea arose that the Federal Reserve would guard against the issuance of excessive paper money, would keep currency from being too elastic, and would thus prevent inflation. Hopes were expressed that the governors of the Fed would operate in a more objective way than Congress, would put professional expertise above partisanship, and could be relied on to take a long, not a short, view of what was best for all Americans.

During World War Two, and to some extent during the Cold War that followed, it was assumed that the Fed's principal job was to finance the government that was protecting us from our enemies. In addition, in 1946 Congress passed a law making the government and the Fed responsible for maintaining "full" employment as well as keeping prices stable. The controversial Phillips Curve, developed by a disciple of Keynes, suggested that these goals were incompatible, that more employment must lead to rising prices, stable prices to less employment. A similar idea was contained in Milton Friedman's "NAIRU" (non-accelerating inflation rate of unemployment), which tried to identify a level of employment that is compatible with stable prices. These concepts have been hotly debated, but a majority of economists now agree that any incompatibility between employment and inflation goals only applies to the short-term, not to the long-term. So it all depends on how the Full Employment Act is interpreted.

What the Fed Watches

"Fed watching" is a thriving activity on Wall Street, but the Fed must also watch the economy. Since economy watching is a daunting task, it is essential to decide which data series matter most, which matter less.

The most useful series would have predictive power, would enable masters of the data to foretell the future. But this idea is no better than a fantasy. Statistics not only fail to forecast the future; they take time to gather and interpret and therefore cannot even describe the present, only the past. It is certainly better to know the past than to know nothing, although some series are so flawed or doubtful in their construction that they may be worse than nothing. The series to watch, their relevance, their construction—all of it is subject to intense debate and dispute.

If one is charged by law to foster employment but also to control inflation, as the Fed is, the obvious place to start would be with employment and inflation statistics. The most comprehensive series on employment, the payroll survey conducted by the government's Bureau of Labor Statistics, focuses on larger businesses and thus misses the smaller and new businesses where the greater portion of the new jobs are to be found. The much smaller household survey picks up all businesses, but the statistical sampling is limited. If one is interested in wage gains, the BLS also has

data, but only on hourly workers, so the vast white collar sector of the labor market remains an unknown.

The BLS also produces the Consumer Price Index (CPI), the primary measure of inflation. The techniques used to construct the index are endlessly dissected and criticized. There are reasons to think it overstates inflation and other reasons to think it understates it, with the balance shifting from period to period. The Fed itself can influence the very measure it is watching, since, for example, lower interest rates can boost home sales, higher home sales can depress rents, and rents are used to define home costs in the index. An alternative to the CPI is the Personal Consumption Expenditure Deflator (PCED) produced by the Bureau of Economic Analysis.

Apart from inflation indexes, which are backward looking, the Fed can look at commodity prices (especially the kind of industrial commodity prices tracked by the Journal of Commerce [JOC] Index) and industrial capacity utilization. The underlying assumption is that economic growth in a period of low commodity prices, plenty of production capacity slack, and above average unemployment will be noninflationary, because it will not lead to a bidding up of production factors.

A few analysts look at one commodity, gold, because they believe its price tells them whether money supplies are too tight or loose, and thus the rate at which prices will change. The Fed can also derive inflation

forecasts from the futures market, from a comparison of inflation adjusted bonds with other bonds, and from the shape of the yield curve, that is, from the relationship of bond prices and yields to each other as maturities lengthen.

Apart from consumer price inflation, there is also asset inflation to consider, as measured by stock, bond, commodity, and real estate assets. As we saw in a prior chapter, some economists and even some central bankers believe that asset bubbles are so destabilizing that monetary policy should be used to deflate or, even better, prevent them. But other central bankers demur, and say that monetary policy should confine itself to consumer prices or to some combination of consumer and currency prices.

Currency prices must be a dominant consideration for countries that borrow in currencies other than their own. The U.S. (as the possessor of the premier reserve currency) has always borrowed in dollars, and has thus not had to worry about having to repay loans in a depreciated currency. Even so, some financial analysts have argued that the stability of the dollar abroad should be a primary goal along with stable consumer prices. In any case, the Fed must at least pay close attention to the balance of payments, because a payments surplus tends to import inflation from other countries while a payments deficit tends to import deflation. The reason for this is that a surplus balance of payments increases the money supply (more money

is coming in than leaving) while a deficit decreases it (unless sellers finance the sales).

Assuming that stable consumer prices are desired, how should that be defined? If the target is zero percent inflation, might that not produce deflation as often as inflation, and is deflation not to be avoided at all cost? We will not reprise the arguments pro and con this position, but simply note that the U.S. Fed since the 1930s has voiced a strong aversion to deflation, especially during the aftermath of the bubble of the 1990s. This in turn has led some Fed board members to want to target inflation, that is, to target no less than one, two, or three percent inflation in any given year, so that there will be a cushion against deflation. The European Central Bank has in fact adopted such a policy, and specified two percent inflation as the target. Economist Paul Krugman has suggested three to four percent.[69]

Critics respond that inflation targeting is contradictory, because it applauds productivity gains in industry, but responds to them by flooding the economy with new money to bring prices back up. Or, if certain economic sectors are lagging in productivity (e.g. healthcare, housing, education in the U.S.), it underwrites their price increases by expanding the money supply.

Appendix Two

Global Monetary Systems and Institutions

IN MOST COUNTRIES, the finance minister is nominally in charge of international finance including the all important price of the country's currency. In the United States, this means the secretary of the treasury. In reality, the chairman of the central bank has much more control over a currency's international price because the central bank can raise or lower interest rates (thus strengthening or weakening demand from foreign buyers) and also "print" more or less money (thus increasing or decreasing supply).

Even central banks, however, can only do so much. A central bank may try to control the price of money (actually the price of credit) as represented by interest

rates or it may try to control the quantity of money. Alternatively, it may try to control the global price of the country's currency or the size of its global monetary reserves. But it is necessary to choose, because it is only possible to control one variable at a time.

As noted in the prior appendix, the U.S. Federal Reserve has generally chosen to concentrate on domestic short-term interest rates and to raise or lower them for almost exclusively domestic reasons. In 1987, markets became persuaded that the Fed would make an exception and raise interest rates specifically to support the dollar. As a result, the U.S. bond market, and then the U.S. stock market, plunged, until it became clear that the Fed would not proceed further along those lines.

The global monetary system that forms the backdrop for all this is negotiated between leading countries. During the past century, systems have come and gone and generally not lasted for more than a generation or two. We will focus on different types of systems, the pros and cons of each, and will conclude with a word on global monetary institutions.

1. The Classic Gold Standard

Assume that gold is money or that any paper money can be redeemed on demand in gold. The dollar is defined as some fraction of an ounce of gold, the pound as some other fraction, and so on. In effect,

there is one world currency although it is denominated in dollars, pounds, and other currencies.

If the United States imports more than it exports, gold will leave the country in payment. This might be offset if gold is flowing in for investment reasons. If not, the amount of gold (that is, money) will fall, and as gold (money) becomes scarcer, interest rates will tend to rise. As interest rates rise, economic activity will tend to fall. As economic activity falls, so will imports. At some point, gold (money) flows into and out of the country will again match and a working equilibrium will be restored. Similarly, if banks create too much credit (and thereby expand the money supply and reduce interest rates), gold will flow out of the country seeking higher rates. This will reduce the money supply, raise rates, and restore a working equilibrium. We will now consider arguments for and against a classic gold standard.

For Classic Gold Standard:

The great advantage is that the system is self-correcting: governments find it hard to manipulate. Economic downturns may be sharp, but are usually short-lived. Prices and interest rates may also rise and fall but tend to be stable over the long run. In some respects, this system makes life easier for developing countries, because a universal currency means that entrepreneurs are not saddled with uncertain local currencies and local currency debts as they are today.

For or Against Depending on One's Viewpoint:

The money supply can only be increased by finding and processing new gold. Governments cannot expand or manage it.

Against Classic Gold Standard:

Countries with gold reserves and mining potential are unduly favored.

2. The Gold Exchange System

This system prevailed in various forms from the end of World War One to August 1971. After World War Two, it was known as Bretton Woods (for the conference site where its terms were negotiated by Harry Dexter White, representing the U.S., Lord Keynes, representing Britain, and others).

Under Bretton Woods, the value of the U.S. dollar was fixed in relation to gold. (In technical jargon, gold was the numeraire and a dollar the unit of quotation). All other currencies were fixed (pegged) relative to the dollar, although subject to revaluation by their respective governments. Central banks would keep reserves of gold and dollars, and could demand at any time that the U.S. buy back the dollars in exchange for gold at the fixed rate. The pros and cons of this system were hotly debated while it lasted.

For Gold Exchange Standard:

This arrangement recognized the unique role of the dollar as a kind of international currency, one that had become the world contract standard, the major settlement currency, the pricing instrument for global commodities such as oil, the major bank clearing and travelers' currency, the main refuge for people afraid to hold their local money, and so on.

For or Against Depending on One's Viewpoint:

The arrangement allowed monetary authorities to expand world currencies indefinitely on a fixed base of gold. In theory, the U.S. would not over-expand its currency, thereby exporting inflation to the world, because other countries could stop it by demanding gold for dollars. Since the amount of outstanding dollars was far larger than the American gold reserves, a drain of gold would eventually force the U.S. to stop printing money.

Against Gold Exchange Standard:

In practice, other countries were very reluctant to demand gold, because this meant that their currencies would become "sounder" than the dollar, that is, would appreciate relative to the dollar. This would not only reduce the value of their considerable dollar reserves. It would also make their goods harder to sell abroad, which would in turn increase domestic unemployment, which might lead disgruntled voters to throw

out governments. Eventually France under President de Gaulle demanded gold in the early 1970s. The U.S. eventually refused to comply and the Bretton Woods system collapsed.

For Gold Exchange Standard:

It is sometimes argued that the world's finance ministers should have prevented the collapse of Bretton Woods by the simple expedient of accepting a French proposal to devalue the dollar relative to gold. At the time, each dollar's value was fixed at 1/35 an ounce of gold (an ounce of gold was valued at $35). If the value of gold had been set at, hypothetically, $70 an ounce by international agreement, the U.S. would then have been able to continue exchanging gold for dollars whenever demanded by foreign central banks.

Against Gold Exchange Standard:

At the time, it was objected that this re-valuation of the dollar against gold would humiliate the U.S. and reward France for its "trouble-making," since France had large gold reserves. France replied that the U.S. had been the trouble-maker by printing too many dollars, importing far more than exporting, and generally not living up to its obligations as the reserve currency country. Apart from concern about "rewarding" France, there was also opposition to "rewarding" the Soviet Union and South Africa, two large gold producers, by increasing the value of gold in dollars.

3. Floating Rates

During the 1950s and 1960s, economist Milton Friedman criticized the fixed rate Bretton Woods system and proposed that currencies should be bought and sold on a free market basis. This suggestion was dismissed as impractical. But when Bretton Woods collapsed and negotiations to repair or replace it with another fixed rate system failed, floating rates came into being (in June 1973) more or less by default.

The float was never "clean," that is, governments continually intervened by buying or selling currencies in order to manipulate their prices. But there was a widely shared presumption in the early years that currency markets were getting too big for government interventions to continue, that markets would therefore become "less dirty" over time. As Steve Forbes, editor of *Forbes Magazine*, put it in 1992, "Today, thanks to high technology,...[private money] traded over computer lines will overwhelm any resources governments can muster. Democracy is coming to international finance."70

As it turned out, this presumption proved to be incorrect: the float became ever "dirtier." In any case, we will consider the pros and cons of a "clean" free market in currencies.

For Floating Rates:

If the chief purpose of prices in an economy, in this

instance the world economy, is to convey information about supply and demand, then nothing accomplishes this better than a free market. In addition, the transparency of a free market makes it more difficult for governments to intervene, i.e. to distort prices for political reasons.

Against Floating Rates:

Floating rates create unnecessary complication and uncertainty for business owners and managers. Unanticipated currency swings may be large enough to wipe out anticipated profits on an investment or for a year of operation. In a survey of chief executive officers of the world's 1400 largest companies, currency instability was cited as the third highest concern, right behind global competition and over-regulation.[71] Companies do employ a variety of marketable financial hedges to reduce currency uncertainty, but the hedges, like all financial transactions, cost money.

The case against floating currencies was summarized by Robert Kuttner, then economics correspondent for the *New Republic*: "A market system needs a stable stage on which to play."[72]

Robert Bartley, generally regarded as an individual of the Right in politics, unlike Kuttner, who is regarded as of the Left, agreed, "What the world economy needs is the monetary stability that allows free markets to work."[73]

For Floating Rates:

According to this viewpoint, both Kuttner and Bartley are wrong. Marxists have traditionally argued that free markets of all kinds are needlessly complicated, inefficient, costly, duplicative, and so on. After the collapse of Communism, the world generally recognized that free markets are more, not less, efficient, whatever their costs. The idea that free markets are better, but that they somehow require unfree currency markets as a foundation is completely illogical. Currencies represent prices, critically important prices, and prices cannot do their job of communicating information and organizing production if fettered and distorted.

It may sound persuasive to say, along with Steve Forbes, a defender of Bartley, that, "Changes in the value of money are just as disruptive as changes in the number of inches in a foot or minutes in an hour would be."[74]

It is true that time, distance, and price are all measurements. But time and distance measurements are logical and helpful only if inert, while prices are logical and helpful only if allowed to change freely. Currency cartels and price controls, like other cartels and price controls, are economically destructive.

Against Floating Rates:

As we have noted, the classic gold standard provided automatic remedies for a situation where a country's

banking system created too much credit (and thereby artificially expanded the money supply and reduced interest rates) or where a country was importing too much relative to exports without offsetting capital flows. A floating exchange rate system also provides remedies, but they are not automatic and can be easily thwarted by government action.

In theory, if the U.S. "prints" too many dollars and inflation results, international currency buyers will push down the value of a dollar to ensure that a pound of copper (or something else) costs the same whether bought in dollars, pounds, or other currencies. This is called the purchasing power parity theory. It might work quite efficiently if we only used world markets to buy or sell goods or services. In reality, however, we also use world markets to buy and sell currencies, bonds, stocks, and other investments. These financial flows tend to swamp the volume of trade in goods, and in the process swamp purchasing power parity.

It is also unrealistic to expect free markets to discipline governments that mismanage their currencies, because so many factors enter into currency valuations. The answer to the question: what makes floating currencies rise or fall?—is a very complicated one. In the long run, free currency prices, like other free prices, simply reflect people's subjective valuations. But all else being equal, one would expect a strong currency country to:

- not inflate its domestic prices

- not import more than it exports, thereby avoiding a deficit in its trade account (relating to goods) or current account (relating to goods, agricultural products, services, foreign investment income, corporate profits earned abroad and repatriated, et al)
- borrow overseas from private investors rather than from governments or central banks consistently grow its economy
- save and invest a good share of its earnings
- become more and more productive (high productivity growth)
- offer higher real (inflation adjusted) interest rates than other countries
- promise political stability
- display military strength, or other assurances of national security etc.

In real life, countries tend at any given time to have some of these factors working for them and some against them, and markets will weigh the factors differently depending on circumstances and perceptions. Even factors that seem positive for a currency may, on closer inspection, prove to be equivocal. For example, expectation of strong economic growth typically strengthens demand for a currency. But growth increases imports, which negatively affect the trade balance, which may weaken currency demand. Whether economic growth has increased currency demand on balance at a given moment can only be a matter of conjecture.

When governments step into this complicated picture and start misbehaving (for example by "printing" too much of their currency), markets may react with a wave of selling. But, then again, they may not. Consequently, floating rates may or may not enforce financial discipline.

It is especially difficult to enforce discipline on a reserve currency country such as the U.S., because that country can always borrow in its own currency. Non-reserve countries more often than not must borrow in other, "stronger" currencies. If their own money falls in value relative to the borrowed currency, the real cost of the loan increases, sometimes dramatically. This is an inducement to arrange the nation's financial affairs in a manner designed to keep debt manageable, but it can also be a recipe for dire and unnecessary economic suffering.

4. One World Money

At various times, during the Bretton Woods negotiations and especially after the collapse of Bretton Woods, there have been proposals for a single world money other than gold, that is, for a world fiat (paper) currency. This money would presumably be issued by a designated global institution such as the International Monetary Fund and would either exist along with national monies or eventually replace them.

For One World Money:

Most of the arguments against a floating rate system are arguments for a single world money. As Robert Bartley, echoing economist Robert Mundell, has concluded, "Ideally, the [global] economy ought to have one money, with one central bank, perhaps. [In the meantime], a system of truly fixed exchange rates would simulate a world money. . . ."[75]

Against One World Money:

This is not possible. Even if it were possible and eventually adopted, political considerations would swamp economic ones, with ruinous results. A world monetary authority would never be independent of global politics, its decisions would be thought to favor some nations at the expense of others, and the system could not last.

Most importantly, the main restraint on a country's desire to "print" ever more money is concern about what this will do to the value of its currency. A world central bank would have no such worries, would "print" and inflate beyond all bounds, and would ultimately bring the world economy down.

5. Dollarization

An alternative to adopting a new world currency would be for everyone to agree on the use of an

existing currency. In the past, this has usually meant dollarization.

Dollarization in turn may take a variety of forms. A country other than the United States may simply adopt the dollar as its currency. Or, it may:

- promise to exchange its local currency for a dollar whenever demanded
- disband its central bank and adopt a "currency board" charged with issuing currency when and only when a dollar is available in reserve to meet an exchange demand
- peg its currency to the dollar and take whatever steps are necessary to support the peg.

All of these approaches have been tried by various countries and have given rise to intense debate among economists.

For Dollarization:

Economist Steve H. Hanke has strongly favored currency boards and full dollarization for many countries as a way to avoid the tendency of governments and central banks to "print" money and inflate with abandon.

Against Dollarization:

Milton Friedman, the "father" of floating rates, just as intensely opposes pegs, currency boards, and dollarization. He believes that they are both ineffective (conditions vary too much among countries) and unrealis-

tic (countries will not give up their sovereignty to the U.S. Federal Reserve Bank).

6. Managed Floating Rates

As we have noted, floating global currency rates have been ever more tightly managed by governments since their formal inception in 1973. Intervention often takes the direct form of buying and selling currency on the open market. Alternatively, it may take the form of fiscal or monetary policies designed to influence foreign exchange buyers and sellers.

Proponents of management do not necessarily agree on how it should be done. One debate is whether leading countries should try to cooperate and coordinate their interventions or should separately pursue their national interest as they see it. In the 1980s, governments generally assumed that coordination was desirable and tried to negotiate guidelines in the so-called Louvre Accord. Unfortunately, the Accord skirted the touchy issue of what individual countries would do when markets drifted away from agreed-upon parities. Before long, a much-publicized spat developed between the U.S. secretary of the treasury and the German finance minister, a spat that roiled world financial markets and ended the British chancellor of the exchequer's hope of establishing, "A more permanent regime of managed floating."[76]

An even more intense debate concerns whether or not currency "managers" should aim for a stable cur-

rency. Stability in this context may mean over time, against a basket of other currencies, against gold, or some other measure. A very different approach is to aim for the lowest possible currency price as a way of reducing the price of export goods and thus stimulating foreign sales and domestic employment. A deliberate attempt, covert or overt, to reduce one's currency price is usually referred to as devaluation.

For and Against Devaluation:

Politicians who support devaluation may simply want to win votes and stay in office. But they may also sincerely believe that the best way to bolster flagging economic demand is to devalue the currency. Of course, if all countries are intent on managing their currencies down in order to boost exports, no one country is likely to benefit from this particular maneuver. In economic jargon it becomes a zero-sum game.

Another complication is that devaluation does not stimulate domestic employment at once. When a currency price falls, imports become more expensive immediately, which raises costs for everyone (including exporters), while exports become less valuable, which initially creates a more negative trade balance.

What happens thereafter is uncertain. Proponents of devaluation say that there is a J curve: export income and employment will decline for a short while, then rise steeply as volume increases. Others say no: the J curve is a fiction. As the price of imports rises,

other domestic prices will rise with them. In the blink of an eye, the revenue gains from additional exports will be offset by more domestic inflation. Real (inflation adjusted) national income will not improve.

To make matters worse, as opponents of the J curve tell it, the inflation arrives quickly; the export volume gains may take as long as several years to follow. In the meantime, liquid international capital will not be happy with the devaluation, and will have taken flight to other, more reliable shores, leaving behind capital scarcity and higher interest rates. Although exchange controls have been used by some governments to prevent capital flight, either domestic or international, they further alienate investors and may jeopardize foreign investment for a long time.

The classical arguments against devaluation are hotly disputed, especially by the staff of the International Monetary Fund, which has often prescribed lower currency prices for failing third world economics. But as Paul Volcker, former U.S. Fed chairman, has noted, "A depreciating currency ordinarily means that imports cost more and the exports earn less foreign currency. In other words, the nation is poorer, not richer, and that's not something to jump with joy about."[77]

To which Morgan Stanley chief economist Steve Roach adds, "I have looked at economic history back to the Babylonian era, and there has never been a country that has prospered on the back of a weak currency."[78]

To some degree, of course, terms such as devaluation and weak currency are in the eye of the beholder. If a government intervenes to slow or block the appreciation of its currency, that is technically not a devaluation. Indeed, it could be called an effort at stabilization. But if not a devaluation in name, it is still a devaluation in spirit. In either case, the motives are similar: a desire to maintain or grow employment through export.

Throughout the post-World War Two period Japan followed the managed currency path, first refusing to float its currency, then controlling its rise. China subsequently followed suit, long maintaining a peg to the dollar despite mounting pressures to acknowledge its economic success by revaluing upward. These two countries, together with the United States, for many years around the turn of the 21st century formed a de facto managed currency bloc or cartel that was sometimes loosely referred to as "Bretton Woods II."

Global Monetary Institutions

Although the choice of a monetary system lies at the heart of global economics, other, collateral issues are almost as critical. In particular, there is the question of who or what should oversee a global monetary system.

Bretton Woods established two new global institutions, the World Bank and the International Monetary Fund. The former was intended to raise money among rich nations and lend it for development purposes to

the governments of poor nations. The latter was meant to assist world finance ministers, support the currency exchange system, and, among other duties, provide member states with temporary reserve financing if they were experiencing balance of payments difficulties (more money leaving the country than entering). We will briefly consider the pros and cons for each.

7. World Bank

For:

This internationalizes at least a portion of foreign aid to poor countries, provides below market loan rates, and is meant to help overcome world poverty.

Against:

Because World Bank loans are made to governments rather than private entrepreneurs, they are often invested unwisely. Sometimes the money has flowed into "show projects" such as unneeded steel mills; or it has fallen into a maw of corruption and ended up in government officials' personal off-shore bank accounts. The World Bank's affiliate, the International Finance Corporation, does make a much smaller amount of loans to parties other than governments.

8. International Monetary Fund (IMF or "the Fund")

For:

By withholding financial assistance, the IMF can often persuade the most profligate and recalcitrant governments to stop spending and accept financial discipline. When countries or central banks run into trouble through no fault of their own, the IMF can act as a "lender of last resort," thereby providing liquidity and helping to stabilize world markets. As former World Bank chief economist, U.S. treasury secretary, and Harvard president Lawrence Summers has said of both the Bank and the Fund, "It would be hard to devise better institutions than these to raise capital to transfer from the richer countries to the poorer countries and to allocate that capital effectively."[79]

Against:

One group of critics holds the IMF to be the agent of a predatory global capitalism, forcing countries to open themselves up to international exploitation in return for loans and rescue packages. A variant idea is that it is a tool of international banks. In his book, Globalization and Its Discontents, economist Joseph Stiglitz, a former chief economist of the World Bank, registers a related complaint that the IMF clings to an, "Outworn presumption that markets, by themselves, lead to efficient outcomes."[80]

Stiglitz would like to see governance reform to reduce the influence of the rich nations in the leadership of the Fund, increase the influence of poor, especially African nations, promote an emphasis on social justice and redistributive taxation, and stop relying on what he regards as "trickle down" from the rich to help the poor.

This notion of the IMF as a tool of world capitalism is not shared by advocates of free markets. They tend to be equally critical of the Fund, although for entirely different reasons, and charge that it:

- represents an outmoded ideology of central planning
- always demands sharp tax increases of governments, no matter what the problem is, even if tax rates are already insanely high, too high to be collectible
- generally recommends currency devaluation and other "beggar-thy-neighbor" policies, even though these kind of policies always backfire, as they did during the Great Depression
- foolishly condones price controls and other unworkable ideas
- promotes speculation and financial misbehavior by offering a "safety net" to failing regimes and speculators (another example of "moral hazard").

According to this line of thought, the Fund preaches government "responsibility" and "austerity," but ends up creating austerity only for the poor. In any case, as

economist Wilhelm Röpke, a champion of free markets, has observed:

Austerity is bad economics and a false calculation, because it works against people's willingness to work and to save, both so necessary today. But then, this glum philosophy is tailor-made for all planners, collectivists, and "commissars." It gives them an occupation, power, and importance.[81]

Mikhail Gorbachev, the last leader of the Soviet Union, said about the IMF's prescriptions for his country in 1992, "[The IMF program] reminds me of a form of neo-Bolshevism. . . . Stalin [also] . . . invented an artificial model and wanted to impose it on 300 million people."[82]

Economist Milton Friedman, ideologically far removed from Gorbachev, has recommended that, "The IMF be abolished."[83]

Appendix Three

Other (Non-monetary) Theories of the Business Cycle

THE BUSINESS CYCLE theories that have been reviewed in the body of the book are all monetary in nature. That is, they think that money problems lie at the root of the problem of boom and bust. But there are also non-monetary theories which either compete with or complement the monetary approach.

Non-Monetary Theory A: The business cycle reflects human nature.

Keynes expressed this point of view when he wrote about the importance of "animal spirits" in an

economy. The general idea is that the ups and downs of an economy merely reflect the ups and downs of the human psyche, which in turn reflect our genes, our collective D.N.A. John Stuart Mill pointed out the connection as early as 1830:

> Unreasonable hopes and unreasonable fears alternatively rule with tyrannical sway over the minds of a majority of the mercantile public; general eagerness to buy and general reluctance to buy, succeed one another in a manner more or less marked.[84]

The tendency to emotional extremes is in turn reinforced by our tribal behavior, a subject explored by Charles MacKay in his mid–19th century book *Memoirs of Popular Delusions and the Madness of Crowds.*[*]

There is more to this particular business cycle theory, however, than manic-depression or herd behavior. Another aspect of human nature, well documented by social scientists, is that we generally expect present conditions to persist into the future. In other words, we tend to over-estimate the probability of continuity, of more of the same, and to under-estimate the probability of discontinuity, of some significant disruption or deviance from trend.

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[*] Other books worth mentioning in this connection are British economist Frederick Lavington's 1922 work, *The Trade Cycle*, which theorized that economies rose and fell with the public's collective level of confidence, and economist Charles Kindleberg's 1978 book *Manias, Panics, and Crashes.*

This latter tendency is quite important because it leads us to take more and more investment risk as economies or stock markets rise sharply. Rationally we should do the reverse. If we all moderated our enthusiasm somewhat as things improved, we would not only be better prepared for adversity. We might avert adversity altogether.

For example, the investment firm Grantham, Mayo, Van Otterloo has studied historical periods when U.S. stock prices have been high, and found that they tend to follow years when gross domestic product has been very stable, inflation has been low, and corporate profit margins have been high. When all three factors converge, investors' confidence soars and stocks are bid up. If investors would only look more closely, they would find that corporate earnings are historically mean-reverting. That is, they tend to fall when high and rise when low, so that betting on the indefinite continuation of nearly ideal conditions is unwise.

It should be noted that some Austrians and other opponents of monetary expansion think that the "human nature" theory of the business cycle complements rather than conflicts with their own theory. Austrians hold that business cycles are caused by monetary over-expansion. But why do governments and banks over-expand the money supply in the first place? What is their motive? Government officials think that extra money will help them win the next election. Banks over-lend because they are looking to this

year's earnings report and no further. But both public officials and bankers also over-expand because they become over-confident or manic like everyone else. In this sense, monetary and psychological explanations of business cycles are simply different sides of the same coin, with each explaining aspects of the other.

James Grant, who describes himself as an Austrian, a follower of von Mises and Hayek, thinks that monetary over-expansion does much harm, but also credits a psychological interpretation of business and market cycles. He states that:

> The underlying source of recurring cycles in an economy is the average human being. . . .[85] Even if some all-knowing central bank could create a state of economic perfection—. . . human beings would respond by overpaying for stocks and bonds. In this way they would restore imperfection [because overvaluation would lead to malinvestment, disappointing returns, and transition from boom to bust].[86]

Non-Monetary Theory B: The business cycle reflects not only human nature, but also the moral failings of the market system. So long as we have a market system, the best we can do is to palliate the problem with government regulation.

This thesis runs as follows. It is human nature to fall into extremes of overoptimism or pessimism and

to follow the crowd, but it is also human nature to be greedy. According to this view, free markets inflame rather than regulate greed, and give rise to a war of employers against employees, sellers against buyers, and ultimately all against all.

Alan Greenspan, chairman of the U.S. Federal Reserve Board, looked back at the U.S. economic and stock market bubble of the late 1990s in 2002 and discovered, "[an] Infectious greed in the business community" [along with] "a once in a generation frenzy of speculation."[87]

Joseph Stiglitz, who served as chairman of President Clinton's Council of Economic Advisors from 1995–97 and chief economist of the World Bank from 1997–2000, thought that the economic record of the 1990s had been generally excellent. There had been no artificial boom and therefore no predictable bust. But he acknowledged some excesses and thought these could be traced to the deregulation of markets begun in the 1980s by President Reagan. If America had only been wise enough to keep its regulatory apparatus firmly in place, it could have had the 1990s boom without the excesses of greed and speculation that contributed to the bust.

Stiglitz' emphasis on regulation as a key facet of boom and bust also provides a possible answer to what has always been a particularly nagging question. If business owners are greedy, they must be presumed to be greedy all the time. Why then are boom and bust

so episodic? Why does greed manifest itself at certain times and not at others? The Austrians would say that boom/busts happen when government "prints" too much money and thus encourages or at least "enables" people to borrow, gamble, and ruin themselves. Stiglitz by contrast believes that they happen whenever government lets down its regulatory guard and allows business owners to run amok.

Non-Monetary Theory C: We should not look for a single cause of business cycles. They are complex and involve a shifting variety of factors.

William Beveridge noted in 1931, "Unemployment is like a headache or a high temperature—unpleasant and exhausting but not carrying in itself any explanation of its cause. [One has to] find . . . out which of . . . many possible causes is at work."[88]

What might these many possible causes include? The U.S. President's Council of Economic Advisors in 1990 cited three broad categories:

> External shocks. . . , policy errors, or widespread imbalances, such as an overaccumulation of inventories. . . . Expansions end because of [one or more of these. They] do not die of old age.[89]

When speaking of external shocks, the Council had in mind events such as a war or the Arab oil embargo in the early 1970s, which was itself connected to an Arab–Israeli

war. When speaking of policy errors, the Council did not refer to government "printing" too much money, as per Austrian theory, but rather to other policy errors. An example would be the Smoot-Hawley Tariff Act, which raised U.S. duties after the stock market crash of 1929. At least one observer has argued that congressional debate favoring tariff protection had begun well before the Crash and thus might have precipitated it. Whether or not it precipitated the Crash, most historians now believe that protection made the Great Depression much deeper than it otherwise would have been.

Non-Monetary Theory D: Business cycles are caused by the ebb and flow of new technology and other innovation.

This idea was developed by the economist Joseph Schumpeter. He believed that free markets bring with them "creative destruction" in the form of new technology and other innovation. Innovation is initially disruptive, even destructive; it shatters whatever existing equilibrium exists. But eventually order and equilibrium are regained, albeit in a new form. Both owners and workers, producers and consumers (as a group) should then find themselves richer, with many new improvements and conveniences in their lives, even though particular producers or consumers may never recover, as in the case of buggy manufacturers when automobiles arrived or workers who lose their jobs and are too old to be retrained.

Schumpeter's ideas have won many adherents, although he never explained the exact linkage between innovation and the business cycle. Schumpeter's magnum opus on the subject, the two-volume Business Cycles, described a short, intermediate, and long cycle (the last being the celebrated Kondratieff Wave of fifty to sixty years). The cycles overlapped; especially foul conditions resulted whenever all three cycles hit bottom at the same time.

Paul Krugman, the Keynesian economist, has called Schumpeter's book "turgid, almost meaningless."[90] But other economists, for example, Finn Kydland and Edward Prescott, real business cyclists who jointly won the Nobel Prize in 2004, have also expressed the view that innovation among other factors may create "shocks" which lead to boom or bust, although they have not followed Schumpeter's particular scheme.

Austrians agree with Schumpeter that entrepreneurs play a vital role in the economy in general, but disagree that innovation per se sets the business cycle in motion. In addition, Austrians such as von Mises and Hayek regard equilibrium as an economic goal, one that we strive after but never quite reach, while Schumpeter, like most other classical economists, thought of equilibrium as an economic norm, a state that can and should be achieved. Although this difference may seem merely theoretical, it is of profound importance. The mathematical approaches that now dominate economics depend upon the conceptual

possibility of reaching equilibrium. If the Austrians are right, mathematical economics represents a wrong turn toward an intellectual dead-end.

Summary Outlines

Outline One

Are the Rich Necessary?

Part One: The Central Economic Problem

1. Why Are We Still So Poor?

- Humanity should be rich, but has remained poor because savings have been continually stolen or squandered. Moreover, we keep quarreling about how we might best cooperate.

2. The Appeal of Science

- If economics could be made into a science, it would help us settle the quarrels. But there are reasons why this is not possible.

3. Economic Arguments

- Economics is primarily a form of valuation. As such, it reflects our personal values. We form and express our values by debating them, and this book presents a series of economic debates.

Part Two: The Rich

4. Are the Rich Necessary?—No

- The rich are essentially parasites.
- Wealth causes poverty, without rich people there would be no poor people.
- The problem is not simply that very rich people do not share adequately with the poor. The larger problem is that the rich steal from or exploit the poor, that, as Proudhon said, "property is theft."

5. Are the Rich Necessary?—Yes

- Our economy needs rich people precisely because they are rich.
- There cannot be too much saving if it is invested properly.
- The rich have vital work to do too, and if they shirk it or do it badly, they will lose their money.
- The charge that the rich can only make others richer through a "trickle-down" process is false.

- What would actually happen if the government decided to seize rich people's assets entirely in order to give them to the poor?

Part Three: The Rich in a Democracy

6. Are the Rich Compatible with Democracy?—No

- The rich stand in the way of democracy and often intentionally thwart it.
- We need complete democracy.

7. Are the Rich Compatible with Democracy?—Yes

- Free market arrangements are more democratic than they at first appear.
- To describe rich people as "bosses" is incorrect.
- The acid test for the idea of the business leader as servant is that there must be downward as well as upward mobility. The consumer must be able to give, but also to take away.
- The free market democratic system of one dollar, one vote is actually superior to the political democratic system of one person, one vote. In the final analysis, it is more democratic.
- Response. It is perverse to call an economic system "democratic" when poor people have so few votes.

Part Four: Profit-making

8. Are Private Profits Necessary?—No

- Private enterprise pits owners and workers against each other in a ceaseless struggle, a struggle that is ultimately self-defeating for everyone.
- The profit system is inherently inefficient.
- Quite apart from its injustice and inefficiency, the profit system does not give us the goods that we need.
- Even when the profit system produces the right goods, it denies them to those who need them the most, the poor.

9. Are Private Profits Necessary?—Yes

- Prices and profits work together as an indispensable signaling device.
- Profits are also indispensable as a system of positive and negative incentives that are objectively scored.
- At first glance, it might seem that the profit system just produces what rich people want, not what the greater number of people need. But this is wrong.
- It is also understandable that many people think of profits as "stolen" from workers. After all, do not workers' wages come out of the "skin" of owners and vice-versa? Is this not a classic

example of a "zero-sum game"? Surprisingly, the answer is no.

- Raising pay in one company will not increase the overall share of "Labor."
- Employee business ownership creates more problems than it solves.
- The kind of macroeconomics commonly taught in schools is misleading: it does not adequately acknowledge the role of profits.

10. Are Private Profits Necessary?—No/Yes

- Profit-driven change is irrational and disorderly.
- **Response:** A price and profit system gives us order, not chaos.
- The pot-of-gold-at-the-end-of-the-rainbow atmosphere of the profit system, with its uncertain, excessive, and largely undeserved rewards, encourages business owners to adopt a short-term, grab it and flee mentality.
- **Response:** On the contrary, the profit system encourages, even demands, a long-term commitment.
- Economic growth requires cooperation. The profit system encourages cutthroat, dog-eat-dog competition, which is the opposite of cooperation.
- **Response:** The profit system both encourages cooperation and channels aggressive tendencies into useful pursuits.

- We can and should devise a better economic system, one that appeals to our higher, not our lower nature.

Part Five: Profit-making and Depressions

11. Does the Profit System Cause Depressions? —Yes/No

- The blind selfishness of profit-driven markets is incompatible with employment stability.
- **Response:** The opposite is true.
- Profit-driven economies are inherently prone to depression because workers as a group are not paid enough to be able to afford to buy what they make.
- **Response:** This is false. A business owner who underpays will take the gains and either reinvest them in the economy, to be earned by other workers, or buy luxury goods, which must also be produced by other workers, or pay dividends to other shareholders, who will also either invest or buy. So long as the money is circulating in this way, there should be no failure of demand.
- To achieve employment stability, we need stable prices in our economy. The profit system gives us erratic prices, occasionally stable, but more often rising (inflation) or falling (deflation).

Falling prices in particular are a primary cause of depressions.

- **Response:** Prices have nothing in common with weights and distances. We should not want them to be stable. On the contrary, we should want them to fall. Falling prices mean that we can all afford to buy more with the same amount of income. Falling prices are what the market system should be all about, i.e. making people better off as each year passes.
- **Response:** No, falling prices are deadly. If sharp falls in prices could be matched by sharp falls in wages, then, yes, markets might be able to pull themselves out of depressions on their own. But this is completely unrealistic. Modern workers will not, under any circumstances, accept lower wages. If prices fall dramatically, wages will not fall, profits will collapse, massive unemployment will follow, and depression will persist indefinitely. The best way to keep prices from falling, and thus avert or cure depression, is for the government to increase the money supply by "printing" more money.
- **Response:** "Printing" too much money causes depressions in the first place, mostly by encouraging too much debt. To try to cure depressions with the same monetary expansion that caused the problem in the first place is like trying to cure a hangover with more alcohol.

Part Six: The Global Profit System

12. Does Global Free Trade Destroy Jobs?—Yes

- Free trade destroys jobs, especially good, high paying jobs.
- Left to itself, unrestrained free world trade produces a "race to the bottom" for labor and environmental standards.
- Free trade is ultimately about exploitation.

13. Does Global Free Trade Destroy Jobs?—No

- Free trade produces more and better jobs.
- Global markets are not trashing labor and environmental standards.
- Global free trade is not at all about exploitation.

Part Seven: Glaring Inequality

14. Are There Alternatives to the Profit System?—Yes/No

- Putting aside purely economic considerations, living with others on a share and share alike basis is simply a better way to live.
- Response: Small-scale egalitarian communities are better than a state-run collectivity, but are nevertheless impractical and self-defeating.

15. Should We Accept This Degree of Inequality? —No/Yes

- Income inequality is unjust, and uncharitable. No one should accept it with a clear conscience. The sooner and the closer we can get to equality the better.
- Response: Personal incomes are in no sense arbitrary. They are determined by supply and demand, which is a fair and reliable way to evaluate our contributions.
- Milton Friedman's assertion that the development of free markets has reduced inequality, and thus helped the poor, is equivalent to saying that inequality reduces inequality. It is nonsensical.
- Response: No, the poor especially benefit from economic growth.
- Response: Even if wealth-sharing programs slowed economic growth, we should balance the claims of growth and equity.
- Response: If you want economic growth, economic policies per se will not give it to you. Only businessmen and businesswomen can give it to you, and it does not help to undermine and de-motivate them.
- Response: Inequality is in fact increasing at an alarming rate.
- Response: Global inequality seems to be decreasing. It may be temporarily increasing within

developed countries because of the global shifts, but it is hard to say. The data are flawed.

Part Eight: Greed

16. Does the Profit System Glorify Greed?—Yes

- Private markets are indeed grounded in selfishness and greed and are thus inherently immoral.

17. Does the Profit System Glorify Greed?—Yes, and a Good Thing

- "Greed is good."

18. Does the Profit System Glorify Greed?—No

- Whether one disapproves or approves of greed, it is quite erroneous to think that markets encourage it. Markets are just technical, and thus morally neutral, mechanisms for human exchange.
- No, the market is not morally neutral, it does express an ethical principle, and that principle is certainly not greed. It is instead rational self-interest, something quite different from greed, and this is by far the best principle on which to organize a society.
- The private market is grounded neither in greed nor in self-interest, but rather in cooperative unselfishness. Adam Smith made a mistake in

thinking otherwise, and his mistake has been perpetuated.

Part Nine: Government

19. Can Government Protect Us From the Excesses of the Profit System?—Yes

- A private profit-making economy without government regulation is unbearable.
- Protecting workers is only the beginning of what the community, acting through government, must do.

20. Can Government Protect Us From the Excesses of the Profit System?—No

- Government is not synonymous with community. Like other institutions, it looks upon the world through the lens of self-interest. And because it enjoys a monopoly of coercive force, it has the potential to be the worst predator of all.
- Government is also corrupt.
- A government that is neither predatory nor corrupt can be of immense help to an economy.

Part Ten: Central Banks

21. Can Central Banks Protect Us From the Excesses of the Profit System and Lead the Economy?—Yes

- Without a central bank, there would be no way to control the dangerous excesses of the banking system and otherwise keep the economy on a steady course.

22. Can Central Banks Protect Us From the Excesses of the Profit System and Lead the Economy?—No

- The record of the U.S. Federal Reserve has been poor. The country did better before its founding. This should not be surprising. Price-fixing is especially toxic for an economy, and central banks are basically price-fixers. In general, central banks are national economic planners, and national economic planning does not work.

Part Eleven: Four Economic Value Systems

23. Competing Economic Value Systems

- Economic ideals and related value systems may be grouped under four broad headings: fraternalism, reciprocalism, equalitarianism, and philanthropism. The four types of economic value systems appear and reappear in history. Frater-

nalism tends to dominate, but all have their passionate proponents.

Part Twelve: Reconciling Opposing Viewpoints

24. Expanding the Non-Profit Sector

■ A major expansion of the charitable (non-profit) sector through tax credits offers a way forward out of the old, bitter, and often sterile quarrels between friends and foes of "big" government around the world.

Appendix A

What is a Fair Price?

■ The answer will surprise most people.

Appendix B

What Exactly Are Profits?

■ Current definitions are misleading and measurements inaccurate.

Appendix C

Did the U.S. Congress Trigger the Stock Market Bubble of the Late 1990s?

- Again, the answer will surprise most people, especially members of Congress.

Outline Two

How Much Money Does an Economy Need?

Introduction

Part One: What Kind of Prices Do We Want?

1. Should Prices Be Stable?

- When we weigh something, we want standard units. We do not want pounds or kilograms to mean one thing today, another thing tomorrow. Why then do we tolerate fluctuating currency units? Why should money not be fixed in value,

so that we can know exactly what it will buy from year to year, and absolutely rely on its value?

2. Should Prices Fall?—Yes

- Stable consumer prices make no sense at all. The whole point of free markets is to reduce prices continually, so that more and more people can afford to buy.
- Falling, not stable, prices are what we should hope for from a productive economy.

3. Should Prices Fall?—No

- The last thing we should want is falling prices. It threatens everyone's job. The main reason: a falling average price level (deflation) is too hard on people who have borrowed money. Whenever deflation threatens, the government should start "printing" more and more new money and inject that money into the economy. All the new money should stop prices falling and thus avert the economic risks of deflation.

4. Should Prices Fall?—Yes Again

- Any interference with deflation is a serious mistake. Deflation is always good, although it may be gentle and pleasant at some times (with prices on average falling one or two percent a year) and quite painful at other times (with prices falling rapidly). Pleasant or painful, it is the

economically efficient way. A period of recession or depression liquidates past mistakes, clears the ground for future growth. Rapidly falling prices make the liquidation faster.

5. Should Prices Fall?—No/Yes

- A policy of laissez-faire, of keeping government out of the economy, even in the midst of a debt/deflationary downward spiral, is neither politically realistic nor economically workable.
- No, government intervention causes the very debt deflations and economic slumps that it is meant to cure. After all, it is "easy money" that lures people into too much debt in the first place, from which the debt deflationary downward spiral eventually follows.

6. Should Prices Rise?

- Gentle inflation is good because it provides a hedge or cushion against deflation. But if gentle inflation is good, then a more vigorous inflation is better. It makes life easier for borrowers. Rising prices help the economy in another important way as well. If prices rise a bit faster than costs, business profits will be boosted.
- It may seem a good idea to help people who borrow at the expense of people who lend by inflating prices, until one realizes that (apart from banks) rich people and corporations

borrow the most. It is also important to understand that inflation may indeed boost profits and employment, but only if it is unanticipated. To keep inflation or at least the degree of inflation unanticipated, the government must be stealthy. But this kind of stealth is dishonest. In any case, when governments "print" new money, they are engaging in taxation, albeit indirectly and clandestinely.

7. What Makes Prices Unstable?

- Greed alone cannot raise prices. Another common idea about inflation is that it is caused by economic "overheating." There is something quite wrong with this logic. Another explanation of inflation is offered by critics of government "intervention" in the economy. Government intervenes in certain industries, notably health care, education, and housing, to ensure that everyone has access. The initial method is to provide financial subsidies. Because these subsidies tend to increase demand without increasing supply, prices rise, so that access is actually restricted rather than improved.
- Milton Friedman famously said that, "Inflation is always and everywhere a monetary phenomenon." Inflation may come from any of three sources: demand, supply, or government engineered money supply changes. But, very often,

money does lie at the root of the problem. We must also keep in mind that a change in the quantity of money, as important as it may be, is really less important than people's expectations about where the quantity of money is headed. Friedman's "quantity theory of money" does not turn out to be a reliable tool for forecasting or controlling inflation.

Part Two: How Much Money Do We Need?

8. Does the Economy Need More Money?—Yes

- An economy should have as much money as possible. After all, why should people suffer from a lack of money? Why should money be scarce? Unlike simple monetary expansionists, Keynes did not want to see a greater quantity of money circulating in the economy for its own sake. He wanted to see more money in the economy for a very specific reason, namely that it would reduce interest rates. Reduced interest rates would in turn promote more investment, and more investment would promote more employment.

9. Does the Economy Need More Money?—No/Yes

- If we pour water into our milk, it will look as if we have more milk, but we will not. Similarly,

if we pour more money into our economy, we may feel richer, but we will not be richer. Money has value only as a claim against real goods and services. "Printing" money cannot multiply real goods and services and therefore cannot make us wealthier.

- In the 1970s, U.S. inflation approached double digit levels. Some economists thought the government should not curtail the growth of the money supply, but should instead work with business and labor to develop wage standards and thereby slow wage growth directly. This too drew its critics. They noted that the historical record of wage and price controls, whether mandatory or "voluntary," had been dismal.
- Controls are imperfect, Keynesians acknowledge, but are arguably better than the traditional economic nostrum for controlling inflation: putting the economy through the wringer of a recession or even a depression. Recessions and especially depressions serve no useful purpose.
- Just because we want to eliminate slumps does not mean that we should also try to limit booms. On the contrary, we should seek to prolong them. Booms may falter for any number of reasons. Investors are easily "spooked." Once prices start to fall, businesses might prefer to respond by reducing wages, but wages in the modern era have become "sticky." Firings and lay-offs reduce

consumer demand, which sends the downward spiral ever lower. Adjustments are required. The first is for government to "print" money and inject it into the banking system. This reduces interest rates and thereby "jump-starts" investment.

- Critics again demur. Flooding the economy with new money will not solve unemployment. It will only make matters worse. Unemployment means that wages are too high. It can only be solved by adjusting them down until they reach an economically sustainable level.

10. Does the Economy Need More Money? —Sometimes

- Keynesian critics are not of one mind. Some agree with Keynes that government should try to stop a recession from turning into a depression. They also agree that the best way to do this is to "print" large quantities of new money to prevent prices from falling. They think he was wrong, however, to recommend monetary stimulus during normal times. In this view, monetary growth should be moderate and absolutely regular, except during true economic emergencies. In general, the "holy grail" of monetary policy should always be stable prices. This particular economic advice comes from Milton Friedman and the monetarists.

- What about when the economy slumps, but prices do not fall? The Keynesian answer was to ease monetary policy to help the weak economy, but simultaneously cut government spending to restrain inflation. The correct answer, say a group of economists known as supply-siders is just the reverse. The most important point about supply-siders, however, is that they still hew to the basic Keynesian/monetarist policy synthesis framework.

Note: Chapters 11–15 summarize the views of "Austrian" economists.

11. The Problem of Banks

- All banks are technically "insolvent" all the time, because they never keep enough money in their vaults to meet their promise to repay depositors on demand. Building free markets on a foundation of banks that are in some sense "insolvent" all the time is clearly a chancy undertaking. An effort to require banks to maintain 100% reserves against all deposits failed in British courts in 1811 and 1816.
- A fractional reserve bank can "print" new money and thus expand the money supply. In effect, then, the government can print new money on its printing presses. Or government may indirectly "print" money by inducing banks to lend more.

The upshot of this is that fractional reserve banking introduces a money supply that may fluctuate sharply.

12. Keeping Prices Honest

- The continual pouring of new money into the economy and draining of old money out of the economy (mostly the former) by governments and government influenced banks takes an unstable situation and makes it far worse by misleading and deranging the price system. Money supply fluctuations through bank credit especially distort the single most important price in the economy: the price of money itself as reflected in interest rates. Manipulating and distorting interest rates is bad enough. But governments also manipulate and distort international currency prices.

13. The Boom/Bust Cycle

- Pouring in new money, reducing interest rates, and confusing the price system may produce a temporary boom, but it will sow the seeds of its own destruction. When easy money and credit lead directly to hyper-inflation, governments may finally be forced to stop. However, there are times when easy money and credit are partially offset by deflationary factors such as productivity gains or cheap imports. In this case, inflation is masked and larger and larger economic bubbles inflate.

14. Laissez-faire Redux

- Two conditions must be met for a real recovery to take place. First, the mistakes of the past must be liquidated. Second, prices (including wages) must fall until they are again in approximate balance with the amount of money in circulation. Government intervention will thwart both liquidation and flexible prices. Whatever government does, the bottom line is that government intervention cannot cure business cycles, because it has caused them in the first place.

15.Keynes Redux

- Deep-dyed Keynesians, new or old, are especially appalled by the heretical Austrian idea that the seeds of an economic bust may be found in the preceding boom. In their view, booms are good; they do not lead to malinvestment. Both Keynesians and monetarists deny any suggestion that the Federal Reserve set in motion events that led to the Great Depression by "printing" too many dollars during the 1920s boom. This underscores Mundell's comment that, "[So many] years after its beginning, there is no general agreement on the causes of the [G]reat [D]epression."

16. Conclusion

The author describes the conventional wisdom on monetary policy, offers the personal opinion that it is entirely wrong, but invites the reader to reach an independent judgment by weighing the various arguments presented in this book and in its companion volume, *Are the Rich Necessary?*

Appendices

Appendix One: The Federal Reserve Board (U.S. Central Bank)

- In monetary theories of the business cycle, whether Keynesian, monetarist, supply side, or Austrian, central banks play a dominant role. It is vitally important to understand how they work, and the best way to do that is to look at the operations of a particular central bank, in this instance the U. S. Federal Reserve.

Appendix Two: Global Monetary Systems and Institutions

- The global monetary system is negotiated between leading countries and tends not to last for more than a generation or two. We focus on different types of systems, the pros and cons of each, and conclude with a word on global monetary institutions.

Appendix Three: Other (Non-monetary) Theories of the Business Cycle

- The business cycle theories reviewed in the body of the book are all monetary in nature. But there are non-monetary theories as well, theories that either complement or contradict the monetary approach. Theory A: The business cycle reflects human nature. Theory B: The business cycle reflects not only human nature, but also the moral failings of the market system. Whenever government lets down its regulatory guard, business owners run amok. Theory C: Business cycles are not any one thing, but reflect a great variety of possible causes. Theory D: Business cycles are caused by the ebb and flow of new technology and other innovation.

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