Trapped by the bubble
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WHEN The Economist described America’s economy as a bubble in April 1998 and advised Alan Greenspan, the Federal Reserve’s chairman, to raise interest rates to pop it, many people dismissed our warnings. Today, the Dow is even higher than it was, the economy is enjoying robust growth and the core rate of consumer-price inflation has fallen to a 33-year low. So were we wrong? Sorry to be party-poopers, but America’s economy still looks horribly bubble-like. A drop in share prices this week, as central bankers and finance ministers gathered for the annual meetings of the IMF and the World Bank, was a timely reminder that a collapse on Wall Street remains the biggest threat to the world economy.

Not convinced? Consider the three most common criticisms of the idea that there is a financial bubble. First, it is argued, higher share prices are justified by improved fundamentals. In a month that has seen the publication of three books with progressively ambitious titles—“Dow 36,000”, “Dow 40,000” and “Dow 100,000”—it seems churlish to quibble. But the climb in share prices over the past year proves neither that the market is correctly valued nor that the bubble is a figment of our imagination. History shows that markets do overshoot and that bubbles can persist for some time—indeed, that is their nature. It also shows that the bigger a bubble gets, the greater the excesses it creates in the economy—and the bigger the bang when it eventually pops.

It is, in truth, impossible to know whether share prices are overvalued right now. But over the past year or so, evidence of a bubble has mounted with every sign of excess elsewhere in the economy. Households and firms are on a borrowing spree. The private sector’s financial deficit has risen to an unprecedented 5% of GDP (in the previous 50 years it has never exceeded 1%). Money-supply growth is rapid. And America’s current-account deficit is heading for a record 4% of GDP this year. These are all classic symptoms of a bubble.

When assets become liabilities
What about the second objection: that even if shares are overvalued, why should the Fed worry? America’s inflation rate is low, so there seems no case for higher interest rates. But inflation has been held down by many one-off factors—such as a strong dollar and, thanks to weak demand in the rest of the world, low commodity and import prices—which may already be going into reverse. But more important, central banks should not ignore another sort of inflation: in the prices of assets, such as shares and property. Our survey of the world economy in this week’s issue argues that many central
banks have focused too narrowly on consumer-price inflation. Excessive rises in asset prices can be as dangerous as conventional inflation. Sudden surges in wealth can, for example, encourage excessive borrowing, which, when borrowers are forced to readjust their finances, can cause a painful hard landing.

In its latest *World Economic Outlook*, published this week, the IMF argues that conventional inflation can sometimes be a poor gauge of whether an economy is overheating, and urges central banks to pay more attention to other signs of imbalance, such as rising asset prices, rapid credit growth, private-sector financial deficits and current-account deficits. The IMF suggests that overheating in asset markets may call for monetary tightening not only when it threatens an increase in product-price inflation, but also when asset prices increase to unsustainable levels that threaten to destabilise the economy.

This does not mean that the Fed should adopt a target for the Dow. But it should take more account of the impact of asset prices on the economy. Mr. Greenspan has worried long and hard about share prices since his “irrational exuberance” speech in December 1996, but he seems to have concluded that there was nothing he could do. Why? Partly, perhaps, because of the third popular criticism of our bubble thesis: that it is too risky, both economically and politically, for a central bank to prick a bubble by raising interest rates. It is hard to tell when and by how much rates should be raised. And the Fed, like other central banks, has a mandate only to deliver stability in consumer prices. If the Fed deliberately tried to push down share prices, it would quickly come under fierce attack.

Deciding when to prick a bubble is indeed devilishly hard. But that is no reason for inaction. Instead, it argues for acting preemptively to prevent a bubble inflating in the first place—as the Bank of England recently tried to do by raising interest rates in response to rising house prices, even though inflation was below its target. The Bank sensibly wants to prevent a repeat of the late-1980s housing bubble. And its action also belies the claim that it is politically impossible to raise interest rates without hard evidence of rising inflation.

In recent years, Mr. Greenspan has been taking a big risk by not having tightened policy when he first thought a bubble might be forming, or subsequently. There were plenty of signs of overheating, such as rampant consumer borrowing, that he could have used to justify higher interest rates. His second risky move was to cut rates three times last autumn in response to financial turmoil, when policy was already lax, and then to fail to take back this easing as soon as financial markets had stabilized. The Fed has thereby fostered the impression that it will slash interest rates when share prices fall sharply, but not increase rates when they shoot up. This apparent asymmetry has created a form of moral hazard that encourages investors to take bigger risks.
What should the Fed do now? Trapped by the bubble, Mr. Greenspan’s room for maneuver is limited. Perhaps Wall Street will slide slowly downwards, letting air gently out of the bubble. But history suggests that this is unlikely. America’s economy shows no sign of slowing; July’s record trade deficit confirms that strong consumer spending is sucking in imports. Unless share prices collapse, the Fed should raise interest rates again to cool things down and to signal that it is not underwriting the market’s value. If it does nothing, the Fed runs the risk that, when Wall Street does eventually fall, inflation will be rising and the dollar falling, making it harder to ease monetary policy to offset the effects of a crash.

One bonus is that the rest of the world economy is in a much healthier state now than it was a year ago. By the same token, a sharp fall on Wall Street may be less of a worry. Even so, if America’s stock market and its economy dive, it is vital that policymakers in Europe and Japan ensure that their economies pick up the extra slack. If the Bank of Japan, for instance, were to persist with its refusal to ease monetary policy even as America’s economy stalled, the world economy would take a nasty tumble. It would be best if we were wrong about America’s bubble. But prudent central bankers should not assume that we are—for the downside risk is huge.

Navigators in troubled waters

Central banks are now more powerful than ever before. They should enjoy their moment of glory: it will not last, says Pam Woodall, our economics editor

As the world’s top economic policymakers gather this weekend in Washington for the annual get-together of the IMF and the World Bank, they should raise a glass to the central bankers who 20 years ago started their real fight against inflation. The 1979 annual meeting, which took place in Belgrade at a time of double-digit inflation and a sliding dollar, was memorable not for any policy decisions it took, but because Paul Volcker, then newly installed as chairman of America’s Federal Reserve, suddenly decided to return home before the formal business had even begun. On October 6th 1979, following a secret meeting of the Federal Open Market Committee, the Fed’s policymaking body, Mr. Volcker announced his “Saturday Night Special”: a package of measures designed to squeeze out inflation by radically changing the way the Fed controlled the money supply. This was a defining moment in the battle against inflation, and signaled the start of a new assertiveness among central banks.

Mr. Volcker succeeded in crushing inflation, but at the cost of America’s worst recession since the second world war. Nevertheless, the Fed’s boldness encouraged other central
banks to take up the fight. Today, central banks not only agree more or less unanimously that price stability should be the main goal of monetary policy, but most of them have in fact achieved it. The average inflation rate in the rich economies is currently just above 1%, its lowest for almost half a century.

The power of central banks has steadily increased over the past couple of decades. Until the late 1980s, only the Fed, the German Bundesbank and the Swiss National Bank enjoyed legal independence. Most central banks remained firmly under the thumb of finance ministries. But the surge in global inflation in the 1970s and 1980s convinced many people that politicians were not always to be trusted with the monetary levers, so central bankers were allowed to take control. The Reserve Bank of New Zealand in 1989 became the first to be given independence and a clear mandate to fight inflation. Over the past decade more and more central banks, from the Bank of England to the Bank of Mexico, have been set free.

Fifteen years ago the idea that European governments would hand over a large part of economic policy to unelected officials would have been laughed at; yet today the new European Central Bank (ECB) is the most independent central bank in the world, even more insulated from political pressures than the Bundesbank. Even the Bank of Japan, blamed by many for the Japanese economy’s painful progress from boom to bust, has been made independent. Never before in history have central banks wielded so much power.

And not only that: many of them also enjoy increased respect. This reflects their general success in defeating inflation, but more particularly, in America it also reflects the success of Alan Greenspan, who succeeded Mr. Volcker as the Fed’s chairman, in safely steering the economy through more than eight years of uninterrupted, low-inflation growth—the longest peacetime expansion in America’s history. Low unemployment and a soaring stock market have made Mr. Greenspan a popular hero. Indeed, he is probably the most revered central banker of all time. Contrast that with the early 1980s, when many small businesses saw Mr. Volcker as public enemy number one and construction workers formed picket lines outside the Fed. The chairman of the Fed has often been described as the second most powerful man in the world. Mr. Greenspan may have gone one better than that. Without such a strong economy, surely President Clinton would never have survived the Monica Lewinsky scandal.

All at sea
Over the years, central bankers have popularly been referred to as captains, admirals, pilots and lifeboatmen. Implicit in all these nautical titles is the assumption that central bankers know exactly where they are heading, how their craft (ie, the economy) works, and how their actions will affect its course. Yet in reality central bankers have more in common with the early navigators. They operate in a world of huge uncertainty, with no
reliable maps or compasses. Because of lags in the publication of statistics, they do not know precisely where the economy has got to even today, let alone where it is going. And some of the policy dilemmas they face are the equivalent of not knowing whether the earth is round or flat. So for all their increased power and independence, central banks still find that their ability to steer economies with precision is limited.

In some respects things have been getting more difficult for them. They have always had to live with uncertainty, but over the past couple of decades that uncertainty has been hugely compounded by financial deregulation and innovation. The role of central banks has traditionally been defined in terms of banks, money and inflation. Thus, at the very pinnacle of their power, it is disconcerting that they still have to ask three questions. What is a bank? What is money? And what is inflation?

As the boundaries between different sorts of financial institutions have become blurred, central banks have found banks increasingly hard to define, let alone police. The financial revolution has also distorted the traditional measures of the money supply, as people shift their savings from standard bank deposits to new financial instruments. But perhaps most worrying of all, a lively debate has recently got under way about how to measure inflation, and which prices central banks need to concern themselves with. Specifically, should they try to stabilize the prices of assets, such as property and shares, as well as the prices of goods and services?

In this increasingly foggy world, the chances of navigational errors are high. The immediate danger is not that inflation will return to the double-digit levels of the 1970s. Central bankers will be sure to raise interest rates quickly if consumer prices turn up. Instead, new hazards are looming which the navigators, still euphoric about their defeat
of inflation, have been slow to spot. The most obvious of these are an asset-price bubble in America and deflation in Japan. Awkwardly, central banks are ill-equipped to deal with either.

Today, it has become conventional wisdom that the sole objective of central banks should be the pursuit of price stability. That could be dangerous, because central banks have become obsessed with price stability as measured by the consumer-price index (CPI). By that gauge, most of them score high marks; for example, over the past three years America’s inflation rate has averaged 2.3% and Japan’s 0.8%. But the focus on CPI inflation is too narrow. Achieving low inflation does not guarantee economic and financial stability.

Look closer, and America’s economy reveals alarming signs of excess. The Fed has allowed a stock market bubble to develop that has been fuelled by rapid credit growth. Ironically, the very success of the Fed in reducing inflation may have inadvertently encouraged the bubble. American investors and consumers seem to have exaggerated expectations of Mr. Greenspan’s ability to protect the economy and so support the stock market. This faith in a “new era”, combined with low nominal interest rates thanks to low inflation, has sent share prices soaring. The Fed has made a big mistake in ignoring this, for history shows that inflation in the price of assets, such as shares and property, can sometimes be even more dangerous than the more common consumer-price sort: when bubbles burst, they can cause serious economic harm.

At the other extreme, the Bank of Japan has failed to learn from the lessons of the 1930s. In Japan, many prices and wages are now declining, and output has slumped far below the economy’s productive potential, yet the Bank of Japan has been slow to ease monetary policy, misguided concerned that it might set off inflation again. The ECB is only in its infancy, but it, too, has already shown signs of the same tunnel vision: seeing price stability as an end in itself, and underestimating its ability to use monetary policy to encourage growth when there is ample spare capacity.

Some central bankers brought up on the idea that their sole job was to kill inflation have not yet woken up to the fact that their new enemies are asset-price inflation and deflation. This does not mean that central banks should abandon the pursuit of price stability, which remains a proper long-term objective. However, they should remember that price stability is not an end in itself, but only a means to the real aim of sustaining economic growth. Price stability by itself will not prevent booms and busts, so central banks need to widen their vision to include other signs of economic imbalance. They must try to prevent both severe asset-price bubbles that can burst painfully, and deflationary conditions that depress growth.

The price of money
Central banks have a range of responsibilities, including monetary policy, acting as lender of last resort, exchange-rate policy and sometimes bank supervision. This survey will concentrate mainly on monetary policy, because that is the most important, and often the most troublesome, part of a central banker’s job. Larry Summers, now America’s treasury secretary, once said: “Monetary policy is destiny. The prospect for peace and prosperity for the rest of this century and beyond depends as much on monetary policies as on any other factor.” Are central banks up to this awesome task?

In many people’s minds, the term “central banking” conjures up visions of prudence and discipline. But, argues Mr. Volcker: “Central banks [need to be reminded of] what they are wont to warn others about: excesses of zeal and confidence.” It is a sobering fact that the increased prominence of central banks during this century has coincided with more inflation, not less (see chart 3). The gold standard did a much better job at achieving price stability than discretionary monetary policy. “The truly unique power of a central bank”, says Mr. Volcker, “is the power to create money, and ultimately the power to create is the power to destroy.”

At a time when governments are privatizing many businesses and liberalizing prices, does it still make sense for central bankers to act like central planners and fix the price of money (ie, interest rates)? At present only a tiny minority of economists say that central banks should be abolished, but if the current experiment with central-bank independence and the pursuit of price stability were to go badly wrong, many more would argue that the world could do without central banks. At the very least, there would be a political backlash against central-bank independence. To win public support for their independence, central bankers need to become more accountable and more transparent in their decision-making.
In the longer run even that, however, may not be enough to ensure their survival in the face of a potential new challenge: electronic money. In a few decades, final settlements may conceivably be made electronically by the private sector, without the need for clearing through the central bank. If so, central banks could one day lose their ability to set interest rates.

But even in the shorter term the seas ahead could get much rougher. If and when investors realize that Mr. Greenspan has not discovered a new world, America’s bubble could burst, painfully. The pain could be lessened if Japan and Europe took up the slack, but if their central banks maintain their cautious policies, the whole world economy could sink. Fickle investors, consumers and businessmen might then see Mr. Greenspan and the rest of his crew in a much less favorable light.

Monetary metamorphosis

“THERE have been three great inventions since the beginning of time: fire, the wheel and central banking,” quipped Will Rogers, an American humorist. Yet central banking as we know it today is an invention of the 20th century. The first recorded reference in English to a “central bank” was in 1873 by Walter Bagehot, then editor of The Economist, who used it to refer to a bank with a monopoly on the issue of bank notes, and its headquarters in a nation’s capital. But it is only in the past 50 years or so that the term has become widely used. At the start of this century the world had only 18 central banks; today there are 173.

Central banks’ original task was not to conduct monetary policy or support the banking system, but to finance government spending. The world’s oldest central bank, the Bank of Sweden, was established in 1668 largely as a vehicle to finance military spending. The Bank of England was created in 1694 to fund a war with France. Even as recently as the late 1940s, a Labor chancellor of the exchequer, Stafford Cripps, took great pleasure in describing the Bank of England as “his bank”. Today most central banks are banned from financing government deficits.

The United States managed without a central bank until early this century. Private banks used to issue their own notes and coins, and banking crises were fairly frequent. But following a series of particularly severe crises, the Federal Reserve was set up in 1913, mainly to supervise banks and act as a lender of last resort. Today the Fed is one of the few major central banks that is still responsible for bank supervision; most countries have handed this job to a separate agency.
The modern era of central banking, with its emphasis on monetary policy, began in the early 1970s, when the old link between money and gold was finally severed and the Bretton Woods system of fixed exchange rates broke down. When countries were on the gold standard or exchange rates were fixed, monetary policy was constrained by the need to maintain the peg. Only since exchange rates have been allowed to float has each country been able to have its own monetary policy.

At first, governments in most countries kept a tight grip on the monetary reins, telling central banks when to change interest rates. But when inflation soared, governments saw the advantage of granting central banks independence in matters of monetary policy. Short-sighted politicians might try to engineer a boom before an election, hoping that inflation would not rise until after the votes had been counted, but an independent central bank insulated from political pressures would give higher priority to price stability. If, as a result of independence, policy is more credible, workers and firms are likely to adjust their wages and prices more quickly in response to a tightening of policy, and so, the argument runs, inflation can be reduced with a smaller loss of output and jobs. Thus, like Ulysses, who asked to be roped to the mast so he would not succumb to the sirens’ song, politicians have removed themselves from monetary temptation.

Several studies in the early 1990s confirmed that countries with independent central banks did indeed tend to have lower inflation rates (see chart 1). And better still, low inflation did not appear to come at the cost of slower growth. Correlation, of course, does not prove causation. Some economists, such as Adam Posen at the Institute for International Economics in Washington, have argued that Germany’s low post-war inflation rate and central-bank independence were both determined by a third factor: namely, Germans’ dark memories of hyperinflation. Countries that dislike inflation develop institutions that will help ward it off.
No central bank is completely independent. Before the ECB was set up, the German Bundesbank was the most independent central bank in the world, yet the German government chose to ignore its advice on the appropriate exchange rate for unification, and thereby stoked inflationary pressures. Some central banks, such as the Bank of England, have full independence in the setting of monetary policy, but their inflation target is set by the government.

Independent central banks are more likely to achieve low inflation than finance ministers because they have a longer time horizon. But independence is no panacea: central banks can still make mistakes. Note that Germany’s Reichsbank was statutorily independent when the country suffered hyperinflation in 1923.

A new economy for the New World?

ONCE upon a time sailors went to sea in the belief that the earth was flat, putting them at risk of dropping off the edge. Fortunately the discovery that it was round solved that problem. Economic thinking about monetary policy and inflation has undergone a similar about-turn.

In the 1960s, the conventional economic wisdom was that monetary policy could reduce unemployment. The theoretical underpinning for this was the Phillips curve, named after Bill Phillips, an economist from New Zealand based at the London School of Economics.
Mr. Phillips, also a trained engineer, constructed a machine to demonstrate the workings of the economy, using water to represent liquidity. In 1958 he published a study showing that between 1861 and 1957 some kind of trade-off between wage inflation and unemployment seemed to have been operating in Britain: when unemployment was high, inflation was low, and vice versa. This seemed to suggest that central banks could permanently reduce unemployment by tolerating a bit more inflation.

A decade later, however, two American economists, Milton Friedman and Edmund Phelps, challenged this theory. The trade-off between inflation and unemployment, they argued, was only short-term, because once people came to expect higher inflation, they would demand higher wages, and unemployment would rise back to its “natural rate”, which depended on the efficiency of the labor market. There was no long-term trade-off between inflation and unemployment: in the long run, monetary policy could influence only inflation. If policymakers tried to hold unemployment below its natural rate (also known by an acronym, NAIRU, the non-accelerating inflation rate of unemployment), inflation would be pushed ever higher.

Just as Messrs. Friedman and Phelps had predicted, the level of inflation associated with a given level of unemployment rose through the 1970s, and policymakers had to abandon the Phillips curve. Today there is a broad consensus that monetary policy should focus on holding down inflation. But this does not mean, as is often claimed, that central banks are “inflation nutters”, cruelly indifferent towards unemployment.

If there is no long-term trade-off, low inflation does not permanently choke growth. Moreover, by keeping inflation low and stable, a central bank, in effect, stabilizes output and jobs. Don Brash, governor of the Reserve Bank of New Zealand, explains how this happens, using chart 4. The straight line represents the growth in output that the economy can sustain over the long run; the wavy line represents actual output. When the economy is producing below potential (ie, unemployment is above the NAIRU), at point A, inflation will fall until the “output gap” is eliminated. When output is above potential, at point B, inflation will rise for as long as demand is above capacity. If inflation is falling (point A), then a central bank will cut interest rates, helping to boost growth in output and jobs; when inflation is rising (point B), it will raise interest rates, dampening down growth. Thus if monetary policy focuses on keeping inflation low and stable, it will automatically help to stabilize employment and growth.
The Fed clearly understands this relationship between inflation and the output gap, but initial signs suggest that the ECB may underestimate the extent to which it can safely hold interest rates low in the short run to boost output and jobs. It has repeatedly said that lower interest rates cannot reduce unemployment. That is undoubtedly true in the long run, but if an economy is operating below potential and the jobless rate is above the NAIRU, then interest rates can safely be cut, and hence output boosted, without pushing up inflation. Statements by ECB officials often appear to suggest that all of the 10% unemployment rate in the euro area is structural and none of it cyclical. However, estimates from the IMF suggest that output in the area is currently almost 2% below potential, i.e., the economy is operating at point A. With growth in the euro area starting to pick up, the ECB is already muttering about a rise in interest rates. But it is far too soon: the area still has a significant output gap that will continue to hold down inflation.

**Is a bit of inflation good for you?**

When inflation was in double digits, central banks had a simple rule: bring it down. But now that the rate in almost all rich economies is 2% or less, they are being forced to ask: how low? This is hotly debated, because some economists believe that inflation has economic benefits as well as costs.

Consider, first, the costs. When inflation is high, people find it difficult to distinguish between changes in average prices and changes in relative prices. For example, a firm cannot tell if a rise in the price of copper reflects general inflation or a scarcity of the metal. This distorts important price signals, leading to a misallocation of resources. Inflation also creates uncertainty about the future, which reduces investment. And lastly, because of the way inflation interacts with tax systems, which are never fully indexed for inflation, it reduces the real return on saving and hence reduces future growth.

Inflation in double digits clearly does considerable harm, but what about lower rates? And does 5% inflation do more damage than 2%, or zero? Yes, answers Martin Feldstein,
president of the National Bureau of Economic Research*. He believes that even modest inflation can do significant damage through its effect on saving. Tax is levied on nominal interest income, so as inflation rises, the real after-tax return on savings comes down and people save less, which depresses future growth rates. Mr. Feldstein estimates that in America a cut in inflation from 2% to zero would permanently increase the level of GDP by 1%. To reduce inflation by two percentage points would involve a one-off loss in output of 5% of GDP, but the discounted present value of the future annual gains, of around 35% of GDP, would far outweigh the loss. Zero inflation, he concludes, is a worthy goal.

Yet there is little empirical evidence that lower inflation rates do noticeably improve growth performance once inflation is below 5%, say. A scatter plot of inflation against growth for a range of countries shows no clear trend (see chart 5). A study by Robert Barro, an economist at Harvard University, found that a reduction in inflation of one percentage point increases the annual growth rate by a paltry 0.02 of a percentage point.

Some economists go much further, arguing that modest inflation, of perhaps 3-4%, is good for growth and employment. Nominal wages, they say, tend to be rigid downwards. Workers may be prepared to put up with flat wages when the inflation rate is 3%, which amounts to a decline in real income, but they are reluctant to accept a pay cut in money terms. So if the inflation rate is zero, real wages cannot be adjusted downwards in declining industries or regions, which means that unemployment will rise. Inflation, the argument runs, greases the wheels of the labor market, allowing real wages to adjust more smoothly.
A widely cited study by the Brookings Institution†, which examined pay in America since 1959, confirmed that very few people take nominal wage cuts in any year. However, the problem of wage “stickiness” may be overstated. There have been few periods in the past when inflation has been less than 3% for an extended period, so it is not surprising that falling wages are rare. If inflation were to remain low, resistance to wage cuts might fade. Indeed, in Japan wages have been falling over the past two years. And as long as productivity is rising, allowing unit labor costs to fall, there may be no need for nominal pay cuts anyway. America’s recent experience certainly suggests that nominal wage rigidities are no cause for concern: unemployment has continued to fall even though average inflation over the past three years has been only 2%.

A second common worry about zero inflation is that interest rates cannot fall below zero, so there is no way of allowing real interest rates to become negative to help the economy out of a recession. But the need for negative real interest rates may be exaggerated. Mervyn King, a deputy governor of the Bank of England, argues that negative real interest rates have been rare in America during the past half-century‡. During most recessions, low real interest rates have been enough to boost demand. The only time when there might be a problem is if the economy suffers a shock when the output gap is already large and inflation below target because policymakers have failed to react to a previous slump in demand. A pre-emptive policy which aims to prevent inflation going below target as well as above, argues Mr. King, minimises the need for negative real interest rates.

The final and most serious concern is that if central banks aim for zero inflation, prices are more likely to fall for brief periods, and the experiences of the 1930s and Japan today show that deflation can be more dangerous than modest inflation. But falling prices are not necessarily a problem. Before the first world war, a decline in the average price level was quite common during periods of rapid technological change, such as the late 19th century; yet these were also periods of strong growth. This is quite different from the harmful sort of deflation seen during the Great Depression. Moreover, the odd year of falling prices does not matter so long as it does not feed expectations that they will continue to fall, causing households to delay spending.

On balance, the benefits of retaining some inflation are probably overstated. Price stability reduces uncertainty and so offers the best economic environment for firms and households. So why do central banks not invariably aim for zero inflation? The answer is that official consumer-price indices tend to overstate the true rate of inflation in all countries, because they do not adjust fully for improvements over time in the quality of goods and services. Estimates suggest that in most countries the official consumer-price index overstates inflation by around 0.5-2.0% a year. This is the best reason why central banks should aim for a slightly positive inflation rate.
Flat-earth economics
With rates of consumer-price inflation of 2% or under, most rich countries have therefore more or less achieved “price stability”. However, that does not mean that central bankers can go out on the town and celebrate. Despite subdued inflation, the big three central banks all face their own particular dilemmas. Japan’s economy is still at risk from deflation. The ECB is having to deal with the added uncertainty of a completely new currency, which has made the bank’s monetary policy extra cautious at a time when output in the euro area is stuck below its potential. As for the American economy, the Fed is baffled because inflation is currently lower than any economic model would have predicted.

Under the old economic rules, if unemployment fell below the NAIRU (thought to be around 5.5%), inflation would start to rise. This, in turn, implied that the maximum rate of growth the American economy could safely sustain (adding up growth in the labor force and in productivity) was about 2.25-2.5%. Today America’s jobless rate stands at a 30-year low of 4.2% and GDP has grown at an average rate of almost 4% a year over the past three years. According to the textbooks, inflation should be rising. Instead, America’s underlying inflation rate has remained subdued. Hence all the talk about the Goldilocks economy—neither too hot nor too cold.

One popular explanation of why strong growth has not pushed up inflation is that the American economy is undergoing a paradigm shift. In this “new economy”, it is argued, information technology and increased global competition have opened up new investment opportunities and boosted productivity growth. Mr. Greenspan himself frequently sings the praises of the IT revolution, and talks of a “once-a-century phenomenon”. Other economists go further and argue that in this new era of low inflation the Fed can throw away its rulebook: the notions of a NAIRU and a maximum sustainable rate of growth have become redundant. Inflation is dead.

Then again, perhaps not. America’s productivity growth in the non-farm sector has indeed increased, to an annual average of 2% over the past three years, twice the average over the previous 25 years. The big question is whether this is just a cyclical blip or a permanent increase in trend growth. If (a big if) this increase is maintained, it may raise the economy’s non-inflationary speed limit to 3% a year, say. But that does not mean there are no limits to growth: if it continues at its recent pace and the labor market continues to tighten, inflation is bound to rise.

Some people may want to believe in economic miracles, but there is an alternative explanation for America’s low rate of inflation. The country has benefited from four favorable factors. First, weak oil and commodity prices until earlier this year, and a strong dollar and weak overseas demand, especially in Asia, have held down import prices. Second, an investment boom has created excess capacity which has made it hard
for firms to pass on wage increases in higher prices. Although unemployment is at a 30-year low, America’s capacity utilization is well below its historical average. Third, non-wage labor costs have been curbed by a booming stock market, which has allowed firms to reduce their contributions to employee pension plans. And fourth, the inflation rate has been nudged down by changes in the way of measuring it.

By holding down prices, these factors have in turn helped to restrain wages. But the old relationship between a tight labor market and wage growth remains alive and well: real wage growth has accelerated over the past few years, as you would expect when the unemployment rate is below the NAIRU. This may have been temporarily offset by the favorable factors, but as these effects wear off, inflation is likely to creep up again. Oil prices are already rising; the dollar has slipped; and recovery in the rest of the world will push up import prices. There are also signs that nominal wage costs are now starting to pick up. Goldilocks is in danger of burning her tongue, and the Fed may come to regret that it did not raise interest rates sooner. Despite the increases this summer, real interest rates still remain lower than a year ago.

Reports of the death of inflation are therefore much exaggerated. Far from being dead, inflation may have taken on a new, more dangerous guise.


Hubble, bubble, asset-price trouble

ANY central banker worth his salt knows that his job is to aim for price stability. But stability of which prices? Should central banks worry only about consumer-price inflation, or also about the prices of assets, such as equities and property? Mr. Greenspan asked this question in December 1996 when he made his famous speech about “irrational exuberance” in the stock market. Since then Wall Street has climbed another 70%. How to deal with asset prices is now one of the most serious dilemmas of monetary policy.
Consumer-price inflation may currently be modest, but another sort of inflation, in share prices, is rampant. Many central bankers are privately worried about the lofty heights share prices have reached, but they do not believe there is much they can or should do about it. Such diffidence could prove damaging. Price stability, remember, is only a means to the end of maximum sustainable growth. And asset-price inflation can be even more harmful to growth than ordinary inflation.

Policymakers often claim that by pursuing price stability they will reduce the risk of boom and bust. But history suggests that, although price stability does deliver big benefits, it does not guarantee economic and financial stability. Indeed, there is reason to believe that financial bubbles may be more likely to develop during periods of low CPI inflation. The two biggest bubbles this century—America’s in the 1920s and Japan’s in the 1980s—both developed when inflation was modest.

One explanation is that when inflation is subdued, interest rates look low, thanks to “money illusion”: people fail to notice that in real terms rates are just as high as in more inflationary times. This encourages a borrowing binge and prompts investors to chase higher and hence riskier returns. When interest rates are low, people are also able to borrow a much bigger multiple of their incomes to finance speculative investment. At the same time, price stability can sometimes encourage economic euphoria. With seemingly no reason for central banks to raise interest rates, people start to expect that the expansion will continue indefinitely. This false sense of security encourages investors to take bigger risks, and lenders to relax their standards.

Flemming Larsen, the deputy director of research at the IMF, pointed out in a recent speech that there was much evidence that an economy can overheat even at a time of price stability as conventionally defined. Excess demand shows up instead in balance sheets and asset prices. Traditional indicators of inflation may mislead monetary policymakers. Central banks, he argued, should pay more attention to asset markets and to unsustainable balance-sheet trends, and may need to raise interest rates even if inflation remains low.

William McChesney Martin, governor of the Fed in 1951-70, memorably described the Fed’s job as being “to take away the punch bowl just when the party is getting going”—ie, before the economy overheats and pushes up inflation. But there is more than one sort of party. The Fed has failed to remove the punch bowl from Wall Street’s speculative binge.

By describing America’s economy as a bubble in early 1998, *The Economist* made few friends for itself in that country. Optimists claim that the surge in share prices reflects the “new era” of rapid growth in productivity and profits, brought about by new technology and corporate restructuring. This, they argue, justifies the high share prices recently seen.
The P/E ratio of the S&P 500 currently stands at 33, compared with an average of 14 over the past century. By every standard method of valuation, Wall Street is now more overvalued than it was on the eve of its crashes in 1929 and 1987.

United Stocks of America
It is true that there have been some genuine improvements in the performance of the American economy, justifying part of the rise in share prices. But only part. Irrational exuberance may have turned these genuine gains into a bubble, so that investors have unrealistic expectations of future profit growth and have convinced themselves that the old methods of share valuation are redundant. Indeed, there are remarkable similarities with America in the 1920s and Japan in the 1980s (see chart 6).

In the 1920s, people also believed in a new era of faster growth arising from new technology. The only difference was that at that time most of the excitement was generated by cars, airplanes, electrification and the radio, rather than by computers, telecoms and the Internet. Convinced, like many others, that the boom-bust cycle was a thing of the past, Irving Fisher, an economist at Yale University, made his infamous observation on the eve of the 1929 crash that “stock prices have reached a permanent and high plateau.” In the same way, in Japan in the late 1980s a belief at home and abroad that its economic model was superior to those of other countries convinced investors that strong growth and rising share and property prices could continue forever.

Today, besides runaway share prices, America shows plenty of other signs of excess. Consumers have been on a borrowing and spending binge, and household saving has turned negative for the first time since the 1930s. Firms are also borrowing heavily. As imports soar, America’s current-account deficit is heading for a record 4% of GDP. The
property market is also starting to look frothy: prices of prime residential property in many big cities are soaring. Last, but not least, money-supply growth seems excessive. These are all classic symptoms of a bubble.

Stephen King, an economist at HSBC, has drawn up a checklist of 12 tell-tale signs of bubbles based on previous episodes. In America ten out of those 12 are flashing red. Joseph Kennedy boasted that he got out of the market in 1929 because even shoe-shine boys were offering share tips. Perhaps today’s equivalent is the New York taxi driver who keeps one hand on the wheel and the other on his laptop computer, punching in share orders online.

In many other countries, too, share prices have been rising rapidly. Indeed, over the past four years some European stock markets have risen by even more than Wall Street. But they started from lower levels, so they look less overvalued. More important, there are also fewer signs of excess, such as a borrowing binge. In general, households in continental Europe own far fewer shares than their American counterparts (see chart 7), so the increase in wealth from a booming stock market, and the effect on the wider economy, has been much smaller. That is why these economies are less vulnerable to a sharp fall in share prices.

The trouble with bubbles
If America is experiencing a bubble, what should the Fed do about it? There are four reasons why it (and other central banks) should worry about asset-price inflation:

• It can be a leading indicator of CPI inflation, if rising asset prices spill over into excess demand. The increase in wealth encourages consumers to splurge. At the same time rising share prices reduce the cost of capital, so firms invest more. American retail sales
have jumped by more than 8% over the past year. So far, the effect of excess demand on prices has been offset by other factors. But for how long?

• The consumer-price index is a flawed measure of inflation. Ideally, an effective measure should include not only the prices of goods and services consumed today, but also of those to be consumed tomorrow, since they, too, affect the value of money. Assets are claims on future services, so asset prices are a proxy for the prices of future consumption. For instance, a rise in house prices today will increase the cost of future housing services. A classic paper written in 1973 by two American economists, Armen Alchian and Benjamin Klein*, argued that central banks should try to stabilize a broad price index that includes asset prices. Estimates suggest that in America such an index has recently been rising faster than at any time since the late-1980s boom.

• Just as high consumer-price inflation tends to blur relative price changes, surges in asset prices also distort price signals and cause a misallocation of resources. For instance, if the cost of capital is artificially low, firms may be tempted to over-invest in risky projects. American business investment has jumped from 13% to 18% of GDP over the past six years, similar to the surge in Japan in the late 1980s. As the quantity of investment surges during a bubble, its quality typically deteriorates.

• When a bubble bursts, it can cause severe economic and financial harm. Rising asset prices encourage excessive borrowing by firms and individuals, leaving them heavily exposed to a fall in asset prices and a recession. The longer the party continues, the worse the eventual hangover, because imbalances, such as the level of debt, will be even bigger.

Given these costs, there is a strong case for central banks to pay more attention to rising asset prices, and to raise interest rates to deflate a bubble in its early stages. This does not mean that central banks should try to target share prices, or change interest rates in response to every twitch in the Dow. But if a sharp rise in share prices is accompanied by rapid growth in domestic demand and a steep increase in borrowing, alarm bells should start ringing.

However, most central bankers, particularly those at the Fed, are hostile to the idea of trying to puncture bubbles. Monetary policy, they argue, should concentrate on stability in the prices of goods and services, and central banks should respond to asset prices only if they spill over into general inflation. Central bankers offer three reasons why they should not attempt to prick bubbles. First, they say, it is impossible to be sure that a rise in asset prices represents a speculative bubble, rather than an upturn justified by improved economic fundamentals. Intervening to prick a bubble, says Mr. Greenspan, presumes that central banks know more than the market. But the market is not disinterested. It is to investors’ and securities firms’ advantage to keep a bubble going. Central banks, on the other hand, are able to take a more balanced view. True, it is
impossible to estimate the “correct” value of equities, but monetary policy is always dealing with uncertainty. Central banks do not give up on trying to target consumer-price inflation just because they are unsure about the pace of productivity growth or the size of the output gap.

A second problem with pricking bubbles is that central banks have no laser-guided weapons for the purpose. The one they can deploy, interest rates, acts more like a nuclear bomb, affecting the whole economy. The link between interest rates and asset prices is also uncertain, so it is hard to know by how much to raise rates. Experience suggests that stock markets shrug off timid rate increases, but bold increases can have dangerous results.

Last, and most important, central banks do not have a political mandate to halt asset-price inflation. The awkward truth is that bubbles are popular. Whereas everybody accepts that inflation in goods and services is a bad thing, almost everybody regards rising equity and property prices as a good thing. If, by raising interest rates, the Fed were to reduce the wealth of the 50% of American households who own shares, it would not be long before Congress acted to curb the Fed’s power.

Asset prices were high on the agenda at this year’s annual meeting of central bankers at the Federal Reserve Bank of Kansas City symposium in Jackson Hole, Wyoming. Mr. Greenspan devoted his speech to the subject, stressing the uncertainties in valuing shares. Much to his relief, no doubt, the paper on monetary policy and asset prices presented at the conference supported the orthodox view that monetary policy should not respond to a rise in share prices unless it signals higher CPI inflation. But this conclusion was based on a model which simulated the economic effects of bubbles in a rather mechanical way. It did not take account of how investors’ perception of policy might cause a bubble to inflate if, for example, they expect a central bank to cut interest rates when share prices fall, but to do nothing when they rise—as in America today.

How not to do it
There are two examples of central banks deliberately trying to burst a bubble: America in 1928-29 and Japan in 1989-90. Both attempts did indeed end in tears. But that was largely because both central banks left it very late before they acted, and then pursued over-tight policies after asset prices had crashed. The lesson may be not that central banks should keep clear of bubbles, but that they should intervene as early as possible to prevent them.

In Japan, share prices and property prices increased more than fourfold between 1981 and 1989. Geoffrey Miller, the director of the Center for the Study of Central Banks at New York University, who has studied Japan’s bubble**, reckons that with hindsight it is clear that monetary policy was too lax. The Bank of Japan started to fret about rising property
and share prices and rampant bank lending in 1987. If it had tightened policy then, the economic damage would have been considerably less. So why did the bank wait two more years?

Uncertainties about whether it really was a bubble and how asset prices would respond to higher interest rates both played a part. And as in America today, CPI inflation was low (in part because of a strong yen), so politically the bank would have found it hard to take action. But, says Mr. Miller, the Bank of Japan also faced another constraint: political pressure from America. The Louvre Accord agreed by the G7 in early 1987 committed Japan to boosting domestic demand to help reduce America’s trade deficit.

Mr. Miller concludes that pricking bubbles is far from easy. But he argues that there will be times when asset-price bubbles become so large that they pose a threat to the entire economy—and when they do, central banks should raise interest rates to deflate them.

**Two enemies, one bullet**

A central bank has only one main weapon: interest rates. So if it decides to raise rates to prick a bubble when consumer-price inflation is already low, this could result in falling prices in product markets. But is that necessarily a bad thing? During previous periods of rapid productivity growth, such as the last quarter of the 19th century, average prices did fall. This was a benign sort of deflation, in contrast to the malignant sort where output and prices spiral downwards. Perhaps, as argued in an essay in the latest annual report of the Federal Reserve Bank of Cleveland, prices should be falling now in America. The essay summarises arguments made by economists in the 1920s and 1930s, which suggest that at times of rapid technological change overall price stability and economic stability may be incompatible.

Indeed, it is possible that if rapid productivity gains are pulling down the costs of production, price stability might be the wrong goal. Earlier this century, several economists argued that increased productivity growth brought about by technological advances in the 1920s should have caused real incomes to rise as prices fell relative to wages. Instead, a lax monetary policy prevented prices from falling, and nominal wages lagged behind productivity growth. As a result, profits surged, and share prices soared on the false expectation that this happy state of affairs would continue indefinitely.

The essay asks whether this might describe the situation today in America. An overly lax monetary policy is counteracting falling prices, and so artificially inflating profits, which misleads investors. The surge in share prices causes an investment boom and the expectation of further gains attracts capital from abroad. The excess capacity thus created, and a strong dollar, have held inflation down, so the Fed has ignored excessive money growth. In this way, by aiming for a low but positive inflation rate, a responsible central bank could inadvertently pursue an over-expansionary monetary policy. Central
banks, concludes the essay, need to be on guard against unusually strong money growth during periods of rapid technological change and exuberant financial markets. This does not mean central banks should throw away their long-run objective of price stability, but should set it in a broader monetary framework and recognize that price stability has limitations as an indicator of overall economic health.

Although most central banks have ignored asset prices, the Bank for International Settlements (BIS, the central bankers’ bank) has been sounding the alarm for years. Its latest annual report expresses deep concerns about the surge in share prices in America. Charles Goodhart, a member of the Bank of England’s Monetary Policy Committee, has also argued for several years that central banks have concentrated on too narrow an index of inflation. The focus on the CPI, he says, is one of the main reasons why monetary policy was too lax in Britain during the property bubble in the late 1980s, and then too tight in the early 1990s. In a recent paper†† he argues that housing and financial assets should be included in some way in a broad inflation index. But in practice this would be tricky, because asset prices are volatile and hard to interpret.

In its latest World Economic Outlook, the IMF accepts that there is no mechanical way to take account of asset prices in setting monetary policy, but vigorously agrees that central banks do need to pay much more attention to asset prices. “In particular, central banks should examine asset-price inflation in light of other developing imbalances that can be suddenly reversed, including external and private-sector financial balances as well as [rapid] growth in money and credit.” Is Mr. Greenspan listening? The unexpected increase in British interest rates in early September, in response to rising house prices, suggests that the Bank of England is.

Central banks would be wise to pay attention to such advice, because international financial liberalization may increase the future risk of bubbles. Bill White, chief economist of the BIS, argues that thanks to financial liberalization, monetary policy now works increasingly through the exchange rate. When an economy expands rapidly and interest rates are expected to rise, the exchange rate quickly appreciates, helping to keep inflation in check. As a result, interest rates need to rise by less than they otherwise would, leading to a greater risk of bubbles in asset markets. In both Japan in the 1980s and America in the late 1990s, inflation has been held down by strong exchange rates.

Mr. Greenspan recently conceded that: “If we could find a way to prevent or deflate emerging bubbles, we would be better off. But identifying a bubble in the process of inflating may be among the most formidable challenges confronting a central bank.” Mr. Greenspan first started to fret about America’s current bubble three years ago. Ideally, an omniscient Fed should have tightened policy then; it is now too late to deflate the bubble gently. In December 1996, Mr. Greenspan probably thought he was going to let out some air with his “irrational exuberance” speech, which was followed by a quarter-point rise in
interest rates. Instead, share prices continued to surge. In light of the various technical and political constraints, he now seems to have decided that there is nothing he can do but cross his fingers and let the bubble burst by itself.

Anxious Alan
Nobody can predict when that will be, but eventually it will happen, perhaps because the dollar starts to tumble as foreigners become less willing to finance America’s widening current-account deficit, or because rising inflation pushes up bond yields. Mr. Greenspan thinks a slump in share prices need not be catastrophic for the economy if policymakers respond correctly. The Great Depression and Japan’s recent slump, he argues, were caused not by bursting bubbles, but by excessively tight policies after asset prices had plunged. In contrast, says Mr. Greenspan, after the 1987 stock market crash, central banks pumped liquidity into the financial system, and economies continued to expand.

Mr. Greenspan’s confidence that he can use monetary policy to prevent a deep recession if share prices crash exposes an awkward asymmetry in the way central banks respond to asset prices. They are reluctant to raise interest rates to prevent a bubble, but they are quick to cut rates if financial markets tremble. Last autumn, in the wake of Russia’s default and a slide in share prices, the Fed swiftly cut rates, saying it wanted to prevent a credit crunch. As a result, share prices soared to new highs. The Fed has inadvertently created a sort of moral hazard. If investors believe that monetary policy will underpin share prices, they will take bigger risks.

Is Mr. Greenspan right in thinking that a stock market crash would have as little impact on the economy as in 1987? The impact on consumer spending would be much bigger today, because about half of all American households now own shares either directly or via a mutual fund or pension plan, compared with just over a quarter in 1987. Moreover, the impact of the 1987 crash on consumption was modest because the stock market rebounded quickly. Today, a 40% drop in share prices (broadly the same as in 1987), if sustained for a period, would probably tip America into recession. Mr. Greenspan may hope that he can prevent a deep recession by cutting interest rates, but America’s economic imbalances, notably the level of private-sector borrowing, are getting so large that the landing looks quite likely to be hard.


†“Monetary Policy and Asset-Price Volatility”, by Ben Bernanke and Mark Gertler. Federal Reserve Bank of Kansas City Symposium, August 1999

Bonfire of the insanities

SOME economists believe that there is no such thing as a bubble because markets are always rational and efficient. But history suggests otherwise. In their time, tulips, canals, railways, gold, silver, property and share prices have all bubbled up and then gone “pop”. Each time investors convince themselves that this time it will be different. It never is.

The craziest bubble of all time was tulipmania in the Netherlands in the 1630s. Tulip bulbs, newly arrived from Turkey, became wildly fashionable, and prices soared. At the height of the mania, speculators paid 5,500 florins (equivalent to more than $50,000 in today’s money) for a single rare bulb. Charles Mackay, in his classic 1841 book “Extraordinary Popular Delusions and the Madness of Crowds”, tells how one unfortunate sailor, who was rather partial to onions, was sent down to a rich man’s kitchen for breakfast, and ate a tulip bulb worth 3,000 florins by mistake. He ended up in prison, but at least he had a good laugh a year later when prices plunged and bulbs became virtually worthless.

Another infamous example was the South Sea Bubble in 1720. The London-based South Sea Company came up with an ingenious plan to take over Britain’s national debt in return for interest and sole trading rights to the South Seas (South America) and hence, in theory, access to the treasures of the gold and silver mines in Peru and Mexico.

The snag was that Spain already controlled those trading rights, which made it difficult for the company to generate profits. Even so, speculators frantically bid up the share price. It rocketed from £130 to £1,000 within seven months, then collapsed abruptly, leaving many investors ruined and landing the chancellor of the exchequer of the day in prison. Even Sir Isaac Newton averted his gaze from the stars for long enough to buy some shares and make a profit, then buy some more and lose a packet. His comment? “I can calculate the motion of heavenly bodies, but not the madness of people.”

Every time a bubble appears it looks different, but there are common features. James Grant, the editor of a New York-based financial newsletter, says the basis of bubbles is usually one part fundamental (eg, a technological revolution), one part financial (an explosion of cheap credit) and one part psychological (a suspension of traditional valuation norms). Rising prices draw in ever more investors, all convinced that prices will go on rising. Charles Kindleberger, an American economist, put it nicely: “There is nothing so disturbing to one’s well-being and judgment as to see a friend getting richer.”
Living on borrowed time

MANY Americans like to argue that their economy is healthy and well-balanced, unlike Japan’s in the late 1980s. So even if the stock market did collapse (which of course it won’t), it would inflict little real economic damage. They clearly have not looked at the figures for private-sector debt recently. American households and firms are on a borrowing binge, with combined debts at record levels in relation to GDP (see chart 8). That means a collapse in share prices could have severe consequences.

In several economies, but most notably America’s, central banks’ preoccupation with price stability has blinded them not only to rising share prices, but also to an explosion of credit. As rising share prices have made households wealthier, at least on paper, American consumers have been increasingly relying on borrowing to finance a spending spree. Total household debt has risen to a record 102% of personal disposable income, up from 85% in 1992. Most alarming is the doubling since 1996 of margin debt (borrowing against shares). Consumer debt-service payments are also at record levels, despite low interest rates. There are already signs that consumers are becoming overstretched. Credit-card write-offs have soared and personal bankruptcy rates are at a record high. One reason, suggests an analysis by Maureen Allyn, chief economist at Scudder Kemper, is that the biggest increase in debt has been among low-income families.

Companies’ debts have also recently hit a record level as a percentage of corporate-sector GDP. In 1998 non-financial businesses increased their debt by more than $400 billion. If
all of this had been invested in plant and machinery there would be less cause for concern, but over half of it was used to finance share buy-backs. As with household credit, the quality of corporate credit has also deteriorated. Despite the booming economy, non-performing bank loans have risen, and the default rate on corporate bonds is running at its highest level since the early 1990s.

In relation to financial assets, debts look less alarming, thanks to higher share prices; indeed the ratio of households’ debts to their directly owned financial assets has fallen from 45% to 37% over the past five years. The ratio of companies’ debt to equity at market value has also fallen. But share prices can fall, whereas debt remains fixed in value. And only income can service debt; financial assets cannot pay interest bills unless the assets are sold. If everybody is forced to sell, share prices tumble further. Indebted American households and firms are therefore vulnerable to a rise in interest rates or an economic slowdown. As Warren Buffett once said, “Until the tide goes out you don’t know who’s swimming naked.”

In setting policy, central banks give too little weight to the growth in bank credit. Work by the BIS* has found that rapid credit growth played a big role in the asset-price bubbles in Japan, Britain and Scandinavia in the late 1980s. Credit expansions and asset-price booms tend to be self-reinforcing. Faster credit expansion boosts economic activity, profits and hence asset prices. In turn, rising asset prices flatter balance sheets and so allow households and firms to borrow more. In this way, a credit boom fuels a speculative bubble.

Another sign of America’s borrowing binge is the growth in the private-sector financial deficit (firms’ and households’ savings minus total investment). This has surged to a record 5% of GDP this year, from a surplus of almost 4% in the early 1990s (see chart 9). That is why Mr. Greenspan is unwise to draw comfort from the American economy’s soft landing after the 1987 collapse in share prices. In 1987 the private sector had a modest financial deficit of only 0.8% of GDP. The unprecedented deterioration in American private-sector net saving over the past few years greatly increases the risk of a hard landing. At some point, when share prices fall or growth slows, people will reduce their borrowing and save more. Investment and consumption could sag.
In the late 1980s, Japan, Britain and Sweden all experienced a remarkably similar deterioration in private-sector net saving, at the same time as property and share prices soared. When the bubbles burst, all three economies saw a sharp increase in net savings as firms and households were forced to repair their balance sheets, triggering deep recessions.

**Digging a deeper hole**

The biggest risk is that high levels of debt and falling asset prices might trigger debt deflation, a concept first developed by Irving Fisher in 1933. Fisher placed much of the blame for the Great Depression on the excessive levels of debt taken on during the boom years of the 1920s. Debt deflation—a spiral of falling asset prices, rising debt-to-asset ratios, forced asset sales, an increase in bad debts, and a decline in bank lending—can seriously amplify a downturn. And lower interest rates do little to stimulate the economy, because the overhang of debt discourages people from borrowing more. In the early 1990s the deepest recessions were in countries that had seen big increases in private-sector debt in the late 1980s, most notably Britain (see chart 10).
Could debt deflation happen in America? The impact of falling asset prices should be less severe than it was on the Japanese economy, partly because America is less dependent on banks for credit and more dependent on capital markets. In America, banks hold only a quarter of total financial assets, compared with three-quarters in Japan. This means that any losses would be less concentrated on banks, and spread more around the economy. America’s banking system also looks in better shape than Japan’s. Banks have not invested directly in equity markets; far fewer loans are collateralized against land or shares than in Japan; and accounts are more transparent. American banks currently boast strong capital ratios.

However, there are still several potential problems. For instance, increased competition from the capital markets has reduced the quality of lending, forcing banks to move into riskier areas. And although banks themselves have not invested directly in equities, they have lent heavily to hedge funds that have done so. The near-collapse last year of Long-Term Capital Management, a large hedge fund, gave some indication of banks’ involvement in the recent growth in financial leverage.

America’s borrowing binge means that if the economic bubble does burst, Mr. Greenspan will face the toughest test of his career. But at least he may have learnt a lesson from Japan’s mistakes.


What’s your problem?
WHILE the American economy is currently running with the wind, its sails full out, Japan’s economy has been stuck in a liquidity trap in which monetary policy can become ineffective. Japan is the first developed economy since the 1930s to face the threat of deflation, and sadly it has ignored some of the lessons from the Great Depression.

Like other central banks, the Bank of Japan has focused too narrowly on price stability in recent years, although in a completely different way from the Fed. The bank, which was granted full independence in matters of monetary policy only last year, has a legal mandate to pursue price stability. Unfortunately it seems to have taken this rather too literally. Over the past three years, Japan’s rate of consumer-price inflation has averaged 0.8%, so judged by its objective the bank might be thought to have done a superb job.

In reality, though, Japan has been experiencing price deflation. Its consumer-price index fell by only 0.1% in the year to July, but the official index probably overstates inflation by somewhat more than in other economies, because it fails to take proper account of recent shifts in spending from traditional retailers to discount stores. Measured correctly, Japan’s consumer prices would show a bigger drop. And this is not the benign type of deflation in which technological advances boost productivity and reduce costs, but the malign sort due to weak demand and excess capacity.

Producer prices have fallen in seven of the past nine years (see chart 11). Average wages in manufacturing fell by 3.2% in the year to July. And because of the prolonged slump, Japan’s output gap has widened to around 8% of GDP, bigger than in any big rich economy since the 1930s. Its economy at last shows sign of revival, but Japan has come dangerously close to sliding into a deflationary spiral in which people delay spending because they expect prices to keep falling, thus putting further downward pressure on prices.
Don’t repeat after me
Japan offers a lesson in what not to do after an asset-price bubble bursts. The Bank of Japan was only partly to blame for the bubble itself, because during the 1980s it was under heavy pressure from the Ministry of Finance to hold down interest rates to boost demand and so help reduce America’s trade deficit. The economy was therefore awash with liquidity. Equity and land prices more than doubled in the three years to December 1989, and firms and households borrowed heavily on the basis of those inflated prices.

When Yasushi Mieno took over as governor of the Bank of Japan at the peak of the speculative bubble in 1989, he was determined to bring down land and share prices to cool the overheating economy. The markets had already shrugged off two increases in interest rates before he took office. When he raised rates on December 25th 1989, share prices started to tumble, but land prices continued to rise. So Mr. Mieno continued to push interest rates higher, to 6% by August 1990 from a low of 2.5% in 1989. By late 1990, share prices had fallen by more than 40%, yet the economy still looked strong, so Mr. Mieno delayed cutting interest rates until July 1991, and then did so only cautiously. At the time most economists thought he was doing an excellent job. In 1991 he was voted central banker of the year by the magazine Euromoney. But with hindsight he kept rates high for too long.

The collapse in asset prices and a sharp slowdown in the economy revealed serious weaknesses in Japan’s financial system. Financial liberalization in the 1980s had exposed banks to tougher competition, forcing them to move into riskier areas; they lent huge amounts to property developers, using land and equity holdings as collateral. Even so, banks looked healthy because capital gains on their equity portfolios and the ease of issuing new equity lifted their capital ratios well above internationally required levels.

This quickly changed when property and share prices plunged. Borrowers began to default in droves and banks were soon overwhelmed by bad debts, forcing them to reduce lending. Companies faced with both massive debts and excess capacity slashed their investment, and households started to save more for the rainy days in prospect.

A need for liquid refreshment
Falling demand, falling prices and shrinking bank lending were the main ingredients of deflation in the 1930s. The lesson from the Great Depression was that central banks need to take vigorous action to prevent deflation. Instead, Japanese policymakers dithered. The Ministry of Finance badly mishandled the banking crisis, repeatedly underestimating the seriousness of the problem. Likewise, the Bank of Japan persistently underestimated the risk of deflation, and took its time to relax monetary policy.
Japanese short-term interest rates have been virtually zero for most of this year, yet the economy remains fragile. Japan has been stuck in a classic liquidity trap where, in the words of Keynes, monetary policy finds itself “pushing on a string”. Because prices are falling, real interest rates remain painfully high at a time when they should be negative to encourage borrowing, so conventional monetary policy becomes useless. The normal remedy in these circumstances would be to use fiscal policy to boost demand. That is what Japan has done. But this lever is becoming jammed because of Japan’s alarmingly high level of government debt.

What can the Bank of Japan do? In May 1998, Paul Krugman, an economist at MIT, urged the bank to set a formal inflation target, and then to promise to achieve it by printing lots of money—or, more accurately, by buying government bonds to increase the monetary base. An inflation target, he argued, would help to change future expectations about prices, and so reduce real interest rates.

In his usual provocative way, Mr. Krugman argued that the Bank of Japan needed to make a credible commitment to an “irresponsible monetary policy”. This was an unfortunate turn of phrase, since the Japanese always shy away from the unorthodox. Yet an inflation target is neither unorthodox nor irresponsible. An increasing number of central banks, such as the Bank of England, set such targets. Mr. Krugman favored a relatively high one of 4%, but a lower target of 1-3%, say, would be more credible.

There is no guarantee that a massive increase in the monetary base would boost bank lending. The precarious state of banks’ balance sheets continues to limit their ability to lend, and firms that are already heavily in debt may not want to borrow more. However, one way in which pumping out money can help to boost the economy is by pushing the yen lower. This would push up exports and help to stem deflation by lifting import prices. Sadly, only one of the nine members of the Bank of Japan’s policy board, Nobuyuki Nakahara, supports an inflation target and direct purchase of government bonds. Most of the others fret that adopting such a target would be reckless because it would cause inflation. That, says Russell Jones, an economist at Lehman Brothers, is like crying “Fire” during Noah’s flood. It may be unconventional for a central bank to try to create inflation, but these are unconventional times.

A second concern of the Bank of Japan is that printing money would encourage the government to run an even bigger deficit. But better that, surely, than a continuing recession that automatically swells the budget deficit by depressing tax revenues. A third objection is that a cheaper yen would cause frictions with Japan’s trade partners in America and Europe. However, it is surely better for the rest of the world if Japan recovers rather than continues to stagnate.
What really holds back the Bank of Japan, perhaps, is that it wants to preserve its newly won independence, and is therefore loathe to cave in to politicians that are calling for monetization—even if they might be right. But if deflation persists, the bank’s new independence is likely to come under attack anyway.

Waiting for the dawn
Over the past year, the Bank of Japan has belatedly eased policy. As well as reducing interest rates to zero, it has provided direct loans to troubled firms and expanded the list of securities it will purchase. These measures have increased the monetary base, but they fall well short of full monetization. Furthermore, the bank has tended to act in a surreptitious, almost reluctant manner. To influence inflationary expectations, it needs to be bold.

The rise in the yen—up by more than 30% against the dollar since August 1998—confirms that monetary policy remains too tight. Even if the Bank of Japan is reluctant to buy government bonds, it can still boost the monetary base through foreign-exchange intervention to buy dollars. But intervention by the bank this summer failed to lower the yen, because it was “sterilized” (through the bank mopping up liquidity in the money market) and not allowed to boost the monetary base. If the bank wants a weaker yen, it will eventually be forced to expand the monetary base more vigorously.

Recent indicators suggest that Japan’s economy may now be stabilizing. GDP grew in the first two quarters of this year. But output is expected to dip again later this year when the latest fiscal stimulus runs out of steam. The economy remains fragile. Bank lending fell by a record 6.5% in the year to July (see chart 12). Consumer confidence remains weak. Firms are expected to continue to cut capital spending and employment over the next year, and if the yen continues to rise, manufacturers will be hurt.
The Bank of Japan seems to comfort itself with the belief that the economy is not yet experiencing full-blown deflation, so it does not yet need to consider unorthodox policies. But how bad do things need to become before the bank realizes that preventing prices from falling is far from irresponsible? Japan is a painful reminder that if central banks blunder, the threat of deflation is real even in a modern economy. The ECB, which earlier this year seemed to be allowing inflation to drop dangerously low, should also heed this lesson. It is time, perhaps, for all central banks to consider explicit inflation targets—with solid floors as well as ceilings.

Dropping anchor

CONSERVATIVELY dressed central bankers may not look like fashion victims, yet they are as prone to the latest craze as anybody else. Remember when monetarism was all the rage? Then central-bank independence became the “in” thing. The latest fashion is for inflation targets.

Most economists argue that monetary policy works best if central banks have some sort of nominal anchor to guide policy and to tie down inflationary expectations. The gold standard provided the firmest possible anchor, but at the cost of unacceptable swings in output. Modern anchors come in three main shapes. In the late 1970s and early 1980s most central banks adopted monetary targets. But then money-supply measures became distorted by financial deregulation and innovation, so central banks switched to exchange-rate or inflation targets.
Pegging a country’s currency to that of a low-inflation economy such as Germany’s, as under the European exchange-rate mechanism (ERM), was an easy rule to follow, and it certainly helped countries such as France and Britain to reduce inflation. But in a world of highly mobile capital flows, pegged exchange rates are vulnerable to speculative attacks of the sort the ERM suffered in 1992 and 1993. Today, the options are either to fix exchange rates permanently or to float. Central banks still watch exchange rates closely. For example, a stronger currency reduces inflation, so a central bank will take this into account in setting interest rates. But that is a long way from targeting the exchange rate.

This leaves inflation targets as the last effective anchor. They are clearly becoming more popular. A survey by the Bank of England of 91 central banks in developed and emerging economies found that 54 had an explicit inflation target in 1998, compared with eight in 1990. The first to adopt an inflation target was the Reserve Bank of New Zealand in 1990. Australia, Britain, Canada, Sweden and now the ECB also have inflation targets. In all these countries the mid-point of the target for consumer-price inflation is between 1% and 2.5% (see table 13). The reason it is not zero is that all the countries are aware that their official price indices overstate inflation, and they all recognize the dangers of deflation.

<table>
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<tr>
<th>The inflation rule-book</th>
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<tr>
<td><strong>Official inflation target, %</strong></td>
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<td>Australia</td>
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Because monetary policy works with long lags, central banks adjust policy on the basis not of current inflation but of a forecast. If forecast inflation (assuming unchanged interest rates) in two years’ time, say, lies above the target, interest rates are raised. If it is below target, rates are cut.

**Target practice**

An inflation target is easier for the public to understand than a target for money or the exchange rate. That, it is argued, may make it more effective in reducing inflationary expectations. But perhaps the most important feature of inflation targets is the emphasis they put on transparency and accountability. Inflation targets are not rigid; they allow a central bank to make use of all available information, giving it considerable discretion in setting policy, so transparency in its decision-making is vital. Inflation targets are
commonly combined with an inflation report, like that pioneered by the Bank of England. And because it is easier to judge whether policy is on track, inflation targets make central banks more accountable, which, in turn, helps to build public support for their independence.

Inflation targets were originally introduced in order to hold inflation down, but they are also a good way to prevent deflation. That is why they should have a floor below which inflation is not allowed to drop, as well as a ceiling. In a forthcoming book*, Thomas Cargill, Michael Hutchison and Takatoshi Ito argue that if Japan had had an inflation target during the 1990s, its economy would now be in much better shape. An inflation target would have forced the Bank of Japan to loosen policy much earlier, and would have helped to convince people that it would not allow prices to keep falling.

To demonstrate the effectiveness of inflation targets, the authors compare the experience of America and Sweden in the 1930s. Sweden left the gold standard in 1931 and instead adopted an explicit target for its price level. This halted deflation much sooner than in America. In the three years to 1931, Swedish industrial production dropped by 21%, but by the end of 1933 output had recovered to its 1928 level, and by 1934 it was 28% higher. In contrast, American industrial production plunged by almost 50% in the four years to 1932, and did not regain its 1928 level until the end of 1936.

Even now, the Fed has no explicit nominal anchor. And given the low level of American inflation in recent years, a formal CPI target might have made it even harder to raise interest rates. Inflation targets, in other words, do not provide a complete answer. This survey has argued that central banks need to worry about asset prices as well as CPI inflation. Ideally, central banks should target a broad price index, including asset prices, as proposed by Charles Goodhart of the Bank of England. In practice, however, such an index would be tricky to calculate. Probably the best option is for a central bank to set a medium-term inflation target, but to keep a close eye on asset prices, and be prepared to undershoot the target temporarily—and to explain why—if share prices bubble over.

As Bill White of the BIS argues, central bankers have a choice: increase interest rates to curb rising asset prices and undershoot the inflation target by a little, or desist and eventually undershoot the target by a lot, as in Japan. As this survey has pointed out, price stability—which an inflation target is designed to achieve—is not an end in itself. In normal circumstances an inflation target is an excellent guide for monetary policy, but it should not be applied too rigidly. Central banks need to keep their eyes open for other signs of excess.

Show me the money
Share prices are one sign of excess, money is another. Back in August 1977, *The Economist* published a signed article by Alan Greenspan, then a private economist, with a
list of five economic “don’ts”. One of them was: “Don’t allow money-supply growth to spiral out of hand.” Today Mr. Greenspan seems to be breaking his own rule. America’s broad measure of money, M3, has grown at an average rate of 9% over the past two years, its fastest since the mid-1980s; in real terms broad-money growth has been faster than at any time in the past quarter-century (see chart 14).

The notion that persistent rapid growth in the money supply leads to higher prices is one of the oldest propositions in economics. The Bundesbank was the first central bank to introduce money targets, in 1974, and most other countries followed suit. But as the link between money and inflation appeared to weaken, strict money targets were abandoned by virtually all except the Bundesbank. Or, as Gerald Bouey, a former governor of the Bank of Canada, put it, “We didn’t abandon the monetary aggregates, they abandoned us.” Financial deregulation and innovation, and the blurring of boundaries between banks and other financial institutions, have made money-supply figures hard to understand.

But central banks may have thrown the baby out with the bathwater. Today most of them pay little attention to money; it is not even included in banks’ models for forecasting inflation. Only the ECB has refused to join this trend. The bank’s chief economist, Otmar Issing (who used to do the same job at the Bundesbank), insists that money still matters. All past inflations, he says, have been preceded or accompanied by rapid monetary growth.

Several studies confirm that M3 remains a useful leading indicator of inflation in the euro area. However, the ECB has rejected a strict target, because the introduction of the euro may distort the figures. Instead, it has set a “medium-term reference value” of 4.5% for annual M3 growth. Alongside this, ECB policy also takes account of a wide range of
indicators to see how future inflation might move in relation to its medium-term goal of 0-2%. The ECB has been widely criticized for having, in effect, a target for both money and inflation and thus making policy less transparent. The critics may have a point, but the ECB is right to keep a close eye on money. If the money supply in the euro area had recently been growing at the pace of America’s, the ECB would surely have raised interest rates.

Money may be a fickle guide to the economy over the next year or so, but over long periods there is still a close link between the money supply and inflation. The financial revolution may mean that rigid monetary targets are no longer practical, but this is no reason to ignore money completely. When money growth is unusually fast, as it currently is in America, a central bank should ask why. It might be signaling a future rise in inflation, or if inflation remains low, it may signal an asset-price bubble. For example, Japan’s broad money expanded at an annual rate of more than 10% during its late-1980s bubble. Central banks cannot use the money supply to sail on auto-pilot, but they would be foolish to ignore its warning lights.


**In a fog**

ON THE ground floor of the Federal Reserve building in Washington you can play an electronic game which offers four tests to judge whether you are suitable to be Fed chairman. You have to decide whether to tighten or loosen monetary policy in response to various events, such as rising inflation or a stock market crash. Your correspondent got all the answers right and was duly appointed the next Fed chairman.

If only real life were that simple. Because of huge economic uncertainties, central bankers never have the luxury of an obviously “correct” answer to when and by how much to move interest rates. Although they have become more powerful, their ability to use that power effectively is weakened by imperfect knowledge. Their information on the current state of the economy is always out of date and subject to big revisions. There is particular uncertainty about critical measures such as the pace of productivity growth or the size of the output gap. Central banks do not have a trusted model of how the economy works because it never stands still for long enough for them to get a fix on it.

Moreover, their instruments are blunt. Nobody knows exactly how a change in interest rates will affect the economy. And monetary policy is subject to long and variable lags. It typically takes up to a year for interest rates to affect output and 18 months to two years to feed through into inflation. Alan Blinder, an economist at Princeton University and a
former vice-chairman of the Fed, offers a nice analogy. You arrive late at night in a strange hotel room that feels chilly, so you turn up the thermostat and make for the shower. Ten minutes later the room is still too cold, so you turn up the thermostat again and go to sleep. At 2am you awake in a pool of sweat in an oppressively hot room.

Much the same happens with monetary policy. If interest rates are set according to the economy’s temperature today, then they will probably be raised by too much and kept high for too long. Monetary policy must be forward-looking, taking account of future inflation. Mr. Blinder suggests that central banks should follow a strategy of “dynamic programming”*. Today’s interest-rate decision should be thought of as the first step along a path of future interest-rate decisions. So before a central bank begins a cycle of tightening, for example, it should have some idea about where it is going. At each stage the central bank should project an entire path of future interest-rate decisions with associated paths for key economic variables. If those economic variables turn out as expected, the central bank should continue to follow the planned path. But if the economy slows sooner than expected, the bank should tighten by less than planned, or even cut interest rates.

In recent years central banks have tried harder to head off trouble before it happens. The snag, says Mr. Blinder, is that a successful policy based on pre-emptive strikes will appear to be misguided, exposing central banks to criticism. If they successfully tighten policy early, so that inflation does not even start rising, critics accuse them of unnecessarily destroying jobs. This is exactly what happened when the Fed raised interest rates in 1994-95, and succeeded in preventing a rise in inflation. Central banks cannot win. More recently, America’s monetary policy seems to have become less pre-emptive because of the new uncertainties about productivity growth and the link between inflation and unemployment. The Fed now seems to require more evidence of rising inflation before it will put up interest rates. This increases the risk that the economy will wake up in a sweat at 2am.

And getting foggier
In recent years, financial liberalization and innovation have created even more uncertainty. The global integration of capital markets has complicated monetary policy because, as Flemming Larsen of the IMF suggested in a recent speech, monetary conditions in one country are now increasingly affected by developments elsewhere. For example, in the first half of the 1990s, low interest rates in America encouraged massive capital inflows into Asia. With hindsight, Asian central bankers should have tightened policy to offset this, and allowed exchange rates to rise to reduce the risk of overheating. More recently, the American economy has been stimulated by capital inflows from Asia in the wake of the region’s crisis. These pushed up the dollar at the same time as excess capacity in Asia reduced import prices. Both factors suppressed inflation, and so allowed the Fed to hold down interest rates. Mr. Larsen suggests that recent monetary policy in
America may not have taken sufficient account of this stimulus from abroad. It has therefore become easier than intended, contributing to higher share prices.

Deregulation and the proliferation of new, complex financial instruments have also made it harder to predict the way the economy will respond to a change in interest rates. For instance, firms’ use of derivatives to swap floating-interest-rate debt for fixed-rate debt may alter the effect of a change in interest rates on the economy. And as the banking sector has shrunk relative to the size of capital markets (see chart 15), monetary policy has worked increasingly through changes in asset prices, such as exchange rates, bonds and equities, rather than through bank lending. This means that transparency in monetary policy plays a more important role than ever in influencing market expectations. Central banks can at least ensure that they themselves do not become another source of uncertainty.


**Coming in from the cold**

“YOU are not here to tell me what to do. You are here to tell me why I have done what I have already decided to do,” Montagu Norman, the Bank of England’s longest-serving governor (1920-44), is reputed to have told his economic adviser. Today, with luck, economic analysis actually precedes policy decisions. But how much of its thinking should a central bank share with the public? Traditionally, central banks had a reputation for secrecy and mystery; their language was designed to blur and obfuscate. But now their new buzzwords are transparency and accountability.

This change has gone hand in hand with increased independence. In a democratic society, transparency and accountability are essential if central-bank independence is to remain
politically acceptable. Central banks need to make the public aware of the benefits of price stability now that memories of high inflation are fading. Clear monetary-policy goals can also help to guide inflationary expectations and thus influence the behavior of firms and workers. But perhaps most important of all, central banks need to communicate clearly with the financial markets. By becoming more predictable, central banks can help to make market reactions to interest-rate changes easier to predict, which then makes monetary policy more effective.

Mervyn King, at the Bank of England, has argued that “successful monetary policy should be boring”. Changes in interest rates should be predictable, not make headline news. “Successful central bankers should be seen as neither heroes nor villains, but simply as competent referees, allowing the game to flow.” There is little chance that any central bank will ever get to be so boring, but certainly most of them have become a lot more transparent.

None more so than the Bank of England, which is now widely regarded as a model central bank. Since it was made independent in 1997, interest-rate decisions have been taken by its Monetary Policy Committee, which consists of five Bank officials and four independent economists. The minutes of each meeting, explaining the reasons behind changes in interest rates, and the details of how individual members voted, are published within two weeks. The Bank’s quarterly Inflation Report is also probably the best document published by any central bank. It includes an inflation forecast and a detailed assessment of how inflation is developing against the target rate of 2.5%.

The Fed and the Bank of Japan have also become more transparent in recent years. The Fed publishes the minutes of its policy meetings and its voting records with a six-week delay, the Bank of Japan within eight weeks. The ECB, however, prefers to remain rather opaque. It refuses to publish minutes of its meetings and individual voting records, and keeps its inflation forecast to itself. All this has earned it a reputation for secretiveness. Willem Buiter, a member of the Bank of England’s Monetary Policy Committee, argues in “Alice in Euroland”*, a scathing attack on Europe’s new central bank, that the ECB’s lack of transparency and accountability could undermine the whole EMU project.

Otmar Issing, the ECB’s chief economist, responds to these criticisms in an equally robust manner in “Willem in Euroland”†. He denies that the ECB favors secrecy and obfuscation. Indeed, he agrees that transparency and accountability are essential for monetary policy, but disagrees with Mr. Buiter on how these are best achieved.

**More transparent than thou**

Some of the accusations made against the ECB are indeed unfair. For example, at the monthly press conferences the bank holds immediately after its meetings (something the Fed does not do), Wim Duisenberg, the ECB’s president, explains the policy decisions the
governing council has just taken. This comes close to providing instant summary minutes. As Mr. Issing sees it, that may be preferable to publishing carefully edited minutes weeks later.

The ECB’s mistake, perhaps, has been not to call its press statement “minutes”, and not to call its monthly bulletin an “inflation report”. Many private-sector economists think highly of its monthly bulletin, which provides a clear analysis of economic and financial trends in the euro area. As for the ECB’s decision not to publish its inflation forecast, this partly reflects the huge uncertainties it faces. It has a harder job than other central banks because the introduction of the single currency and consequent changes in the financial sector may affect the reliability of economic statistics and change economies’ response to interest rates. That could make the ECB’s inflation forecasts unreliable in the early years.

But why does the ECB not publish individual votes? Mr. Issing claims that if it did, interest-rate setting might become politicized as members came under pressure to vote for narrow national interests. But the exact opposite seems more likely: that governors may take advantage of anonymity to vote on national lines. Publication of voting records would make it easier for them to resist political pressure. It would also make individual members more accountable, thus encouraging independent decisions.

Although the ECB is no match for the Bank of England so far as openness is concerned, in one way it is more transparent than either of the other two big central banks, the Fed and the Bank of Japan. This is because it has clearly defined its mandate of price stability as 0-2% inflation over the medium term. In contrast, neither of the other big banks has such a clearly stated goal; indeed, the Fed, under the 1978 Humphrey-Hawkins act, officially still has a dual mandate to pursue full employment and price stability at the same time. But then the Fed has a reputation which gives its policy credibility, whereas the ECB has no track record, so it needs to work that much harder on being transparent.

Moreover, the ECB is less accountable than the Fed. Unlike other central banks, it has no government to which it is answerable. Mr. Duisenberg cannot be sacked. He is required to testify before the European Parliament, but that is not quite the same as Mr. Greenspan appearing before Congress. Yet without proper accountability, the ECB will find it hard to win the public support that the Fed or the Bundesbank have enjoyed. Politicians will find it easy to blame the ECB for all kinds of economic ills. To gain public trust, therefore, it is crucial that the ECB becomes as open as possible.

**Mumbling with great incoherence**

One reason why the ECB gets a much worse press than the Fed is that Mr. Greenspan is seen as a kind of god. As long as he appears to be delivering the goods, nobody minds about his lack of transparency. Mr. Greenspan has made the obfuscatory language of central banks into something of an art form. In his early years he once replied to a
congressman: “If I seem unduly clear to you, you must have misunderstood what I said.” On another occasion he told a hapless interlocutor: “I know you believe you understand what you think I said, but I am not sure you realize that what you heard is not what I meant.” Mr. Greenspan’s speeches are still somewhat opaque, but in recent years he has become a bit clearer, partly in order to prepare the bond market for interest-rate changes, and so allow it to do some of the work for him. The Fed’s operating strategy has also become more open than it was. Until February 1994 the bank did not even announce policy changes on the day they were decided on.

Many economists argue that Congress needs to update the Fed’s mandate and give it an explicit inflation target to make its objectives and decision-making more transparent. Under Mr. Greenspan, the Fed has in fact embraced a policy not unlike inflation targeting, but, as a recent book* argues, its strategy is not clear, creating uncertainty about its intentions and thus extra volatility in financial markets.

Another concern is that the Fed’s credibility currently rests too much on the skills of the chairman. Mr. Greenspan cannot stay in office forever. Also, his successor might not be able to maintain the good relationship Mr. Greenspan has recently had with the administration. In a different political environment, the Fed might find itself under pressure to become much more expansionary. A numerical inflation target, argue the book’s authors, would reduce market uncertainty about the Fed’s policy and help to depersonalise monetary policy. It would also increase accountability, by making it easier for Congress to judge the Fed’s performance against a benchmark. This would help to protect its independence against any future political backlash.

Suppose that Mr. Greenspan and his board of governors were forced to resign because of a financial scandal: financial markets would plummet. Yet in Japan, markets barely twitched in March last year when Yasuo Matsushita, the governor of the Bank of Japan, resigned along with several other top officials, following the arrest of a senior employee for leaking market-sensitive data to banks. Embarrassingly, this happened only weeks before the Bank of Japan was due to be given independence in monetary policy. How has the Bank of Japan matched up to its new responsibility?

Legally, the Bank of Japan is now as independent as the Fed, but in practice it is rather less so. The finance minister or a representative can attend policy meetings and express his view, though he cannot vote. The make-up of the bank’s policy board also undermines its credibility. Because of the scandal, the new law giving the bank independence came into effect when it was suffering from a power vacuum. Masaru Hayami was appointed governor mainly because he was respected and untainted by scandal, but he had retired 17 years earlier, and even when he was still in harness his career had been on the international side, not in monetary policy. One of the two deputy governors is a journalist rather than a trained economist or experienced central banker.
The other deputy, Yutaka Yamaguchi, is an economist and a career central banker. Of the six outsiders on the policy board, only one (Kazuo Ueda) is a monetary economist; most of the others lack expertise in monetary economics. This is very different from the Fed or the Bank of England, where the overwhelming majority of the members of the policymaking boards are professional economists.

A further worry is that every one of the bank’s moves to ease policy over the past year has given the appearance of responding to political pressure. For instance, the February cut in interest rates, to virtually zero, came after several politicians had called for the bank to loosen the monetary reins. Sadly, these defects have undermined the Bank of Japan’s efforts to become more transparent. The bank’s minutes are actually more detailed than the Fed’s. But in common with the Fed, the Bank of Japan lacks a clear definition of its goal of price stability, so its intentions often remain obscure. Financial markets seem distinctly unimpressed by the bank. Unlike other central banks, the Bank of Japan is 45% privately owned, with shares traded on the stock exchange, and in the 1990s its share price has fared even worse than the Tokyo market as a whole (see chart 17).

Central banks need to become more open, but transparency is no panacea. In an ever-changing world which has no precise model of how the economy works, and in which stable consumer prices and soaring asset prices send starkly conflicting signals, a central bank cannot be completely definitive about its monetary-policy decisions. A central banker cannot say more than he knows or understands. He would, however, be wise to have his excuses ready when things go wrong.

* “Alice in Euroland”, by Willem Buiter. CEPR policy paper No 1.

†“The Eurosystem: Transparent and Accountable. Or Willem in Euroland”, by Otmar Issing. CEPR policy paper No 2.
A motley crew

CENTRAL bankers may lack the glamour of pop stars or football players (although Rick Houenipwela, the governor of the Solomon Islands’ central bank, also manages the national football team), but they are not the dull and aloof characters of popular imagination. Most of them are likeable chaps (sadly, there are hardly any women), whose interests often extend far beyond monetary policy.

Alan Greenspan, a sprightly 73-year-old, is an outstanding economist, but economics was not his initial career choice. He first studied music and played the saxophone, touring with a swing band for a year. When he was appointed to the Fed in 1987, many doubted whether he could fill Paul Volcker’s shoes, but now he is widely rated as the best Fed chairman in history. His fascination with obscure statistics is legendary. As a child he was shy, but had an aptitude for numbers. When he was five, his mother would show him off to friends by getting him to add three-digit numbers in his head. These days he is said to like reading economic reports each morning in the bath.

Mr. Greenspan probably thought that his claim to be the world’s oldest central banker was secure, but he lost it last year when Masaru Hayami was appointed as governor of the Bank of Japan. Mr. Hayami is just a year older, but unlike Mr. Greenspan, who still plays a good game of tennis, he is a little frail. He first joined the bank in 1947 and retired in 1981. But when the Bank of Japan was shaken by a scandal early last year, he was asked to return.

Wim Duisenberg, the president of the ECB, is a mere stripling of 64. Back home in the Netherlands, he had previously been a professor of economics, finance minister, and central-bank governor. He also used to be a keen sailor, but some commentators wonder if he is the right person to captain the euro-11 in uncharted waters. At the Dutch central bank he did an excellent job, but he is not much of a communicator—a skill which the ECB desperately needs.

Central-bank bosses’ pay does not appear to be related to their importance (see chart 16). Mr. Greenspan earns least among the heavyweights, a mere $137,000 a year. The heads of the ECB and the Bank of Japan both have salaries of around $350,000. Eddie George, the governor of the Bank of England, does even better at $380,000, but top of the league, at an estimated $600,000, is Antonio Fazio of the Bank of Italy.
America has almost twice as many central bankers per head of population as Japan, largely because of its 12 regional reserve banks. Critics say the system is bloated, and suggest halving the number of regional reserve banks. However, with nine central bankers for every 100,000 people, the Fed is a relatively lean organization compared with European central banks: the average in the euro area is almost 20 per 100,000 people. The ECB has a tiny staff of only 700, but the Bundesbank and the Bank of France each still have around 16,000, even though they are no longer responsible for monetary policy.

The perks of the job also vary a great deal, particularly the style of the offices. At the Federal Reserve, a handsome white building with marble columns, visitors walk up an elegant curved staircase hung with old paintings to reach the governor’s office. Callers at the Bank of Japan are ushered through a garage area. The ECB has the best view, from the 36th floor of Frankfurt’s Eurotower. At the Bank of England, history comes alive: the attendants in its foyer wear pink coats. Those at the Fed carry guns.

Sources and acknowledgements

An endangered species

THE past decade has seen the biggest bull market of all time—not just in equities, but in central banking, too. However, the power of central banks may well have reached its peak: from here on it could all be downhill.

As this survey has argued, the biggest risk to the world economy today is Wall Street. Whether history records Mr. Greenspan as a saint or a sinner will depend on how America’s excesses are unwound. He has become a victim of his own success. The stunning performance of the American economy under his leadership has created exaggerated confidence in the Fed’s ability to cushion the economy and financial markets against all shocks. This has encouraged investors, firms and individuals to take bigger risks. If the bubble bursts, Mr. Greenspan will quickly lose many of his fans. And if the ECB and the Bank of Japan fail to take up the economic slack should America stumble, they too will face a political backlash. The independence of central banks, even the whole concept of central banks, might then come under attack.

Some economists already argue that central banks do more harm than good, and that as liberalization has swept the globe, it seems anomalous that central banks continue to fix interest rates. Why not abolish central banks, ask those critics, and have a free-market money system where interest rates adjust in response to changes in the demand and supply of loans? If borrowing surged, rates would automatically rise to choke off demand. A second charge against central banks is that in acting as lender of last resort they foster moral hazard, encouraging banks to lend more recklessly and thus making crises more likely.

The idea of abolishing central banks has strong intellectual roots. In their day, Adam Smith, Walter Bagehot, Friedrich Hayek and Milton Friedman have all been sceptical of central banks, favoring a system of free banking in which privately owned banks would be allowed to issue their own bank notes, circulating in competition with those of other banks. Hayek believed that the state’s monopoly over the supply of money had been a main cause of inflation during this century. A privatized money regime, he argued, would force monetary discipline and lead to a stable, non-inflationary economy. Banks would issue different non-interest-bearing certificates which would trade at variable exchange rates. Competition would ensure that only banks that guaranteed a stable purchasing power would survive; others would be driven out of business.

Unfortunately, the outcome might be far from stable. The variable exchange rate between the different notes would increase uncertainty and lead to poor co-ordination of the decentralized decisions of millions of consumers and producers. Imagine if, while a house was being built, the length of a metre kept changing, and the architect, the
bricklayer and the plumber were all working to a different measure. An efficient economy needs a standard unit of account. In a free-for-all banking system, interest rates would also tend to be much more volatile. A good central bank can do better than the free market.

Another important reason for having a central bank is the need for a lender of last resort to prevent systemic financial crises. Banks are more prone to crises than other businesses because their assets are largely long-term, whereas their liabilities (deposits) can be withdrawn on demand. This means that even a financially solvent bank may face a liquidity crisis. And since banks are closely intertwined, trouble at one bank can cause a system-wide panic, triggering a domino-like collapse throughout the entire financial system. It was partly the Fed’s failure to act as lender of last resort in the 1930s that made the Depression “Great”.

What about the accusation that by acting as lender of last resort, central banks create moral hazard? Without a safety net, some economists argue, banks would be more prudent, reducing the risk of financial crises. However, in 19th-century America, before the Fed was set up, there were still plenty of bank crises, caused by errors of judgment and waves of euphoria. As Keynes said, “A ‘sound’ banker, alas! is not one who foresees danger and avoids it, but one who, when he is ruined, is ruined in a conventional and orthodox way along with his fellows, so that no one can really blame him.”

To limit moral hazard, a central bank should provide emergency liquidity only where there is serious systemic risk. The snag is that this is hard to judge. As financial markets become increasingly interdependent and different sorts of institutions form alliances, it has become harder, argues Bill White* at the BIS, for central banks to balance the short-term desire to prevent crises against the longer-term need to reduce moral hazard. Central banks seem to have become more scared of financial failure, and as financial borders have been eroded, they have extended their safety net to more institutions. Take the near-collapse last year of Long-Term Capital Management. The Fed feared that a collapse of the fund could damage the entire financial system, so it helped to organise a private-sector bail-out. But by doing so it may have sent the wrong message.

As global financial liberalization has increased the risk of financial instability, the distinction between central banks’ role as lender of last resort and monetary policy has become less clear. During his 12 years in office, Mr. Greenspan has faced three major crises: the 1987 stock market crash, the American credit crunch of the early 1990s, and the financial turmoil last year in the wake of Russia’s default, when liquidity evaporated and markets virtually seized up. Each time the Fed slashed interest rates and made it clear that it would inject sufficient liquidity to support the financial system. Each time Mr. Greenspan succeeded in stabilizing financial markets. But each success in preventing
meltdown aggravates moral hazard and therefore increases the risk of even greater instability in future.

**Ten green bottles sitting on the wall**

In a liberalized financial world in which markets tend to overshoot, it would be foolhardy for governments to abolish central banks completely. Yet, ironically, the very financial liberalization that increases the importance of their role in maintaining financial stability could, some time in the future, help to cause their downfall. After a century of expansion (see chart 18), the number of central banks is likely to decline over the next couple of decades. As volatile international capital flows continue to cause big swings in exchange rates, many small economies will consider regional monetary unions, currency boards or dollarization. As a result, the number of independent monetary authorities with the power to set monetary policy will shrink.

Looking further ahead, central banks’ ability to steer monetary policy may also be curbed by technological and financial innovation. Monetary policy assumes that households and firms need money for transactions, and that banks can create money only if they hold sufficient reserves at the central bank. But suppose that a new means of payment—privately created electronic money—were to reduce the role of orthodox money. “E-money” consists of pre-paid cards, where money is stored on a computer chip, and software-based products that can be used to make payments over computer networks.

The impact of e-money on monetary policy will depend on how it affects the demand for bank reserves. A central bank is able to change interest rates because it is a monopoly supplier of reserves to the banking system. It can affect the price of those reserves, ie, the interest rate at which banks lend to one another, by changing their supply through open-market operations. Central banks will not lose their monopoly, but, argues Benjamin
Friedman of Harvard University in a recent conference paper*, that monopoly may one day become irrelevant.

Central banks can retain control of interest rates so long as cash and bank reserves remain the ultimate means of exchange and settlement. Even if everybody switched to electronic means of payment, but issuers still settled their balances with merchants through the banking system, as happens with credit cards, then central banks would retain control. But, says Mr. Friedman, suppose that in 25 years’ time e-money becomes increasingly acceptable, so that firms would accept and swap balances in the books of issuers of e-money. Computers can communicate in real time to allow a vendor to verify instantly that a buyer has sufficient funds in his account and make an immediate transfer of funds. Final settlements could then be carried out by the private sector without the need for clearing through the central bank, which would therefore lose its ability to set interest rates.

If central-bank money were to be driven out, then Hayek’s vision of a privatized system of money would have been achieved by evolution through innovation, rather than through legislation, and without jeopardizing the single unit of account. Central banks might try to defend their patch by imposing reserve requirements on issuers of e-money. But this would be futile, argues Mr. Friedman, because issuers could simply keep devising ingenious new products in order to evade the tax.

These are not only the thoughts of academic economists. Mervyn King of the Bank of England recently told this year’s gathering of central bankers in Jackson Hole, Wyoming, that if electronic-payments systems with much greater computing power than exists today were to develop, then in 100 years’ time central banks would no longer exist in their present form—and nor would money.

The crucial characteristic of electronic-payment systems is their ability to eliminate the usual time lag between transactions and final settlement, so a seller need never worry about the creditworthiness of a buyer. Pre-agreed rules would determine which financial assets were sold by a buyer of a good or service according to the value of the transaction. And any financial securities for which electronic markets exist could be used for settlement. This could eliminate credit risk, interest-rate risk and operational risk attached to payments. Unlike the free-banking systems of the 19th century in which bank crises were common, such a system would, in theory, eliminate systemic risk. There would be no need for a lender of last resort, argues Mr. King.

A regulatory agency would be needed to monitor the integrity of the computer systems used for settlement purposes. But it is not obvious that this job should be given to central banks: it would need the expertise of computer-software experts rather than economists. Financial assets, and goods and services, would be priced in terms of a unit of account...
(defined, perhaps, by a basket of commodities to ensure broad price stability), says Mr. King, which would be regulated in much the same way as present-day weights-and-measures inspectors.

If all this came about, Mr. King concludes, “the successors to Bill Gates would have put the successors to Alan Greenspan out of business.” Economies have managed without central banks in the past; they may well do so again in future. In the meantime, the best way for the navigators to stay afloat is to keep a wider watch for hazards at sea.