Chapter One

The Great Experiment

> Like gold, U.S. dollars have value only to the extent that they are strictly limited in supply. But the U.S. government has a technology, called a printing press (or, today, its electronic equivalent) that allows it to produce as many U.S. dollars as it wishes at essentially no cost. By increasing the number of U.S. dollars in circulation, or even by credibly threatening to do so, the U.S. government can also reduce the value of a dollar in terms of goods and services, which is equivalent to raising the prices in dollars of those goods and services.
>
> —*Ben Bernanke,*
> Chairman of the Board of Governors of the
> Federal Reserve Bank of the United States

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President Lyndon B. Johnson once summed up the general feeling about economists when he asked his advisers, "Did you ever think that making a speech on economics is a lot like pissing down your leg? It seems hot to you, but it never does to anyone else." Reading a book about monetary policy and central banking can seem equally unexciting. It doesn't have to be.

Central banking and monetary policy may seem technical and boring; but whether we like it or not, the decisions of the Federal Reserve, the Bank of Japan (BoJ), the European Central Bank (ECB), and the

Bank of England (BoE) affect us all. Over the next few years they are going to have profound impacts on each of us, touching our lives in every way. They influence the value of the dollar bills in our wallets, the price of the groceries we buy, how much it costs to fill up the gas tank, the wages we earn at work, the interest we get on our savings accounts, and the health of our pension funds. You may not care about monetary policy, but it will have an impact on whether you can retire comfortably, whether you can send your children to college with ease, or whether you will be able to afford your house. It is difficult to overstate how profoundly monetary policy influences our lives. If you care about your quality of life, the possibility of retirement, and the future of your children, you should care about monetary policy.

Despite the importance of central bankers in our lives, outside of trading floors on Wall Street and the City of London, most people have no idea what central bankers do or how they do it. Central bankers are like the Wizard of Oz, moving the levers of money behind the scenes, but remaining a mystery to the general public.

It is about time to pull the curtains back on monetary policy making.

Even though they are separated by oceans, borders, cultures, and languages, all the major central bankers have known each other for decades and share similar beliefs about what monetary policy should do. Three of the world's most powerful central bankers started their careers at the Massachusetts Institute of Technology (MIT) economics department. Fed chairman Ben Bernanke and ECB president Mario Draghi earned their doctorates there in the late 1970s. Bank of England governor Mervyn King taught there briefly in the 1980s. He even shared an office with Bernanke. Many economists came out of MIT with a belief that government could (and, even more important, should) soften economic downturns. Central banks play a particularly important role, not only by changing interest rates but also by manipulating the public's expectations of what the central bank might do.

We are living through one watershed moment after another in the greatest monetary experiment of all time. We are all guinea pigs in a risky trial run by central bankers: it's Code Red time.

Those of us who are of a certain age remember the great Dallas Cowboys coach Tom Landry. He would stalk the sidelines in his fedora, holding a sheet of paper he would consult many times. On it were the plays he would run, worked out well in advance. Third down and long and behind 10 points? He had a play for that.

The Code Red policies that central bankers are coming up with more closely resemble Hail Mary passes than they do Landry's carefully worked out playbook: they are not in any manual, and they are certainly not normal. The head coaches of our financial world are sending in one novel play after another, really mixing things up to see what might work: "Let's send zero interest rate policy (ZIRP) up the middle while quantitative easing (QE) runs a slant, large-scale asset purchases (LSAPs) goes deep, and negative real interest rates, financial repression, nominal gross domestic product (GDP) targeting, and foreign exchange intervention hold the line."

The acronym alphabet soup of the playmakers is incomprehensible to the average person, but all of these programs are fancy, technical ways to hide very simple truths.

In *Through the Looking Glass*, Humpty Dumpty says, "When I use a word, it means just what I choose it to mean—neither more nor less." When central bankers give us words to describe their financial policies, they tell us exactly what they want their words to mean, but rarely do they tell us exactly the truth in plain English. They think we can't handle the truth.

The Great Financial Crisis of 2008 marked the turning point from conventional monetary policies to Code Red type unconventional policies.

Before the crisis, central bankers were known as boring, conservative people who did everything by the book. They were generally disliked for being party poopers. They would take away the punch bowl just when the party got going. When the economy was overheating, central bankers were supposed to raise interest rates, cool down growth, and tighten monetary policy. Sometimes, doing so caused recessions. Taking away the punch bowl could hardly make everyone happy. In fact, at the start of the 1980s, former chairman Paul Volcker was burnt in effigy by a mob on the steps of the capitol for hiking short-term interest rates to 19 percent as he struggled to fight inflation. Central bankers like Volcker believed in sound money, low inflation, and a strong currency.

In the throes of the Great Financial Crisis, however, central bankers went from using interest rates to cool down the party to spiking the punch with as many exotic liqueurs as possible. Ben Bernanke, the chairman of the Federal Reserve, was the boldest, most creative, and unconventional of them all. With his Harvard, MIT, and Princeton background, he is undoubtedly one of the savviest central bankers in generations. When Lehman Brothers went bust, he invented dozens of programs that had never existed before to finance banks, money market funds, commercial paper markets, and so on. Bernanke took the Federal Funds rate down almost to zero, and the Fed bought trillions of dollars of government treasuries and mortgage-backed securities. Bernanke promised that the Federal Reserve would act boldly and creatively and would not withdraw the punch bowl until the party was really rolling. Foreign central bankers like Haruhiko Kuroda (BoJ); Mervyn King and his replacement from Canada, Mark Carney (BoE); and Mario Draghi (ECB) have also promised to do whatever it takes to achieve their objectives. We have no doubt that whoever replaces Bernanke will be in the same mold.

These are the days of a new breed of central banker who believes in the prescription of ultra-easy money, higher rates of inflation, and a weaker currency to cure today's ills. Their experimental medicine may have saved the patient in the short term, but it is addictive; withdrawal is ugly; and because long-term side effects are devastating, it can be prescribed only for short-term use. The problem is, they can't openly admit any of that.

Central bankers hope that unconventional policies will do the trick. If everything goes as planned, inflation will quietly eat away at debt, stock markets will go up, house prices will go up, everyone will feel wealthier and spend the newfound wealth, banks will earn lots of money and become solvent, and government debts will shrink as taxes rise and deficits evaporate. And after all is well again, central banks can go back to the good old days of conventional policies. There is no guarantee that will happen, but that's the game plan.

So far, Code Red policies have lifted stock markets, but they have not worked at reviving growth. But Code Red–type policies are like a religion or communism. If they don't work, it is only proof that they were not tried in sufficient size or with enough vigor. So we're guaranteed to see a lot more unconventional policies in the coming months and years.

How I Learned to Stop Worrying and Love Inflation

The Great Financial Crisis was a story of a huge mountain of debt that was piled too high, reached criticality, and then collapsed. For decades, families, companies, and governments had accumulated every kind of debt imaginable: credit card bills, student loans, mortgages, corporate and municipal bonds, and so on. Once the mountain rumbled, broke, and started to collapse, the landslides spread everywhere. The epicenter of the crisis was the U.S. subprime mortgage market (in fact, many foreign leaders still think it was fat, suburban, Big Mac–eating Americans who caused the global crisis), but the United States was just a small part of a much bigger problem. Countries such as Ireland, Spain, Iceland, and Latvia also had very large real estate bubbles that burst. Other countries, including Australia, Canada, and China, have housing bubbles that are still in the process of bursting. It's the same problem everywhere: too much debt that cannot be paid back in full.

(We certainly would not minimize the role of the Federal Reserve in failing to supervise the banks and especially subprime debt. By holding interest rates too low for too long and by willfully ignoring the developing bubble in the U.S. housing market, they certainly played a central role.)

When a person has too much debt, the sensible thing to do is to spend less and pay down the mortgage or credit card bills. However, what is true for one person isn't true for the economy as a whole. Economists call this principle the *paradox of thrift*. Imagine if everyone decided overnight to stop spending beyond what was absolutely necessary, save more, and pay down their debts. That would mean fewer dinners out, fewer visits to Starbucks, fewer Christmas presents, fewer new cars, and so on. You get the picture. The economy as a whole would contract dramatically if everyone spent less in order to pay down debts. But, in fact, that is exactly what happened during the Great Financial Crisis. Economists call this process *deleveraging*. And the last thing central banks want is for everyone to stop spending money and reduce their debts at the same time. That leads to recessions and depressions.

At least that was the theory proposed by John Maynard Keynes, the father of one of the most influential economic schools of thought, and it has become the reigning paradigm. It's all about encouraging consumption and reviving "animal spirits." If the economy is in the doldrums (recession), it is up to the government to run deficits, even massive ones, in order to "prime the pump." Put plenty of money into people's hands so they will go out and spend, encouraging businesses to expand and hire more workers, who will then consume yet more goods, and so on. Wash, rinse, and repeat.

Another solution if you have too much debt is to declare bankruptcy. In many countries that can be an effective way of starting over again. You put behind you debts you can't pay, offer to pay what you can, and start anew. Once again, what is good for the individual isn't necessarily good for the economy as a whole. Imagine what would happen if millions of people declared bankruptcy at the same time. Banks would all go bust, and the government would probably have to pick up the tab and recapitalize the banks. And then, before long, the government would find itself going bust.

The difference between what is right for one person and what is right for society is paradoxical. It is what logicians call the *fallacy of composition*. What is true for a part is not true for the whole. If you drive to work 10 minutes early, you might avoid traffic. If everyone drives to work 10 minutes early, the traffic jam will happen 10 minutes earlier. Central banks don't want everyone to be prudent or to go bankrupt at the same time. They would simply prefer everyone to remain calm and carry on spending.

If you want to avoid everyone's ceasing to spend—or, worse yet, everyone's going bankrupt at the same time—the only way to make the debt go away in real terms is through inflation. Inflation is the Ghostbusters of debt. It wipes debt out over time. For the sake of simplicity, imagine that you owe $100,000. If inflation is 2 percent, it will take about 30 years to cut the value of the loan in half. But if the rate of inflation doubles to 4 percent, it will take just 18 years to halve the value of the loan. And if inflation doubles again to 8 percent, you will halve the loan in 8 years!

Inflation is just what the doctor ordered for an economy with too much debt. By ratcheting up inflation, central bankers can erode debt quickly and quietly. But while inflation is the friend of debtors, it is the enemy of savers; so for central bankers to come out and say they're in favor of inflation would be like the pope's announcing one day that he's not Catholic. That isn't going to happen.

Inflation is a subject that divides economists because it means different things to different people. Not all inflation is bad. Inflation is generally considered to be problematic when the broad price level of most goods and services starts to go up because too much money is chasing too few goods. The increase in the price of a haircut is bad inflation. The method of cutting hair is no different than it was in the 1930s or the 1950s, yet it is vastly more expensive to get your hair cut today. (I [John] pay 200 times more for a haircut today than I did when I was a kid.) However, an increase in the price of a Picasso or de Kooning is considered to be normal, or "good," inflation. The higher prices are merely a reflection of more wealthy people in the world chasing fine art. They reflect the scarcity of the goods for sale and the laws of supply and demand at work. And who complains about the asset inflation of a rising stock market or rising home values?

Then there is good deflation and bad deflation. The deflation of falling telegraph, telephone, or Internet prices is viewed as good. Better technology means that prices fall because we can do the same things more cheaply or even nearly for free. For example, in *Money, Markets & Sovereignty*, Benn Steil and Manuel Hinds describe the second phase of the Industrial Revolution in the United States between 1870 and 1896. Prices fell by 32 percent over the period, but real income soared 110 percent amid robust economic growth, expanded trade, and enormous innovation in telecommunications and other industries.

The bad kind of deflation is different. When demand drops because people have too much debt and not enough money to spend, prices fall, too, though the cost of production does not. Jobs dry up, leaving people with even less to spend. That is the kind of deflation central bankers fear today.

Alphabet Soup: ZIRP, QE, LSAP

Let's look at how central bankers attempt to create inflation and how they help households, companies, and governments burdened with too much debt. We'll go through the main acronyms and technical terms and explain what they mean and how they affect you.

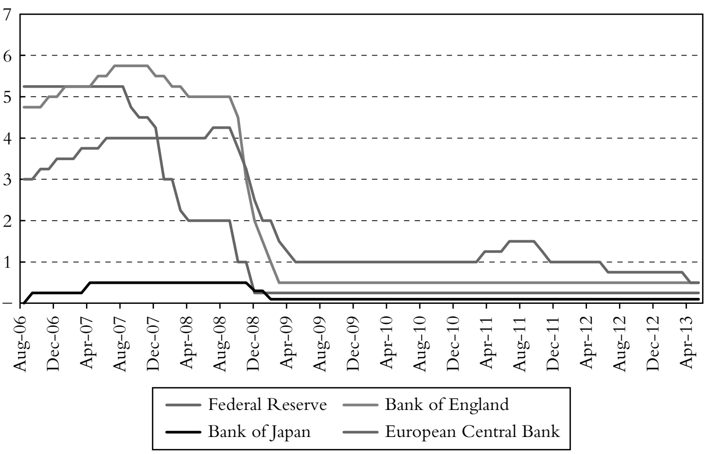

Figure 1.1 Global Interest Rates
SOURCE: *Variant Perception*, Bloomberg.

The main way monetary authorities have an impact on the economy is by setting interest rates. Interest rates determine the price at which people will borrow and lend. In the old days, when the economy was growing quickly, central banks would raise rates. When the economy was slowing, they'd cut rates, which meant that financing got cheaper, credit was easier, and money was looser.

The reason the Fed cut interest rates was to stimulate the economy. Lower rates mean lower mortgage, credit card, and car payments. They give businesses access to cheaper capital and hopefully spur profits and thus hiring. This puts more money into the hands of consumers. As an example, U.S. 30-year mortgage rates recently hit a record low of 3.66 percent, down from 4.5 percent the same time last year. A number of mortgage holders will refinance, given the much lower rates, increasing their disposable income. That almost makes us want to buy a house or two. Who can complain about a free lunch?

Cutting rates can only go so far until you hit zero. You can see this in Figure 1.1. Then you're stuck with a floor. In fact, central banks cut rates during the financial crisis, and then left them near zero and have not raised them since. Leaving rates at or near zero is what central banks refer to as *zero interest rate policy* (ZIRP). Currently, the United States, United Kingdom, Japan, Switzerland, and, arguably, the Euro area are all engaging in ZIRP.

In a ZIRP world, debtors are overjoyed and savers are screwed. Imagine borrowing at 5 or 10 percent and then suddenly seeing your borrowing costs fall to a little above zero. No matter how much debt you had before, paying very little interest every month is a lifesaver. Low borrowing costs make it easier for struggling businesses to roll over their debt and reduce the real value of debt payments. If you reduce the coupon payment on a loan, that is economically the same thing as forgiving part of the principal amount, but this forgiveness is hidden. The low rates effectively allow "zombie" households and businesses to limp along without going bankrupt.

Near-zero interest rates are, however, terrible for savers, investors, and lenders. Imagine you're a retiree, and you've been responsible and saved all your life; you've put money in the bank that you expect to pay you interest every month. You probably bought some bonds as well so you could collect coupons every quarter. In a ZIRP world, you would be getting very little every month from interest and coupon payments. You would live your retirement years with far less income than you had planned for, or you would need to work far longer in order to save more.

This is happening to retirees all over the world—it's why more and more people over 60 are still working. The Federal Reserve and central bankers are not particularly worried about savers. Most Americans are struggling with debt. In an indebted society, helping debtors beats helping savers.

Inflation is the opposite of a gift that keeps on giving. Higher inflation allows the Federal Reserve and other central banks to take real interest rates below zero. *Nominal interest rates* are the actual interest rate you get. *Real interest rates* are nominal rates minus the inflation rate. If your bank offers you 2 percent on your bank account, the nominal rate is 2 percent. So far, so simple. If inflation is 2 percent, then the real interest rate is 0 ($2 - 2 = 0$). The interest rate is only just keeping up with inflation. If inflation is 4 percent, then the interest you are getting on your bank account isn't even keeping pace with inflation. Your real interest rate would be negative 2 ($2 - 4 = -2$). As you can see, with rates near zero, as long as inflation is positive, central banks can create negative real rates. Even though nominal rates can be trapped at zero, real interest rates can go below zero.

When real rates are negative, cash is trash. Negative real rates act like a tax on savings. Inflation eats away at your money, and is in effect a tax by the (unelected!) central bankers on your hard-earned money. Leaving money in the bank when real rates are negative guarantees that you will lose purchasing power. Negative real rates force savers and investors to seek out riskier and riskier investments merely to tread water. It almost guarantees people don't save and stop spending. In fact, Bernanke openly acknowledges that his low interest-rate policy is designed to get savers and investors to take more chances with riskier investments. The fact that this is precisely the wrong thing for retirees and savers seems to be lost in their pursuit of market and economic gains.

Simply by opening their mouths, central bankers can affect not only today's interest rate, but tomorrow's *expected* interest rate as well. If Bernanke (and his successors) or Mario Draghi of the ECB promise to keep interest rates near zero until kingdom come, investors will generally take them at their word. By promising to keep rates low, central banks have crushed bond yields. The bond yield curve tells the story. The yield curve is the structure of interest rates for bonds for today, tomorrow, and the day after tomorrow. By plotting a line for each bond maturity, you can see what expected rates are out into the future: 2 years, 5 years, 10 years, and 30 years. The U.S. government can now issue 10-year debt for less than 2 percent yield. This is below the rate of inflation. It implies the Fed has been successful at keeping rates below inflation all the way out to 10 years.

Lots of big economists such as Paul Krugman, Ben Bernanke, Gauti Eggertsson, and Michael Woodford, have provided the intellectual underpinnings that justify Code Red policies (the list of names is actually quite long). They argued that if unconventional monetary policy can raise expected inflation, this strategy can push down real interest rates even though nominal rates cannot fall any further (i.e., they can't fall below zero). Read their research and bear that in mind when these same economists say they don't want to create inflation.

Government bonds used to offer a risk-free rate of return. You took no risk in buying them, and you were guaranteed a return. Jim Grant, the astute financial analyst, has noted that bonds have rallied so much, and the yields on government bonds are so low, that they now offer investors *return-free risk*: you're now guaranteed a loss buying government bonds. Coupons are so low that investors are not even being compensated at the rate of inflation. It is hard to see how rates can go much lower or how more fools can be found to buy the bonds. The only people who buy British, Japanese, German, or American government bonds today in any size are institutions that are legally forced to do so, like insurance companies and pension funds.

From a central banker's point of view, leaving interest rates near zero is useful, but it has given them little *direct* influence over the economy. They can control rising inflation and expectations of higher prices only indirectly. However, central banks still have more bullets in the chamber they can use.

Quantitative Easing, a.k.a. Money Printing

In addition to manipulating interest rates, central banks have the ability to increase the money supply through quantitative easing (QE). Despite all the syllables, that's just a fancy way to say money printing. When the Fed wants to print new money and expand the money supply, it goes out and buys government bonds from banks that it has designated as "primary dealers." The Fed takes delivery of the securities and pays the dealers with newly printed money. The money goes into the dealers' bank accounts, where it can then support lending and money creation by the banking system. Likewise, when the Fed wants to reduce the money supply, it sells bonds back to the banks. The bonds go to the dealers, and the money paid to the Fed simply disappears. (As you can see, both "printing" money and making money disappear happen electronically and instantly. No actual printing of currency is involved. No trees are harmed in the process.)

Banks absolutely love QE—it is a gift to them, and it's one that circumvents the congressional appropriations process. To pay for QE, the Fed credits banks with electronic deposits that are reserve balances at the Federal Reserve. These reserve balances have ballooned to $1.5 trillion, from a mere $8 billion in late 2008. The Fed now pays 0.25 percent interest on reserves it holds, which amounts to nearly $4 billion a year in the banks' coffers. If interest rates rise to 3 percent, and the Federal Reserve then raises the rate it pays on reserves correspondingly, the interest payment will rise from $4 billion to $45 billion a year—an even larger gift! And that is one of the reasons why people are so worried about what will happen if the Fed ever goes back to a normal policy regime. Will the primary dealers lose their interest bennies? Will the Fed actually raise reserve rates? Or will the Fed reduce the money supply, taking away profits of the banks? There is a reason the markets are worried, and it has to do with profits. Their profits. Stay tuned.

The Fed has done over $1.5 trillion of money printing via QE. It is set to do a lot more. See Figure 1.2 for the projected growth of the Fed's balance sheet. It resembles a Nasdaq stock in 1999, shooting to the moon. You would think that $1.5 trillion might be enough, but many respected economists and writers such as Paul Krugman and Martin Wolf are calling for even more QE. When you hear pundits calling for even more QE, you can almost conjure reruns of old *Star Trek* episodes, with Captain Kirk—make that Captain Ben—shouting, "Dammit, Scotty, you've got to give me more QE!" as the Fed tries to escape a black hole of high debt and low growth.

Every time a central bank prints money, it creates winners and losers. So far, the biggest beneficiaries of money printing are governments themselves. This should come as no surprise. (To paraphrase Captain Renault in *Casablanca*, "I'm shocked, shocked to find that money printing is going on in here!") Central banks everywhere are printing

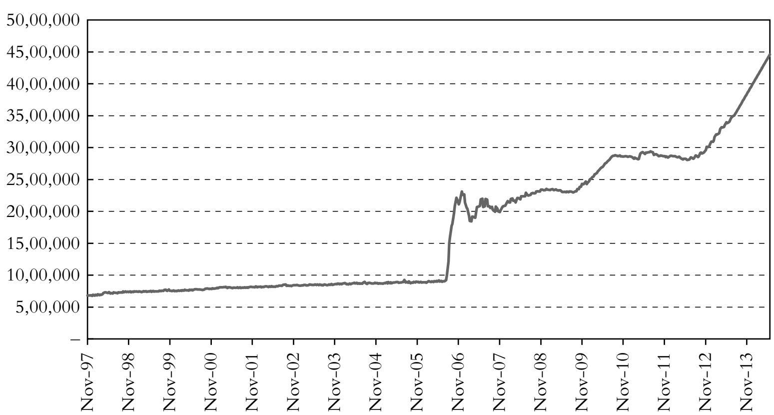

Figure 1.2 Projected Growth of the Federal Reserve's Balance Sheet
SOURCE: *Variant Perception*, Bloomberg.

money to finance very large government deficits. In fact, in 2011, the Federal Reserve financed around three quarters of the U.S. deficit; in 2012, it financed over half of it; and in 2013, it will finance most of it. Why borrow money from real savers when the central bank will print it for you?

The problem for savers and investors is that *all* the major central banks are in on the act. Take a look at Figure 1.3 and you can see that it isn't just the Fed. It is the BoJ, the BoE, the Swiss National Bank, and even the ECB that have expanded their balance sheets. In the case of Japan and England, the central banks are buying bonds outright. The Europeans are not buying bonds directly, but they've provided unlimited financing for private banks to do so. And the Swiss have been buying loads of everyone else's bonds to keep their currency from appreciating. It's a lollapalooza of money creation.

Since printing the money to buy government bonds costs nothing (given that central bank money is just bytes on a computer somewhere), governments get money for nothing and their checks for free. The central bank buys government bonds in the open market rather than from the government directly, and the pretense of an arm's-length transaction between government and central bank maintains

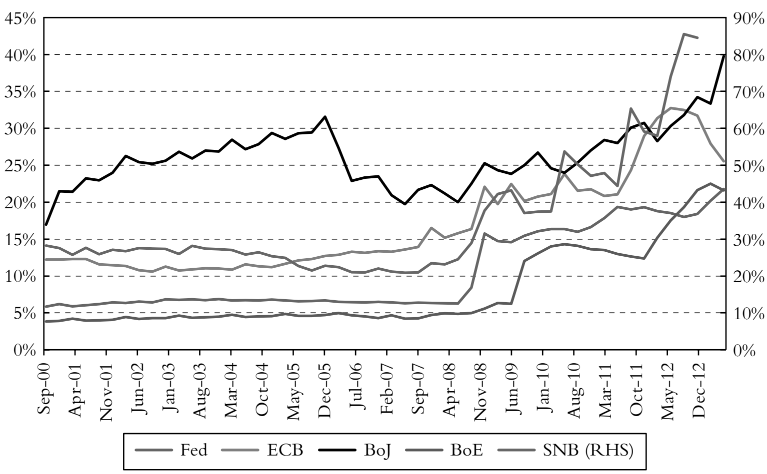

Figure 1.3 Central Bank Balance Sheets Shoot Up to the Moon
SOURCE: *Variant Perception*, Bloomberg.

the illusion of central bank independence, with all parties claiming a separation of monetary and fiscal policy. But that's just for show. By essentially issuing bonds to itself, the government appears to raise revenue miraculously, without burdening anyone else. Yet free money is like a unicorn that leaves trails of tasty chocolate droppings wherever it goes: it exists only in the realms of fantasy. (You or I might simply say, "There are no free lunches"; but as John Maynard Keynes put it, "Words ought to be a little wild, for they are the assaults of thoughts on the unthinking.")

Since there can actually be no such thing as a government raising revenue at no cost, simple logic tells us that someone has to pay. It is impossible to know in advance who will pay for a central bank's "free lunch," only that someone, somewhere will eventually pay. So governments are using quantitative easing to raise revenues without even knowing upon whom the burden will fall (let alone telling them). Compare this to raising revenue the normal way, by taxation. It is possible to know who raised the tax, when it was levied, when it is payable, and how much has to be paid. The burden of money printing, however, falls on unsuspecting victims. These are generally creditors, savers, and investors, but the costs are even more widely felt. It is easy for your local politician to deny culpability—the central bank is by design out of his control. (Well, except in Japan these days. Things like central bank independence can change when survival is at stake.)

Extremely high government spending would be difficult without central bank financing. As the book goes to press, for every dollar that the U.S. federal government spends, it borrows 40 cents (and that has been the case for some time). To put this in everyday terms, in 2012 the median American household income was $50,054. If a normal American family ran its budget like the U.S. government, it would borrow about $20,000 a year to pay for expenses. Most households would love to print money to finance their spending. By printing money, the Federal Reserve lends a helping hand to ease spending. (If the Federal Reserve is reading this, any money printing sent our way would be much appreciated. Please call for our bank account details. We promise to spend any such money immediately and thus do our part to drive up consumer spending.)

The biggest winners from the Fed's policies have been stockholders. The job of all central bankers is to keep prices stable. In the case of the Fed, it also has the job of promoting full employment in the economy. The two missions are referred to as the "Dual Mandate." However, in a Code Red world, the central banks have created a third mandate for themselves: make stock prices go up through large-scale asset purchase (LSAP) programs. Bernanke spoke directly about this in a speech in January 2011:

> Policies have contributed to a stronger stock market just as they did in March 2009, when we did the last iteration of this. The S&P 500 is up 20 percent-plus and the Russell 2000, which is about small cap stocks, is up 30 percent-plus.

He returned to the theme in a speech in 2012.

> LSAPs also appear to have boosted stock prices, presumably both by lowering discount rates and by improving the economic outlook; it is probably not a coincidence that the sustained recovery in U.S. equity prices began in March 2009, shortly after the FOMC's decision to greatly expand securities purchases. This effect is potentially important because stock values affect both consumption and investment decisions.

These remarks are vintage Bernanke. If you're an investor or speculator, the message is loud and clear: Buy stocks. We've got your back. (But let's see who takes the blame when the stock market falls next time. Just saying . . .)

The reason the Fed wants stock prices to go up is that when stocks go up, investors are happy and likely to spend more money. It is trickle-down monetary policy. QE, ZIRP, and LSAPs to the tune of $85 billion of purchases a month are pumping up the stock market, all with the hope that rich people will spend those gains, and that money will trickle down to the rest of the country. So far, no dice. (As we write this, new jobs created per month in the United States are around 150,000, so it takes about $500,000 of QE to create one job. Bravo to the Fed!! It would be far easier to simply write the unemployed checks for $100,000. That would be 80 percent cheaper.)

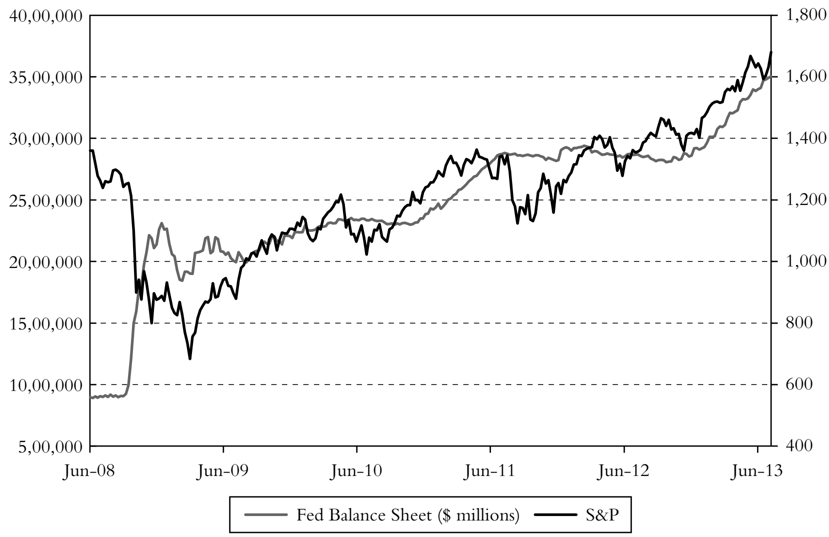

Figure 1.4 QE and LSAPs Have Been Very Bullish for Stocks
SOURCE: *Variant Perception*, Bloomberg.

The problem is that there is no clear link between developments in financial markets and the real economy. Research now points to the problem: the "wealth effect" from a rise in the stock market is quite small. Higher stock market prices tend to benefit only the few who were already wealthy. The same economists who despise supply-side economics are madly infatuated with supply-side monetary policy. Go figure. Trickle-down monetary policy indeed!

Most Americans own stocks, but only the wealthiest 10 percent of the population own significant amounts of stocks. Their retirement accounts are worth an average $277,000. But middle-income families have just $23,000 in their accounts, and the poor have nothing at all. The rich were almost all employed before quantitative easing anyway. Afterwards, they still have jobs and are richer. As for the poor, they still have very high unemployment and have not benefited in the slightest from a higher stock market.

Debasing Your Currency

In a world of zero interest rates, negative *real* rates and quantitative easing, money has less and less value. Central bankers are perfectly aware of this, and they've discussed it in public. In fact, devaluing the dollar is a very explicit goal. In a speech in 2002 Ben Bernanke admitted that creating money electronically would immediately devalue the dollar. As he argued:

> Like gold, U.S. dollars have value only to the extent that they are strictly limited in supply. But the U.S. government has a technology, called a printing press (or, today, its electronic equivalent) that allows it to produce as many U.S. dollars as it wishes at essentially no cost. By increasing the number of U.S. dollars in circulation, or even by credibly threatening to do so, the U.S. government can also reduce the value of a dollar in terms of goods and services, which is equivalent to raising the prices in dollars of those goods and services.

The Obama administration is thrilled with a weaker dollar. Christina Romer, former chair of the Council of Economic Advisers, also noted that, "Quantitative easing also works through exchange rates." She argued that the Fed could engage in much more aggressive QE to further lower the dollar, if needed. We will return later to the point that this makes it hard to object when Japan does the same thing but just twice as intensively!

While devaluing the dollar might seem like an insane idea to a normal person, it is exactly what some central banks want. Weakening your currency is a tried and tested strategy that countries have used throughout the years. Central bankers who weaken their currencies are like drag racers that inject nitrous oxide into their engines. It is like cheating and can give an economy a little extra push in the race for economic growth. The fact that is bad for the long-term survival of their engines is lost in the drive to win the race today.

Many countries rely on exports or would like to export more to grow. A weaker currency makes goods and services more appealing to foreigners. For example, a few years ago, when the pound had an exchange rate of $2.10 against the dollar, lots of British women traveled to New York for the weekend to buy handbags and eat out. But when the pound bought only $1.35 worth of goods, no one hopped from London to the United States to go shopping. On a very large scale, the same happens. For a U.S. auto maker, selling cars to foreigners gets a lot easier if the dollar is weak against foreign currencies.

When a currency appreciates, exports can be hit very hard. It's tougher to sell computers, cars, and ships to foreigners, and so most countries and their businesses want a weak currency. It is easier for a business to sell products when their currency is dropping than it is to become more productive. Politicians may say they want a strong dollar or a strong euro, but in practice the opposite is true. (Watch what they do, not what they say.)

Devaluing your currency sounds wonderful in theory. In practice, it doesn't always work out as planned. Central bankers, like drag racers, can inject nitrous oxide into their engines to get a little more horsepower. If you are the only one doing it, you'll have an edge. The problem is that if everyone is doing it, no one has an advantage. And eventually, everyone burns out their engines and no one wins. Despite the initial optimism they may inspire, in the long run currency crises can only lead to stagnation, inflation, falling standards of living, and poor growth.

Navigating a Code Red World

Whenever central bankers spike the punchbowl through money printing or currency devaluations, investors are happy. Every QE announcement has made stocks go up. Every major currency sell-off, whether it is the dollar or, lately, the Japanese yen, has lifted stock markets and commodities like oil, copper, wheat, and corn in the terms of the currency being trashed—er, we mean devalued. The policy of very low interest rates and money printing appears to have worked, up to this point. Most stock markets have doubled from the lows they hit after Lehman Brothers went bankrupt. The euphoria of investors should come as no surprise. When Nixon took the dollar off the gold standard in 1971, stocks skyrocketed. But investors should recall that the joy was short-lived. As it turned out, the 1970s were one of the worst decades for investing in stocks or bonds. Commodities did well for a while and then crashed. Investing was treacherous. The near future will likely be equally tumultuous, marked by bubbles, booms, and busts; and investors will need to be prepared.

For many investors, the last few years have been a stormy voyage. It is easy to feel like a medieval explorer sailing through uncharted waters into terra incognita beyond the edge of the map.

In a memorable (and relevant!) scene from *Blackadder*, one of our favorite comedies, Lord Melchett hands Blackadder a map and says, "Farewell, Blackadder. The foremost cartographers of the land have prepared this for you; it's a map of the area that you'll be traversing." When Blackadder opens it, he sees the map is blank. Lord Melchett smiles and adds, "They'll be very grateful if you could just fill it in as you go along. Bye-bye."

Luckily, you do not need to be without a map, or indeed to fill in an empty map as you go along. Code Red will show you how to navigate the treacherous currents ahead.

Key Lessons from the Chapter

In this chapter we learned:

- Before the Great Financial Crisis, central bankers used conventional monetary policy. Now they are experimenting with nonconventional "Code Red" policies like quantitative easing, zero interest rates, large-scale asset purchases, and currency debasement. These policies will lead to inflation in the long run.
- If you have borrowed too much, it is good to spend less and save. Central bankers, however, want everyone to keep borrowing and spending. Their policies are designed to encourage borrowing and speculation.
- The way to get people to spend their money instead of save is to create negative real interest rates on cash. Inflation in most countries is higher than interest rates, so cash is trash.

- Politicians and central bankers want to encourage exports, so they are trying to devalue their currencies and make goods and services cheaper for foreigners. Unfortunately, not everyone can devalue their currency at the same time.
- Currency wars have happened before in the 1930s and 1970s. They rarely end well for anyone, but governments pursue currency wars anyway.
- Let's review some Code Red terms:
  - ZIRPs—zero interest rate policies. Many central banks have cut interest rates to zero and can't cut them anymore. The central banks have promised to keep them near zero for years.
  - LSAP—large-scale asset purchase program. This is when a central bank prints money to buy bonds, mortgage securities or stocks.
  - QE—quantitative easing. This is when central banks expand the size of their balance sheet to influence the economy rather than through raising or lowering interest rates.
  - Currency wars—is a policy to deliberately weaken your own currency. This happens when central banks use QE and ZIRP to reduce the attractiveness of holding cash. Central banks also can "talk down" their currency and say they want it to go lower.