# The Depression of 2008

by Fred E. Foldvary

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# Recessions and depressions

The U.S. economy as well as much of the global economy will very likely fall into a depression in 2008. This booklet will explain why there will be a recession and depression by the end of the decade of 2000-2010, and why the most probable year is 2008. You will learn how you can minimize your losses or even gain from this depression, and how government policies need to change to prevent future depressions.

We need to first be clear on the difference between a recession and a depression. A recession is related to the word "recede," meaning to fall back. An economic recession is a fall in total output that lasts for a significant time interval. In the U.S., a recession is usually recognized when the gross domestic product, the total output of legally produced goods, falls during two consecutive quarters, i.e. for six months.

An economy is depressed when output falls below the long-run trend. Therefore a depression begins during a recession when GDP falls below the long-run trend and ends in the recovery when GDP rises above that trend. In the news media, "recession" is often used to refer to "depression," but here I will be precise and use the definitions indicated here. So, the economy is still in depression when the economy recovers and expands but is still below the long-run trend.

It would be more meaningful to measure a recession as a fall in per-capita GDP rather than in total GDP. In the long run, national income grows with an increasing population, so if the population grows by one percent and the economy only grows by half a percent, the economy is not regarded as in recession, but the average person has suffered a drop in income. However, I will use the standard criterion of total output.

## Money, real estate, and business cycles

Since this is an informative work and not a novel, I will provide the punch line up front rather than leave you in suspense until the end of the booklet. For a more thorough explanation, read the rest of the book.

There are two causes of the business cycle. One is financial and the other is real. The financial cause is the expansion of money and credit by the banking system. This monetary expansion lowers interest rates so that banks can loan out the extra money. Low interest rates induce a greater investment in and purchase of real estate. The real side of the business cycle is this increase in construction and in real estate speculation.

At the height of the economic boom, real estate prices are high and interest rates are rising. These higher costs choke off further construction and buying, so the rate of growth of the economy falls. The continuing slowdown stops the expansion, and as investment falls, the demand for goods also falls, and the whole economy then falls into a recession, and then into a depression.

In the United States there has been a real estate cycle with a typical duration of about 18 years. This is shown on the table on the next page. This cycle was discovered by real estate economist Homer Hoyt (1960 [1970], p. 538), who explained, "While there were variations in timing between different cities and different types of property, the urban real estate cycle was approximately 18 years in length." Hoyt adds, "The urban real estate cycle has been closely associated with the general business cycle."

Hoyt, however, did not fully understand the economics of the real estate cycle, at least the way it is analyzed here. He thus thought that the real estate cycle had been eliminated by 1960, whereas in fact it had already resumed. In real prices, after adjusting for inflation, real estate prices fell in 1973 and in 1990, and then again in 2006 and 2007.

Fred Harrison (2005) divides this 18-year length by adding two years from the peak to the trough, two years for the economy to recover from the depression, and 14 years for developers to buy land and construct new housing.

As shown in the table below, there has been a cycle in real estate prices, which is really the rise and fall of land values. Peaks in construction have come at about the same time as peaks in land value. Depressions have followed these peaks within a couple of years.

There were two exceptions to the 18-year period. The next real estate boom after the 1920s would have been during the 1940s, but World War II interfered, as millions of Americans were overseas and much of the economy was devoted to war-time production. With no real estate boom, there was no post-war depression. The real estate cycle resumed started up again during the 1950s.

The other exception was during the 1970s, when there was high inflation yet unemployment stayed high. Tangible goods such as gold, silver, gems, collectibles, and land values all rise substantially, until the Federal reserved stopped the rapid increase in the money supply, resulting in a sharp recession in 1980.

| Peaks in land value | interval | Peaks in Construction | interval | Start of Depressions | interval |
|---|---|---|---|---|---|
| 1818 | -- | -- | -- | 1819 | -- |
| 1836 | 18 | 1836 | -- | 1837 | 18 |
| 1854 | 18 | 1856 | 20 | 1857 | 20 |
| 1872 | 18 | 1871 | 15 | 1873 | 16 |
| 1890 | 18 | 1892 | 21 | 1893 | 20 |
| 1907 | 17 | 1909 | 17 | 1918 | 25 |
| 1925 | 18 | 1925 | 16 | 1929 | 11 |
| 1973 | 48 | 1972 | 47 | 1973 | 44 |
| 1979 | 6 | 1978 | 6 | 1980 | 7 |
| 1989 | 10 | 1986 | 8 | 1990 | 10 |
| 2006 | 17 | 2006 | 20 | 2008? | 18? |

The land-value data from 1818 to 1929 are from Harrison (1983, p. 65) and Hoyt (1960, p. 7). Building data for the 1909-1929 period, which are from Harrison (1983, p. 65), Hansen (1964, p. 41), and Shirk (1981). Data for 1972-1989 are from Statistical Abstract, 1990, housing prices and "Value of New Construction Put in Place" reports of the U.S. Department of Commerce, Bureau of the Census. Data for 1990 - 2006 are from several news sources.

Some falls in GDP have not followed peaks in real estate. The recession of 2001 came after a technology boom. Also, the terrorist attack of September 11, 2001, created an economic shock. But the economy soon recovered, lifted up by the continuing real estate boom. But all major depressions have come after real estate booms, and after the peaks.

Since the last U.S. real-estate-caused recession and depression occurred in 1990 (output fell during the fourth quarter of 1990 and the first quarter of 1991), adding 18 years brings us to the year 2008. The real estate cycle of 1990 to 2008 has followed the usual pattern, peaking out in 2006. The economic signals, such as slowing economic growth, lower housing starts and building permits, as well as increasing inflation and higher interest rates, all indicate a coming recession and depression, similar to previous declines that followed real estate peaks.

The timing of the recession depends on the fiscal and monetary policy of the federal government. Congress is not likely to make large changes in taxes or spending until the recession arrives. So the main policy that can shift the timing is the expansion of money by the Federal Reserve System. When the news media report on the Fed's raising or lowering interest rates, the most relevant rate is the "federal funds rate," the interest rate on short-term loans by banks to other banks.

The Fed does not directly set this rate, but targets it. The federal funds rate is set by the market for inter-bank loans. Fed adjusts the money supply so that the market rate is the rate that the Fed targets. If the current rate is higher than the target, the Fed increases the money supply so that the rate gets pushed down to the target.

At the peak of the business cycle, the Fed faces a dilemma. The large past increase in the money supply now increases price inflation. But economic growth is slowing, and a reduction in the growth of the money supply to stop the inflation would raise interest rates and push the economy into a recession. The Fed must choose between greater inflation and a recession.

On Sept. 18, following a turbulent month in the financial markets, the Fed lowered its target interest rate to 4.75 percent from 5.25 percent, although the average actual rate had been around 5 percent during the previous month. This provides more funds for loans in the short run, but does not alter the basic problem of subprime loans with payments scheduled to rise, or the more fundamental problem of high real estate prices that will halt investment and bring on a recession.

The Fed is now powerless to stop both a recession and price inflation. It can only alter the timing of already existing effects. Inflation is already happening, and the fall in investment that leads to a recession is already happening. So an even larger expansion of the money supply could shift the recession to 2009, with much higher inflation, and a sharp contraction of money would plunge the economy into an immediate recession. Faced with these two bad choices, the Fed in late 2006 and 2007 chose to leave the federal funds rate unchanged. If that continues, then 2008 is the most likely year for the next depression.

## The economic cat

To understand the business cycle in greater depth, we need to go into more detail. Many financial analysts and economists, sometimes using complicated statistical methods, have made forecasts, but they have varied widely, and they have often been wrong. That's because the forecasters have lacked a good understanding of the business cycle.

It's important for everyone to understand the real estate cycle, because it affects the whole economy. Even if you don't own real estate directly, you probably own some indirectly via the stock and bond market, and your job may be affected by the cycle. Some people have fallen into financial disaster from not understanding the economics of real estate.

Real estate has been in the news just about every day during the past year (2006-7) as sales slowed down and housing prices have fallen in some places. Many recent buyers now face rising mortgage cost that they can't afford. The real estate chickens are now coming home, but why did the chicken cross the road in the first place?

There are all kinds of opinions about what's going on and where this is all heading. But forecasts are generally useless without a theory, a sound explanation that fits all the pieces of the puzzle together. That's why you should not believe any economic or financial forecast unless you understand and agree with the reasoning behind the forecast.

Unfortunately in the field of economics, there is no consensus theory of the business cycle. Most economists today think that booms and busts are caused by unexpected external shocks, such as an increase in the price of oil, or the eruption of new technologies. Those explanations imply irregular economic fluctuations. But in historical fact there have been quite regular boom and bust cycles, as shown by the table above.

The problem in analyzing booms and busts is that there is no one single business cycle. There are major cycles combined with minor ups and downs, plus small random fluctuations, so if you look at GDP year by year, the pattern looks irregular, but if you see the cat in the drawing, you can see a clear cyclical pattern.

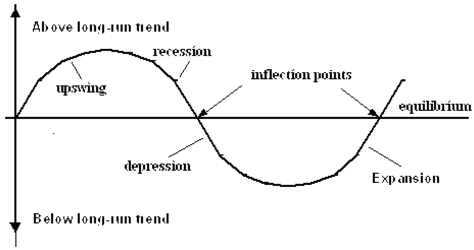
The economy is like those pictures where there is a jumble of lines, but there is a picture in the drawing, and if you look hard enough, or know how to look, you can see the design, such as a cat, and once you see the cat, it then seems obvious where the cat is.

The cat lurks in the real estate cycle, and real estate economists have recognized that there has been for a long time a boom-bust real estate cycle. During the 1930s, real estate economist Homer Hoyt discovered an 18-year cycle of real estate in Chicago, which he later found also in other cities. The cat is that the peaks of the real estate cycle precede the business cycle for the economy as a whole. But although they know that real estate has experienced ups and downs, real estate practitioners are not aware of this cycle research, and even worse, economists have also not been aware of this real estate literature and theory. That is why they have not been able to forecast the timing of the downturn and that is why economic forecasts have been wrong so often.

**The Generic Business Cycle**

So here we have the cat, and the real estate table above lets the cat out of the bag. But don’t believe the forecast just from the chart alone. Data do not create theory. By itself, this evidence does not provide an explanation. You should not believe the forecast made in this booklet until you understand the explanation.

To understand the business cycle, we need to begin with its various parts. Imagine a sine wave. Starting at the left side, the upswing is called an expansion. The top is the peak, and the upper portion of the upswing is an economic boom. The downswing or decline is the recession. If the recession line is steep, we call it a crash. The parts below the horizontal line are the depressions. The bottom is called a trough.



Schumpeter's concept of the business cycle

It's easy to understand why an economy expands. Folks want to improve their lives and create more wealth. The puzzle of the cycle is in the downturn after the peak. Why can't the economy just keep on growing? The key puzzle of the business cycle is the cause of the decline.

The economist Joseph Schumpeter identified the key turn in the cycle as the point of inflection at the peak of investment. The upward swing switches from an acceleration of growth to deceleration, a reduction in the rate of growth. A continuous decline in the rate of growth of GDP results in zero growth and then negative growth.

For example, suppose the annual growth rate is 6 percent in January. In February, the growth rate is reduced to 5 percent. In March, growth is reduced another percent to 4. As each month the growth rate continues to be reduced by another one percent, with April at 3, May at 2, and June at 1 percent, in July the growth rate becomes zero, and in August growth is now minus one. The continuing change in the rate of growth of minus one percent eventually causes negative growth. In terms of calculus, the negative second derivative eventually makes the first derivative negative. The point of inflection occurs when the second derivative, the change in the rate of growth, turns from positive to negative. So why does it switch?

Economic investment drives the business cycle. While a financial investment can include stocks, bonds, real estate, and mutual funds, an economic investment means an increase in the stock of capital goods, such as machines, buildings, and inventory. (Education is also an economic investment, but "human capital" does not affect business cycles.) The rate of increase in economic investment falls when entrepreneurs and investors expect lower profits. Pessimistic expectations are caused either by increased costs or an expected fall in overall demand. Since the fall in demand occurs after the recession starts, the explanation must be an increase in costs not matched by an increase in expected revenues.

The most important investment costs that change are interest rates and the cost of real estate. Interest rates are important for two reasons. First, much of investment is made with borrowed money. Second, even if the money is not borrowed, investors compare the expected rate of return relative to risk of the various financial alternatives, and choose the highest return. So, for example, if an investment in trees grows at three percent but bonds pay five percent, the investor will buy bonds. So at a higher rate of interest, projects with lower returns are avoided.

All economic activity requires space and a location. A big increase in the cost of using or buying real estate will reduce profits and therefore reduce investment. The high cost of renting an office, store, or farmland, or the high cost of buying land, eats up much of the revenue and leaves less for profit. At the height of the boom, both interest rates and real estate costs are rising, and so investment begins to slow down. The amounts of new economic investments keep going down as costs keep rising, without any matching increase in expected revenues.

In order to understand why investments go bad when interest rates and real estate costs go up, we need to go deeper into the structure of capital goods.

**Capital goods and interest rates**

Capital goods are goods that have been produced but have not yet been consumed. We can think of capital goods as the tools used in production. Capital goods include machines, buildings, and inventory, and exclude financial capital such as money or bonds. Conventional economic theory treats capital goods as homogenous, all the same. In most economic models, capital goods are treated as one variable, K. That makes the math easier, but it leaves out important aspects of capital goods.

The school of economic thought that originated in the Austrian Empire in the latter 1800s has a different view of capital goods. Economists of the Austrian school, which is now world-wide, recognized that capital goods have a time structure. Imagine a tall stack of pancakes. The lowest pancake represents household goods such as food in your refrigerator, goods that are rather quickly consumed, i.e. used up.

The second pancake represents inventory, or "circulating capital." These are capital goods with a high turnover, like bread in the shelf of a grocery store. The next pancake up the stack represents capital goods that hang around for several weeks or a few months, like an inventory of books that are not best sellers. The next higher pancake is made up of capital goods that take a few years to mature into sales, such as Christmas trees. Lastly, the highest pancake on the stack represents capital goods that take over a dozen years to plan, build and sell, such as a new housing development or trees that take a couple of decades to mature.

The capital goods low on the stack are not sensitive to interest rates. It does not matter how high interests rates are if your money is only tied up for a few days. But the long-lasting higher-order capital goods at the top layers tie up your money for a long time, and so the rate of return matters a great deal.

As explained by Austrian-school economists such as Friedrich Hayek, high interest rates flatten the structure of capital goods, reducing the top layers. As with the example used above, think of trees that take 50 years to mature. If the tree grows 3 percent a year in value, but the market rate of interest is 4 percent, you won't plant the tree. If the market rate is less than 3 percent, the trees get planted. At low interest rates, it's worth investing in a housing development, but at very high interest rates, such developments are not as profitable, because taking into account the length of time the money is tied up, the return may well be lower than what one can obtain from bonds.

The interest rate plays a vital role in the economy. It is not just the money we get from savings or pay for borrowing. The interest rate is like a carburetor in a car, which adjusts the amount of air and gasoline going into the engine. The interest rate equalizes savings and investments, and thereby adjusts the amount of consumption and investment fueling the economy, making the mix just right. It is the job of the interest rate to distribute production into spending for consumption and investment, so that consumption plus investment use up all the goods produced, with no overproduction or underproduction.

If the interest rate is set by the pure free market, with privately-produced money and unrestricted banking, changes in the rate of interest do not cause a problem. The interest rate adjusts to equalize savings and borrowing. More savings lead to lower interest rates, and the reduced consumption is offset by greater borrowing for investment, especially in higher order capital goods. If there is less savings, interest rates rise, and there is less borrowing, as the greater consumption is offset by less investment.

If the interest rate gets distorted, it is like the carburetor injecting too much air or gasoline, eventually ruining the engine. Since no economy today has a pure free market, especially in money, all interest rates world-wide have become skewed. In the United States, the Federal Reserve system (the Fed) is the central bank. Its job is to manipulate the money supply and interest rates.

When the news media announce that the Fed is raising or lowering interest rates, the relevant rate is the federal funds rate, which is the interest rate banks pay when they borrow funds from other banks. The Fed does not set that rate - it targets that rate, by manipulating the money supply.

The Fed lowers the federal funds rate by buying treasury bonds, and paying for them by raising the reserves or money held by the banks. Our money is fiat money, not backed by any commodity, and the Fed creates money out of nothing by decree. This is often described as "printing money," but that would be too crude and obvious. The process of creating money is much more clever and subtle than simply printing money and spending it.

To understand how the Fed creates money, imagine that you own a \$10,000 US treasury bond, and you tell your broker you want to sell it. The Fed's broker buys the bond from you, and pays you with a \$10,000 check from the Fed. You deposit the Fed check into your bank account, so now the bank has the Fed check. Your bank has an account at the district's Federal Reserve Bank, so your bank deposits the Fed check into its account there. The funds your bank has at the Fed are called "reserves." Anybody else would have to cover the check by drawing down their funds some place, but the Federal Reserve Bank covers the Fed check by - presto! - creating the reserves. God said "Fiat lux - Let there be light," and the Fed says, "Fiat money - Let there be money."

The Fed-created money acts as though there were more savings. Banks lower their interest rates to loan out that extra money. At that lower interest rate, there is more investment in higher-order capital goods, especially real estate construction and development.

It's important to recognize that this new investment is artificially juiced up by the manipulation of interest rates by the Fed, as these investments would not have been made with the higher interest rates that a pure market would have set. It's like an athlete running faster on drugs, while over the long run, drugs do damage to the body.

A 2003 paper by Barry Eichengreen and Kris Mitchener confirms the role of money and credit as a cause of the Great Depression: "We conclude that the credit boom view provides a useful perspective on both the boom of the 1920s and the subsequent slump."

When interest rates rise back up, investment in these industries will grind to a halt, and the workers in those industries will be laid off. They will buy less stuff, and so less stuff will be produced, and down goes the economy. The stimulus may feel good at the moment, but it is at the cost of future pain.

Another problem is that the public's planned savings did not change. The Fed is not letting the interest rate do its job of adjusting consumption and investment. The boosted new investment competes with consumption in the market, and so prices rise. The new money creates price inflation, but prices don't all rise at the same rate. Prices rise faster where the new money is being loaned out, such as for purchasing and constructing real estate.

We may not see much increase at first in the consumer price index, and it seems like "inflation is under control," but in actuality, there is high asset price inflation, rising real estate prices and a rising stock market.

## Land and the business cycle

Capital goods are half of the real estate cycle story. Land is the other half. As first explained by the American economist Henry George, as the economy recovers from a recession, at first there is a decrease in vacancies, and then when vacancies are low, rents rise, and the price of land rises, and then speculators buy real estate as they expect rentals and prices to keep rising.

When real estate prices rise, it is really the price of land rising, not the value of the buildings. Land values rise because there is a fixed supply and a rising demand. But the biggest reason why land values rise is the humongous implicit subsidy granted to real estate owners.

Public works and civic services increase the value of land and little of this is paid from property taxes specifically on land so these public goods get capitalized as higher land value and more rent. More generally, much of the increase in wealth from economic growth and greater productivity is soak up by rent and capitalized in land value. Fred Harrison (2005) calls this the "law of absorption," a concept that was central to the land theory of Henry George (1879).

Tax advantages, such as reduced or eliminated capital gains taxes and tax deductions for mortgages and property taxes, make real estate that much more attractive, but none of this really benefits a new buyer, because he pays for all this in the higher price for land. A new buyer gains only if land keeps rising faster than other assets.

Homeowners borrowed $2.5 trillion from 2001 to 2005 using their homes as collateral (Panzner, 2007, p. xiii). The whole financial system depends on land as collateral, but land is a safe collateral only with ever increasing land prices. As an economy expands, and land prices go up, leveraged ownership can reap huge profits. The speculative demand for real estate makes prices rise even faster. We have seen real estate prices double during the past several years.

But an economy with continuously escalating land prices is not sustainable. Land seems to be a solid collateral, but this is an illusion. Since land has no cost of production, the land collateral is quicksand. The price of land can drop to zero, and the land will still sit there. After the ratio of land price to rent increases due to speculative buying, it must fall back to the historical ratio, because ultimately the price of land depends on the rent it fetches.

The Fed lowered the federal funds rate down to one percent after 2001, which also lowered other interest rates. Real estate purchasing, construction, and land values all escalated, exactly as theory predicts. Economist Robert Shiller in book *Irrational Exuberance* says that we are experiencing the greatest real estate boom in history. It has been a world-wide boom, aside from Japan, which had its own boom and bust previously.

**Fannie and Freddie**

What has made this real estate boom even bigger than previous booms is the huge explosion in the secondary loan market. Bankers sell their mortgages to government-sponsored enterprises, popularly called Fannie Mae and Freddie Mac, which have implicit guarantees from the federal government. Fannie, Freddie, and other financial companies assemble pools of mortgages and sell them as collateralized debt obligations, or CDOs. The Financial Markets Association reported that there were $316.4 billion in CDOs issued in 2006, with over $1 trillion issued in total.

With these guarantees and government-sponsored mortgage resale markets, banks have gone hog-wild, lending out interest-only mortgages and adjustable-rate loans to buyers with not so good credit. That's the subprime market we've been hearing about. Some of these loans are “liar loans,” mortgages made without any documents of income and for amounts that are close to the appraised value of the home. The borrower can lie about his income to get a loan.

Fannie and Freddie have not reduced the risks of default, but have spread them throughout the economy, so that not just the banks are at risk but also insurance companies, pension funds, hedge funds, and ultimately the taxpayers. There is a tendency to loosen lending standards during a boom, since if a loan goes bad, higher prices will bail out the loan, but when property prices stop rising and defaults go up as they are now doing, banks tighten lending rules, but this only reduces the demand for real estate even more which makes it more difficult to sell, and puts a downward pressure on prices. The uncertainty also dries up normal lines of credit, such as asset-backed commercial paper.

The collapse of real estate prices brings down the financial system that fueled it and which has now run out of gas. The only question is, who bears the losses. Most likely, the losses will be spread among the banks, brokerage firms, insurance companies, savings in the form of money and bonds, and the government, which will borrow more to pay off its insurance promises.

**The indirect ownership of real estate**

While real estate and business cycles have had the same basic structure for the past 200 years, each particular cycle takes place in its own historical setting. Besides the rise of the secondary market in mortgages, financial assets based on real estate have become much more prominent during the past two decades.

Real estate investment trusts (REITs) are companies that own and manage real estate. Some specialize in mortgages, residential housing, commercial properties, and building companies. In the U.S. they do not pay corporate income taxes if at least 90 percent of the profits are paid as dividends. One step more removed from the actual properties are mutual funds that own REITs, enabling the investor to diversify. There are also real estate mutual funds, such as the Vanguard REIT index fund, based on an index of average real estate prices or an index of REIT prices.

Since corporations are legal artificial persons, holding property in their own name, the shareholders do not obtain the tax advantages such as depreciation and tax credits. One can obtain these benefits by joining a real estate partnership, where all profits, deductions, and credits flow down to the partners. For example, there are partnerships which own low-income housing eligible for tax credits to the partners. However, a limited partner, who only puts up money and does not participate in the management, receives “passive income” which may not get the full tax advantages of depreciation and other loss deductions, unless they offset passive income. A disadvantage of a partnership is that they will increase the length and complexity of income tax forms.

While in previous cycles, owners who anticipated a downturn could at best sell their properties, one can now hedge against a general decline. There are bear market funds that rise in value as real estate or REIT prices fall. One can also buy put options of the shares of construction companies, which rise in value as the price of the shares fall. There is also an S&P/Case-Shiller home price index and associated futures markets for housing in several U.S. cities.

These financial instruments enable investors and speculators to participate in real estate ownership and revenue and to hedge against declines, but they do not alter the fiscal and monetary policies that cause the real estate cycle, so they cannot alter the cycle.

## Riding the river

Eventually, the previous great increase in the money supply creates price inflation in producer goods and consumer goods, and the monetary authority then reduces the rate of growth of the money supply. The reduction in the supply of loanable funds raises interest rates. With adjustable mortgages and rising interest rates and flat property values, some owners can't afford to pay their mortgages, and they go into default.

More properties get dumped on the market. Higher interest rates plus high prices for real estate choke off new investment in real estate construction and other higher-order capital goods.

Remember the point of inflection, where the second derivative turns from positive to negative. Business expands when it expects higher profits and reduces investment when they expect lower profits. They expect lower profits because costs have gone up. The most important costs for most investments in higher order capital goods such as buildings are for interest payments and land.

During the peak of expansion, at the point of inflection, both of these costs are rising, and so the rate of investment growth falls. The change in the rate of growth turns negative. Depressions are born in the midst of the previous boom. Higher costs eventually choke off new investment. That lowers demand for other goods, and then the economy plunges into a recession.

This is exactly what happened in Japan after its boom of the 1980s. Real estate prices then deflated from their lofty heights, as the Japanese economy stagnated for a long time. Mortgages are paid from wages and profits, so eventually, real estate prices stop rising. The real estate market stays at a plateau. Sales volume drops, as it is now doing, but most owners refuse to sell at prices much lower than they were, although in 2007, median house prices fell at an annual rate of four percent (Makin, 2007). The large number of properties for sale on the market then dampens new construction, which then reduces the demand for durables such as furniture, appliances, and office equipment.

When the economy goes into recession, people lose their jobs, businesses fail, and then real estate prices collapse as owners are forced to sell and banks unload properties. Banks fail, enterprises go bust, unemployment soars.

The Fed now faces a financial dilemma. The past growth of the money supply will increase price inflation. But if they slow down the growth of money, interest rates rise, and slow down the economy. There is nothing the Fed can do to prevent the next recession because the fruits of the previous expansion of money are now ripe as high real estate prices and rising defaults.

Reflecting the interest-rate dilemma, as of the end of June 2007, the Federal Reserve Board's Open Market Committee (FOMC) has left the targeted federal funds rate at 5.25%, the eighth consecutive decision to keep rates at that level.

We are heading down the river to a financial waterfall, and expanding the money supply won't do any good now, since at the peak of the boom, inflation is expected and money expansion no longer boosts output but just fuels further inflation.

**Location, location, and timing**

What about the timing? When can we expect the next recession? Historically, the recession begins around two years after real estate peaks out, and it looks like the peak occurred in 2006. The last real-estate depression was in 1990. Adding 18 years to that puts the next depression in 2008.

This is not a new forecast. Back in 1997 I published an article, "The Business Cycle: A Georgist-Austrian Synthesis," in the *American Journal of Economics and Sociology,* in which I predicted a recession in 2008. I have made the same forecast in subsequent articles. The real estate cycle since then has been right on track towards a depression of 2008.

Could the recession start this year, in 2007? I think a recession is unlikely before 2008 because commercial real estate is still strong, and business investment is still strong. But the rate of growth is already decreasing. We are past the point of inflection.

The exact year of the recession cannot be forecast precisely because the Fed can alter the timing, and we don't know what the Fed chiefs will do. If the Fed lowers interest rates substantially, the recession will still come, but possibly later, and with much more inflation. If Congress greatly increases spending, borrowing the funds from abroad, this would also push the depression further into the future, but Congress typically does not react until the depression is already present.

Past evidence can give use clues to the timing, and about two years after the peak seems to be the average time interval from the real estate peaks to the following recession and depression. That's why I continue to forecast that 2008 is the most likely year for the coming depression. And it will probably be a severe recession and depression, given the huge increase in real estate prices, and the huge previous expansion of the money supply that has created large economic distortions.

## How to extirpate the cycles

To “extirpate” means to pull out by the roots. Business cycles are bad for the economy. A depression destroys enterprise and jobs. This is not the “creative destruction” of innovation and competition, but the results of government-created distortion.

Alan Greenspan stated in a speech in September 2007 that The human race has never found a way to confront bubbles" (Ip, 2007). But some members of humanity, namely geo-classical economists, have indeed seen the economic cat, the interventions of government that cause real estate bubbles.

The prevention of a bad outcome requires the extirpation of the causes. The business cycle and real estate cycle have two basic causes: financial and real. The financial cause is the manipulation of money and interest rates by the monetary authority, the Federal Reserve System and other central banks. Before the Fed was established, the U.S. Treasury acted as a central bank, and before the Civil War, the state governments intervened in money and banking, so the USA has never had free-market banking.

As explained by Austrian-school economists such as George Selgin, a free banking policy would let the money supply and interest rates be set by the market rather than by a government agency. There would be some base money such as gold, and the banks would issue their own private currency, bank notes convertible into the base money.

Convertibility and competition would prevent inflation, while the banks would flexibly supply as much bank-note currency as the public wanted to hold, but no more than that. The interest rate would be able to do its vital job of equalizing savings and borrowing while allocating output between consumption and investment. There would be no more artificially boosted investment and speculation from artificially low interest rates. The market rate of interest would be the natural rate based on actual savings, not manipulative money injections.

The real side of the business cycle is the real estate boom and subsequent bust. Free banking would dampen the real estate cycle, but to extirpate it also requires an end to landowner subsidies. Government spending on public works and civic services paid for by taxes other than on land have the effect of pumping up rent and land values, a subsidy to landowners.

The secondary market run by Fannie Mae and Freddie Mac and other government-sponsored enterprises add to the artificially raised land values. To eliminate the real estate cycle, these institutions need to be completely privatized, with no implicit or explicit guarantees. All other guarantees on mortgages should also be scrapped, so that owners and lenders bear the full risks.

There are two ways to eliminate the subsidy to landowners from civic works. One way is to privatize public works and community services, as is done now with homeowner associations and with proprietary communities such as hotels, shopping centers, and resorts. If the streets, parks, and security and other community services are provided by private contractual communities, landowners would have to pay for the services that protect and serve their lands, rather than forcing others to subsidize them. New transit and other infrastructure would no longer be a subsidy and so would no longer fuel excessive land speculation. The pure free market would thus have no real estate cycle and no business cycle.

So long as public works and civic services are provided by government, the real estate cycle can be prevented by financing these goods the same way that private communities are funded, from the rentals generated by these services. Just as a hotel room charge pays for the public goods of a hotel, such as elevators and lobbies, and the assessments of a residential association pays for its public goods, a levy on the ground rent or site value generated by the civic services would prevent the subsidy to the landowner, and speculation based on anticipated future subsidies.

Even if the Federal Reserve is not abolished, a tax shift that replaces punitive taxes (on wages, entrepreneurial profits, and goods) with a levy on land value or land rent would greatly dampen the real estate cycle. Land speculation would no longer be profitable, since the higher rents expected in the future would be collected by the government. However, an artificially lower interest rate due to money expansion would still distort investment in capital goods, and lead to excessive construction followed by deconstruction, with business failures, layoffs, and an economic downturn, but not nearly as severe. Loans would no longer be for land value but only for buildings, which do not fluctuate like land values.

So the remedy for the business cycle is free banking and public revenue from land rent, either as a government levy or with private communities. These two policies would extirpate the root causes of the business cycles. The economy would then grow smoothly, with only minor random turbulence rather than the severe and destructive boom-bust cycle we how have.

**News in 2007 confirms the real estate deceleration**

After the peak of real estate prices and construction, the real estate market typically plateaus. Demand falls, but sellers are reluctant to lower their prices by much. So the inventory of unsold homes for sale rises. After the recession starts, then the large increase in loan defaults put many more properties on the market for sale, and then prices plunge. As of June 2007, the recession has not yet started, and the real estate market is at the plateau stage.

The U.S. Commerce Department reported that new home sales fell 1.6% in May 2007. Sales fell in all but one of the first five months of 2007. New home sales were down 21.1% year-to-date. Inventories of unsold homes stood at a 7.1-month supply at the end of May. The median sales prices fell 0.9% in the past year to $236,100. Home prices in ten of the largest U.S. cities fell at the fastest pace in 16 years in April (Greg Robb, MarketWatch, 26 June 2007).

The National Association of Realtors announced that sales of existing homes dropped 8.4% from February to March 2007, the largest one-month decline since January 1989, during the last housing recession.

As of the end of June 2007, annualized sales of existing homes fell below the 6 million threshold to 5.99 million, more than 10% below the year-ago level and the lowest since June 2003. The inventory of previously owned homes on the market rose to 8.9 months, the highest since June 1992. The median price for an existing home dropped to $223,700, down a bit over 2% from May 2006. Meanwhile, annualized sales of new homes declined 1.6% from April to 915,000, worse than expectations. Versus their year-ago level, new-home sales were off almost 16%. The inventory of new homes for sale rose slightly, and the median sales price was $236,100, down about 1% from May 2006.

Orders for American-made durable goods fell sharply in May 2007. The Commerce Department announced on June 27 that May orders for durable goods, manufactured products that last at least three years, fell 2.8%, or $6.1 billion, to $213.0 billion. Orders were down for metals, machines, and electronic appliances. Orders for non-defense capital goods fell by 3%. (Andrew Farrell, Forbes.com, 27 June 2007). Residential fixed investment, the GDP component that includes spending on housing, plunged by 15.8% in the first quarter

Although the purchase prices of real estate has peaked out, rentals paid by tenants are still rising because fewer tenants can afford to buy real estate and economic growth is still positive. But rising rentals for commercial real estate is a prime cause of reduced investment by business. Recent news confirms the increase in rental costs.

The Blackstone Group leased commercial units at $90/sf at One Post Office Square and Rowe's Wharf, Boston, properties that it obtained from its purchase of Equity Office Properties Trust in 2007. These rates compare to averages of $62/sf in Boston's Back Bay area and $56.25/sf in the financial district. Rents in those markets increased 56% and 42%

respectively over the past year, and brokers say that rents of $80/sf and more are becoming more common (LoopNews, 28 June 2007).

In June 2007, the UCLA Anderson Forecast concluded that the U.S. economy is close to a recession. A *Los Angeles Times* report by Annette Haddad on June 19 cited senior economist David Shulman as saying that "weakness in the housing market is finally spilling over into consumption spending."

The Bank of International Settlements (BIS) warned in June 2007 that the global economy could be on the brink of a depression like that of the 1930s. The BIS stated that years of loose monetary policy fueled a dangerous credit bubble that left the global economy more vulnerable to an economic catastrophe than is generally understood (MoneyNews.com).

*The Week* magazine, July 6-13, referencing Chris Isidore of CNNMoney.com, features on p. 42 the collapse of a large hedge fund managed by Bear, Stearns, & Co. Its emergency sale of securities drove down bond prices, causing losses for Wall Street firms. The hedge fund had borrowed $6 billion to buy bonds backed by subprime mortgages, many of which were already in default. More such actions could create a panic, shake the entire bond market, and spillover to the stock market. Higher interest rates, or actually, a greater risk premium, could dry up investment, and bring on a recession.

As of September 15, 2007, the the Intrade™ "prediction market" (www.intrade.com) is tilting towards a recession (successive quarters of negative real GDP growth) in 2008 in the contract US.RECESSION.08 that started trading on August 2, 2007. The contract for recession in 2007 is tilted towards no recession.

**Authors on Market Madness and Impending Doom**

Fred Harrison's 1983 book *The Power in the Land* combined the economic thought of Henry George with the real estate price research of Homer Hoyt and others to describe the real estate cycles of several countries. In his 2005 book *Boom Bust*, Harrison predicts a global depression in 2010. Harrison finds that house prices lag behind the land market by 18 months. He bases the 2010 year on the trough of the last business cycle, 1992, and forecasts a peak in 2008, followed by a depression in 2010. In contrast, my analysis here is based on 1990 as the year the recession began in the U.S., with 2008 the next recession based on the 18-year cycle. Moreover, Harrison does not include the Austrian-school side of the business cycle that incorporates money and credit, capital goods and interest rates.

With economic recessions and depressions come socialists to condemn "capitalism." A typical case was *Beyond Boom and Crash* (1978) by Robert Heilbroner. They confuse themselves with their own propaganda term "capitalist." Heilbroner correctly points out problems in today's economies, such as inflation and recessions, but then, since our economies are "capitalist," he blames "capitalism," which is meaningless, unless the term has switched meanings from a label for today's mixed market plus government economies to something different, the market as such, apart from government intervention. But there is no explanation as to how a pure market economy would create business cycles, and for a good reason, namely, it could not. My analysis presented here is that monetary and fiscal interventions cause the cycle, not the market as such. A non-existent free market cannot cause an existing cycle.

Robert Shiller has been the most prominent economist warning of a real estate crash, particularly in the second edition (2005) of his book *Irrational Exuberance*. Shiller in his book points out that real estate prices in the US rose sharply after 2000, just as the stock market did in the mid 1990s. Real (inflation-adjusted) house prices rose by 52% from 1997 to 2004 (p. 12), and, I add, continued rising to 2006. Shiller discusses investor confidence, emotions, psychology and expectations as explanations of bubbles, comparing financial bubbles to ponzi schemes, noting that as prices rise, the level of exuberance is magnified by the rise in the price itself, a phenomenon I discussed also in my 1998 article on land speculation. Despite its insights, *Irrational Exuberance* does not explain or even recognize the historic real estate cycle, nor any Austrian-school or Georgist ideas.

However, Shiller does make a good point: that we need to also understand mass psychology along with the economic and policy causes of the business cycle. A good book on how mass psychology affects financial markets is one by James Dines, in which he points out that the masses do not recognize a rising trend until it is well under way, and then fail to bail out when the trend turns. Dines points out that bubbles are invisible to those inside the bubbles; indeed, real estate professionals tend to think there will be a "soft landing" after prices peak out. Dines explains that technical analysis, the analysis of graphs, can supplement fundamental analysis (based on economics and financial data) and mass psychology to help investors profit from trends.

The article "Out of touch with realty reality" by Les Christie, CNNMoney.com, June 21, 2007 confirms this mass psychology: "Despite turmoil in the housing markets that includes record foreclosure numbers, mortgage rate increases and home price depreciation, homeowners don't believe there's a real estate slump, according to a new poll."

Individual psychology is also important in investor decisions. In his book *Beyond Greed and Fear*, professor Hersh Shefrin applies the field of behavioral finance to describe psychological biases, such as overconfidence and being too anchored on one experience, that lead to bad decisions. This is related to the winner's curse, in which the winner in bidding in an auction is the person who is most optimistic, but later regrets the purchase because he paid too much. This applies to land speculation, where at the peak of the boom, speculators pay too much and drive prices up to levels not warranted by the future rents, and then when there are no more greater fools, prices fall.

Speculative zooms in price followed by a plunge back to reality creates a fractal-type price pattern, as described by Mandelbrot and Hudson in *The (Mis)behavior of Markets* (2004) in their analysis of price bubbles. When a trend breaks, it can do so rapidly. Price gyrations can go to extremes because when speculators anticipate the future, they overshoot. Market are riskier than most people realize.

Such considerations raise the question of efficient financial markets. Modern portfolio theory (MPT) is based on the concept that markets tend to be rather efficient, in that the price of assets reflects the known public information, and that new information spreads quickly. MPT acknowledges market volatility, but just says that one cannot profit from it consistently. Yet if the theory of the real estate cycle presented here is accurate, one can indeed profit from it by buying real estate at the beginning of the recovery, such as in 1994, and selling during the boom 12 years later, such as in 2006, before the downturn. Some financiers have indeed done this, but it is not public knowledge. Most investors and speculators do not know about the real estate cycle, and most who are introduced to it are too skeptical to act on it, probably including most who are reading this booklet. One can profit greatly if one has an insight missed by the masses, such as the future course of energy production, an insight which turns out to be correct. But few have such insights.

Since the inflationary years of the late 1960s there has been a financial literature predicting gloom and doom, with a crashing stock market and economy. "How to profit from the next crash" usually fetches good sales, although while there was high inflation in the 1970s and several recessions, there has been no disaster on the scale of the Great Depression. During the real estate boom of the ozo years (2000-2009), several books and a number of financial newsletters have been predicting the next crash and depression. I look in the index to see if there are entries for Hayek, Hoyt, and George; if not, then the book does not have an Austrian or Georgist theory as expressed here. None of these works have analyzed the financial and real aspects of the business cycle in the way that my research has done, but they might offer helpful tips on how to cope with the downturn.

Michael Panzner's (2007) book *Financial Armageddon: Protecting Your Future from Four Impending Catastrophes* proposes four threats to the economy. First is the high debt bubble of the government as well as mortgages and personal loans. Second is the retirement system, both the social security system, which will be paying out much more in the near future, and the private pension plans which are not adequately funded. Third are government guarantees that far exceed the funds backing the pledges, as the federal government explicitly guarantees bank deposits and some mortgages, and implicitly guarantees the liabilities of agencies such as Freddie and Fannie. The government would also have to borrow large amounts in the event of another disaster like the Katrina flooding in New Orleans.

Panzner's fourth financial threat is the derivatives market. Derivatives are financial instruments such as options and futures contracts, by which one may either hedge against an unfavorable change in assets held, or speculate on expected changes in price. With derivatives combined with debt, one can leverage money for huge gains, but they leave the holders vulnerable to huge losses, which then compel them to sell the underlying asset, which if done swiftly and in a large scale, can bring down large segments of the financial market.

In *Cash in on the Coming Real Estate Crash* (2006), Decker and Sheldon point out that the real estate market must return to its historic averages. They note that the housing affordability index, calculated by the National Association of REALTORS®, is falling as interest rates rise. Other items they relate include rising energy costs, tighter lending rules, and higher unemployment. They note that local conditions can vary widely. If one expects a local downturn, besides selling one's home, one can stick it out or profit from buying when prices are low. The sketchy analysis of why the crash is coming may not matter much to those who seek practical tips.

Harry Dent's book *The Next Great Bubble Boom* (2004) compares the current economy with past cycles and predicts a bull market driven by advancing technology until the end of the 2000 decade and then, with the end of the baby boom era, a crash between 2010 and 2012. The author predicts (p. 95) that "housing prices are likely to continue to grow slower at best and may even weaken while the stock market sees its next great bull market," with a crash in 2011. He says the slowing is due to demographic trends, as the population gets older, and overbuilding during the first years of the decade. But in fact, real estate prices zoomed until 2006, and it is not clear that there is a technology boom going on.

Another doom book in my collection is *The Coming Crash in the Housing Market,* by John Talbott. Written in 2003, the timing now seems premature, but then again, Hoyt is not in the book's index. The author wrote that housing prices looked awfully high, relative to other prices and to incomes and to rent. In 2002, shortly after the recession of 2001, there were, the author points out, rising foreclosures and personal bankruptcies. He says that the housing sector is not a true market because a few large lending institutions dominate it along with Fannie and Freddie, hence market efficiency does not apply. Despite the high prices of 2002, houses kept on rising through to 2006, and indeed the continuing real estate boom pulled the economy out of the recession. Talbott should consider the 18-year pattern next time around.

Since the crash didn't arrive in the mid ozos, Talbott came out with another book in 2006, *Sell Now! The End of the Housing Bubble*. George, Hayek, and Hoyt are still not in the index. He noted how house prices had risen by a real 35 percent since 2003. Talbott observes that he sees the housing boom as global and notes that in Japan, after the boom, real estate prices deflated back to where they started from. He blames overly aggressive banks, along with Fannie and Freddie, for the bubble, and like Shiller, compares the real estate bubble to a Ponzi scheme. This time around, Talbott has timed it right, according to Hoyt, although he sees only a portion of the whole story.

Daniel Arnold's book *The Great Bust Ahead* (2005) exclaims that the greatest depression in history is about to happen because of demographics, including immigration. Middle-aged persons are the biggest spenders. He projects the Dow Jones Industrial Average to reach 26,000 by 2010, followed by a collapse as the baby boomers reduce their spending. However, as I see it, the baby boomers and others will most likely spread out their retirements, as many will continue working, so the demographic effect will be gradual and, at any rate, comes after my projected 2008 date..

In *How to Profit from the Coming Real Estate Bust,* John Rubino in 2003 pointed to stalled job creation, maxed-out consumers, high debt, and derivatives. He correctly observed that real estate was propping up the economy. He correctly stated that before the fall, there would be rising mortgage delinquencies, falling sales, but stable prices, and, with Hoyt and Foldvary not consulted, forecast a recession in 2004.

As I survey these and other books and articles, I find that nobody else has synthesized the historic real estate cycle with the Austrian and Georgist business cycle, and I have seen no other theory of the business cycle that is both coherent and complete in including the financial as well as real sides of the explanation. But time will tell if the forecast here for 2008 (or a bit later) is accurate. If not, then it will be the first time in known history that a recession did not follow a real estate boom fueled by easy money.

**Financial signals of a coming recession**

There are signals we can watch that will indicate that the recession is about to start. Watch business profits, business investment, and non-residential construction. The focus today is mostly on residential real estate, but what turns that second derivative negative is less investment by business, and that follows lowered profit expectations. Since the economy is already slowing down, as the rate of growth diminishes, the signals indicate that we are approaching the peak.

Some financial analysts pay attention to the yield curve on bonds, to compare short and long-term rates. Normally, long-term interest rates are greater, as they include a premium for inflation and for greater uncertainty. When short-term rates are higher, the curve is said to be inverted, and warns of a recession. However, there have been false signals from this curve, and long-term rates have been depressed by the great amount of foreign purchases of U.S. bonds.

Other signals include business profits, housing starts, and orders for durable goods. These indicate investment in capital goods, as we should keep in mind that investment drives the cycle.

There are also several real estate indexes we can watch. A new real estate signal is the S&P Case-Shiller Metro Area Home Price Indices, associated with a new futures market in real estate prices. Another signal is the iShares Dow Jones US Real Estate index, symbol IYR, which seems to have topped out on February 2007.

What is different today from past real estate cycles is that it is easier to hedge from or speculate on a real estate decline. But this won't prevent the downturn, because few people understand the real estate cycle.

## How to protect yourself from a recession

This section is not intended as financial advice, but as an educational matter. If you believe that a recession is coming soon, then obviously it would be prudent to take a low-risk conservative position in your financial investments, avoiding stocks sensitive to the business cycle.

One can reduce one's vulnerability to a real-estate downturn by selling real estate holdings, whether directly owned or as partners and shareholders. However, your own home may be a different story. Most homeowners have a huge personal benefit from their home and neighborhood, its subjective value being much greater than the market value, and so even if one expects a fall in the price, most homeowners may be better off not selling, if they intend to live there for a long time and if they expect to have an income that will pay the home expenses.

One can hedge against real estate holdings or speculate with shares in an inverse of a real estate index, such as the Short Real Estate ProFund (SRPIX), on which you can make money as real estate falls, or the UltraShort Real Estate ProShares (SRS), a leveraged and thus riskier bear-market real estate fund. One might also go short on the Shiller futures markets, and/or buy put options on construction companies. I'm not recommending such positions, but those who seek to hedge may find these useful.

The stock market usually declines at the beginning of a recession, but what to do about this is a highly individual matter. Those who use modern portfolio theory and have an asset allocation of relatively uncorrelated passive market-average funds, may wish to do nothing, as a downturn would be an opportunity to rebalance the portfolio and buy more of what is cheaper. Those with a more active stance might wish to sell the more volatile and speculative stocks.

What bonds will do depends on inflation. The nominal interest rate, the one that is quoted, is made up of the inflation rate plus the real interest rate. Real rates tend to go down during a recession, but the inflation rate may be high, as it was in the 1970s, depending on Fed policy as well as international money flows. Those who fear a rise in interest rates would seek to either sell bonds or shift from long-term to short-term bonds that are less sensitive to inflation.

Tangible assets, especially gold and silver, have risen during the ozo years, and are a hedge against inflation as well as currency failures. With fiat money, the value of any currency can fall to its cost of production, zero, while historically, gold and silver have held their value. Shares of mining companies can provide leverage, as any increase in the price of metals is sheer profit if the companies have not hedged away the gains. Shares of companies producing or servicing oil, gas, and alternative energy may do well in the long run as demand rises or supplies get disrupted, but they could fall with lower demand in a severe depression.

The typical investor is usually best off with a diversified portfolio of uncorrelated passive market-average funds, although an advisor who has had a good track record and has keen insights into future trends might do even better. In my judgment, the best approach to efficient markets is to half believe in it. Personal finances are an individual responsibility, and I make no recommendations, as my only forecast is on the real estate cycle, since nobody knows the future prices of any financial assets. With financial markets, almost anything can happen at any time.

**The waterfall**

As the economy head towards the coming waterfall, we can't stop it. Some will profit from it, many will suffer losses, some great losses, from the coming real estate collapse and economic depression, but at least, if this analysis correctly explains economic reality, since we now understand the real estate cycle, we will have the satisfaction of knowing why we are suffering from the crash, and just maybe, next time around, we will be better prepared to handle it.

One thing I can predict with high confidence is that government chiefs, and even most economists will not learn the right lessons from the collapse, and history will repeat itself, as it always has.

## References


Arnold, Daniel A. 2005. *The Great Bust Ahead.* Vorago-US. <http://www.thegreatbustahead.com/>

Commerce, U.S. Dept. of. *Statistical Abstract of the United States*. Washington, DC. Various years.

Commerce, U.S. Dept. of, Bureau of the Census. *Value of New Construction Put in Place.* Various issues.

Decker, David J, and George G. Sheldon. 2006. *Ca$h in on the Coming Real Estate Crash.* Hoboken: John Wiley & Sons.

Dent, Harry S., Jr. 2004. *The Next Great Bubble Boom.* New York: Free Press.

Dines, James. 1996. *How Investors can make money using Mass Psychology.* Belvedere: James Dines & Co.

Eichengreen, Barry, and Kris Mitchener. 2003. "The Great Depression as a credit boom gone wrong." Bank for International Settlements, Working Papers No 137.

Foldvary, Fred. 1997. "The Business Cycle: A Georgist-Austrian Synthesis." *American Journal of Economics and Sociology* 56 (4) (October): 521-41.
<http://www.foldvary.net/works/geoaus.html>
<http://findarticles.com/p/articles/mi_m0254/is_n4_v56/ai_20381871>
<http://www.blackwell-synergy.com/doi/abs/10.1111/j.1536-7150.1997.tb02657.x>

Foldvary, Fred. 1998. "Market-hampering Land Speculation: Fiscal and Monetary Origins and Remedies." *American Journal of Economics and Sociology* 57 (4) (October): 615-37.

Foldvary, Fred. 2004. "The Real Estate Bubble." <http://www.progress.org/2004/fold364.htm>

Foldvary, Fred. 2005. "California's Real Estate Bubble." <http://ca.lp.org/lp20050802.shtml>

Foldvary, Fred. 2006. "The Real-Estate Deceleration." <http://www.progress.org/2006/fold440.htm>

Foldvary, Fred. 2006. "Real Estate Cycle on Schedule as Manufacturing Falls.." <http://www.freeliberal.com/archives/002463.html>

Foldvary, Fred. 2006. "An Austrian Analysis of Real Estate." <http://www.hayek.org.ar/new/images/fotos/Foldvary01.pdf?PHPSESSID=63c155091d2f5db561f4cc00cf2e7142>

Foldvary, Fred. 2007. "The Business Cycle." <http://www.cooperativeindividualism.org/foldvary-fred_the-business-cycle.html>

George, Henry. 1879. *Progress and Poverty.* Rpt. NY: Robert Schalkenbach Foundation, 1975.

Hansen, Alvin H. 1964. *Business Cycles and National Income.* New York: W. W. Norton & Company.

Harrison, Fred. 1983. *The Power in the Land.* London: Shepheard-Walwyn and New York: Universe Books.

Harrison, Fred. 2005. *Boom Bust: House Prices, Banking and the Depression of 2010.* London: Shepheard-Walwyn. < www.shepheard-walwyn.co.uk>

Hayek, Friedrich A. 1933 [1966]. *Monetary Theory and the Trade Cycle.* Trans. N. Kaldor and H. Croome. Rpt. New York: Augustus M. Kelley.

Heilbroner, Robert L. 1978. *Beyond Boom and Crash.* New York: W.W. Norton & Co.

Hoyt, Homer. 1933. *One Hundred Years of Land Values in Chicago.* rpt. NY: Arno Press & The New York Times, 1970. Rpt. Washington: Beard Books, 2000.

Hoyt, Homer. 1960. "The Urban Real Estate Cycle - Performances and Prospects." *Urban Land Institute Technical Bulletin* no. 38. Rpt. Hoyt, 1970, pp. 537-47.

Hoyt, Homer. 1970. *According to Hoyt: 53 Years of Homer Hoyt*. Homer Hoyt Associates: Washington, DC.

Harrison, Fred. 1983. *The Power in the Land.* NY: Universe Books.

"Issue of the week: Bear Stearns' collateral damage. 2007. *The Week*, vol. 7, nos. 317-8 (July 6-13).

Mandelbrot, Benoit and Richard Hudson. 2004. *The (Mis)behavior of Markets: a fractal view of risk, ruin and reward.* New York: Basic Books.

Panzner, Michael J. 2007. *Financial Armageddon: Protecting Your Future from Four Impending Catastrophes.* New York: Kaplan Publishing.

Rubino, John. 2003. *How to Profit from the Coming Real Estate Bust.* New York: Rodale.

Schumpeter, Joseph A. 1939. *Business Cycles.* NY: McGraw-Hill. Rpt. Philadelphia: Porcupine Press, 1982.
Selgin, George A. 1988. *The Theory of Free Banking.* Totowa, NJ: Rowman & Littlefield, and Washington, DC: CATO Institute.

Sheffrin, Hersh. 2000. *Beyond Greed and Fear.* Boston: Harvard Business School Press.

Shiller, Robert J. 2005. *Irrational Exuberance.* 2nd ed. New York: Doubleday.

Shirk, G. 1981. "The 18⅓-Year Cycle in Total Construction." *Cycles* (August).

Talbott, John R. 2003. *The Coming Crash in the Housing Market.* New York: McGraw-Hill.

Talbott, John R. 2006. *Sell Now! The End of the Housing Bubble.* New York: St. Martin's Griffin.

## Newspaper and Internet references

Christie, Les. 2007. "Out of touch with realty reality." CNNMoney.com, June 21.

Farrell, Andrew. 2007, June 27. "How Durable Is U.S. Growth?" Market Scan, Forbes.com <http://www.forbes.com/markets/2007/06/27/durable-goods-fed-markets-equity-cx_af_0627markets14.html>

Haddad, Annette. 2007. "Report from UCLA team skirts the R-word." *Los Angeles Times*, June 19. <http://www.latimes.com/business/la-fi-econ19jun19,0,6990411.story?page=2&coll=la-home-center>

Ip, Greg. 2007. "Greenspan Says Turmoil Fits Pattern." Wall Street Journal (Sept. 7), p. C2 <http://online.wsj.com/article/SB118913318976220324.html>

LoopNews, 28 June 2007. <www.LoopNet.com>

Makin, John. 2007. "Recession 2008?" *The Wall Street Journal Online.* (Sept. 8), p. A13. http://online.wsj.com/article/SB118921622921621367.html?mod=opinion_main_commentaries

MoneyNews.com <newsmax@reply.newsmax.com>, Jun 25, 2007.

Robb, Greg. 2007, June 26. "May's new-homes sales off 1.6%." www.MarketWatch.com

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*Public Goods and Private Communities* won him the Atlas Foundation's Antony Fisher International Memorial Award in 1995, and a Chinese edition was published in 2006. Besides his numerous articles, Fred Foldvary writes a weekly column for *The Progress Report* (www.progress.org) and is an associate editor of the online journal (www.econjournalwatch.org).

Many financial analysts and economists make forecasts and predictions, but most are just educated guesses, many just projections from past trends, and none of them have the *oomph* of a theory that explains and fits all the major U.S. depressions.

Fred Foldvary's booklet, *The Depression of 2008*, has just that *oomph*. Foldvary, an economist (PhD in economics from George Mason University, Virginia) who teaches at Santa Clara University, California, has been studying and writing about business cycles for the past 20 years.

There has been no consensus among economists as to what causes business cycles. Many economists think there are only random fluctuations. Foldvary examined something different. He combined Friedrich Hayek's Austrian-school theory of the business cycle, based on capital goods, interest rates, and money, with the Henry George theory based on land values, and the real estate cycle research of Fred Harrison and Homer Hoyt. Foldvary's Geo-Austrian synthesis matches every U.S. depression for the past 200 years. It also fits the cycles of other countries, including the Japanese boom of the 1980s and subsequent bust.

Foldvary has presented his theory of the business cycle at several economic conferences, and published it in the October 1997 issue of the *American Journal of Economics and Sociology*. In that article, Foldvary predicted that the next depression would take place in 2008. He repeated that prediction in several later articles and lectures. During the past ten years, Foldvary has not changed the predicted year of 2008; indeed he finds that the economy has followed the same pattern as in previous cycles and is right on track to fall into recession and depression in 2008.

Foldvary has written this booklet in order to make his findings more accessible. He does not want the financial world to claim that nobody warned the public, that no economist saw the depression coming. If the recession has already started, you will at least understand why it happened, and how to be better prepared next time.