

The Deep Cause of the Subprime Lending Crisis

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Abstract

The financial crisis induced calls to extend, strengthen and tighten financial regulations. This paper argues that the deep underlying problem is not in the financial industry, but in the real side of the economy, in real estate. The most important collateral for mortgage loans is land value, which then serves as collateral for packages of loans and leverage derivatives. The problem is that real estate has had periodic boom-bust cycles. The rise in land values becomes magnified as land speculators buy properties for resale at higher prices. Land then becomes priced not for current use but for expected future demand, which at the peak of the boom is overly optimistic. Speculators with the greatest expectations later suffer the winner's curse. If taxation were shifted to tax almost all of the land value, the price of land would fall to a small fraction of the pre-tax price, eliminating gains from land speculation. Mortgage loans would be collateralized by the value of buildings and of income from tenants, rather than land value. The boom-bust real estate cycle would disappear.

Keywords: Mortgages; Real estate cycle; Land tax

Introduction

Most of the reporting and analysis of the subprime mortgage problem focused on the lending practices and the policies governing mortgages as the proximate causes of the subprime lending crises that began in 2007 and intensified in 2008. For example, the Community Reinvestment Acts of 1977 and 1995 require banks to lend to low-income communities which have higher risks. When conditions such as escalating real estate prices are ripe for a substantial increase in mortgage loans, these acts contributed to a greater increase in subprime mortgages by lenders such as Countrywide Bank than would otherwise have been the case.

But the deeper issue is why the real estate boom occurred in the first place. The expansion of real estate construction and increase in prices after 2001 was not an isolated phenomenon, but has to be seen in the context of a real estate boom-bust cycle which has been occurring in the US for two hundred years [1,2].

The real estate economist Homer Hoyt discovered that there is a real estate cycle in the U.S. with an average period of 18 years in the US. The focus of his study was Chicago, which had the best real estate price data in the U.S., the annual *Olcott's Land Value Blue Book of Chicago and Suburbs*. Olcott used Somers' methods to appraise the city every year, including the separation of real estate prices into land value and improvements value. This and earlier records supplied data for Homer Hoyt's classic book, *One Hundred Years of Land Values in Chicago*.

While the Chicago real estate prices are the most thoroughly documented of any American city, Homer Hoyt's studies led him to conclude that Chicago's real estate cycle had been typical of U.S. real estate trends. Homer [3,4] stated, "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." Moreover, "The urban real estate cycle has been closely associated with the general business cycle."

Such a real estate cycle is not unique to the US. In his 1983 book *The Power in the Land*, Fred Harrison analyzed the real estate cycles of several countries such as the U.K. as having patterns similar to that of the US cycle. Indeed, during the decade of the 2000s, "In Ireland, Spain, Britain and elsewhere, housing markets that soared over the last decade are falling back to earth" [5].

The real estate cycle in the US is summarized in table 1 below. We can see there the remarkable 18 year regularity of the real estate cycle,

with two major exceptions. The next real estate boom after the 1920s would have occurred during the 1940s, but World War II disrupted the cycle, as millions of troops were overseas and much of production was shifted to military goods. The cycle came back after the Korean War, culminating in an apartment boom of the late 1960s and early 1970s. Real Estate Investment Trust (REIT) assets grew from \$2 billion in 1969 to \$20 billion in 1973, while commercial bank mortgage loans increased from \$66.7 billion in 1969 to \$113.6 billion in 1973 [6]. This real estate boom was followed by the recession of 1973, the worst up to that time since the Great Depression.

The next recession came in 1980 rather than 18 years later because of the "stagflation" the economy experienced from 1974-1979. The high inflation induced a flight to tangible assets, and gold, silver, coins, stamps, and gems all escalated in price along with real estate, until under the influence of the new Federal Reserve chairman Volcker, the monetary expansion halted, resulting in the recession of 1980. The subsequent economic recovery then once again sparked a real estate boom that ended with the recession of 1990, interestingly 17 years after the 1973 recession. Eighteen years later, the economy once again is experiencing a downturn after a real estate boom, one which economist Robert Shiller [7] edition of *Irrational Exuberance* describes as the greatest real estate boom in history.

A theory of the real estate cycle

Homer Hoyt did not have an explanation of the real estate cycle. Moreover, macroeconomic explanations of the business cycle seldom specifically incorporate the real estate cycle. There has been no consensus among economists on the business cycle. I provided a synthesis of the real estate and business cycles [1], with a "geo-Austrian" theory that integrated the cycle theories of the Austrian school of economic thought and the cycle theory of Henry George [7,8] the first economist to present a real-estate related theory of the boom-bust cycle. We can

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Peak in Land Value	Interval	Peak in Construction	Interval	Start of the Recession and Depression	Interval
1818	0	--	--	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	16	2006	19	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.

Table 1: The real estate cycle in the USA.

now test that synthesis by applying it to the recent real estate downturn and associated mortgage lending crisis.

The Austrian theory of the business cycle is based on the school's theory of capital goods, a theory. The school's founder, Carl Menger [9], conceptualized a time-structure of "lower order" and "higher order" capital goods. The higher order capital goods are those which have greater time duration. For example, Christmas trees which require two years to grow and harvest are of lower order than mahogany trees which require many decades to mature.

One can picture the structure as a stack of pancakes. On the lowest stack is "circulating capital" or inventory that turns over quickly. The highest cake requires many years to build and sell. The most important capital good on the highest stack is real estate development.

Capital goods with a rapid turnover are not affected by the rate of interest. The higher the capital goods are on the stack, the more sensitive they are to interest rates. Real estate construction and purchase are highly responsive to interest rates. At low rates of interest, there is more investment in real estate. Thus, high interest rates flatten the stack, while low interest rates do the opposite.

Thus while neoclassical economics posits greater borrowing for investment with lower rates of interest, the Austrian-school theory refines the result to posit that the greater investment will be focused on the capital goods of highest order. Lower interest rates do not merely increase the stock of capital goods, but also alter the structure of capital goods.

When the interest rate is lowered due to increased domestic savings, then the greater investment is offset by less consumption. However, when the rate is reduced because of an expansion of the money supply or from foreign capital inflows, then the increase in higher-order investments can be unsustainable, resulting in what Austrian-school economics calls "malinvestments," capital goods no longer profitable as interest rates and prices rise. Whether the federal-funds rate decrease to one percent in 2003-2004 was due to an inflow of foreign savings or was driven by monetary policy can be debated. Both short-term and long-term interest rates were low, and the result was greater investment in real estate construction along with a greater demand to purchase the properties. Just as Austrian theory predicts, the construction became a malinvestment, a glut of housing inventory.

Neoclassical economists have also recognized that a credit boom creates an unsustainable expansion. For example, a similar pattern occurred prior to the Great Depression; Barry Eichengreen and Kris

Mitchener [10] conclude "that the credit boom view provides a useful perspective on both the boom of the 1920s and the subsequent slump."

The Austrian school also recognizes that a credit expansion does not just cause price inflation, but also distorts the structure of prices. Prices rise soonest and fastest where the money is being loaned out. Thus both during the 1920s and 2000s the was only moderate price inflation in consumer goods, but high inflation in asset prices, principally in the stock market and land values.

With its focus on capital goods, the money supply, and interest rates, the Austrian theory ignores the land factor. The Georgist theory of the business cycle is based on land value [7]. At first an economic expansion reduces vacancies, and then rents and land values rise. Speculators then buy real estate to profit from expected increases in real estate prices. The speculative demand makes real estate prices-land values-rise even faster and farther. Those who buy near the peak are in effect the highest bidders, those with the most optimistic expectations, and these tail-end expectations turn out to be mistaken, after which these land speculators suffer the auction-winner's curse.

The rise of real estate prices is due to an increase in the demand for land, since the supply of land is fixed while buildings can be expanded to the quantity demanded. But land value also rises because landowners receive a large implicit subsidy.

Civic services, public works, economies of density, and other lavational advantages become capitalized into higher land values. When landowners do not pay for the public works and other government services, they receive an implicit subsidy. Those who are both renters and workers' pay twice for governmental public goods, once as higher rentals and again with taxes. Moreover, real estate owners enjoy tax advantages such as deducting property taxes and mortgage payments from taxable income, depreciation for investment property, tax-free exchanges of real estate, and a large exemption from capital gains taxes for owner-occupied houses. The tax advantages include deductible home equity loans, as homeowners borrowed \$2.5 trillion from 2001 to 2005 [11].

Home ownership has also been encouraged and subsidized in the US since the 1930s by federal and state governments via guarantees, insurance, and the secondary market for mortgages. The Home Owners Loan Corporation was founded in 1933 to prevent foreclosures, which in 1934 became the Federal Housing Administration. The FHA also helped promote a secondary market for mortgages in 1938 through the government-sponsored enterprise, the Federal National

Mortgage Association-Fannie Mae. The Federal Home Loan Mortgage Corporation (FHLMC), Freddie Mac, was created in 1970 to operate a secondary market for conventional real estate loans. While now operating in the market, these enterprises are considered to have an implicit government guarantee.

Fannie Mae, Freddie Mac, and other such firms greatly expanded the market for mortgages, since the originating firms can sell them to these firms. The mortgages get packed into collateralized debt obligations and are sold to financial institutions. Rather than reduce the risks from mortgages by spreading them, the secondary market increased the systemic risk by expanding the amount of mortgage debt and from the use of leverage by hedge funds and others.

The Geo-Austrian synthesis [1,2] can thus be summarized as follows. An expansion of credit, not due to greater domestic savings, reduces interest rates, which induces greater and excessive investment in higher-order capital goods, principally in real estate construction and purchase. Since there is no offsetting reduction in consumption, prices rise. The rise of rents and real estate prices induces speculation, and land values rise because of the greater demand and due to the subsidies to landownership.

As Henry George [8] stated it, "Since the industrial pyramid clearly rests on land, some obstacle must be preventing labor from expending itself on land. That obstacle is the speculative advance in land values. It is, in fact, a lockout of labor and capital by landowners." Speculation carries real estate prices to heights anticipating future growth rather than current use, which increases costs for those who seek to invest in the present. There is a glut of real estate inventory, while the quantity of properties demanded declines due to the high, unaffordable prices.

Real estate prices then fall and defaults rise. Some borrowers are unable to make the rising mortgage payments, as mortgage payments reset to higher rates, while others abandon properties with a mortgage higher than the property value. The drop in construction creates unemployment in construction as well as in real estate finance and sales. Many homeowners refuse to lower their selling offers, which reduce sales. The subprime problem is only the leading edge of the greater problem with real-estate related debt and reduced investment.

Fiscal policy and real estate

The credit boom for real estate and the lending practices have as their root because the increase in land values during the economic expansion. The deep cause is capitalization. Land values become capitalized up by vocational benefits and they get capitalized down from paying for these benefits. When real estate is taxed lightly, when most of the infrastructure and civic services are paid for by other sources, this increases the price of land. In an economic expansion, much of the increase in productivity is captured by increasing rents and land values.

The real estate cycle shown on Table 1 indicates that there is a fundamental structure in the economy that has generated this cycle despite great changes in the financial field and in the role of government. The fundamental fiscal structure that generates capitalization has been a common denominator in economic history. All the monetary and fiscal stabilizers erected during the past decades were not able to prevent the crumbling of the real estate market and the current mortgage crisis.

The fundamental structure ties credit to land value. Land value serves as prime collateral for bank loans, and during an economic expansion, investing and speculating in real estate is a function of the expectation of increasing site values. The only way to eliminate the recurring speculative booms of real estate is to remove the subsidy to landownership. As proposed by Henry George [7], if taxation were shifted from wages, business profits, buildings, and the sales of goods, to land value, land buyers would no longer expect to gain from higher future land prices. If most (90 percent) of the rent and land value were taxed, then the price of land falls to a small fraction of the pre-tax price. Little credit would be needed for purchasing land. Credit now applied to land would shift to finance capital goods and enterprise. The boom-bust real estate cycle would disappear.

Since the deep cause of the real estate cycle is the subsidy to landownership, policies to improve lending practices or more strongly regulate the financial industry will perhaps reduce the financial problems associated with a falling real estate market, but does not prevent the cycle from happening again. We can therefore expect the real estate cycle discovered by Homer Hoyt to continue indefinitely, since vested real estate interests will most likely prevent any fundamental change in the tax policies of governments world-wide.

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