

THE EFFECT OF CYCLICAL FLUCTUATIONS UPON
REAL ESTATE FINANCE

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Importance of Real Estate Cycles in Finance

The most important cause of fluctuations in the gross and net income of real estate and consequently the chief factor in producing drastic changes in the capital value of all the different species of urban property is that group of interacting forces which is called the real estate cycle. As a result of the rigidities of operating costs such as real estate taxes, fuel, maintenance labor, and also as a result of interest and amortization charges, the combined effect of falling rents and increased vacancies will reduce the net income of rental real estate much more sharply than the gross income. Thus, when the total income of a Chicago office building dropped from \$764,000 in 1928 to \$564,500 in 1932, a decline of 26.2 percent, the net income fell from \$315,000 to \$81,000, or a fall of 74.3 percent.^{1/}

A net income that would cover interest and amortization charges of \$100,000 by a 3 to 1 ratio in 1928 would have failed to meet those requirements in 1932. The widespread defaults on the interest payments on the bonds and mortgages of office buildings, apartments and hotels during the 1930's indicate that the above example is a typical and not an extreme case. The average price of office building bonds had fallen from their \$1,000 issue price to \$187 in 1932.^{2/}

The debacle culminating in the 1930's affected every species of real estate from the large office buildings to single family homes. The vital question for lending institutions now is whether the pattern of the real estate cycle from 1914 to 1933 will repeat itself and whether

^{1/} Homer Hoyt, One Hundred Years of Land Values in Chicago. University of Chicago Press 1933. p. 379.

^{2/} Amott-Baker, Price Averages of Real Estate Issues.

mortgages now being made are subject to the same risks as the mortgages of the 1920's. In considering this question, the basic underlying forces behind these cycles are of greater significance than the patterns themselves.

The Real Estate Cycle Described

Real estate cycles result from the interaction of both local and national forces. The magnitude of the fluctuations and their duration vary in different cities and even within different neighborhoods in the same city, because the demand for housing, for store and office space or for industrial sites is local. It comes from those who want to live or work in that particular urban community and not elsewhere. The general course of a real estate cycle may be briefly described as follows.^{1/} An upturn in real estate activity is usually started by a spurt in population growth, caused generally by an influx of families in response to jobs offered at that particular place and also by an increase in the rate of family formation on the part of the resident population. This increase in the number of families causes a demand for more dwelling space, with the result that vacancies are absorbed and, in the absence of rent control, there is a rise in gross rents which produces an even greater increase in the net returns of existing buildings. The increased net income causes a marked increase in the selling prices of existing buildings. The point is reached when it becomes profitable to erect new structures and a building boom is started. The rapid absorption of vacant sites for new structures leads to speculation in lots and in subdivisions. At a certain critical point, the supply of new homes begins to exceed the rate of new family formation. A surplus of homes, offices, and factories is being

^{1/} Hoyt, op. cit., Ch. VII

built up, which is not apparent as long as general business prosperity prevails, but which suddenly reveals itself when a business recession forces families to double up or to move from the larger cities to smaller towns or country districts. Then declining rents and increasing vacancies sharply reduce net incomes and capital values, bringing new construction to a standstill and causing wholesale defaults and foreclosures.

Real Estate Fluctuations Vary Greatly Between Cities

The basic factor which puts this whole cyclical process in motion and which expands the building supply - namely, population growth, varies tremendously between different cities. While the population of Los Angeles increased nearly 150 times and that of Miami over 100 times from 1900 to 1940, the number of persons in Charleston, S.C., increased only 13 percent, and those in Fall River, Massachusetts, only 11 percent in that 40-year period. In every State of the Union, the variation in the rate of growth between cities of 10,000 and over is enormous. In towns where the population is declining there is scant demand for new dwelling units, except to replace wornout structures, whereas cities like Corpus Christi, Texas, which more than doubled in numbers from 1930 to 1940, require a great increase in their housing supply.

The risk of loss on mortgages of course depends not upon the rate of growth, whether slow or fast, but upon whether the economic forces causing the growth or the new job opportunities are permanent or transient. No greater declines have taken place than in mining and lumber towns, which had their sudden boom and then collapse when the natural resource on which they were based was exhausted. On the other hand, rapidly growing Chicago in the 19th century and Los Angeles of the 20th century had the expanding

and varied economic resources to sustain their population expansion. The magnitude of real estate oscillations in rapidly growing cities is much greater, however, than in slowly growing centers.

Differences in Timing of the Cycle

The economic forces which cause a variation in the rate of growth of different cities also cause a difference in the timing of the real estate cycle. A series of charts on real estate activity prepared by Mr. L. Durward Badgely of the Mutual Life Insurance Company, shows that real estate booms practically always occur in periods of general business prosperity and that real estate activity everywhere declines in a serious business depression. However, some cities have only moderate real estate activity at times when other cities are experiencing booms. This is due to the rapid expansion of economic forces in particular periods. Akron, Ohio, was the most rapidly growing city in the United States from 1910 to 1920, expanding from a population of 69,067 to 208,435 as a result of the growth of rubber tire factories, but it suffered a decline from 1930 to 1940 when the employment in the tire factories dropped. That was the very decade when Corpus Christi had a great expansion due to the growth of the oil industry. Gary, Indiana, grew rapidly from 1905 to 1930, as the result of the establishment of the U. S. Steel mills there.

A generalized national real estate cycle like that prepared by Mr. Roy Wenzlick serves a useful purpose in indicating broad trends but it is nevertheless an over-simplification or an averaging of differences. Thus, while Wenzlick indicates a peak in national real estate activity in 1888-1889, it was actually reached in Los Angeles in 1887, in Kansas City in 1888, in Chicago in 1890 and in Essex County, New Jersey, in

1891. Nor is there any exact time interval between major cycles for all cities.

Real estate cycles have a number of component parts, which do not always coincide in point of time. Different types of real estate indices that may be measured are (1) deeds recorded or mortgages recorded, (2) number of new buildings as measured by permits, (3) number of lots subdivided, (4) rents, (5) land prices. In Chicago, in one cycle, the peak in activity was reached in 1890, the peak in the number of lots subdivided and land values in 1891 and the amount of new construction in 1892. In the cycle reaching its peak in the 1920's, the peak in new building, land values, and real estate transfers was reached in Chicago in 1925, and this was the peak year for many other cities throughout the nation. Yet Mr. Badgley's charts show Newark reached its peak in 1921, Los Angeles in 1923 and New York City as late as 1930.

Measured by real estate activity - that is by deeds recorded - there is no definite time interval between major peaks in the same city or different cities. Thus in Chicago, major peaks of real estate activity were reached in 1836, 1856, 1872, 1890, and 1925, which represent intervals respectively of 20, 16, 18 and 35 years. In Los Angeles, according to Mr. Badgley's charts, peaks were reached in 1887, 1906, 1920 and 1923, which indicate intervals of 19, 14 and 3 years. In New York, the chart of the Lawyer's Title Corporation shows major peaks in realty values in 1836, 1857, 1893, 1906, 1921 and 1930, or intervals respectively of 21, 16, 20, 13, 15 and 9 years.

Even these charts for individual cities are generalizations, because real estate activity usually varies greatly in the same urban region at the same time among different sections and types of property. The 1890 boom in Chicago chiefly affected the South Side near the World's Fair grounds and central office sites; while the Chicago boom of 1925 was largely an outlying business center, apartment and suburban boom.

National Forces Affecting All Real Estate

Notwithstanding these variations in real estate activity due to local conditions, nearly every type of real estate is adversely affected by a national business depression. The declines in real estate prices are greatest in cities where there was excessive speculation, or extreme over-building or in durable-goods-producing cities like Detroit or Pittsburgh where unemployment is greatest, but the effect is felt everywhere. Even in stable cities, real estate values are forced down by reductions in family purchasing power which lower the amount that can be paid for rent and also reduce the purchases in retail stores. Reproduction costs of buildings are lowered by a decline in material prices, by some reduction in building wages and by a greater efficiency of labor, and this reduces the values of existing structures. The increase in vacancies and a lowering in rents due to doubling up or a decline in family incomes increases the foreclosures on heavily mortgaged properties, while the sale of properties acquired by banks and financial institutions depresses prices still more.

Long Range Forces

There are deeper long range forces which are underlying causes of the real estate cycle itself and which may moderate or change its future

pattern. The real estate cycle will not automatically repeat itself, for there are deep seated social and economic forces which are changing the entire setting in which it operates.

1. The Rate of Urban Growth is Slackening. Application of the inventions of the Industrial Revolution to the iron, coal, petroleum, copper and other mineral resources which were the source of power and material for the machine age, development of new fertile agricultural areas with machinery, and freedom from major world conflicts before 1914, helped American cities grow at the extraordinary average rate of 51 percent per decade up to 1930. From 1930 to 1940, the average rate of urban growth was only 7.6 percent or one-seventh of the former rate of growth and 51 cities with a population of 50,000 and over actually declined in population. With the prospect of a stationary population of 155,000,000 to 160,000,000 by 1970, our present urban population of 75,000,000 can hardly expand to more than 85,000,000, permitting an average decennial rate of urban growth of 5 percent or less with a greater number of cities showing population losses. Hence there will be fewer real estate booms caused by spurts in population growth.

2. Urban Decentralization.

Most cities are losing population at their cores, gaining slightly on their outer edges and in their incorporated suburbs and experiencing their most rapid growth in the open unincorporated fringe which has been made accessible by the automobile and the bus. From 1930 to 1940, the blighted areas of Chicago lost 9 percent in population, the other city areas gained 4.5 to 6.5 percent, the incorporated suburbs increased 8 percent and the unincorporated suburbs 75.6 percent. In 66 metropolitan areas, the central cities gained 3 percent, the incorporated suburbs 9 percent and the unincorporated suburbs 27.7 percent. All of our

cities today occupy less than one percent of our land area, and the old scarcity value of central urban sites or of strips adjacent to subways, street cars or mass transportation lines has been lessened by the automobile, the concrete highway and the airplane. With the superabundance of land accessible by automobile on the periphery of most cities, speculative land booms based on expectations of conversions of farm to urban sites have less and less justification. Likewise, there are ever increasing areas of decaying structures in which real estate booms are not likely to take place.

3. Increase in the Public Debt, Prices, Wages. Major wars, by increasing government spending, have pushed up wholesale prices and wages. This, in turn, had had a profound effect on construction costs and building values. In the Civil War, the federal government debt was increased from \$65 million to \$2,436 million from 1860 to 1870; in World War I it rose from \$1 billion to \$24 billion between 1914 and 1920; in World War II it shot up from \$40 billion to \$270 billion from 1939 to 1945. In the Civil War and World War I average wholesale prices more than doubled and, while held somewhat in restraint by price control in World War II, wholesale prices advanced over 50 percent. The important fact is, however, that while wholesale prices receded after every war, labor doubled its wages during each war period and held most of its gains. As a result, construction costs, which are chiefly wages for manufacturing materials and wages of workers on the site, have advanced to ever higher levels, because these labor costs have not been offset by use of machinery as in other industries. Consequently fewer and fewer families have been able to buy new homes, because housing costs have increased faster than incomes over long periods of time.

4. The Interest Rate. Changes in the long term interest rate affect the real estate cycle. Interest rates declined from 8 percent on the best real estate security in Chicago in 1873 to $3\frac{1}{4}$ percent in 1900, and then rose slowly to $5\frac{1}{2}$ percent in 1920, from which they declined to 4 percent in 1927. The rates from this point rose to $5\frac{1}{2}$ percent in 1932, and they have since declined to 3 percent in 1946. The changes in the long time capitalization rate has affected all real estate values through the capitalization rate.

The Real Estate Cycle-1914 to 1932

With these brief references to some of the fundamental factors affecting the pattern of real estate cycles, let us examine the interaction of the factors in the real estate cycle of 1914 to 1932 and note their similarities or differences with the situation after World War II.

In World War I, there was a drastic curtailment of residential buildings, so that after the War, there was a great shortage of dwelling space. The return of 5,000,000 soldiers and sailors to their homes, deferred marriages, and the post-war industrial boom to manufacture civilian goods created a great demand for urban housing and absorbed every vacancy. Construction costs had more than doubled during World War I and rents had remained stationary until Armistice Day. There was a period of uncertainty and delay in starting new building after the first World War, however, because building at double 1914 costs was not profitable so long as rents remained constant. A sharp rise in residential rents began in 1920 and continued until they had risen 65 percent. Office and store rents likewise advanced sharply. Construction costs fell 25 percent in 1920 and a new profitable relationship was established between rents and building costs.

The value of nearly all existing buildings doubled as a result of the higher rents and higher reproduction costs. Consequently, a total of 6,800,000 private non-farm dwelling units were erected between 1921 and 1929 inclusive. Apartment buildings, office buildings, hotels and stores were built in large volume.

The significant fact to be noted in this period of high level construction was that new buildings of all types - homes, apartments, hotels and stores - could be constructed and rented at approximately the same rentals as the existing structures with but a slight premium for newness or more modern design. Consequently, the building of new structures was sustained by a filtering up of families from the older to the newer buildings. This construction volume was aided by liberal bank loans, and by the sale of mortgage bonds based on somewhat inflated values. While business prosperity continued, and family incomes were high, relatively high apartment, office and store rents were paid. After 1924, the rate of building new dwellings was exceeding the rate of new family formation and vacancies were beginning to increase. Likewise, office buildings were beginning to have empty space. This type of building from 1926 to 1929 was the added space financed by easy credit that was to bring disaster later. In the entire decade from 1920 to 1930 there was an increase of 5,541,000 non-farm families, but 7,035,000 new non-farm dwelling units were built.

The stock market crash of October 1929 ushered in that severe depression which lowered the national income from the \$83.3 billion of 1929 to the \$40 billion of 1932, increasing unemployment from 1.5 million to 11.9 million in the same period. The debacle caused a drop in the number of new non-farm dwelling units from 937,000 in 1925 and 509,000 in 1929 to only 93,000 in 1933, a drop of 90 percent from 1925. New office, hotel

and apartment construction came to a complete halt. National residential rents dropped 43 percent by 1933. The vacancies in office buildings rose to 27.6 percent and in hotels to 40 percent in that bottom year. The vacancies in multi-family apartments in New York was 13.72 percent in 1934. As a result of vacancies and falling rents, net incomes dropped drastically and foreclosure rates rose sharply. The H.O.L.C. made 1,000,000 loans to save home owners. Real estate values dropped from 50 percent in the case of single family homes, to from 60 to 75 percent in the case of apartments and office buildings and to as much as 90 percent in the case of vacant urban sites.

The Real Estate Cycle 1933 to 1947

Now let us see whether these are the seeds of the same disaster in the present situation. The forces making for ultimate real estate recovery began in 1933, with the beginning of the rise in the national income and in employment. With new construction at very low ebb, the rate of family formation began to outstrip new construction. In the entire decade from 1930 to 1940, there was an increase of 4,503,000 non-farm families but only 2,734,000 new non-farm dwelling units were built. Relatively high building costs in comparison to family income had restricted the proportion of families who could afford new homes to not over one-third of the total. The total amount of new office building construction was negligible because rents were not high enough to yield a return on construction costs, which were not appreciably below those of the 1920's. Gradually vacancies in apartments, hotels and offices were being absorbed. Office rents continued to fall in New York City to 1943, however. The number of new non-farm homes had steadily increased from 93,000 in 1933 to 715,000 in 1941 but had not yet reached the 1925 peak of 937,000 when World

War II intervened to halt all construction except for war workers.

The expenditure of nearly \$400 billion for war increased the national income from \$71 billion in 1939 to \$160 billion in 1944, 1945 and 1946. Average factory earnings were doubled in the same period. Estimated construction costs rose only 50 to 60 percent, and building wages only 15 percent but actual costs, inflated by a sharp decline in the efficiency of labor, by delays in securing materials, by black market prices, and by high profit margins were almost double pre-war. Wenzlick's standard six-room house which cost \$6,000 to build in St. Louis in 1940, cost over \$12,000 to construct in 1947.

Meanwhile as a result of a lack of construction, practically all office buildings, hotels, apartments and houses were 100 percent occupied. Several million families were doubled up. A paradoxical situation had developed in residential real estate. Rents were frozen at levels prevailing in 1942 in most areas, which was on the average only 8 percent above 1935 to 1939 levels. Owners of single family houses, however, could dispossess tenants by selling. With practically no new construction, and no apartments for rent, millions of families were forced to buy. The price of existing single family houses had more than doubled by the Spring of 1946, selling frequently for considerably more than reproduction cost of new houses. Meanwhile houses for veterans built on priorities and limited to a \$10,000 ceiling, sold at or near the ceiling in most cities, a price which only 4 percent of the employed veterans in New York can afford to pay.

Meanwhile, the prices of apartments have advanced in expectation of a modification or removal of rent control, but the prices are still far below the reproduction cost of new apartments. There is a most signi-

ficant difference between the situation prevailing now and that of the 1920's. At the present cost of new apartments minimum rentals of \$80 to \$100 a month must be obtained for them. In some cities this is 50 to 100 percent more than the O.P.A. ceilings on the same type apartments in older buildings. If O.P.A. ceilings are maintained, or a rise of no more than 15 percent is permitted in older buildings, then there will be no extensive filtering up into newer structures. Families as a rule will not pay a substantially higher rent to move into a new building. Hence the values of all existing buildings will not be jeopardized by building more structures at the same or slightly higher rents. The older buildings will remain practically 100 percent occupied. The chief risk will be in loans on the new buildings, rented to the families in the top 10 percent in the income brackets, which will be the first to decline in a depression. The same situation applies to existing office buildings. Rents in the old buildings in Chicago have risen to \$3.50 a square foot, but it would take a rent of \$5.50 a square foot to pay a return on present construction costs. Hence existing office building will not be faced with the competition of new buildings at the same rents until their rates rise to \$5.50 a square foot or construction costs come down.

If rent control is removed on residential properties and if office and hotel rates continue to rise the point will be reached where the rents paid for these older quarters will yield a return on new buildings. The rents, however, will be on so high a level, that not over 5 or 10 percent of our families can afford to pay them. Then we will be all set for another boom and bust with overbuilding at extremely high cost levels, followed by a collapse when family incomes no longer can be stretched to meet them.

This pattern might be varied by a general inflation of all family incomes except those of building labor.

It is also very possible that a greatly expanded program of public housing and subsidized housing will be projected when the average family finds it cannot meet the cost of new housing.

The simplest method of developing a sound prolonged period of construction activity would be to lower building costs by every known method, pre-fabrication, greater labor efficiency, lower hourly pay but a guaranteed higher annual wage, large scale operations, lower interest rates, lower operating costs, lower profit margins, mass production of lighter and more efficient building materials. This might bring new housing down within the means of the bulk of the population, accelerate filtering up, hasten the clearance of our worst slums, and enable more families to enjoy public houses. This does not mean lowering costs to pre-war levels, but if they are reduced to 50 percent above pre-war while average family incomes are doubled over 1940, all will be well. The building of a million or more homes a year, besides office buildings, hotels and stores, and all their accompanying utilities might well sustain a high level of business activity for a decade.

Lower building costs would, however, jeopardize loans made on a higher percentage of the costs of buildings now being erected, or loans made to finance recent sales of single family homes. Such lowering of costs would prevent, however, any sharp increase in rents on old buildings even after rent control is removed. Any short-run mortgage loan losses would be more than offset by the gains of basing the entire mortgage structure on the ability to pay of the majority of American families.
