

# ORER Letter

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## *In Search of the Housing Downturn*

*Peter F. Colwell and Joseph W. Trefzger*

Housing has some unique characteristics. Markets are localized, all parcels are differentiated, and housing's durability and high cost both permit and necessitate the existence of complex financing arrangements. However, the analysis of housing markets is facilitated by the fact that housing is a durable good. As such, the housing market shares some characteristics with other durable goods markets.

One general characteristic of durable goods is that their production seems to rise and fall in a cyclical pattern, whereas their consumption seems much more stable. Sizable inventories accumulate during the high output phase of a cycle, and these inventories are depleted after the cycle has peaked. Unfortunately, observers of a durable goods market might take notice of relatively

high (or low) points over a series of repeating cycles, and wrongly conclude that the market is in a long-term upward (or downward) trend. Such an erroneous conclusion might adversely affect market participants' behavior and public policy decisions. It is therefore important that we learn to distinguish short-term fluctuations, referred to in this article as "cycles," from long-term trends.

The recent history of the Great Lakes illustrates problems caused by the failure to recognize cycles. Several years ago, many observers expected a crisis; Lake levels had risen to such an extent that some shoreline property had been destroyed, and a simple projection of the "trend" indicated that a substantial amount of other property around the Lakes was threatened. However, even a casual examination of the relevant data indicates that the water levels in the Great

## ORER News

### *Noted Broker Addressed U of I Alumni*

The Office of Real Estate Research sponsored its ninth luncheon for University of Illinois alumni working in the real estate field. Approximately 75 alumni and their guests attended the event, held from 11:30 A.M. until 2:00 P.M. on Friday, April 20 at the Chicago Yacht Club. Thanks to Gene Stunard, who again arranged for the use of the Club's facilities.

The speaker was Goldie B. Wolfe, President of Goldie B. Wolfe & Co., which specializes in the office segment of the Chicago real estate market. Ms. Wolfe, who began her real estate career with Rubloff and was the first woman to be named a Senior Vice President of that company, established her own firm in 1989. The recipient of numerous awards for her sales productivity, Ms. Wolfe spoke on "The Art of Negotiating."

### *Quigg to Join Illinois Faculty*

Laura Quigg will join the University of Illinois real estate faculty in the Fall 1990 semester. Quigg, who is completing her Ph.D. at the University of California at Berkeley, specializes in the application of option theory to land valuation.

### *Contribution Appreciated*

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Lakes follow a cycle (of perhaps 11 or 12 years in duration). It is unfortunate that those who predicted calamity did not instead recognize that they were observing the peak of a cycle. Indeed, within a few years the cyclical trough had arrived.

**A Downturn in Housing Values?**

We question the conclusions of a study published in the May 1989 issue of

*Regional Science and Urban Economics* and popularized in a recent *Wall*

*It is unfortunate that those who predicted calamity did not recognize that they were observing the peak of a cycle. Within a few years, the trough of the cycle had arrived.*

*Street Journal* editorial and elsewhere in the media. "The Baby Boom, the Baby Bust, and the Housing Market," by Harvard University researchers N. Gregory

Mankiw and David N. Weil, concludes that real housing values in the U. S. could decline by close to 3% per annum over the next two decades. The reported result of such a sustained decline would be to render real housing prices 47% lower than their current levels by the year 2007. (The figures represent inflation-adjusted values; with high inflation, nominal values could still rise under this scenario.) The explanation offered for the coming decline, which Mankiw and Weil expect to see nationwide, is that there has been an ongoing change in population characteristics. The researchers' results have been interpreted, for example in the *Journal* editorial, as an explanation for recent housing market declines observed in New England and other parts of the country.

The reasoning offered is that the "baby boom" (the large group born during the post-World War II period of high birth rates) has

passed its prime home buying years, hence the strong demand and accompanying rapid appreciation are behind us, and we should expect declining prices after adjusting for inflation. The prediction offered is that this decline will continue across the U.S. over the next two decades. The analysis is thought-provoking, and the factual information on population

trends and housing demand in recent decades is enlightening. Yet the Harvard re-

searchers offer what is almost solely a demand-based approach to explaining market movements that certainly are not affected by demand alone. They have noted an association between demand (as they compute it) and prices. They imply that they have discovered causation between demand and price when, in fact, a number of "cyclical" economic variables are also closely associated with these price movements.

The Harvard team concedes the general difficulty of making forecasts, but does not mention the futility of forecasting price without considering the supply side. It is quite difficult to reach accurate conclusions by projecting that one perceived determinant's movement in a given direction will cause movement in a complex market to continue unabated for a prolonged period.

**Housing Cycles**

Problems in the housing markets of New England and other areas where prices are said to have declined might more properly be attributed to

cycles than to demographic factors. Such cycles might have been triggered by cyclical declines in regional economies. This explanation is more appealing than one based on a supposed long-run demographic feature. Limited demographic arguments are seldom convincing by themselves even in explaining the demand side of a market, because certain demographic features, such as adult population, can be overwhelmed by others, such as in-migration and household formation.

Price increases driven by the supply side of the market reflect labor and material costs, environmental laws, and local government policies. In fact, the price increases of the last decade might

reflect, to some degree, builder attempts to recoup costs of unmeasured quality increases, such as improved insulation or increased electrical capacity. Demand certainly plays a role; if costs rise but low demand prevents builders from passing higher costs to buyers, then builders may curtail output, and if they fear low prices over the longer run, many may exit the industry. Yet price movements cannot be predicted without recognition of the activities of suppliers, whose asking prices are based on their costs. Even the impact of demographic factors on demand is not as clear as the researchers suggest. They assert that housing booms of the 1970s were "predictable far in advance," because of the maturing baby boom. Yet the housing booms were largely regional cyclical phenomena fueled by migration into growing areas, such as balmy California and oil-rich Texas. While national adult population can be accu-

rately predicted far in advance, migration certainly cannot be.

Furthermore, even if population were the sole determinant of demand, we could not predict in advance the amount and type of housing that a given population would seek in distant future periods. How many young adults in the year 2010 will marry, or cohabit, or remain in (or return to) their parents' homes? It may be tempting to emphasize demographic explanations, but attributing to them a high degree of accuracy is inappropriate. Note that

*Continuing technological developments will cause upheavals in the housing market, leaving the existing housing stock in the wrong place.*

the "baby bust" was to have resulted in a dearth of college students by the late 1980s, whereas applications and enrollments remained strong.

Therefore, we should not accept a *Wall Street Journal* suggestion, that builders are now in trouble because they ignored the demographers, without considering alternative possibilities. One alternative view is that builders are in trouble much of the time, because housing markets demonstrate so much cyclical fluctuation.

#### **Possible Explanations for Cycles**

Why do such cycles exist? The answer may be that there is a real estate market equivalent of the "hog cycle." The hog cycle can be explained as follows: when the price of pigs is high, farmers increase their pork production. However, several months must pass before the pigs are ready to sell, and at the end of that period a large number of pigs is ready for market at one time. Therefore,

when the pigs are ready to be sold, the price falls. The lower price, in turn, causes production to be curtailed, and after several months the supply is again low while the price is again high.

A similar internal dynamic cycle might be influencing real estate markets, causing over-adjustment on the production, or supply, side. Builders produce too much housing during the upward phase of a cycle, and that excess is

absorbed during the downward phase following the cyclical peak. Construction remains low until a time when prices have clearly risen; at that time, a new supply cycle begins, as builders become active, anticipating that prices will remain high. (Household formation might also be explained to some degree by such cyclical move-

ments on the demand side of the housing market. A radical decline in the real price of housing would induce additional household formation; the resulting buying activity would, in turn, serve to moderate the price declines.) Other explanations might be offered for the cycles observed in real estate markets. One theory, which is based on financial factors, predicts a flight of capital to real estate development in the face of high inflation or volatile interest rates.

Why can supply cycles occur; how can an uptrend in construction continue if demand is not rising as well? One possible explanation is that an agency problem exists: builders do not bear the full risk of the business of building homes, because they transfer some risk through lenders to government deposit insurance and ultimately to the taxpayers. Because those who make the decisions can avoid part of the risk, they might fail to reduce output when a true

risk-bearer would find it prudent to do so; the result is cyclicity in the form of a construction glut in certain years.

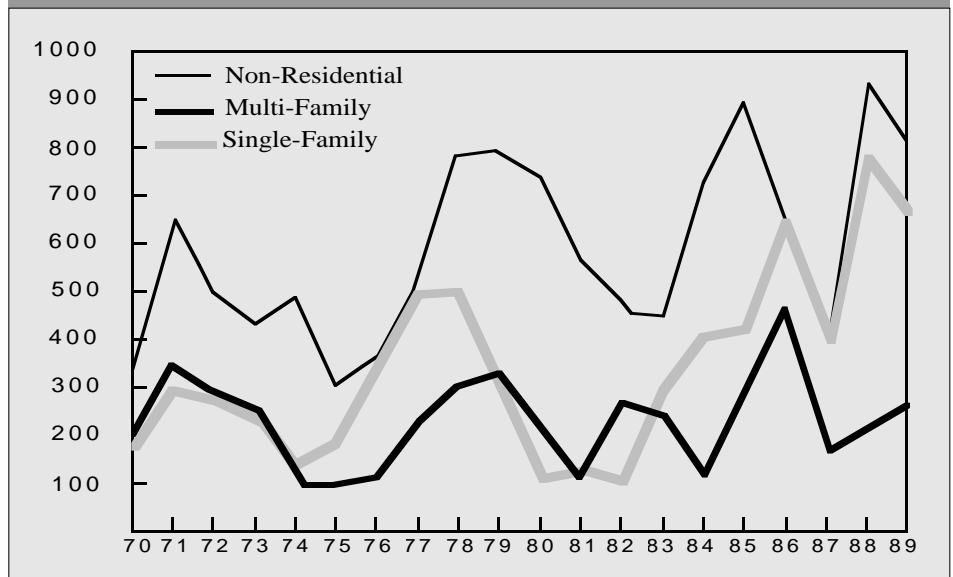
Another possible explanation for cyclical over-adjustments in supply is that builders find it necessary to protect key workers, and therefore keep them working even during weak market periods when it would otherwise be sensible to reduce output. According to this argument, builders accept losses in the short run in order to retain key workers for the next highly profitable cyclical upturn.

**The Technology Factor**

Technology, a factor that influences supply rather than demand, has been the impetus for housing booms throughout recent history, and there is no reason to feel that it will not be in the future. For example, why was there an explosion of home construction after World War II? Certainly there was the return of the soldiers, and their return sparked a high rate of immediate post-war household formation. Yet the war had not destroyed our housing stock, and those young adults who survived the conflict had all lived somewhere before the war.

Admittedly there was underproduction of housing during both the Great Depression and the War, but not to a sufficient degree to create the major postwar building boom. The fact is that the U.S. had a great deal of housing, but much of it was in the wrong place. Because of technological changes, the early postwar period found the nation in the midst of urbanization; rural housing was being abandoned at the same time urban housing was being built at an exhausting pace. A few years later, as with the shift from rural to urban living, the suburbanization of housing was also

Figure 1: Cook County Construction Permit Values, 1970-89 (\$ Millions)



**Chicago: Avoiding New England Market Woes**  
*Peter F. Colwell*

At a time when cyclical movements have caused price declines in some markets, it is interesting to study the cyclicity of Chicago real estate over recent periods. The accompanying graphs depict single-family, multi-family, and non-residential construction activity in the Chicago area over the past 20 years; they also help to illustrate the cycles in building ac-

tivity observable in real estate markets in general. Consider Figure 1, which shows fluctuations in Cook County. There is a very evident cycle in construction; even during a period of significant market activity, such as the 1970s, the graph shows something other than uninterrupted upward movement. In fact, there were two strong cycles in the '70s. Because changes

Figure 2: DuPage County Construction Permit Values, 1970-89 (\$ Millions)

