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Financial Crisis Casts Shadow Over Commercial Real Estate

by Roland Meeks

The commercial market is only moderately off its most recent peak. But tougher times appear to lie ahead.

The troubled housing industry has grabbed most of the headlines because of its role in touching off the current financial crisis and economic slowdown. Until recently, however, the commercial real estate sector had managed to ride out the storm without serious consequences.

Now, increasingly ominous parallels with the residential market are surfacing. Investment in all types of commercial structures has slowed after several years of rapid growth.[1] Prices of office and retail properties, two large commercial categories, have fallen from last year's peaks. Many commercial mortgages were packaged and sold as asset-backed securities, and funding for projects has dried up because these markets are now all but closed.

The commercial and residential markets have differences as well as similarities.[2] The gap in size is a good place to start. In 2007, the nation's stock of commercial structures was valued at more than $3 trillion, a little over a tenth of private wealth. By comparison, the residential housing stock was worth $14.5 trillion. While housing prices soared in recent years, commercial property valuations don't look wildly out of line, judging by standard comparisons to net income.[3] And while the issuance of commercial mortgage-backed securities grew rapidly, the shoddy standards of subprime residential lending were mostly avoided.

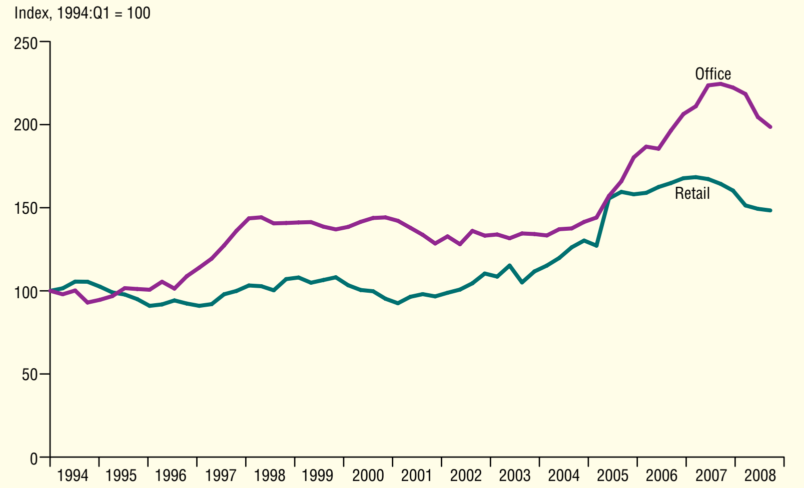
Lately, the commercial market has been wobbling. Real transaction prices for office properties were 11 percent lower in the third quarter of this year than at the end of 2007, and retail properties changed hands for 6 percent less (*Chart 1*). The Architecture Billings Index, a leading indicator of commercial construction, has been exceptionally weak, with the lowest readings on record in the past six months (*Chart 2*).[4] Overall spending on diverse categories of commercial structures—shopping centers and restaurants, for example—has now gone into reverse.

For the economy as a whole, two key risks loom in a downturn of the commercial real estate market. First, a steep and prolonged decline in construction spending would place another burden on growth in an economy already reeling from falling housing prices and financial turmoil. Second, a fall in property values could result in losses for the banking sector. Such losses could impair banks and the financial sector, posing added risks to the economy from a reduced willingness to lend.

Boom and Bust?

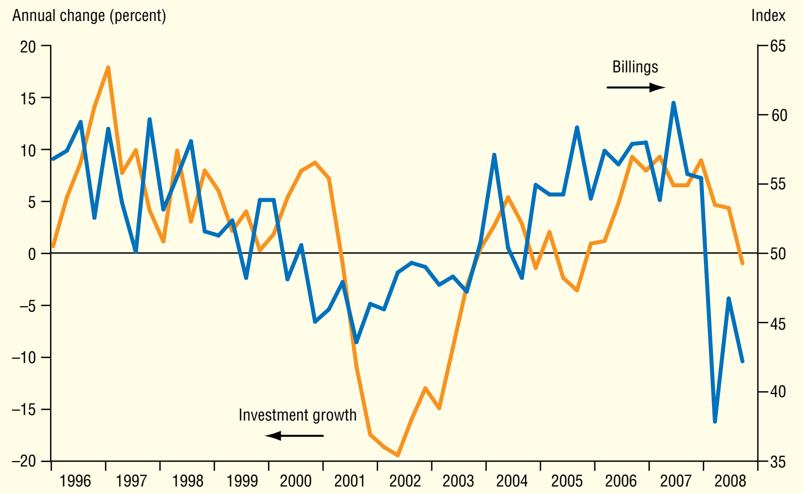
Construction spending is a volatile component of GDP. Over the past 50 years, commercial real estate (CRE) investment growth's standard deviation from the mean—a common measure of volatility—was 10.7 percent. This is less than residential's 14.4 percent but nearly five times higher than the volatility of GDP growth.

Chart 1
Real Prices for Office and Retail Buildings Are Declining



SOURCES: MIT Center for Real Estate; Bureau of Economic Analysis.

Chart 2
Architectural Billings Point to Slower Investment



NOTE: Index values above 50 indicate an increase in billings.

SOURCES: American Institute of Architects, Architecture Billings Index; Bureau of Economic Analysis.

Residential and commercial construction impact GDP growth through their contribution to fixed investment. The decline in residential construction spending has exerted a powerful drag on fixed investment growth since the housing boom peaked two years ago, amounting to more than 8 percent in some quarters. Commercial building, meanwhile, still managed to contribute modestly to investment growth through the second quarter of 2008.

Commercial construction's volatility is a standard feature of the U.S. business cycle. It has turned down, often sharply, in virtually every recession since 1970. At the trough of the previous commercial property bust—following the dot-com bubble's collapse in 2001—CRE construction contracted 18 percent on a year-over-year basis.

However, the peak of the most recent construction cycle doesn't appear high compared with five previous episodes since the early 1970s, suggesting the industry may not be set up for as big a fall this time (*Chart 3*).[5]

Overall, the CRE market's retreat from its peak has been moderate—so far—and the amount of unoccupied commercial space on the market remains about average. But the fundamental outlook for commercial real estate soured somewhat in the first half of 2008, coinciding with the downturn in the business cycle. The third quarter showed continuing deterioration, and a deep recession in the U.S. would be bad news for the CRE sector.

On the other hand, commercial building's share of GDP is around 1 percent, so it's unlikely that even a repeat of past declines in CRE investment would greatly damage overall economic growth. In the longer term, the slower pace of new construction will probably mean the overhang of vacant space won't be severe. However, it's reasonable to expect vacancy rates to rise, while rents and property prices fall, during 2009.

Rents and Vacancies

The sizable fluctuations seen in real estate investment might be put down to myopia or overexuberance. But they aren't necessarily irrational. Cycles can be a feature of a market in which developers are fully rational, in the sense of making internally consistent, forward-looking decisions based on full information.[6]

To understand the economics of the commercial real estate market, we look first to the vacancy rate, which is unoccupied square footage as a proportion of total available space. U.S. office vacancies have fluctuated between 8 and 20 percent since the mid-1980s. In the third quarter of 2008, the rate was 13 percent, trending upward but average by historical standards. Retail vacancies stood at 10 percent, also rising but average.

Imbalances between demand and supply show up as vacancies, which rise and fall but don't disappear. A substantial stock of commercial real estate is always unoccupied, suggesting that demand and supply are never perfectly matched. Why don't rents fall to bring the market into balance?

An excess supply of commercial space can be consistent with stable rents in markets where owners and tenants must engage in a time-consuming and costly search before making a match. Increased search costs, contracting costs and uncertainty raise the vacancy rate at which there is no pressure to change rents.

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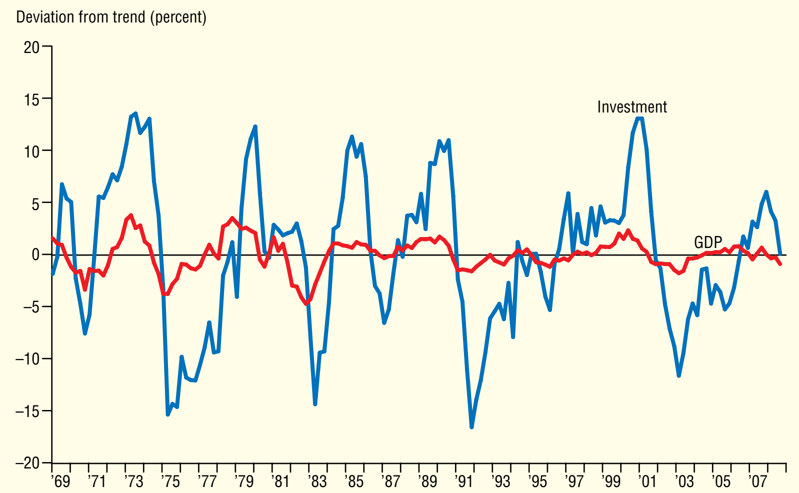
Chart 3
Commercial Investment Peak Lower in Current Cycle



SOURCES: Bureau of Economic Analysis; author's calculations.

Real estate economists call this equilibrium point the natural vacancy rate.[7]

When vacancies are few relative to the natural rate, rents tend to rise. When vacancies are relatively high, rents tend to fall (*Chart 4*). For example, office rents have come under pressure as vacancy rates have increased in 2008. Rents also have a secondary effect on the value of real estate assets: In an efficient market, what investors are willing to pay for a building depends on the rental income it's expected to yield.[8]

The surge in global commodity prices, especially metals, has been a major factor in pushing up the price of construction materials.

Demand and Supply

The basic tools of demand and supply can provide insight into the CRE market and the determination of vacancy rates. It's helpful to think separately about decisions made by builders, owners and users of real estate, each of them operating in distinct, but interrelated, markets.

Builders demand materials and labor and supply structures. Owners demand structures and supply leased space. Users demand leased space and supply goods and services. The three categories may overlap; for example, a store may own the building it occupies. But it's still useful to think of these functions as distinct.

Builders. Over horizons of two or more years, the main source of variation in available space is the construction of new buildings. Activity depends on real estate prices, the cost of materials and labor, and the availability of financing. Higher prices encourage building. When prices are constant, construction activity tends to fall if building costs rise or financing becomes less favorable.

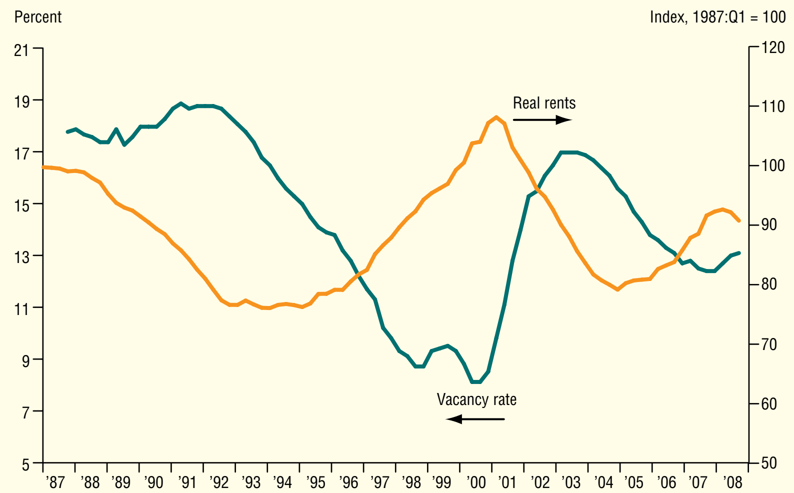
Commercial builders have felt a considerable increase in cost pressure over the past five years. The surge in global commodity prices, especially metals, has been a major factor in pushing up the price of construction materials (*Chart 5*). In September, hourly wages in commercial construction were up almost 8 percent for the year, despite layoffs in residential construction.

Most likely, higher costs played a role in holding down the peak of the current construction cycle. If the same material and labor price increases had taken place in the late 1990s, it would have meant less building activity in the early years of this decade. The increasing proportion of under-construction space being abandoned, especially in the CRE market's weakening retail segment, suggests builders are now facing pressures from both higher costs and falling prices.[9]

Owners. Pension funds, banks and real estate investment trusts are among the owners of CRE.[10] For them, the properties are a capital asset, held to generate income.

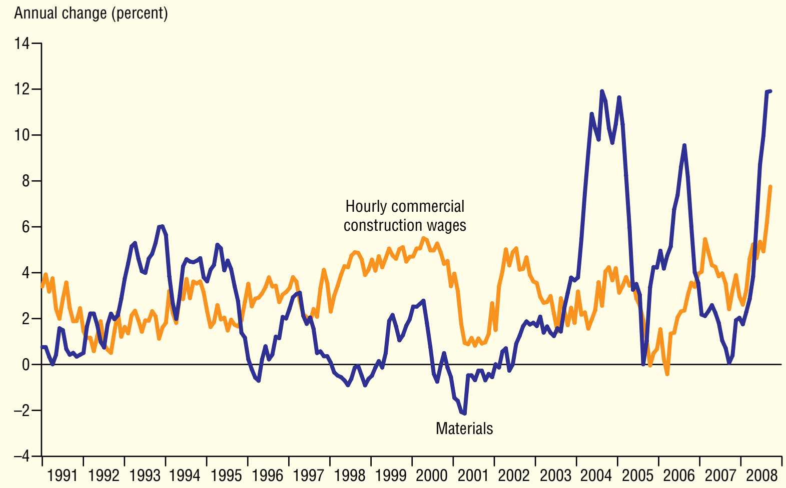
A key factor determining how much property they want to hold is the user cost of capital, sometimes called the rental equivalent price of capital. It sums the direct financing cost of funding the asset, the cost of depreciation and expected capital losses, adjusted for taxes.[11] The user cost of capital tells us the total costs incurred by holding real estate, and

Chart 4
Real Office Rents Fall As Vacancy Rates Rise



SOURCES: Torto Wheaton Research; Bureau of Economic Analysis.

Chart 5
Construction Costs Rise Fast in Recent Years



SOURCE: Haver Analytics.

it's weighed by owners against the revenues earned from those assets.

Owners of commercial buildings have seen their profits squeezed from both the revenue and cost sides this year, putting downward pressure on demand. Rents have begun falling in real terms, reducing revenues, and user costs have risen.

This is partly the result of owners anticipating capital losses on their real estate holdings. It's also the result of declines in many of these investors' net worth, which lowers their creditworthiness and signals lenders to charge them higher interest rates.

Compounding the situation is the credit crunch. General corporate financing costs have risen because the compensation investors and lenders require for bearing all types of risk has increased.[12]

Users. The major users of commercial real estate are retailers and other service-sector establishments, whose demand for space depends on demand for their products.

Spillovers from the housing downturn are evident in the finance, insurance and real estate segment of the economy. These industries, which account for a quarter of total office employment, have shed 150,000 jobs since November 2007. The demand for retail space has been dampened by both weak consumer spending and the downturn in suburban housing markets.

Credit availability is a key factor in each stage of CRE activity. Builders, owners and users depend on the smooth functioning of financial markets to bridge the gaps between expenses and income. The current financial crisis, however, has thrown credit markets into disarray.

The Credit Crunch

Commercial real estate lending is one of banking's central activities. In summer 2008, it accounted for 24 percent of the industry's loan book, or some $1.7 trillion, compared with 28 percent for residential real estate.[13]

Looking at the past 20 years, both these proportions are relatively high, and banks now have more exposure to real estate as a whole than they did at the last lending peak in 1991. The exposure is highest at small domestic

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banks. CRE makes up 40 percent of their loans, compared with 17 percent at large domestic banks.

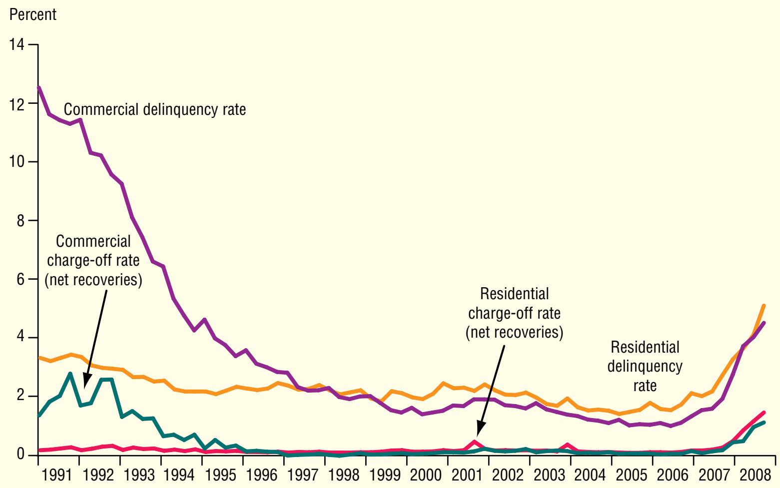
History offers ample reason for finding this trend troubling. When the commercial property market slumped in the early 1990s, banks took charges against reserves totaling 2 percent of their loans in both 1991 and 1992. Many banks subsequently failed, a lot of them in Texas and Oklahoma, where concentrations of real estate loans were high.

In the present cycle, delinquency and charge-off rates for commercial lending have risen alongside those for residential loans (*Chart 6*). This pattern is partly explained by the inclusion of multifamily residences in the CRE category. But they were also included in the 1990s, when banks didn't face problems with both segments of their real estate portfolios simultaneously.

To understand how the declining availability and higher cost of credit may be hurting the commercial real estate market, we need to understand how the funding process operated prior to the financial crisis.

The credit crunch that began with the revaluing of subprime residential mortgages in August 2007 has affected all stages of commercial real estate financing.

Chart 6
Quality of Bank Real Estate Loans Deteriorating



NOTE: Residential loans include loans secured by properties with one to four units. Commercial loans include loans secured by residential properties with at least five units.

SOURCE: Federal Reserve Board.

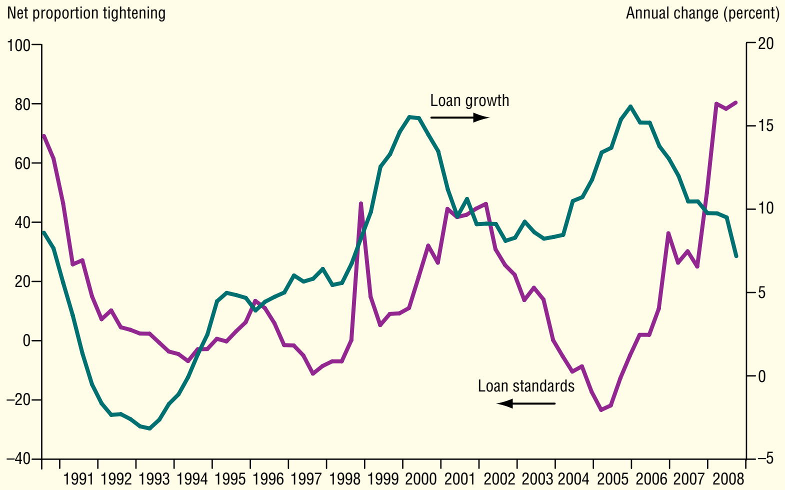
Builders typically financed construction with two- or three-year bank loans. The building's buyers then paid off the loan, with their own funds or a mortgage. The lender may have held the mortgage on its balance sheet or joined with others to create a pool of mortgages and issued bonds linked to the pool's income. These bonds are called commercial mortgage-backed securities (CMBS), and the process of turning pools of mortgages into bonds is an example of the now-familiar securitization, or originate-to-distribute, model that for a time proved highly profitable for investment banks.

The credit crunch that began with the revaluing of subprime residential mortgages in August 2007 has affected all stages of commercial real estate financing. Federal Reserve Board surveys show that banks have sharply tightened credit standards for CRE loans since the third quarter of last year (*Chart 7*). Current-cycle loan growth peaked in 2005 but remained fairly robust in the third quarter of 2008, even amid banks' reluctance to lend and weaker loan demand. This discrepancy may reflect the use of preexisting credit lines and is unlikely to persist.

Appetite for CMBS has all but vanished this year. The premium investors demand to hold CMBS has risen sharply since the onset of the credit crunch (*Chart 8*). Although the stock of outstanding CMBS remained historically high, it began falling in first quarter 2008. Indeed, issuance of new CMBS has now all but ceased, with Bloomberg reporting less than $25 billion worth of deals in the first half of this year.

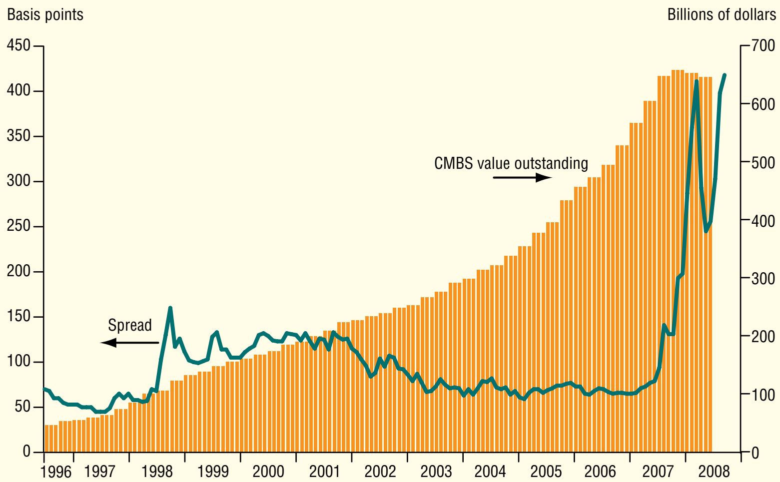
The increased cost and reduced availability of financing have direct consequences for the commercial real estate market and secondary effects on banks and investors. First, the supply of new structures is pinched when builders can't borrow. Second, banks are less willing to extend new credit when they can't securitize loans. Buyers are likely to find that mortgages have become expensive or even

Chart 7
Tightening Loan Standards Crimps Loan Growth



NOTE: The net tightening is the number reporting tighter standards less the number reporting looser standards.
SOURCE: Federal Reserve Board.

Chart 8
Market for CMBS Stalls in 2008



NOTE: The spread is the difference in yield between AAA-rated commercial mortgage-backed securities and Treasuries.
SOURCE: Bloomberg; Federal Reserve Board.

Tougher times appear to lie ahead. Worsening macroeconomic conditions, particularly in the retail and other service sectors, are hurting CRE fundamentals.

unavailable, which crimps demand for CRE and reduces the number of transactions.

What happens to banks if a builder is unable to sell a property or a mortgage holder is unable to refinance? If the bank has to convert the construction loan into a longer-term mortgage or take ownership of the property, it would need to finance this unanticipated expansion of its balance sheet at a time when funds are costly. If the asset were marked-to-market—shown at market value—or subsequently sold at a discount, a charge would be made against the bank's capital, hurting its capacity to lend.

Little wonder, then, that a general desire to reduce CRE exposure has taken hold across the banking sector. Although an individual bank can free up capital by disposing of its real estate assets, fire sales of commercial properties would weaken prices further, with implications for other banks.

In short, tougher times appear to lie ahead. Worsening macroeconomic conditions, particularly in the retail and other service sectors, are hurting CRE fundamentals. Meanwhile the intensification of the credit crunch is dampening market activity. And if commercial property's situation does grow worse, banks are likely to face further losses. One factor that might limit these risks is that the commercial real estate sector wasn't as grossly overbuilt heading into the current economic slowdown as it had been in the early 1990s.

Meeks is an economist in the Research Department of the Federal Reserve Bank of Dallas.

Notes

[1] In general usage, commercial real estate may consist of any property that is not an owner-occupied dwelling unit. Examples include offices, industrial buildings, hospitals, warehouses, retail stores and apartment buildings. This article largely focuses on nonresidential real estate. Office and retail are two important categories of commercial real estate discussed in some depth, but data sources don't always separate them from other market segments.

[2] Basic data on commercial structures and housing stock are from the Bureau of Economic Analysis. Private wealth was calculated as current-cost net stock of private nonresidential commercial structures, divided by total private fixed assets. A more expansive definition of private wealth would include the stock of consumer durables, an estimate of intangible capital and net foreign assets.

[3] For national office and retail properties, Torto Wheaton Research shows the capitalization rate spread over 10-year Treasury bonds was between 1 and 2 percent in second quarter 2008, well above levels seen during the late-1980s commercial property boom.

[4] The Architecture Billings Index is likely to understate the downturn in office and retail construction because it includes industrial structures.

[5] Looking at Chart 3, caution is needed in assessing the magnitude of cyclical movements in real time, as estimates become less accurate toward the end of the sample. However, this statistical evidence is consistent with data from Torto Wheaton Research, which show newly completed office buildings were a proportionately smaller addition to the stock of existing structures in the current cycle than in the construction booms of the late 1990s or the 1980s.

[6] For a detailed theoretical discussion, see "The Persistence of Real Estate Cycles," by Steven R. Grenadier, *Journal of Real Estate Finance and Economics*, vol. 10, no. 2, 1995, pp. 95–119, and "Real Estate 'Cycles': Some Fundamentals," by William C. Wheaton, *Real Estate Economics*, vol. 27, no. 2, 1999, pp. 209–30.

[7] See "The Price-Adjustment Process for Rental Housing and the Natural Vacancy Rate," by Kenneth T. Rosen and Lawrence B. Smith, *American Economic Review*, vol. 73, no. 4, 1983, pp. 779–86.

[8] For a fuller exposition, see "The Role of Speculation in Real Estate Cycles," by Stephen Malpezzi and Susan M. Wachter, *Journal of Real Estate Literature*, vol. 13, no. 2, 2005, pp. 143–64.

[9] TWR/Dodge Pipeline.

[10] According to the National Association of Real Estate Investment Trusts, the bulk of public REITS are direct owners of, or have equity in, real estate, which they hold for the rental income they generate. A subset of REITs, representing 7.5 percent of the overall market in 2007, deals mainly in loans secured by real estate, rather than owning properties directly.

[11] User costs alone can only help us understand how much capital (in this case, structures) firms want to hold, not how they time their spending on new investment. A complete theory of investment that incorporates user costs as one component is described in "Tobin's Marginal q and Average q: A Neoclassical Interpretation," by Fumio Hayashi, *Econometrica*, vol. 50, no. 1, 1982, pp. 213–24. This theory makes the striking prediction that investment spending is determined only by the price of installed relative to new capital.

[12] Studies using aggregate data and user costs based on risk-free rates have struggled to find support for this model. Recent research has highlighted the need for careful treatment of individual firms' cost of capital when specifying user cost terms in investment equations. See "Investment and the Cost of Capital: New Evidence from the Corporate Bond Market," by Simon Gilchrist and Egon Zakrajšek, National Bureau of Economic Research Working Paper no. 13174, June 2007.

[13] Federal Reserve Statistical Release H.8, Assets and Liabilities of Commercial Banks in the United States, Aug. 22, 2008, p. 1 (line 10 divided by line 5).

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FEDERAL RESERVE BANK OF DALLAS
2200 N. PEARL ST.
DALLAS, TX 75201