

# *Deleveraging the Commercial Real Estate Market*

## Research

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### End of an Era

In the midst of the most severe economic downturn in decades, it is far too soon to know how the overhaul of the banking system will play out. But whatever else happens, it is clear that the financing of real estate has undergone a long-term shift. The era of high leverage is over, and it will be replaced with a conservative market environment for the foreseeable future. Less debt means more equity, which will lead to falling property prices and perhaps the revival of REITs. This shift has implications that market participants must heed in order to survive and thrive over the short and long term.

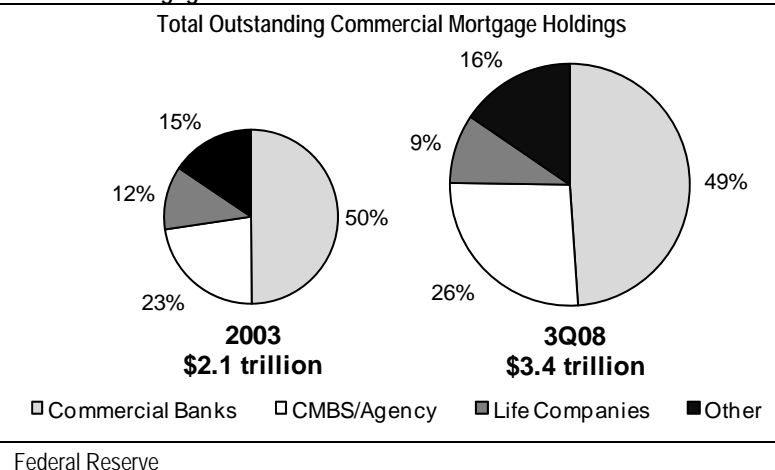
### Mortgage Pie to Shrink

The most-aggressive commercial mortgage originators in recent years have been among the lenders most affected by the restructuring of the banking system. Wachovia, Lehman Brothers and Bear Stearns were forced to take significant write-downs on highly leveraged commercial mortgages written in the recent cycle, when securitization programs fueled the spike of real estate values by providing private equity firms with debt packages totaling 90% or more to buy huge chunks of assets. According to the Federal Reserve, commercial mortgage holdings of institutions rose to \$3.4 trillion in 2008, from \$1 trillion in 1995, when the CMBS market was getting established. With lenders on the sidelines today, the total mortgage pie will shrink, although the impact on each major type of lender will vary.

Life companies will be impacted the least. Insurers' portfolios have risen 59%, to \$313 billion, since 1995, although their market share during that time has dropped more than half, to 9.3%. Life companies will remain conservative lenders, and annual lending volume is likely to remain steady. The sector's market share should increase, given the exodus of competitors.

Securitization programs are out of business for months, maybe years. They cannot write loans until CMBS spreads drop and become less volatile, and banks offload 2007 inventory, primarily floating-rate loans that financed M&A transactions. The total outstanding of CMBS – currently about \$700 billion – will shrink slowly. Maturities total about \$25 billion in 2009, rising to \$40 billion to \$50 billion per year between 2010 and 2014, before increasing to \$100 billion or more starting in 2015.

**Exhibit 1: Mortgage Volume Ballooned From 2003 to 2008**



At \$1.7 trillion, commercial banks comprise the biggest and most opaque piece of the pie. The sector encompasses a wide range of activity, from large banks financing institutional properties to local banks lending to “mom-and-pop” businesses. There is much potential for downsizing in this sector because many banks are looking to reduce exposure to commercial real estate, and most of the loans outstanding carry short-term maturities. Reducing the outstanding balance of bank holdings may be tricky, though. Bank lending is often driven by customer relationships that banks want to maintain. What’s more, many banks are expected to extend problem loans to avoid dealing with foreclosures.

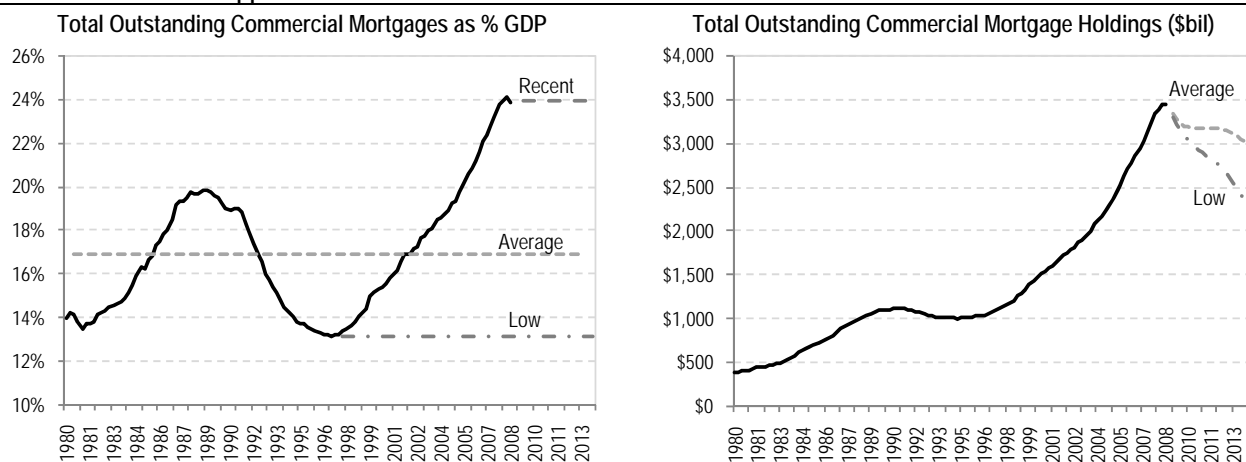
## Historical Analysis

Leverage throughout the banking system grew to unreasonable proportions in recent years. It was the lynchpin of the credit crisis that led to the government’s injection of equity into the banking industry, whose total losses are expected to top \$1 trillion when all is said and done. Banks are now more risk-averse across the board and are striving to build equity cushions. Banks that do write commercial mortgages will underwrite less leverage, higher debt-service coverage and more amortization than loans originated in recent years. The question at this point isn’t whether the total amount of outstanding commercial-mortgage debt will contract, but by how much.

To get a sense of the timing and magnitude of the adjustment, we looked at several historical measures of commercial mortgage debt, dating back to 1980, to estimate how much the commercial mortgage market might shrink if levels revert to their long-term averages or historical lows. We also attempted to model future origination and refinancing volumes based on a number of assumptions about lender appetite for commercial real estate and likely trends in underwriting standards over the next few years. For each approach, we assume some growth in both GDP and the size of the property market as a result of new construction.

*GDP Share Approach.* The first approach to estimating the potential contraction in the commercial mortgage market involves simply comparing the current proportion of commercial mortgage debt outstanding to gross domestic product (GDP) with the historical average and low levels. The run-up in leverage over the past few years has pushed this ratio to historical highs. As of 3Q08, the \$3.4 trillion commercial-mortgage market represented some 24% of GDP, nearly double the recent low point of 13% in

## Exhibit 2: GDP Share Approach

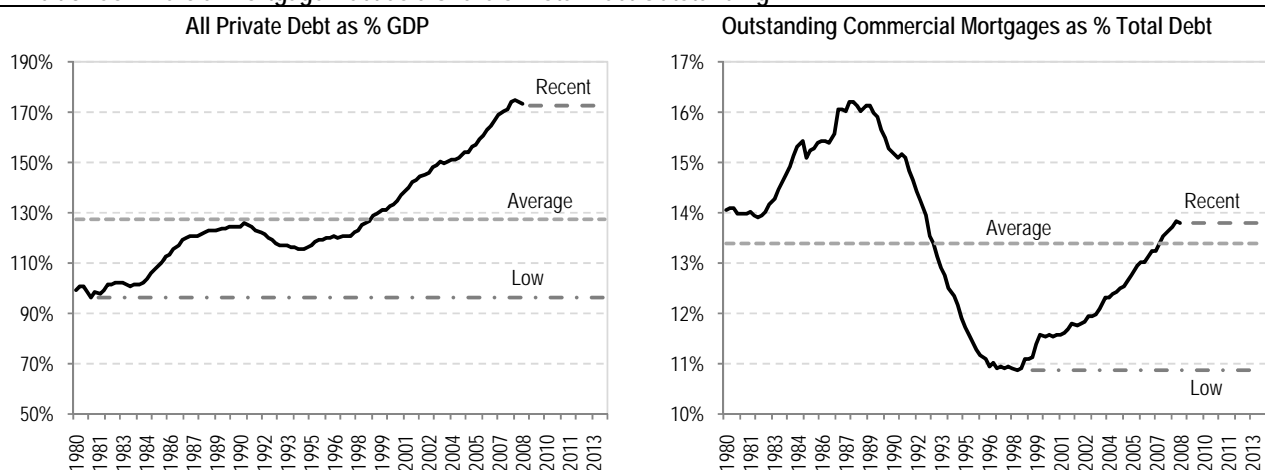


Federal Reserve; US Commerce Department; Moody's Economy.com

1Q97, and nearly 50% higher than the post-1980 historical average of 16.9%. If the size of the commercial mortgage market relative to GDP were to revert to the post-1980 historical average, it would shrink 10% to just over \$3 trillion by 2013 (Exhibit 2). However, if the proportion reverts to the recent historical low point, the commercial mortgage market would drop 31%, to \$2.4 trillion.

*Total Debt Outstanding Approach.* The second approach looks at the share of commercial mortgages relative to all private debt as well as the share of all private debt relative to GDP. This two-step approach takes into consideration the ongoing deleveraging that is occurring throughout the economy and the possibility that lenders' appetite for commercial mortgages might shrink disproportionately. The amount of all private debt as a share of nominal GDP has risen steadily for 15 years, peaking at 174.7% in 1Q08. The post-1980 average is 127%. The low point was 96.3% in 1981, when soaring inflation prompted then-Federal Reserve chairman Paul Volcker to dramatically tighten monetary policy in an attempt to rein in the money supply. The level of commercial mortgages as a share of all private debt was 13.8% in 3Q08, not far from the post-1980 historical average of 13.4%. The low point was 10.9%, in 2Q98.

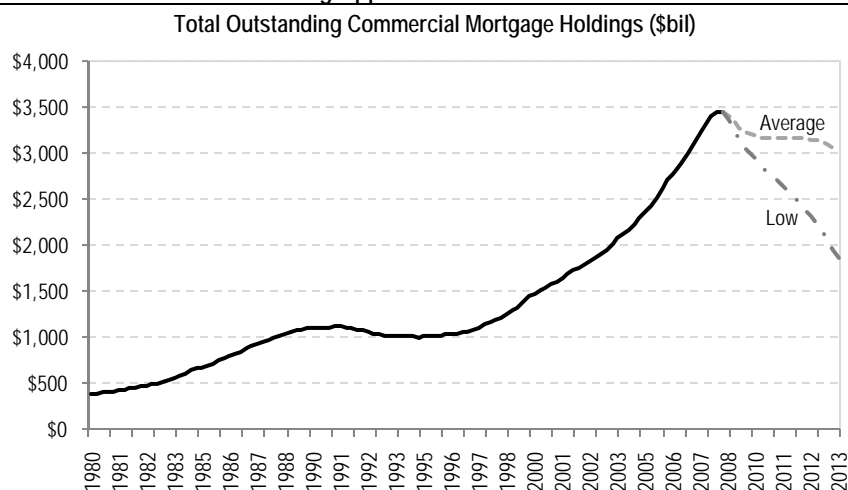
## Exhibit 3: Commercial Mortgage Debt as a Share of Total Debt Outstanding



Federal Reserve; US Commerce Department; Moody's Economy.com

If the proportions of both private debt to GDP and commercial mortgages to private debt revert to historical averages, the total amount of outstanding commercial mortgage debt will drop 10%, to \$3.05 trillion, by 2013 (Exhibit 4). If both proportions revert to historical lows, the contraction in the total amount of outstanding commercial mortgage debt would be much more severe – about 45%, to \$1.9 trillion. Such a draconian decline seems highly unlikely, however, given that the conditions which gave rise to the 1981 low point are far different from the inflationary and monetary environment today.

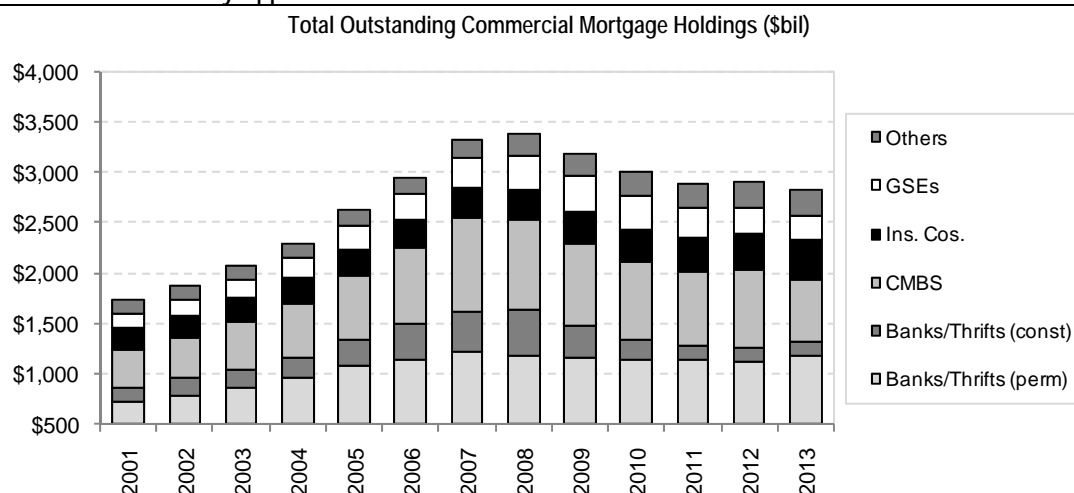
**Exhibit 4: Total Debt Outstanding Approach**



Federal Reserve; US Commerce Department; Moody's Economy.com

*Debt Maturity Approach.* The third approach involves modeling origination and refinancing volumes based on numerous assumptions about underwriting standards and the likely supply of – and demand for – debt. Based on our estimates, roughly \$350 billion of mortgages will come due annually over the next several years, at a time when property values are likely to have fallen roughly one-third from peak levels and banks are supplying less leverage. Properties that were financed with aggressive underwriting assumptions in recent years will qualify for smaller loans. We assume lenders will refinance maturing mortgages at 50-60% loan-to-value ratios, and will fund new construction at 60% of current construction costs. There will be fewer sources of debt, with the securitization market largely out of the picture and banks trying to pare balance sheets. If these and a host of other factors play out as expected, we estimate the total amount of outstanding mortgage debt will drop 14.5%, to \$2.8 trillion, by 2013.

## Exhibit 5: Debt Maturity Approach



Federal Reserve; US Commerce Department; Moody's Economy.com

During the last extended downturn in the 1990s, the total amount of outstanding commercial mortgages dropped 10% from its \$1.1 trillion peak in 1990 to the low point of \$997 billion in 1994. Some sectors shrunk more than the average. The portfolios of banks and thrifts fell 17% from a \$622 billion peak in 1989 to a \$518 billion trough in 1994. Insurers' holdings dipped 23% between the 1990 peak (\$244 billion) and 1997 trough (\$189 billion). Securitization was the only major sector of the commercial mortgage market that expanded during this period, largely because CMBS was in its infancy and growing slowly.

Exhibit 6 summarizes and contrasts the results of all three approaches:

## Exhibit 6: Summary of Commercial Mortgage Debt Outstanding Scenarios

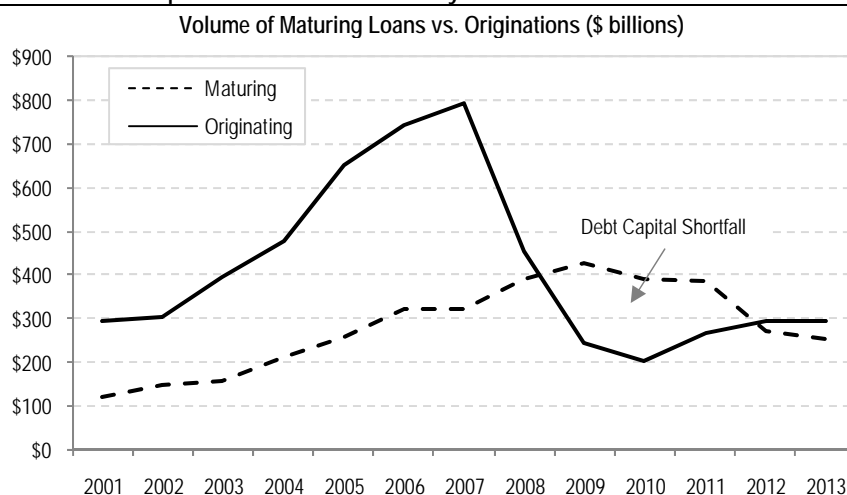
Figures in \$ billions	2008	2009	2010	2011	2012	2013	Annual % Change
GDP Share Approach							
GDP Average Share	\$3,402	\$3,202	\$3,167	\$3,171	\$3,130	\$3,027	-2.30%
GDP Low Share	\$3,376	\$3,072	\$2,920	\$2,790	\$2,603	\$2,348	-7.00%
Total Debt Share Approach							
Debt Average Shares	\$3,402	\$3,206	\$3,174	\$3,182	\$3,144	\$3,046	-2.19%
Debt Low Shares	\$3,357	\$2,980	\$2,747	\$2,523	\$2,232	\$1,871	-11.03%
Debt Maturity Approach							
Maturity Scenario	\$3,388	\$3,201	\$3,012	\$2,892	\$2,915	\$2,958	-2.35%

PREI® (annual % change reflects annual % decline in outstanding commercial mortgages from 2008 to 2013)

## New Capital Sources Needed

All these calculations suggest a likely drop in outstanding commercial mortgage holdings between 10% and 30% over the next five years, depending on the length and severity of the downturn. In other words, the volume of outstanding mortgages could shrink annually by \$100 billion to \$150 billion over the next several years. Whatever scenario plays out, there is likely to be a void of several hundred billion dollars that must be replaced (Exhibit 7), because the supply of debt from traditional sources will be less than the volume necessary to refinance maturing loans during the next few years.

**Exhibit 7: Debt Capital Shortfall: Debt Maturity Scenario**



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How will that void be filled? Property owners will be forced to recapitalize with more equity and/or mezzanine capital from sources that have the appetite and capacity for commercial real estate exposure. These sources include sovereign wealth funds and new mezzanine-debt investors, though neither has emerged yet as a significant buyer of distressed assets, partly out of fear that asset values have further to fall. Other possible sources that are likely to emerge include new specialty lenders.

REITs could also benefit from a lower-leverage environment. The REIT market's biggest growth spurt to date was in the 1990s, when the private market lacked capital. REITs were unable to compete with private buyers in recent years, but they could be well positioned to grow if capital begins to flow again in the public market. The trend toward privatization in recent years was hastened by private equity firms that bought and flipped properties with little money down. Such a strategy is not tenable when prices are falling.

## Deleveraging to Impact Real Estate

Deleveraging will have a profound impact on commercial real estate. Less lending by banks will serve to slow economic growth. Transaction volume will remain down as long as debt is scarce. The prospect of less debt has already helped spur a rise in cap rates, resulting in lower asset prices. When debt is cheap, and leverage is high, investors' cost of capital is lower, enabling them to bid higher prices and still meet yield boogies. To be sure, there are other reasons that commercial property prices will fall over the near

term, including the weakening economy and relatively attractive yields in other investment sectors, but higher debt costs will play an additive role.

The sudden shift to a less-aggressive lending environment creates a potentially large problem with “maturity defaults,” or the situation that is created when a performing loan matures without being refinanced. Such defaults are expected to rise as a consequence of the recent frothy markets, when lenders provided highly levered debt with tight spreads on properties with inflated values. To refinance those loans in an environment in which debt is more expensive and proceeds are limited, property owners must either put more equity into assets or increase cash flow, which will be difficult at a time when the economy is slowing and expenses such as utility costs and property taxes are rising. Maturity defaults could be most acute among floating-rate loans that come due over the next two or three years, particularly those that financed large M&A deals. Some lenders will extend the loans to avoid foreclosure, but demand for debt and equity to take out these deals will almost certainly exceed supply in the near term.

Clearly, there will be ample opportunity for both debt and equity investors with access to capital to take advantage of the distress of overleveraged investors who bought assets at inflated prices. To succeed going forward, firms must have the experience to identify areas of opportunity, the capacity to assess and price risk accurately, and the judgment to make the right choices.

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