

Life After Debt: Coming to Grips with the Funding Gap*

Research

Paul Fiorilla
Vice President
U.S. Office
Tel 973.734.1501
paul.fiorilla@prudential.com

Jack Taylor
Managing Director
U.S. Office
Tel 917.209.9754
jack.taylor@prudential.com

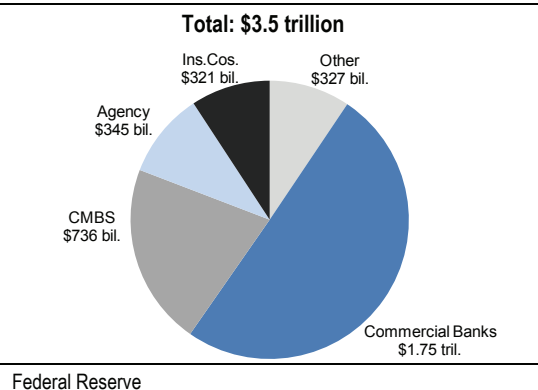
Overview

It is no secret that much of the commercial real estate market is overlevered. The volume of distressed loans, particularly those originated by commercial banks and CMBS programs, is rising rapidly. Once-solid real estate firms are struggling to resolve debt issues, and in some cases are being forced to give properties back to lenders. By now it has been established that one of the main culprits is the aggressive lending environment that prevailed at the tail end of the latest real estate cycle. Some \$2.8 trillion of commercial mortgages were originated between 2005 and 2008, or nearly double the \$1.5 trillion written the previous four years.

Today, the global banking crisis has crippled some sources of debt, such as CMBS, while the remaining field of lenders is either sidelined or lending very conservatively at substantially lower leverage levels and volumes. Anecdotal evidence suggests that the majority of loans maturing in 2009 are simply being extended by lenders. The upshot is that there is a large body of “zombie” commercial properties that will not qualify for mortgages sufficient to pay off the existing debt, even if the owners can make debt-service payments. The difference between the size of the existing and new mortgages is the “**funding gap.**” This funding gap can be filled, and the properties can only be refinanced, through a combination of lender discounts plus an infusion of new capital into the assets.

This situation gives rise to a critical question: how large is the funding gap? The estimate, according to a matrix developed by PREI that factors in lower property values and more-conservative lending standards, is between **\$610 billion and \$825 billion** if all commercial mortgages originated by commercial banks and CMBS programs between 2005 and 2008 are counted. Put another way, property owners will need as much as \$825 billion from a combination of fresh equity, subordinate debt and debt forgiveness/loan losses to recapitalize the debt originated during those years. Even taking construction loans and land loans out of the equation (as many of these loans may be substantially written off by lenders), the total shortfall is estimated to be between **\$390 billion and \$520 billion.** While some of the gap will be plugged by loan losses, a large portion will need to be replaced by new capital.

Commercial Mortgage Debt Outstanding, 1Q09



Prudential Real Estate Investors
8 Campus Drive
Parsippany, NJ 07054
USA

Tel 973.683.1745
Fax 973.734.1319
Web www.prei.com

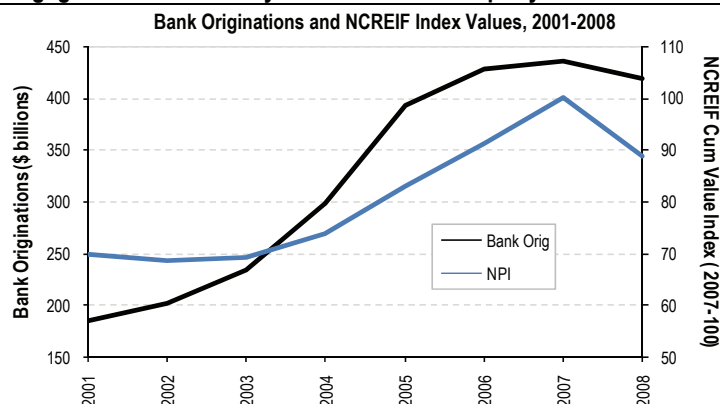
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Certainly there are a large number of variables that go into estimates of future market activity – including the performance of the economy, the health of the banking sector, whether the CMBS market can re-emerge as a viable source of capital and the direction of interest rates – that could make the shortfall grow larger or smaller. Nevertheless, it is virtually certain that the volume of overlevered real estate will create an enormous amount of distress and turnover in the commercial property market in the next few years. In this paper, we will analyze the extent of the problem and discuss some of the variables that will impact the size of the funding gap.

Falling Property Values and Reduced Lending

The run-up in property values between 2003 and 2007 coincided with a big increase in lending volume. While the chicken-and-egg aspect of the correlation can be debated, there is no doubt that the easy access to debt was a major factor in rising values and that the current lack of debt is a major contributor to the current cycle of falling asset values. As measured by the NCREIF Property Index, values have declined 24.5% since their peak in 1Q08, and a further drop of at least 15% is anticipated before the cycle is over, in part because property fundamentals are expected to worsen through 2010. Rising unemployment and the sagging economy have reduced demand for space affecting all types of properties, leading to rising vacancy rates and lower rents. As we know from past cycles, the availability of debt is unlikely to improve as long as property values are declining.

Mortgage Volume is Closely Correlated With Property Values



Federal Reserve, FDIC, ACLI, NCREIF, PREI Research

Debt Supply Not Keeping Up With Demand

Between 2009 and 2014 alone, some \$2 trillion of the total \$3.5 trillion universe of commercial mortgages are set to mature. In addition to the issues caused by underlying asset values declining, discussed later in the paper, the myriad problems facing the commercial banks and the seizing up of the CMBS market will severely impact the ability to refinance this debt.

Commercial banks account for half of total outstanding commercial mortgages, or approximately \$1.75 trillion. However, banks are under significant stress and must tackle multiple problems in multiple asset classes, including the rising delinquencies and foreclosures in commercial real estate, as well as pressure on their

capital ratios. Bank balance sheets are clogged with delinquent and unrefinanceable loans. Regional and community banks in particular are overexposed to commercial real estate. At the larger banks, a significant number of loans were originated for securitization but could not be sold when demand for bonds stalled in mid-2007. Much of that debt represents large floating-rate loans that financed a wave of M&A activity in late 2006 and early 2007 at high leverage levels that will not be refinanceable. As a result, until banks get a handle on delinquencies and shed illiquid loans, they are unlikely to start lending freely again.

The CMBS market has taken a harder hit than the banking sector. CMBS volume shot up in the bull market of 2005-2007, when some \$628 billion of commercial loans were securitized. CMBS prices have fallen to levels that makes it nearly impossible to write loans that borrowers will accept. With CMBS spreads volatile and lenders having little ability to hedge warehoused product before securitization, there is virtually no appetite at the present time for the CMBS model at banking institutions. Lenders whose activity is not expected to change substantially include the government-sponsored enterprises and life companies, but they represent a relatively small part of the total commercial mortgage sector. Therefore, as long as banks and CMBS programs are sidelined, debt is likely to remain scarce.

The Federal government created two programs designed to cleanse bank balance sheets of toxic assets and nurse the lending markets back to health. The Public-Private Investment Program (PPIP) was designed to facilitate the sale of legacy loans and securities, while the Term Asset-Backed Securities Loan Facility (TALF) was created to jump-start securitized lending. However, neither has produced much activity to date in commercial real estate.

The PPIP legacy-loan program has been shelved because banks showed little interest in participating. Banks retain the institutional memory of the last major credit crunch in the early 1990s, when they sold assets at steep discounts only to see buyers reap outsized gains. There is a wide bid-ask gap between what banks and investors see as fair value for legacy loans. Also, major banks passed the government's recent stress-tests, freeing them from immediate pressure to sell underwater assets. As a result, banks are largely allowed to manage their existing mortgage portfolios and not write new loans, or write new loans on a highly selective basis on the best transactions for their existing customers.

TALF was created to spur CMBS lending by providing attractive financing to buyers of triple-A-rated bond classes. However, there has been limited activity to date. TALF was designed to enable both single-borrower financings (where a single sponsor, such as a REIT, would obtain low-leverage debt on a portfolio of properties), and multi-borrower financings, which might involve banks securitizing a pool of new loans that would refinance mortgages in their existing inventory, enabling them to clear balance sheet space. Some REITs have been exploring TALF-enabled issuances, but even if some transactions are executed, the overall volume is expected to have limited impact on the liquidity crunch. Impediments to new CMBS offerings include the limited ability of banks to hedge loans they warehouse before securitization and the lack of matching financing available to CMBS investors. While CMBS will likely return in some form, volume will be extremely limited until the banking system recovers.

Significant Funding Gap is Emerging

The commercial bank delinquency rate has skyrocketed in recent years, jumping to 7.9% at the end of 2Q09, up from 1% in 2006, according to the Federal Reserve. Analytics firm Realpoint reported that the volume of CMBS loans in special servicing jumped to \$47 billion at the end of July, or 6.5% of the total outstanding universe of CMBS. According to Real Capital Analytics, the volume of troubled mortgages (including CMBS) rose by \$67 billion in the first half of the year, bringing the total to \$115 billion. With continued high unemployment and lower consumer spending reducing demand for commercial space and rental income, such problems are likely to keep rising.

Commercial mortgages will face two kinds of payment problems leading to shortfalls. One type emanates from property owners being unable to make debt service payments because of declining income, a phenomenon that is rising rapidly. The second and much more significant type of distress will come in the form of maturity defaults, in which property owners will be unable to refinance performing loans at maturity because lenders will not be willing to provide the same level of proceeds as in recent years. Loans will be underwritten employing more conservative property valuations and lower advance rates. When higher coupons are added to the mix, individual properties will qualify for substantially less debt than they did in the years leading up to 2008. The difference between the size of the old mortgage and the amount of debt the property will qualify for at refinancing represents a funding gap that needs to be resolved before properties can leave the realm of the distressed.

The maturity default problem can be illustrated on a theoretical property. In the matrix to the right, we have calculated refinancing shortfalls based on how a particular property might qualify for refinancing given different property value and loan-to-value (LTV) scenarios. We assume that at the height of the market the property was valued at \$100 and was financed with a \$75 mortgage. If the property's value falls 25% and banks are willing to provide a 60% LTV loan, it would qualify for a new mortgage of \$45, creating a \$30 shortfall. In a more pessimistic scenario, the shortfall is steeper. If the property's value falls 40% and banks are willing to provide only 55% of debt, it would qualify for only a \$33 mortgage, a \$42 shortfall.

Debt Shortfall Matrix						
New Loan LTV at Refinance						
Property Value Decline		70%	65%	60%	55%	50%
	0%	5	10	15	20	25
	-5%	9	13	18	23	28
	-10%	12	17	21	26	30
	-15%	16	20	24	28	33
	-20%	19	23	27	31	35
	-25%	23	26	30	34	38
	-30%	26	30	33	37	40
	-35%	30	33	36	39	43
	-40%	33	36	39	42	45
	-45%	37	39	42	45	48
-50%	40	43	45	48	50	
Initial loan based on \$100 property value, 75% LTV						

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This simple analysis highlights how quickly the shortfall numbers add up. Property values in the NCREIF Property Index have fallen 24.5% since the market peaked in 1Q08. So if one were to assume no further decline in appreciation, then assets financed at 75% of peak values are already facing a debt shortfall of roughly one-third of their current mortgage amount (or \$26 in the chart), even if banks are willing to refinance at a relatively aggressive LTV of 65%. If asset values fall by 40%, as is widely expected, a property financed at 75% LTV at peak value will be far underwater under most any scenario.

Not surprisingly, many lenders are opting to deal with maturity defaults by extending loans, hoping the problem disappears before they are forced to foreclose on troubled properties. However, the extraordinary volume of loans written during the period of time when lenders were most aggressive means the problem is likely to persist.

Another way to illustrate the shortfall problem is in the *aggregate*. Here we will consider loans originated by commercial banks and CMBS originators in the four years – 2005 to 2008 – in which values were peaking and lending was its most aggressive. We focused on CMBS and bank originations because those sectors were the largest and most aggressive providers of commercial real estate debt. We excluded construction and land loans from the estimated total loan losses because these loans are much less homogeneous with a wider dispersion of anticipated losses and an indeterminate level of potential future write-downs. We also created two economic scenarios. In the “optimistic scenario,” property values were assumed to drop 35% from peak to trough, while average LTVs were assumed to decline from 75% to 65% at refinancing. In the “pessimistic scenario,” property values were assumed to drop 45% from peak to trough, while average LTVs were assumed to decline from 75% to 60% at refinancing.¹

The table below provides a summary of the results of our analysis. We have estimated that the funding gap for the \$2.3 trillion of loans originated by banks and CMBS lenders during this period may range from \$610 billion to \$825 billion. If we exclude the approximately \$850 billion of construction and land loans made during this period, the funding gap would range from \$390 billion to \$520 billion.

Estimated Funding Gap 2005-2008 Commercial Bank/CMBS Originations (\$billions)		
	Optimistic Scenario	Pessimistic Scenario
Key Assumptions		
Value Decline (a)	35%	45%
LTV Change (b)	75% → 65%	75% → 60%
Including Construction Loans (\$2.3 trillion)		
Total Funding Gap (c)	\$610	\$825
Excluding Construction Loans (\$1.5 trillion)		
Funding Gap (d)	390	520
Less: Estimated Loan Losses (e)	(70)	(220)
Net Funding Gap After Estimated Loan Losses	\$320	\$300

(a) Peak to trough.

(b) Hypothetical change in available LTV on newly originated loans.

(c) Represents loans originated by commercial banks and CMBS programs only and excludes other sources of lending such as life insurance companies.

(d) Excludes construction loans and land loans from the total originations by commercial banks and CMBS programs.

(e) Loan losses would arise from lender forgiveness or foreclosure/property sales that are insufficient to repay the loan in full

¹ As an example, assume a 75% LTV loan made in 2005 on a property valued at \$83 million (representing a loan amount of \$62 million). Assuming the property's value rose in proportion to the NCREIF index between 2005 and 2007, the property value peaked at \$100 million in 2007. Assuming a current property value of \$55 million (a 45% decline from the peak, and a 34% decline from the value at origination), and an assumed new lending advance rate of 60%, the loan would qualify for a \$33 million mortgage at maturity, producing a \$29 million funding gap.

Even if we assume that a portion of this gap will be satisfied through loan losses, and if we exclude construction and land loans, approximately \$300 billion to \$320 billion of new subordinate debt and equity will be required to recapitalize these properties.

The size of loan losses as a component of the funding gap is difficult to estimate. For purposes of this analysis, we assumed that lenders will ultimately take losses on properties whose debt level exceeds 100% of new market value, because investors are unlikely to infuse fresh capital into a property where the current debt exceeds the current market value. Using aggregate LTVs and property value declines, and not counting construction loans, we estimated the percentage of the 2005-2008 origination cohort that would be valued at greater than 100%. The result was an estimated loss total of \$70 billion under the optimistic economic scenario and \$220 billion under the pessimistic scenario.

None of these figures include mezzanine debt, the use of which exploded in the boom years. While there are no firm statistics of the total mezzanine debt outstanding, many market sources have estimated the number to be between \$75 billion and \$125 billion, much of which will be impaired.

Conclusion: Capital Needed to Right the System

Debt shortfalls have already created distress that has led to the foreclosure of tens of billions of dollars of commercial real estate, but the problem is in its *early stages*. The impact to date has been somewhat muted because many banks and CMBS servicers are opting to deal with maturing loans by extending them, hoping the problem goes away before they are forced to foreclose on properties. However, the problem will undoubtedly persist due to the extraordinary volume of loans written during the period of time when lenders were most aggressive.

Certainly our calculations are rough figures, and can change if economic circumstances are different than anticipated, but they demonstrate that the problem is massive. There is no way to get around the fact that **a large amount of capital must be injected into the system over an extended period of time** in order to make up for the shortfall that was created by aggressive lending at the tail end of the recent bull market in commercial real estate

The global credit crisis has led to a funding gap in commercial real estate, creating significant gap financing and distressed debt purchase opportunities. We expect this gap to endure, representing an historic opportunity for investors with capital.

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Prudential Real Estate Investors
8 Campus Drive
Parsippany, NJ 07054
USA

Tel 973.683.1745
Fax 973.734.1319
Web www.prei.com
E-mail prei.reports@prudential.com

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