Mysteries Revealed – Why CMBS Multifamily Performance is So Much Worse than Agency and Life Company Experience

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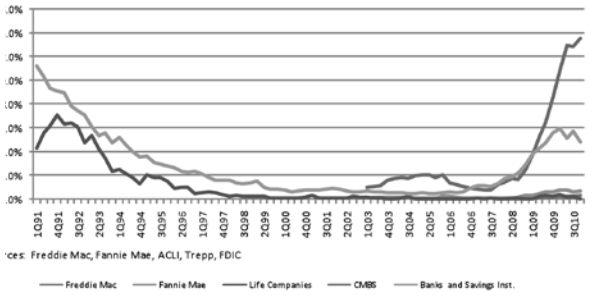
Following the "Great Recession" of the late 2000s, multifamily delinquency rates rose to levels not seen in over a decade, since the last period of major stress to commercial real estate. While the supply-induced stress of the late 1980s and early 1990s hit all investors hard, current performance information shows that the recent recession did not hit all multifamily mortgage debt investors equally, as evidenced by the wide divergence in delinquency rates across multifamily mortgage debt holders. At life insurance companies and government-sponsored enterprises (GSEs, Freddie Mac and Fannie Mae) credit performance has been very strong. In contrast, commercial mortgage backed security (CMBS) collateral has performed poorly, with collateral performance at depositories (commercial banks and savings institutions) falling between the two.

Here we review the divergent performance, and make an effort to understand the drivers, focusing on the relationship between historical CMBS performance and the rest of the market. A priori views are that the differences are driven by underwriting practices. We take multiple approaches to the question and provide evidence to support that view. The implication of our findings is that if market participants are disciplined in their underwriting through the cycle, it can result in meaningfully improved collateral performance.

Historical Delinquency

Multifamily delinquency rates (see Chart 1) were low for much of the decade for all investors. The extremely low delinquency rates in the late 1990s and early 2000s were partially driven by the strong economy during that period and partially a result of the strict underwriting requirements that were a reaction to the stress in the late 1980s and early 1990s. Emerging from that recession, lenders and credit rating agencies imposed very strict underwriting standards in the commercial real estate debt market. As time passed, the high spreads and strong credit protection on commercial real estate debt made it an investment that attracted capital. The flow of capital into the market helped encourage more aggressive underwriting as capital searched for appropriate loans in which to invest.

Chart 1
Multifamily Delinquency and Foreclosure Rates[1]

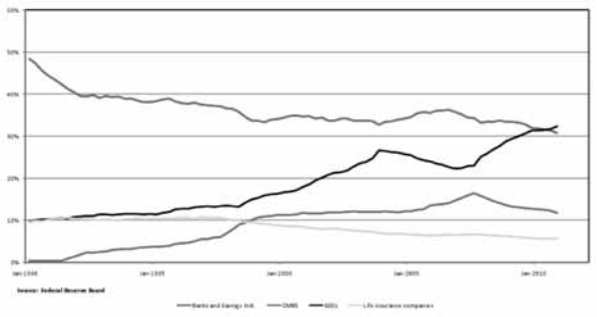


Stress impacted banks first, probably because of the short-term nature of their loans. After 2008, CMBS conduit delinquency rates shot up dramatically. Delinquencies for life insurance companies and the GSEs have been low through the entire period and are still less than 1%.

Sources of Multifamily Debt

The sources of multifamily mortgage debt changed in a meaningful way over the last 20 years and those changes likely have had an impact on the credit risk of the loans originated.

Chart 2
Percent of Multifamily Mortgage Debt Outstanding



At the beginning of the 1990s commercial banks and savings institutions were clearly the major sources of funding for multi-family mortgages. They maintained their role as the largest investor in multifamily mortgage debt until the end of 2010 when the GSEs surpassed them. Conduits began the 1990s with nearly no exposure to this market, but the securitized market grew dramatically and surpassed insurance company exposure before the end of the decade. Note that conduits increased their relative participation in the market during the period from 2004Q4 to 2007Q3. The conduit origination programs would try to structure their deals to have enough multifamily exposure to encourage the GSE's investment in the senior tranches. The target amount was often 30%, leading to competition between the conduits and direct GSE lending as the conduits worked to have bonds attractive to the GSEs. During that period the CMBS conduits' share of the market grew to 16.4% from just under 12%, an increase of 4.5%, and in that same period GSE and life insurance company exposure fell 3.2%. That period was when riskier mortgages were being originated. In the next section, we examine debt characteristics to understand how those characteristics played a role.

Loan Underwriting Characteristics

Underwriting practices have changed dramatically over time. The tax-advantaged investment in commercial real estate in the 1980s fueled investment and aggressive underwriting of value. After the extreme losses that followed that period, the pendulum swung to very stringent underwriting[i]. The conservative underwriting was characterized by lenders' caution on underwriting ratios, proceeds, and other factors such as required reserves and representations & warranties.

We start our review of portfolio characteristics by looking at loan leverage. Higher LTV is generally an indicator of more aggressive underwriting, whether it is a higher level or an increasing trend.

Chart 3
Historical LTV

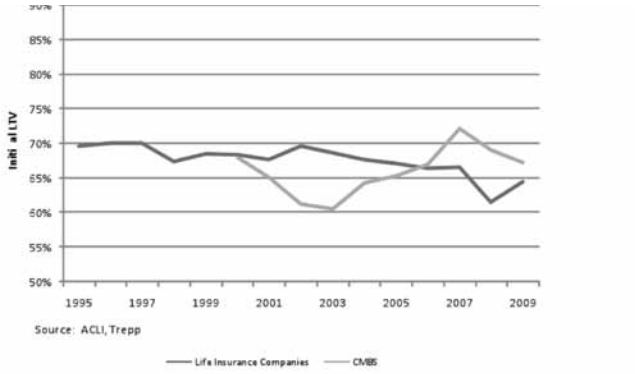
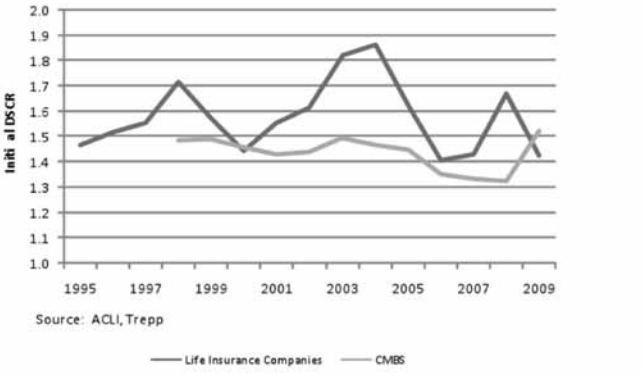


Chart 3 shows that over an extended period average LTV ratios of loans held by life insurers generally trended down. The notable difference for CMBS collateral is that LTV ratios rose on average during the period from 2003 to 2007.

Similarly, loans with lower coverage typically indicate looser underwriting relative to higher-coverage loans. Chart 4 shows that CMBS lenders generally provided loans with lower coverage than the life insurers.

Chart 4
Historical DSCR



Similarly, allowing interest-only (IO) periods during the term of the mortgage increases risk to lenders. Clearly, the percentage of IO loans increased during the period in review. The percent of loans with an IO period started out at less than 10% of the CMBS market, and had already risen close to 56% by the beginning of 2005, and continued to rise from there.

The review of underwriting characteristics above shows that market averages for LTV and DSCR may indicate that there is slightly more risk in the CMBS universe, relative to other lenders, but the differences are not large enough to explain the differences in delinquency rates, so we continue our review of potential drivers.

Underwriting Inputs

In the time period when competition was especially strong leading up to 2007, Freddie Mac evaluated our competitive position and the business that we were losing to conduit lenders. We observed that we often lost business on proceeds — other lenders were willing to lend higher loan amounts than we were. As discussed above, conduit lender DSCR and LTV rates were not as conservative on average, but the ratios were not dramatically different. Given these observations, we looked closely at our own income and value underwriting and the income and value underwriting that was done at conduits.

In fact, we were able to match some "dead deals" — deals we underwrote and bid on, but did not win the business — to properties that were later securitized. On these properties, it was possible to match underwriting income and value at a property level, sourced from Trepp, to our own underwriting. The sample enabled us to go beyond market average underwriting ratios and isolate the underwriting differences between Freddie Mac and CMBS. The insights from our comparisons are approximate, because it was not a final underwriting on a funded transaction, but we did learn something about the relative behavior.

The results of this analysis affirmed the assumption that Freddie Mac was more conservative in its underwriting, which we think was true to some extent for all of the lenders with better performance.[ii]

Specifically, across all years, CMBS underwritten net operating income (NOI) was in the range of 8% higher than Freddie Mac's NOI, and CMBS underwritten property values were generally 5% to 15% higher than Freddie Mac valuations with an average of roughly 10%. The underwritten appraisal gap directly implies that an 80% LTV CMBS loan would be nearly a 90% LTV GSE loan, but could be as high as 94%.

One measure of the impact of the difference in underwritten income and value can be calculated using a model estimation of expected loss. This analysis involved running a loan through a loss forecasting model first as it would be viewed with CMBS underwriting and then more conservatively with GSE underwriting, using the difference in inputs described above. The model then provides a resulting forecasted expected loss. The difference in the expected loss between the two scenarios is a measure of the impact of the difference in underwriting methodology.

In our analysis, we first used a 10-year mortgage on a 30-year amortization with a 75% LTV. The loan is run through the Moody's Analytics Commercial Mortgage Metrics (CMM) model[iii]. The CMM model is widely-used by market participants to estimate credit risk for multifamily debt products. The difference in lifetime expected losses was nearly 20% based on the modified income and value inputs (increasing LTV to 83%). Increasing the LTV to just over 90 percent produces losses about 50% higher. A model with more ruthless default behavior could produce a large sensitivity.

A couple of issues are worth noting. First, the model runs used current forecasts (Spring 2011) for real estate market conditions — which generally call for strong fundamentals during the forecast. These forecasts will support strong loan performance, so the difference between higher-quality and lower-quality loans is likely not as large as it would have been going into the recession. Additionally, there is a distribution around the averages, and expected losses could be much higher for the loans that were underwritten more aggressively, beyond the average. In the extreme, a loan could have been underwritten as a performing mortgage, but it was actually underwater at origination. Those loans obviously would have a much greater modeled probability of default and loss.

A second approach to understanding the impact of different underwriting practices for income and expense involved reviewing delinquency rates in the CMBS space to understand the empirical impact of higher leverage on loan performance. Conduit loans originated with a reported 75% to 80% LTV, when re-evaluated with GSE underwriting standards may very well have not qualified for purchase outside of the conduit universe. Said differently, the loans originated for CMBS include a population of high-risk assets that were not eligible for purchase by other investors. From that perspective, the other lenders' realized performance may better match the performance of CMBS collateral with low leverage. Chart 5 shows CMBS multifamily delinquency by loan count for multifamily collateral and for the subset of collateral with LTV below 70%. Clearly default rates on the population below 70% are lower than for higher leverage collateral.

Chart 5
CMBS Multifamily Delinquency Rates by Loan Count

Loan Performance

We now consider a couple of additional factors beyond original loan underwriting that could produce differences in performance. During the life of a loan, property performance is monitored with periodically updated information on property income and expenses. A property with increasing NOI provides profits to the property owner, and protects the lender against the risk of credit problems on their loan. Property NOI declines hurt the borrower and the lender. The property cash flow problems can indicate that the loan has any of a number of problems. For example, it might indicate that the property is in a poor location, not attractive to renters, and/or property management is problematic. It also could be a side effect of the property being over-leveraged through loose underwriting that based income and values brief peak in performance that would likely fade.

We reviewed DSCR migration on properties in CMBS transactions to understand more about property operations. In the conduit universe, generally 5% to 9% of loans starting a year above a 1.0 DSCR migrated to a stressed position below 1.0. If less of the population is getting worse, or getting worse at a slower rate, it is consistent with better observed delinquency rates. A detailed review of transition rates across investors, which requires granular loan-level information, is an area of study that may provide further evidence for the difference in collateral performance.

Another factor that can contribute to differences is borrower ruthlessness. Once a loan is no longer producing positive cash flows after paying expenses and debt service, the borrower implicitly decides whether or not to fund the loan "out of pocket". Borrowers will not always default when their property cash flows no longer cover the debt payments on the mortgage and may continue to pay the mortgage for a number of reasons. A key factor to consider is whether the property will have value in the future. If the borrower has sufficient liquidity, the borrower will fund the property in hopes that the value of the property will grow in the future. In our review of the data, we find that CMBS borrowers default only about 5% of the time when property cash flows are negative.

Additionally, the borrower will also consider his/her relationship with their lender. The decision to default will impact this relationship. This issue would not be a consideration for CMBS borrowers in recent years because conduit loan origination was so low. Other lenders may have benefitted from borrowers who considered the lender relationship issues as they evaluated default decisions on their properties.

Conclusion

Before the 2007 market crash, banks, savings institutions, life insurance companies, GSEs, and the conduits competed for loans on multifamily properties intensely. Because conduits' economics were based on origination and bond issue income, they had different incentives in evaluating risk relative to other market participants. The result was that CMBS underwriting was more aggressive than other lenders. In our brief review of some of the important issues, it appears that the higher CMBS collateral delinquency rates were partially driven by that more aggressive underwriting. At the highest level, this assertion is indirectly supported by collateral delinquency performance.

We provided evidence that underwritten income and expense in the CMBS universe was not the same as it was for other investors — it was more aggressive in both underwritten NOI and value. Without consideration of this effect, loans that appear to be similar quality in reported DSCR and LTV may actually differ by investor. This effect, combined with other factors discussed above, are key factors that drive divergent performance across investors in multifamily debt.

Our analysis is encouraging for multifamily investors — underwriting matters. To the extent that market participants are committed to good quality underwriting through the economic cycle, there are significant potential benefits, both to investors and to the stability of the multifamily housing market. Said differently, underwriting with in-place stabilized income will benefit investors in CMBS 2.0 — lowering future credit losses and providing greater stability to the sector.

1 Note: Delinquency rates are not directly comparable across investors because of differences in reporting conventions between investors and over time. For example, rates for FDIC-insured institutions are 30-days or more and include loans in nonacrrual status, while life insurance company data includes delinquencies 60-days or more and include loans in foreclosure proceedings.

i Jacob, David P.; Manzi, James M., 2005. CMBS Credit Protection and Underwriting Standards: Have They Declined Too Far? Journal of Portfolio Management, Special Issue September 2005, pp. 80-90

ii Nothaft, Frank E., Freund, James L., 2003. The Evolution of Securitization in Multifamily Mortgage Markets and Its Effect on Lending Rates. Journal of Real Estate Research, Vol. 25, No. 2. pp 91-112.

iii Commercial Mortgage Metrics (CMM) is a quantitative tool offered by Moody's Analytics, Inc. for assessing credit risk in commercial mortgage loans and portfolios. CMM utilizes loan level inputs (e.g., lease structure, NOI, DSCR, LTV) and property market forecasts sourced from CBRE Econometric Advisors to generate a sophisticated array of credit risk metrics.