

COMMERCIAL REAL ESTATE LOAN EVALUATION IN THE INSURANCE INDUSTRY

Underwriters in one insurance company weigh variables related to property and real estate market more highly than other factors when evaluating loan applications.

by Daniel M. Norris

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Banks and thrift associations are not the only institutions that provide commercial mortgages in this country. The life insurance industry holds slightly more than 25% of all outstanding commercial mortgages, and its total mortgage holdings exceed \$231 billion, according to Federal Reserve statistics.⁵ Within the life insurance industry, mortgage holdings are concentrated among 30 to 40 life insurance companies.

The commercial mortgage problem in the life insurance industry first became evident in 1986, when delinquencies and foreclosures rose for the first time since the mid-1970s' recession. There was a 1,500% increase in the proportion of holdings of large life insurance companies that constituted commercial loan foreclosures during the 1980s.⁵ Reflecting a continuing problem, the proportion of outstanding commercial loan balances classified as either delinquent or in the process of foreclosure has increased more than fourfold.⁵ These and similarly alarming figures have fueled a concern in recent years over the financial soundness of the insurance companies that count commercial real estate mortgages as a significant portion of their assets. The increase in foreclosures and commercial loan delinquencies has put intense pressure on the profits and long-term viability of the life insurance industry. As a result, life insurance companies like banks and thrifts, are facing significant asset-quality challenges in the first half of this decade.

One way of averting commercial loan losses is by effectively screening loan applicants to assess creditworthiness. To the extent that loan losses are correlated with specific property and applicant factors that are detectable before loan approval, an effective screening process may reduce commercial loan losses. Alternatively, the screening process may identify applicants who should be charged a higher interest rate or given stricter loan terms to compensate the lender for assuming a higher risk of loan default. Ideally, such a screening process would be mechanized to reduce loan approval costs and ensure consistent application. However, loan officers never will completely bypass the need for making subjective judgments concerning the probability that a loan will be repaid.¹

The purpose of the study reported in this article was to determine how important certain variables were to underwriters who evaluated and approved (underwrote) commercial real estate loans in one large insurance company. The results may help guide other commercial real estate mortgage providers in the development of a loan approval model by identifying variables that may be used to screen loan applicants' creditworthiness.

The Study

The commercial real estate loan underwriting department of a large insurance company that agreed

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to participate in this study manages a multibillion dollar portfolio of commercial real estate loans. Like loan underwriters in other institutions, the underwriters in this department incorporate all important facts and analyses about a commercial real estate loan onto a loan information sheet. If an underwriter believes that a proposed transaction meets criteria for a good mortgage, he presents the loan information sheet to a loan approval committee which decides whether to grant credit. The underwriter is held accountable for the completeness and accuracy of all the facts and analyses included on the loan information sheet.

The loan information sheet as well as interviews with underwriters were employed here to identify 19 specific variables used by the underwriters to evaluate a real estate loan. The 19 factors were grouped into four categories (loan, borrower, property and market) which correspond to classifications employed in other studies of grouped loan variables.^{2,4,5} Although this study focused on individual factors, it also determined the importance of group factors.

Definitions Of Variables

Several variables had meanings that may not be obvious. For example, among the loan variables, when the amortization schedule was longer than the term of the loan, a balloon payment was set at the end of the term. The amortization period typically ranged from five to 30 years and could be an interest-only schedule. The amount of the loan was used to measure the magnitude of the commitment by the insurance company. The interest rate combined with other loan variables determined the payment amount that must be supported by cash flow from the property.

The property category contained the largest number of variables since, in essence, the actual or potential cash flow generated from commercial property creates value and is the source for mortgage payments. The property type variable included a detailed description of the property that supported the mortgage loan, for example, hotel, department store, apartment, medical office, etc. The loan per square foot variable allowed the underwriter to compare properties of different size. The lease rollover variable indicated the percentage of the square footage that would be subject to lease expiration in a particular year; it provided a clue to the effect on cash flow from the property and the ability of the borrower to meet mortgage payments if leases were not renewed. The micro-location variable was an assessment of the specific neighborhood in which the property was located and of the uses of surrounding properties. The loan-to-value ratio compared the loan amount to the appraised value of the property and measured the risk of borrower default; presumably, the smaller loan-to-value ratio, the less chance of default by the borrower. The contract debt service coverage ratio indicated how many times the yearly principal and interest payments could be paid by the yearly net operating cash flow from the property.

The personal liability of the borrower for the mortgage ranged from 0% to 100% and affected the overall riskiness of the loan. The borrower classification variable used codes to specify the nature of the borrower, namely: individual borrower, corporation, partnership, joint venture, etc. The total assets, net worth and liquid assets of the borrower were relevant if the borrower was assuming any personal liability on the loan (as with recourse loan).

The real estate market group of variables included factors that were not specific to a particular piece of property. The macro-location variable was a broad assessment of the region of the country in which the property was located. The metropolitan statistical area reflected forces that could affect the value of the property, such as the real estate market downturn in Boston. The economic debt service coverage was similar to the contract debt service coverage variable except that the economic debt service coverage variable used current rental and vacancy rates in the market area to calculate the possible cash flow from the property. Market vacancy was a measure of the vacancy percentage of similar properties in the area and attempted to capture aspects of the overall market in which the property was located.

The respondents were asked to list other factors that might be important in evaluating a loan. Several mentioned that the credit or financial strength of tenants should be an underwriting factor. One underwriter stated that the loan amount in relation to reproduction cost should be examined. Another underwriter declared that the attitudes and recent actions of the loan approval committee should be taken into account. However, none of the additional factors was mentioned frequently enough to be significant.

The Results

Questionnaires were sent to 40 members of the underwriting department of the insurance company; 36 (90%) were returned. In the questionnaire respondents were asked to complete the following sentence: "This factor is _____ important when I underwrite a real estate loan," with responses numbered as follows: 1 = not; 2 = slightly; 3 = moderately; 4 = very; and 5 = extremely. The scores for each factor in each category were summed across all respondents and divided by the number of factors in that category to provide an overall category score. The most important category was the property factors group (3.91) followed by market factors (3.84), loan factors (3.59) and borrower factors (3.24). Table 1 presents the descriptive statistics regarding the 19 variables and the four variable categories (loan, borrower, property and market factors).

Borrower Category

The lack of importance of the borrower category may be related to the structure of the mortgages. Mortgages usually are structured so the lender can foreclose on default; therefore, the lender's primary concern centers on the property's sustained value and its ability to generate rents. In fact, most loan

agreements are structured without recourse, which means the lender cannot require any assets other than property from the borrower in foreclosure. Thus, the borrower's financial condition is much less important than that of the property used to secure the loan.

Loan Amount

The most important of the 19 variables was the amount of the loan (4.36). Four of the seven factors that received at least a 4 rating were property factors. The only two variables to receive a mean rating of less than 3.00 were total assets of the borrower (2.75) and the personal liability of the borrower (2.17). These results were not surprising considering that most loans are structured without recourse.

Underwriter Experience

Table 1 also correlates each individual variable and each variable group with the years of experience of the underwriter. The average for the study respondents was 6.2 years of experience (standard deviation of 3.6 years) with a range of one to 18 years. A relationship between experience and factor ratings suggests that less experienced underwriters may need training to model their assessments more in keeping with those of experienced underwriters since expertise has been defined as a convergence of opinion with other experts.³ Of the four groups, the property factors category had the largest correlation

coefficient (-.32), which suggests that more experienced underwriters provided less weight to variables in this group than did less experienced underwriters. In addition, more experienced underwriters provided less weight to the personal liability of the borrower and the amortization schedule than did less experienced underwriters. More experienced underwriters seemed to focus more on the term of the loan and the borrower classification.

Underwriter Job Category

Table 2 breaks down the mean scores for variables by three job categories of the underwriters (entry level underwriter, mid-level underwriter and senior underwriter). These job categories reflect the experience and competence of the underwriter as shown by the average years of experience for each classification: 3.3 years for entry level, 5.5 years for mid-level, and 9.2 years for senior underwriter. A one-way ANOVA was run for each factor and factor grouping. At a significance level of $p < .05$, only the amount of the loan and the loan-to-value ratio were significantly different among the underwriter job categories. The entry level underwriters rated the amount of the loan much lower (3.67) than the other two types of underwriters did (4.70 for mid-level and 4.67 for senior underwriters). The mid-level underwriters rated the loan-to-value ratio higher (4.60) than other underwriters (3.83 for mid-level and 3.67 for senior underwriters).

TABLE 1
Commercial Real Estate Loan Underwriting Factors

Type of Factor	Mean (n = 36)	Standard Deviation	Range	Experience r
Loan factors	3.59	.48	2.25 - 4.25	.00
Amount of loan	4.36	1.02	2 - 5	.08
Amortization schedule	3.64	.80	2 - 5	-.58**
Interest rate on loan	3.22	.72	2 - 5	-.08
Term of loan	3.14	.59	2 - 4	.27
Borrower factors	3.24	.46	2.20 - 4.00	-.05
Liquid assets of borrower	4.00	.79	2 - 5	-.13
Net worth of borrower	3.78	.72	2 - 5	-.15
Borrower classification	3.50	.70	2 - 5	.29
Total assets of borrower	2.75	.65	1 - 4	-.11
Personal liability of borrower	2.17	.65	1 - 3	-.25
Property factors	3.91	.44	2.43 - 5.00	-.32*
Micro-location	4.11	.75	2 - 5	-.27
Loan to value ratio	4.06	.89	1 - 5	-.26
Type of property	4.03	.81	2 - 5	-.09
Percent leased	4.00	.59	2 - 5	-.33*
Lease rollover	3.92	.84	2 - 5	-.07
Contract debt service coverage ratio	3.64	.80	2 - 5	-.17
Loan per square foot	3.63	.91	1 - 5	-.27
Market factors	3.84	.45	2.67 - 4.67	-.10
Economic debt service coverage ratio	4.03	.70	2 - 5	.12
Macro-location	3.83	.77	3 - 5	-.07
Market vacancy	3.67	.63	2 - 5	-.17

* $p < .01$

** $p < .05$

TABLE 2

Mean Scores by Underwriter Job Category

Type of Factor	Entry Level (n = 12)	Mid- Level (n = 10)	Senior (n = 9)*	Anova	
				F	P
Years of experience	3.3	5.5	9.2		
Loan factors	3.38	3.80	3.56	2.16	.13
Amount of loan	3.67	4.70	4.67	3.99	.03
Amortization schedule	3.75	3.90	3.22	2.00	.15
Interest rate on loan	3.17	3.40	3.00	.90	.42
Term of loan	2.92	3.20	3.33	1.59	.22
Borrower factors	3.18	3.42	3.18	.85	.44
Liquid assets of borrower	3.75	4.40	3.89	1.96	.16
Net worth of borrower	3.83	3.90	3.78	.06	.94
Borrower classification	3.42	3.40	3.78	.82	.45
Total assets of borrower	2.83	2.90	2.56	.69	.51
Personal liability of borrower	2.08	2.50	1.89	2.56	.10
Property factors	3.92	4.07	3.71	1.38	.27
Micro-location	4.33	4.00	4.11	.57	.57
Loan to value ratio	3.83	4.60	3.67	3.42	.05
Type of property	4.08	4.30	3.78	.98	.39
Percent leased	4.00	4.30	3.78	1.90	.17
Lease rollover	3.75	4.20	3.78	.94	.40
Contract debt service coverage ratio	3.83	3.40	3.78	.92	.41
Loan per square foot	3.58	3.70	3.38	.28	.76
Market factors	3.89	3.93	3.89	.04	.96
Economic debt service coverage ratio	4.17	4.20	4.11	.05	.95
Macro-location	3.83	3.90	3.89	.02	.98
Market vacancy	3.67	3.70	3.67	.01	.99

* Two had an "other" job classification, and three were not included.

The divergence of scores may be the result of influences other than underwriters' experience or job classification. Underwriters in this insurance company are assigned to evaluate loans for properties within certain regions of the country. Since real estate market conditions vary across the country, the variables that may be important for an underwriter's particular loan evaluation may vary accordingly. The diversity of scores also may be the result of differences in the personal experiences of underwriters with different types of property. An experienced underwriter from this department stated that these disparities were not at all surprising.

Summary

Thirty-six real estate loan underwriters at a large insurance company participated in a study to determine the importance of 19 variables in the commercial real estate underwriting process. Four of the seven variables most heavily weighted by underwriters were property-specific factors, which reflect the importance of a property's characteristics when a commercial loan is structured without recourse. The overall market variables category was heavily weighted, which may reflect underwriters' response to cyclic real estate markets and the need to diversify mortgages from seemingly hot markets.

Given that the insurance industry is experiencing problems with real estate loans along with the banking and thrift industries, assessment of the creditworthiness of loan applicants deserves close scrutiny to protect the U.S. economy from further deleterious shocks. One suggestion for extending research in this area is a study that constructs a prediction model for loan default using data supplied by the same insurance company surveyed here. The analysis may compare the factors underwriters think are important in evaluating real estate loans and the factors that predict loan default.

NOTES

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