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MAKING SENSE OF DEBT YIELD RATIOS

When applying for a mortgage on your hotel, it is useful to understand the various analytical tools lenders use to evaluate the size and terms of the loans they are making. Until a few years ago, the preferred benchmark lenders used was the debt coverage ratio. Recently, a new tool called the debt yield ratio came into vogue, which seems to be used by most hotel lenders today. Let's look at both and see how lenders in underwriting loans use them.

Example: Assume we are looking to refinance an existing hotel that is starting to experience improved operating results as it comes out of the recent recession. A hotel

appraisal company was commissioned to perform an appraisal to project the build-up of net operating income (NOI) and to also estimate the hotel's current market value. The chart to the left shows the results from the appraisal.

Let's assume the bank was willing to make a loan based on 70% of market value; the amount of the mortgage and annual debt service would be calculated as shown in the top chart to the upper right. The debt coverage ratio (also upper right) shows the lender that in 2011 the NOI is 125% of the proposed debt service. It indicates the margin

of safety for the lender should the NOI decline. By the time the hotel reaches 2014, the debt coverage ratio has grown to 180% of the NOI. Most lenders want to see a debt coverage ratio of at least 1.20. A number of factors affect the debt coverage ratio including the mortgage interest rate, the amortization, the loan-to-value ratio and the NOI. A change of any one of these variables will change the debt coverage ratio.

PROJECTED NOI / \$000

2011	\$5,200
2012	\$5,600
2013	\$6,300
2014	\$7,500 (Stabilized)

Current Market Value
\$67,000,000 (Estimated)

CURRENT INTEREST & AMORTIZATION RATES / ALONG WITH THE DEBT SERVICE CONSTANT FOR THIS TYPE OF HOTEL LOAN

Interest	7.5%
Amortization	25 Years
Constant	8.9%

70% OF MARKET VALUE CALCULATED / AMOUNT OF MORTGAGE & ANNUAL DEBT SERVICE

Market Value	\$67,000,000
Loan-to-Value Ratio	70%
Mortgage Amount	\$46,900,000
Mortgage Constant	8.9%
Annual Debt Service	\$4,174,000

DEBT COVERAGE RATIO CALCULATED / BY DIVIDING NOI BY THE ANNUAL DEBT SERVICE

Debt Coverage Ratio (2011 NOI: \$5,200)	\$4,174 = 1.25
Debt Coverage Ratio (2014 NOI: \$7,500)	\$4,174 = 1.80

Today, many lenders prefer using what is known as the debt yield ratio, which is sort of a mortgage capitalization rate.

Let's assume the lender thinks an 11% debt yield ratio is appropriate for this type of hotel. This ratio can then be used to determine the size of the mortgage by dividing the hotel's NOI by the debt yield ratio.

The amount of the mortgage in this example would be $\$5,200 / .11 = \$47,300,000$

As you can see, using the debt yield ratio to determine the size of the mortgage produced almost the same size loan as the calculation above at 70% loan-to-value ratio, which produced an acceptable debt coverage ratio of 1.25.

Compared with the debt coverage ratio, the debt yield ratio has fewer variables to consider: just the NOI and the debt yield ratio. In most instances, lenders want a debt yield for a hotel loan of at least 10%.

Lenders like using the debt yield ratio to size a loan because it is less likely to be subject to abusive lending practices by mortgage originators. Let's assume (see examples on next page) a lender required a hotel loan have a debt coverage ratio of at least 1.25 and the bank did not utilize a debt yield test. The hotel generates an NOI of \$5,200 and has a market value of \$67,000,000.

DEBT YIELD RATIO / TO SIZE A LOAN

	Total Value	NOI	Loan To Value	Interest	Amortization	Constant	Mortgage	Debt Service	Debt Yield	Debt Coverage
A	\$67,000	\$5,200	75%	7.5%	25 Years	8.9%	\$50,250	\$4,452	10.4%	1.17
B	\$67,000	\$5,200	75%	6.5%	30 Years	7.6%	\$50,250	\$3,809	10.4%	1.37
C	\$67,000	\$5,200	80%	6.5%	30 Years	7.6%	\$53,600	\$4,063	9.7%	1.28

Example A in the table above shows that with a 7.5% interest rate, a 25-year amortization and a loan-to-value ratio of 75%, the debt coverage ratio would be only 1.17.

In **Example B**, an unscrupulous loan office tweaks the terms of the loan by dropping the interest rate to 6.5% and extending the amortization period to 30 years. This produces a debt coverage ratio of 1.37. The mortgage now passes the debt coverage ratio test.

In **Example C**, the borrower seeing such a high debt coverage ratio decides he wants to borrow more than 75% and asks for an 80% loan. This results in a debt coverage ratio dropping to 1.28, which is still within the bank's guidelines. So the bank ends up lending more and increasing its risk by approving a larger mortgage.

If the bank had a guideline of a debt yield of 10.4%, then it would only make the loan under Example B because Example A failed the debt coverage ratio and Example C failed the debt yield test. If the bank was not willing to lower the interest rate and extend the amortization period, it would probably not make the loan.

The debt yield ratio test combined with the debt coverage ratio test are two important tests that banks use when considering making a hotel loan. As you can see by the example above, tests should be utilized together to obtain the proper results.