What is a Yield Maintenance prepayment?

Yield maintenance is a form of prepayment fee or premium that is calculated on the movement of interest rates during the period of time that the security or securities in question are held. The borrower is assessed the yield maintenance by the lender Generally, the anticipation if that the security will provide a higher yield as a result.

The value to the investors is that the yield maintenance helps to ensure that the yield on the investment will remain the same, even if the borrower chooses to engage in some sort of repayment process that is different from the scheduled payment structure. From this perspective, the yield maintenance makes it possible for the investor to be assured of a reasonable rate of return on the commercial mortgage.

Example: $743,000 loan at a 6.25% interest rate amortized over 30 years all due and payable in 9.5 years will have a monthly payment of $4,574 per month and a balloon payment of $634,000 after 9.5 years (114 payments). During the 9.5 years (114 payments), the total interest paid would be $412,158, and the total principal paid would be $109,365. If you were a bond investor that purchased the loan at a face value of $743,000, you would expect the following payments:

$4,574 per month X 120 (10 years) = $548,880
$634,000 balloon payment after 9.5 to 10 years
*Total Return on Investment of $1,182,880 (Total Interest + Principal)
Total Investment Outlay: $743,000
Total Interest Received: $439,880

*The bottom line is the investor will get approximately $1,182,880 over 10 years, excluding the no yield maintenance window.

If I want to pay off the loan after 5 years (60 payments), how would I calculate the yield maintenance?

This would depend upon what the replacement US Treasuries would be at 5 years with the prevailing interest rate yields required by bond investors. Typically, as interest rates increase, the spreads may decrease. For Example, if the prevailing interest rates were at 6.25%, and the current 5 Yr Treasury yields were at 2.010%, then the spread would be 4.24%, however, if the interest rate of the Yield Maintenance loan was written at 6.25%, and the 5 Yr Treasuries were at 2.101%, the yield maintenance would be the deficit of yield of the loan balance for the remaining term of the loan. If the 5 yr Treasuries were at 4.149%, there would be no yield maintenance to calculate. An alternative solution would be to opt for a 7 year fixed with only 6.5 yrs yield maintenance, or access the supplemental financing options, or a 7 or 10 year fixed with 5 to 7 year yield maintenance.

No Yield Maintenance Window:

It is typical for the ballon payement loans to have a open window of the last 6 months with no yield maintenance or any other prepayment penalty. So the calculations for yield maintenance would exclude the last six months. Currently, with historical low interest rates, the probability of interest rates remaining flat for the long term is not likely, however, if interest rates were to remain flat, the yield maintenance prepayment would be extremely cost prohibitive and the alternative solution would be the supplemental financing.

Supplemental Assumable Financing (2nd, 3rd, 4th TD's)

For over 15 years, the Agency Financing (Fannie Mae) loan programs have offered a supplemental financing option for additional loans to piggy back behind the existing financing so a Apartment Owner can avoid paying yield maintenance and offer attractive assumable financing to new buyers, or in the event of refinancing for additional cash out. The most common method is on a "earn-out" scenario for a acquisition of a apartment building with substantialy low rents whereby the investor acquires the property with below market rents requiring more cash downpayment and after the property is stabilized, the lender provides a 2nd loan for additional cash out to improve the leverage position. This has been available for a 2, 3 and even a 4th loan during the loan terms from 5 to 30 years. The supplemental financing is available at $250,000 minimum loan amounts and are assumable for a buyer. This technique was designed to mitigate any hand cuff's or constraints of facing yield maintenance in the event of a refinance or purchase scenario. The advantage is the property owner benefits from added property value when the existing assumable financing is below the prevailing interest rates.

Yield Maintenance Calculation (30 Yr. Amort, due in 10 with 9.5 yrs Yield Maintenance)
Loan Payoff in 7 years

10 Year Fixed Loan Terms		**Prepayment Assumptions**	
Original Loan Amount	$ 743,000	Remaining Maturity (months)	30
Note Interest Rate	6.25%	Remaining Amort	270
Loan Term in months	120	Loan Balance at Prepayment	$662,320
Amort in months	360	Loan Balance at Maturity	$625,886
Monthly Payment	$4,575	Treasury Yield (5 year) at time of Prepayment	2.01%

NPV of remaining scheduled payments & maturity balance as of Prepayment date	$ 728,981	
less loan balance at prepayment date	$ 662,320	
Prepayment Fee:	$ 66,661	10.06%

Yield Maintenance Calculation (30 Yr. Amort, due in 10 with 7 yrs Yield Maintenance)
Loan Payoff in 5 years

10 Year Fixed Loan Terms		**Prepayment Assumptions**	
Original Loan Amount	$ 743,000	Remaining Maturity (months)	24
Note Interest Rate	6.25%	Remaining Amort	264
Loan Term in months	120	Loan Balance at Prepayment	$655,480
Amort in months	360	Loan Balance at Maturity	$625,886
Monthly Payment	$4,575	Treasury Yield (5 year) at time of Prepayment	4.15%

NPV of remaining scheduled payments & maturity balance as of Prepayment date	$ 681,317	
less loan balance at prepayment date	$ 655,480	
Prepayment Fee:	$ 25,837	3.94%

Yield Maintenance Calculation (30 Yr. Amort, due in 7 with 6.5 yrs Yield Maintenance)
Loan Payoff in 5 years

7 Year Fixed Loan Terms		**Prepayment Assumptions**	
Original Loan Amount	$ 743,000	Remaining Maturity (months)	18
Note Interest Rate	6.25%	Remaining Amort	294
Loan Term in months	84	Loan Balance at Prepayment	$687,643
Amort in months	360	Loan Balance at Maturity	$668,950
Monthly Payment	$4,575	Treasury Yield (3 year) at time of Prepayment	2.00%

NPV of remaining scheduled payments & maturity balance as of Prepayment date	$ 730,252	
less loan balance at prepayment date	$ 687,643	
Prepayment Fee:	$ 42,609	6.20%

Yield Maintenance Calculation (30 Yr. Amort, due in 7 with 5 yrs Yield Maintenance)
Loan Payoff in 5 years

7 Year Fixed Loan Terms		**Prepayment Assumptions**		
Original Loan Amount	$ 743,000	Remaining Maturity (months)		0
Note Interest Rate	6.25%	Remaining Amort		276
Loan Term in months	84	Loan Balance at Prepayment		$668,950
Amort in months	360	Loan Balance at Maturity		$668,950
Monthly Payment	$4,575	Treasury Yield (2 year) at time of Prepayment	N/A	1.23%

NPV of remaining scheduled payments & maturity balance as of Prepayment date	$ 668,950	
less loan balance at prepayment date	$ 668,950	
Prepayment Fee:	$ -	0.00%
A 1% minimum prepayment would apply.	$ 6,689.50	1.00%