



HOW DO YOU DETERMINE THE IMPLICIT INTEREST RATE IN YOUR LEASE?

When organizations evaluate lease proposals, they generally compare Lease Rate Factors (LRF's). Many organizations mistakenly assume that this LRF is an interest rate or borrowing rate, but a LRF IS NOT AN INTEREST RATE, and should not be used to compare a lease proposal to an organization's borrowing rate. The Lease Rate Factor is simply the lease payment (usually a monthly payment) divided by the Total Original Equipment Cost (OEC) of the lease.

For Example:

Total Original Equipment Cost (OEC) to be leased:	\$100,000.00
Monthly Payment (MP):	\$2,650.00
Lease Rate Factor (LRF) (MP divided by OEC):	2.65%

In the example, above, the 2.65% LRF is not an interest rate. In order to accurately compare the cost of leasing to the cost of borrowing, the organization should perform an analysis of the "Implicit Interest Rate" in a lease proposal. To do so, the analyst will need several pieces of information:

1. Original Equipment Cost (OEC), or total amount to be leased – can be determined from LRF and MP if not explicitly listed in proposal
2. Monthly Payment (MP) – can be determined from LRF and OEC if not explicitly listed in proposal
3. Term (T) of lease
4. Future Value (FV) – in the case of an operating lease, this will be an estimate of the future Fair Market Value (FMV) of the equipment. In the case of a capital lease, the FV is usually specifically defined in the lease proposal.

With all of the above, we can solve for the Implicit Interest Rate in the lease using a standard financial calculator as follows:

Example (Operating Lease Proposal):

Present Value (PV) = OEC	\$100,000.00
Payment (PMT) = MP (enter as negative number)	(\$2,650.00)
Term (n) = Monthly Term	36 months
Future Value (FV) = FMV estimate (enter as negative number)	(\$20,000)
SOLVE FOR (i) = monthly interest rate	.71108
Multiply by 12 for annual Implicit Interest Rate	8.53%



The Implicit Interest Rate, in this example 8.53%, is the number which should be used when comparing the cost of lease financing to traditional financing. It is important to note that the estimate of future Fair Market Value will have a significant impact on the analysis so proper research should be performed prior to making this assumption – including analysis of the language used to define FMV in the lease contracts and documentation. As part of the proposal process, your organization should also ask the Lessor what their estimate of future FMV is – this is a number they will have handy as it determines how much investment they are willing to make in the equipment.

If we were to change the FMV assumption in this example from \$20,000 to \$15,000, note the underlying change to the Implicit Interest Rate:

Example (Operating Lease Proposal):

Present Value (PV) = OEC	\$100,000.00
Payment (PMT) = MP (enter as negative number)	(\$2,650.00)
Term (n) = Monthly Term	36 months
Future Value (FV) = FMV estimate (enter as negative number)	(\$15,000)
SOLVE FOR (i) = monthly interest rate	.50407
Multiply by 12 for annual Implicit Interest Rate	6.04%

COMMENTS / QUESTIONS?

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