YIELDS WITHIN YIELDS

How do you evaluate the real rate of return on leasing partnerships that include a portion of the investor's capital with distributions?

BY EDWARD BROWN

When evaluating equipment leasing limited partnerships, financial planners generally do most of their work before making their recommendation to the client. They will often look at the sponsor's track record, at the business plan in the prospectus and at the market for leased equipment; they will also check fees and sharing arrangements for distributions and for any proceeds from the sale of equipment when the partnership's life expires.

Before investment is, of course, the best time to look for problems in a partnership, but it is not the only time planners should investigate equipment leasing programs. As the partnership matures, many planners also pay attention to the quarterly and annual financial statements. Unfortunately, distinguishing between the partnership's real rate of return and the amount that is distributed to the limited partners is seldom easy. Unlike real estate, which often appreciates in value during the life of the partnership, leased equipment loses value over time—sometimes very rapidly. That means the periodic distributions include part of the investor's principal as well as the interest earned.

For the planner skilled at evaluating track records but not in accounting, the problem becomes one of methodology. How can you calculate your client's real rate of return if the distributions are erratic and if the receipt of principal is weighted in the last few years of the investment's life, rather than spread evenly over the entire holding period?

To begin, it may be helpful to look at an investment that is not as complex: a bank certificate of deposit. With a present value calculator, it is relatively easy to calculate the real rate of return on a single-deposit investment like a bank CD. The planner simply enters the initial deposit as the present value (PV), the number of years the CD is locked up (N) and the maturing value as the future value (FV). If you ask the calculator for the interest earned (i), the answer will be the compounded rate of return—the interest earned on the investment and on the interest payments that have been received during the life of the investment.

As an example, suppose a bank advertises a $10,000 CD maturing in five years, which will return a total of $14,000. The bank claims it is offering an 8% rate of return, but this is a simple interest calculation that divides the 40% cumulative return by five years. To get the real rate of return, the planner would simply enter $10,000 as the PV, five as the N, $14,000 as the FV, and then ask for "i" on a compounded basis. The answer is 6.96%.

Let's look at an equipment leasing partnership that "matures" in the same five-year period and—to keep the numbers simple at the beginning—makes the same distribution at the end of each year that includes principal and interest. At the end of five years, under this assumption, the investor will receive nothing from the sale of equipment since it has no remaining value. (This is not a bad conservative assumption for planners to make in evaluating leasing partnerships that invest in computers or computer peripherals.) The client makes a one-time investment of $3,480 and receives a check for $1,080 at the end of each of the five years.

Since the investors will receive nothing more after their total distributions of $5,400 (5 x $1,080), they are receiving some principal in each of the $1,080 checks. At first glance, it appears that the planner subtracts the initial investment ($3,480) from the total received ($5,400), divides the result ($1,920) by $3,480 and then divides that result by five (the holding period)—to get an 11.03% annual rate of return. More sophisticated planners will look beyond this simple interest number and calculate a compounded rate of return of 9.18% (PV = $3,480, N = 5, FV = $5,400).

Even this last number is not correct. In the CD example, the investor received one lump sum ($14,000) at the end of the five-year period. In the latter example, the investor receives some principal in each periodic distribution during the five-year holding period. The investor can reinvest each portion of principal as it is received and earn interest on it—a factor that should be reflected in a somewhat higher rate of return.

The real rate of return—sometimes called the modified internal rate of return—can be calculated by assuming a reinvestment rate, that is, a rate the investor could reasonably expect to receive on the distributions if they were placed in a side account and allowed to grow during the life of the partnership. We have to do this because, unlike a bank account, most leasing partnerships are closed-end vehicles that do not allow the partners to reinvest in them. The investor is forced to find another interest-generating investment for his distributions. In today's market, an 8% assumption would be reasonable.

Table 1 shows that if every $1,080 check is reinvested at 8% for five years, the account will be worth $6,336 at the end of the five-year period. At this point, the planner knows that the real future value is $6,336, the present value is $3,480 and the number of years is, once again, five. Using the present value calculator, he can calculate the investor's real rate of return as 12.73% —assuming, of course, a reinvestment rate of 8%. If the planner feels more comfortable assuming a 12% reinvestment rate, Table 2 shows that the real rate of return would be 14.54%.

There is a slightly more complicated method of arriving at the same numbers that separates the principal and return in the annual distribution check and perhaps offers more meaningful numbers to the investor. Every $1,080 check the investor receives represents

31.03% of his original investment ($3,480). Of course, this 31.03% figure represents principal and interest, so the planner's next step is to figure out how much of the payment would have to be invested at the assumed reinvestment rate to give the investor back his $3,480 investment at the end of five years—just as if the investment were a CD. The formula, if we assume an 8% reinvestment rate, is FV = $3,480, N = 5, i = 8%, and we want the calculator to compute the payment. The answer is $593, which means that out of every $1,080 the investor receives, $593 would have to be set aside in an account earning 8% interest to get his principal back ($3,480) at the end of the fifth year.

Subtracting the $593 from the yearly payment amount shows that the investor is earning $487 a year off the original $3,480 investment. If the $487 is invested at an 8% compounded rate, the account would be worth $2,857 at the end of five years. This is the future value (FV = $2,857); the present value is the original investment (PV = $3,480), and the time period is the same as before (N = 5). The compounded interest, based on these figures, is 12.73%.

This simple example can be expanded for more complex situations. Table 3 shows an investment that pays uneven periodic distributions. It assumes a one-time investment of $10,000 in a partnership with an eight-year life, where the first five years of distributions are in the 11% to 15% range and the principal (along with some unspecified amount of interest) is returned in years six, seven and eight.

The procedure in Table 3 is to reinvest each distribution at the assumed 8% rate for the remaining life of the partnership. The first $1,100 distribution grows at an 8% compounded rate for seven years, the second $1,200 distribution for six years and so forth. For year one, payment is $1,100, N = 7, i = 8%, and the calculator should compute FV. If we do this for all eight years and add all the future values, the total future value comes to $25,127.

The next step is to set PV at $10,000, N at eight and FV at $25,127, and have the calculator come up with "i." In this example, the real rate of return comes to 12.21%. If we assume a 12% reinvestment rate (the next column of Table 3), the modified internal rate of return comes to 13.68%.

TABLE 1
COMPOUNDED REAL RATE OF RETURN BASED ON EVEN PERIODIC DISTRIBUTIONS REINVESTED AT 8%, ON AN INITIAL INVESTMENT OF $3,480

DISTRIBUTIONS RECEIVED		STEP 1	STEP 2
YEAR	AMOUNT	REINVESTED AT 8%	
1	$1,080	PMT = $1,080	PV = $3,480
2	1,080	N = 5	N = 5
3	1,080	I = 8%	FV = $6,336
4	1,080	FV = ?	I = ?
5	1,080	FV = $6,336	I = 12.73%

TABLE 2
COMPOUNDED REAL RATE OF RETURN BASED ON EVEN PERIODIC DISTRIBUTIONS REINVESTED AT 12%, ON AN INITIAL INVESTMENT OF $3,480

DISTRIBUTIONS RECEIVED		STEP 1	STEP 2
YEAR	AMOUNT	REINVESTED AT 12%	
1	$1,080	PMT = $1,080	PV = $3,480
2	1,080	N = 5	N = 5
3	1,080	I = 12%	FV = $6,861
4	1,080	FV = ?	I = ?
5	1,080	FV = $6,861	I = 14.54%

TABLE 3
COMPOUNDED REAL RATE OF RETURN BASED ON UNEVEN PERIODIC DISTRIBUTIONS ON AN INITIAL INVESTMENT OF $10,000

DISTRIBUTIONS RECEIVED		YEARS TO REINVEST	REINVESTED AT 8%	REINVESTED AT 12%
YEAR	AMOUNT			
1	$1,100	7	$ 1,885	$ 2,432
2	1,200	6	1,904	2,369
3	1,300	5	1,910	2,291
4	1,400	4	1,905	2,203
5	1,500	3	1,890	2,107
6	7,700	2	8,981	9,659
7	4,400	1	4,752	4,928
8	1,900	0	1,900	1,900
			$25,127	$27,889
PV = $10,000, N = 8, FV = $25,127, "i" = ?			"i" = 12.21%	"i" = 13.68%

The modified internal rate of return offers some advantages over the standard internal rate of return in programs that do not allow the client to reinvest in the same investment. The internal rate of return calculated from Table 3 would reinvest from year one to year two at 12%, from year two to year three at 13%, and so on. The standard internal rate of return would be much higher—misleadingly so.

Planners who are skilled at creating spreadsheets and adapting them to their own use will see ways that these calculations can be used with many different partnership programs. In addition, those who are more comfortable with calculators can vary the reinvestment rate from year to year to arrive at somewhat more precise numbers. However, the basic point is not to decide exactly what the investor is receiving—that, after all, is clearly printed on the distribution check. Rather, the point is to determine how the investor's return compares with other, alternative investments and whether the promises contained in the prospectus and sales literature are, in fact, being kept. By monitoring the real rate of return annually, planners can help their clients stay abreast of the most illiquid portion of their investment portfolios and perhaps spot some bargains on the secondary markets as well. □

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