

Deferred Taxes

We've talked about the fact that you can do things one way for financial reporting and another way for tax reporting. This is perfectly legal. Every corporation in America has more than 2 sets of books. One set in accordance with GAAP in which they try to create as good a financial report as they can, then they have another set of books for the tax reports in which they try to make things look as bad as possible so they do not have to pay a lot of taxes, another set of books for when they contract with the government which has to conform to government accounting principals. There are more... Managerial accounting for instance. All of this is legal AS LONG AS YOU STATE WHICH BASIS OF ACCOUNTING YOU ARE USING. For instance, the IRS does not want you to use GAAP for tax returns, they want you to use tax principles which they issue. If you use some other set of rules the company will be in violation. Must report according to the applicable rules.

We will look at what happens when there is a difference between what is reported on the financial statements and what is reported on the tax returns. In reality there are two kinds of differences which could happen between tax books and financial statements.

1) Temporary Timing Difference.

This says that even though I am using a different accounting principal or method for depreciation (for example) say on our financial statements we are using straight line depreciation but on the tax returns we use MACRS. In both cases we are eventually going to write off the cost of the asset. Eventually all the costs comes off. It just the timing between the two methods will be difference.

2) Permanent Difference

This is when the two will never be the same, not ever. For example say a company is fined millions of dollars for dumping toxic waste. The IRS says that although for financial statement purposes you can list it as a cost, for tax purposes if you are paying fines for an illegal act you cannot deduct it for tax purposes. This is an example of a permanent difference between the financial and tax reports. These will never reverse themselves on the tax return vs the financial statements.

Now, do a tax return ...

In this example the tax life is 5 years, the book life is 6 years, and the depreciation method for book is MACRS. Say the profit before depreciation is \$50,000 per year for 6 years totaling \$300,000. Now we depreciate using the factors. **NOTE THAT THE FACTORS ARE MULTIPLIED BY THE ASSET COST.** (not by the profit before depreciation).

Here we are using the expense method. Will examine what happens to the asset over the 6 year period.

Facts

Asset Cost	\$ 120,000
Salvage Value	0
Book Life (yrs)	6
Income Tax Rate	35%
Tax Life (yrs)	5

BOOK LIFE TAX LIFE

Tax Return year	1	2	3	4	5	6	Total
Profit before Depreciation	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 300,000
MACRS Dep. Fac. (times asset cost)	0.2	0.32	0.192	0.115	0.115	0.058	
MACRS Dep.	\$ (24,000)	\$ (38,400)	\$ (23,040)	\$ (13,800)	\$ (13,800)	\$ (6,960)	\$ (120,000)
Pre Tax Income	\$ 26,000	\$ 11,600	\$ 26,960	\$ 36,200	\$ 36,200	\$ 43,040	\$ 180,000
Income Tax Payable (35%)	\$ 9,100	\$ 4,060	\$ 9,436	\$ 12,670	\$ 12,670	\$ 15,064	\$ 63,000
Profit before Depreciation	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 300,000
Depreciation S/L (straight Line)	\$ (20,000)	\$ (20,000)	\$ (20,000)	\$ (20,000)	\$ (20,000)	\$ (20,000)	\$ (120,000)
Pre Tax Income	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 180,000
Income Tax Exp							
* Curr Payable	\$ 9,100	\$ 4,060	\$ 9,436	\$ 12,670	\$ 12,670	\$ 15,064	\$ 63,000
* Deferred (difference)	\$ 1,400	\$ 6,440	\$ 1,064	\$ (2,170)	\$ (2,170)	\$ (4,564)	\$ -
Total Inc Tax (35%)	\$ 10,500	\$ 10,500	\$ 10,500	\$ 10,500	\$ 10,500	\$ 10,500	\$ 63,000
Net Income	\$ 19,500	\$ 19,500	\$ 19,500	\$ 19,500	\$ 19,500	\$ 19,500	\$ 117,000

Note on Reserves & Allowances. The IRS does not allow Reserves and Allowances. For example, under GAAP when we sell something we make a reserve or allowance for warranty expenses. Some percent of sales will show up as warranty expenses. The IRS will not allow that debit to Warranty Expense. They will only allow actual warranty expenses. So if not warrant expense is incurred you can not get a deduction for it. In other words, you did not get a tax break the previous year on an expense that never showed up. Allowances for bad debts is another example. Not allowed by the IRS. They will allow actual bad debt write offs based on documented proof that you made reasonable efforts to collect and could not. But they will not allow you to make an estimate on future bad debt expense and write that off.

Straight line depreciation is popular with financial people because it keeps everything exactly the same year over year. If nothing has changed than reported income would not have changed. Stability in reported results is a good thing.

Now, the problem arises that the reported income of \$30 per year in the Book Life section does not match income taxes payable in the Tax Life section which differs each year. This is due to the different depreciation methods used. Here we see that the Matching Principle is violated. Eventually the depreciation totals will match (\$120,000). But we have a Temporary Timing Difference.

GAAP says that we are suppose to match the expenses of reported income in the same period that you report the income (matching principle). The way we address this is with something called ...

DEFERED TAXES

In the income statement (financials) we will have a category called income tax expense broken into two parts

- 1) Currently Payable
- 2) Deferred.

These two will give us total income tax and when subtracted from pre-tax income will give us net income.

In this example the tax rate is 35%

<u>Income Tax Exp</u>		
Pre Tax Income	\$ 30,000	
Curr Payable Taxes	\$ 9,100	
+ Deferred Taxes	\$ 1,400	<--- Solved for by difference between
= Total Income Tax	\$ 10,500	Total Inc Tax and Curr Payable
= Net Income	\$ 19,500	

Total Income Tax = Pre Tax Income * 35% = \$30,000 * .35 = \$10,500

Deferred Taxes = Total Inc Tax – Curr Payable Taxes = \$10,500 - \$9,100 = \$1,400

The Deferred piece is something we calculate knowing that the total income tax expense that we are eventually going to have to pay on our \$30,000,000 is going to be 35%. All we are doing here is deferring the payment of the difference of \$1.4 to the future.

In years 4, 5, and 6 we show the deferred tax as negative. This just means we are no longer deferring, we are PAYING more than tax expense in total.

In the first three years we defer a total of \$8,904 and in the last three years we pay back this same amount. The sum of the deferred line is \$0. This is because it is only a timing difference.

Notes:

- The method we’ve just done is called the Expense Method of Deferred Tax Accounting.
- The current method under GAPP is called the Liability Method. Tries to make an estimate of the future impact of deferred tax liabilities (convoluted).

If we see on the balance sheet large amounts of deferred tax liability it means they are using tax methods to defer the payment of taxes into the future. And that what you are seeing on the income statement is representative of what matches the income that is being reported. However a part of that is an amount which they have deferred to the future. Now suppose in the future

they are not making a lot of money, these payments will be tough to make. Large deferred income tax liabilities could get to be a drain on their cash flow if their business does not continue to increase. A downturn could be very sever.

EXAM

Will not have to know the journal entries for what we have just done above. Must be able to calculate what we have just done above, tax return and financial statement accounting. Must know the method of BY DIFFERENCE THE DEFERRED TAX ACCRUAL.

CALCS	
\$ 50,000	Profit Before Dep
0.2	MACRS Factor
\$(24,000)	=(Asset Cost * MACRS Factor)
\$ 26,000	Profit before Dep + MACRS Dep
\$ 9,100	Income Tax Rate * Pre Tax Income
\$ 50,000	Profit Before Dep (from first row)
\$(20,000)	Straight Line Depreciation
\$ 30,000	Pre Tax Inc (profit after Dep)
	Income Tax Payable after
\$ 9,100	MACRS Dep (row 15)
\$ 1,400	(solved) Total Inc Tax - Curr Payable
\$ 10,500	Income Tax Rate * Pre Tax Income
\$ 19,500	Per Tax Inc - Total Inc Tax

Lease Accounting

Many years ago there were extremely high interest rates, prime was greater than 21%. Companies were concerned about the changing nature of technology, computers were coming out. Technology changing very rapidly. Companies were strapped for cash. In order to acquire equipment without over investing and not incur the 20% + interest rates they decided to start leasing. This was so popular it became a leasing boom (late 70's early 80's).

During this time companies did not want to buy the equipment and show the growth in there assets and then have to show HUGE debt with HIGH interest rates which would lower their borrowing capacity, increase their interest cost, increase their depreciation cost.

Instead they opted for the use of **Off Book Transactions**. In fact, this is how Enron got into so much trouble. In this scheme a companies creates subsidiaries who buy product at a higher cost and sell it to Enron at a lower cost so Enron's COGS looked good, the subsidiaries have losses and heavy debt to fund the losses. Because they were not owned by Enron which was "not really" affiliated with Enron except that the treasurer of Enron was the CFO of the affiliate (which owned the subsidiaries) so there was common management but Enron did not actually own the stock of the affiliates so they did not have to put the affiliates accounts on the Enron books. Now Enron can show gains while the affiliates show losses. Eventually Enron could not support the losses they were making and their base business started collapsing. From there everything collapsed. Author Anderson accounting firm was more of less the architect, accomplish. Gave the guidance necessary to make the dealings.

The point is that back in that day (of high interest, rapid technology) corporation had their own off book transactions such as leases. Before FASB came out and made rules about this if you leased a piece of equipment it was just a lease. Did not have to be reported on books, just make the payments to lease expense. What they found was that these companies were leasing and actually taking on the risk of ownership without actually putting the assets on the books. Not only that but they were obligated to pay the leases for a period of time. This obligation constitutes a LIABILITY.

That being the case FASB came out and said you have to classify all leases as either **Operating Lease** or a **Capital Lease**.

Operating Lease: There is no long term obligation. For example a one year or six month lease. In thee cases you just expense it as you incur it.

EXAM

Will have to write out from scratch the four Capital Lease criteria.

Capital Lease

If a lease meets any one of the following 4 criteria it must be classified as a Capital Lease. Must be capitalized on the books as if you bought the asset and incurred the liability.

1. **There is a transfer of ownership at any point in the lease.**
2. **If there is a bargain purchase option.**
3. **If the term of the lease is equal to or greater than 75% of the economic usefulness of the asset.**
4. **If the present value of the minimum lease payments is equal to or greater than 90% of the purchase price of the asset.**

In essence, a capital lease is treated as if the asset were purchased.

Example:

Facts		
Asset Cost	\$	40,000
Lease Payment	\$	5,000 Semi-Annual, arrears
Interest Rate (per yr)		10% Smei-Annual Rate: 5%
Lease Term (years)		5 Semi-Annual Periods: 10

The lease payments we are going to be using are payable in arrears. (meaning the payment is made at the end of the period. Typically payments are made at the beginning of the period, in advance). This allows us to keep our discounting techniques similar to those we use with bonds. Slightly different discounting technique if payable in advance.

Find the Present Value of the LEASE PAYMENTS:

$$\begin{aligned} \text{PV of Lease Paymentst} &= \text{Lease Payment} * \text{PVFA (5\%, 10 periods)} \\ &= \$5,000 * 7.7217 = 38608.5 \end{aligned}$$

Now the test, **IS IT A CAPITAL LEASE ?**

Immediately we can see...

$$\frac{\text{Present Value of Minimum Lease Payments}}{\text{Purchase Price of Asset}} = \frac{\$ 38,608.50}{\$ 40,000.00} = 96.5\%$$

Over 90% so it is clearly a capital lease.

Note on Minimum Lease Payments: say we get a five year lease with an option to renew for another 5 years. We only use the first 5 years in this calculation because we are not obligated for the second 5 years. Only concerned with what we are obligated to.

Now we examine the journal entries.

Facts		
Asset Cost	\$	40,000
Lease Payment	\$	5,000
Interest Rate (per yr)		10%
Lease Term (years)		5

Semi-Annual, arrears
Smei-Annual Rate: 5%
5 Semi-Annual Periods: 10

Journal Entries on Lease (Lessee Accounting, we are leasing, we are the payor)

At Inception

	DR	CR
Leased Assets	\$ 38,608.50	
Leases Payable		\$ 38,608.50

In the first half we make two entries. We have two things happening here. We have an asset and a liability. **The asset has to be depreciated, the liability has to be amortized and paid.**

A entry is going to be depreciation expense and accumulated depreciation fixed asset. How do we know how much that is? It's not over the 5 years that have been depreciated. It's over the 10 PERIODS that have been depreciated because it is semi-annual! Also, we can only depreciate the asset over the period of the LEASE TERM. The period we will be paying for use of the asset. NOT THE LIFE OF THE ASSET.

$$\begin{aligned} \text{Depreciation} &= \text{PV of Min. Lease Payments} / 10 \text{ Periods} \\ &= \$38,608.50 / 10 = \$ 3,860.85 \end{aligned}$$

	DR	CR
(A) Depreciation Exp	\$ 38,608.50	
Accum. Dep. Leased Asset (dep the 10 periods, semi-annual)		\$ 38,608.50

B entry is the amortization of the liability.

In this first period we just calculate the interest on the full principle:

PV of LP =	\$	38,608.50	Principle
Accrued Interest @ 5%	\$	1,930.43	(Interest Expense)

	DR	CR
(B) Interest Expense	\$ 1,930.43	
Lease Obligation	\$ 3,069.57	(by difference)
Cash		\$ 5,000.00

Lease Obligation = Cash Payment – Interest Expense = \$5,000 - \$1,930.43

Lease Obligation reduces the liability. (kind of like a house payment, part goes to principle, part goes to interest).

Now the second half...

A entry (DEPRECIATION AMOUNT DOES NOT CHANGE)

		<u>DR</u>	<u>CR</u>
Ⓐ	Second Half Depreciation Exp Accum. Dep. Leased Asset (dep the 10 periods, semi-annual)	\$ 38,608.50 	(these amounts do not change) \$ 38,608.50

B entry

Ⓑ	 Accrued Interest @ 5%	\$ 38,608.50 Beginning Principle \$ 1,930.43 Interest Exp paid to date \$ (5,000.00) Less the cash payment <u>\$ 35,538.93</u> Remaining Principle _____ x .05 \$ 1,776.95 Interest Exp for this Period
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		<u>DR</u>	<u>CR</u>
Ⓑ	Interest Expense Lease Obligation Cash	\$ 1,776.95 \$ 3,223.05 (by difference)	 \$ 5,000.00 Lease Payment

Lease Obligation = Cash Payment – Interest Expense = \$5,000 - \$1,930.43

Notes:

- The Interest Rate used in these calculations is the rate the company could otherwise barrow at.
- We are doing Lessee Accounting, not lessor. We are the guy who is leasing it in (the lessee). Lessee is also the payor.
- A professional leasing accounting person understands many different kinds of leases. The accounting world has many unique idioms, many specific applications.

Big Picture

Journal Entries on Lease (Lessee Accounting, we are leasing, we are the payor)

At Inception

	<u>DR</u>	<u>CR</u>
Leased Assets	\$ 38,608.50	
Leases Payable		\$ 38,608.50

First Half

	<u>DR</u>	<u>CR</u>
Ⓐ Depreciation Exp	\$ 38,608.50	
Accum. Dep. Leased Asset (dep the 10 periods, semi-annual)		\$ 38,608.50

	<u>DR</u>	<u>CR</u>
Ⓑ Interest Expense	\$ 1,930.43	
Lease Obligation	\$ 3,069.57	
Cash		\$ 5,000.00
		Lease Payment

Second Half

	<u>DR</u>	<u>CR</u>
Ⓐ Depreciation Exp	\$ 38,608.50	(these amounts do not change)
Accum. Dep. Leased Asset (dep the 10 periods, semi-annual)		\$ 38,608.50

	<u>DR</u>	<u>CR</u>
Ⓑ Interest Expense	\$ 1,776.95	
Lease Obligation	\$ 3,223.05	
Cash		\$ 5,000.00
		Lease Payment

PV of LP =	\$ 38,608.50	Principle
Accrued Interest @ 5%	x .05	
	<u>\$ 1,930.43</u>	Interest Exp for this Period

Ⓑ	\$ 38,608.50	Beginning Principle
	\$ 1,930.43	Interest Exp paid to date
	\$ (5,000.00)	Less the cash payment
	<u>\$ 35,538.93</u>	Remaining Principle
Accrued Interest @ 5%	x .05	
	<u>\$ 1,776.95</u>	Interest Exp for this Period

Homework:

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Modifications: 0 salvage value
Book purposes: 5 year straight line dep.
Tax Purposes: 3 year MACRS
Pre Tax Pre Dep income is $\$60,000 = \$25,000 + \$35,000$
Run schedule out 5 years
Tax rate is 40%
Do A) for 5 years

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Leased for 3 years
Do journal entries at inception, 1st and 2nd halves.