

15.511 Corporate Accounting Recitation 6

July 7, 2004



Agenda

- Marketable Securities (lecture notes)
- Bonds
- Leases
- Deferred tax

Accounting for Bonds - Terminology

- Par value
- Proceeds from issuance
- Coupon rate
- Market rate of interest at issuance
- Current market interest rate
- Book value of bond
- Coupon payment
- Interest expense
- Zero-coupon bond

Accounting for Bonds

- Par/Discount/Premium

Bond sells	Proceeds from issuance	Market rate at issuance	Coupon payment
At Par	=Par value	=Coupon rate	=Interest expense
At a Discount	<Par value	>Coupon rate	<Interest expense
At a Premium	>Par value	<Coupon rate	>Interest expense

Accounting for Bonds

- Entries

- At issuance:
 - At par: Dr. Cash (proceeds) Cr. Bond Payable (principal)
 - At a discount: Dr. Cash Dr. Discount Cr. Bond Payable
 - At a premium: Dr. Cash Cr. Bond Payable Cr. Premium
- During the period when bond is outstanding
 - At par: Dr. Interest expense Cr. Cash
 - At a discount: Dr. Interest expense Cr. Discount Cr. Cash
 - At a premium: Dr. Interest expense Dr. Premium Cr. Cash
- Payback of principal
 - Dr. Bond Payable Cr. Cash

Accounting for Bonds

- Calculations

- ❑ Use market interest rate at issuance (r) to discount and calculate the interest expense. Coupon rate is ONLY used to calculate the coupon payment.
- ❑ $\text{Proceeds from issuance} = \text{coupon payments} * \text{PVOA}(r,n) + \text{principal} * \text{PV}(r,n)$
- ❑ $\text{Premium/Discount} = \text{proceeds from issuance} - \text{par value}$
- ❑ $\text{Interest Expense} = \text{book value of bond (net bond payable)} * r = (\text{par value} -/+ \text{Premium/Discount balance}) * r$
- ❑ $\text{Premium accrual} = \text{coupon payment} - \text{interest expense}$
- ❑ $\text{Discount accrual} = \text{interest expense} - \text{coupon payment}$

Accounting for Leases

□ Terminology

- Operating Lease: Lessee rents the property. Lessee charges rent expenses as they become due in each period.
- Capital Lease: Lessee essentially owns the property. Lessee records the leased asset in B/S together with the corresponding lease obligation. During the term of the lease, lessee charges depreciation expenses and interest expenses.

□ Criteria for lease capitalization: a lease is considered a capital lease if ANY of the following conditions apply.

- Essential transfer of ownership at the end of lease term: no payment for leased asset, or Bargain purchase option (BPO) (payment below market value after the lease term).
- Minimum present value of lease payments (including BPO, if any) at lease 90% of asset's market value.
- Lease term is 75% of asset's remaining useful life.

Accounting for Leases

- Entries for capital leases

- Accounting is similar to acquiring an asset with 100% debt financing.
- Any payment in advance is recorded as an immediate reduction in the lease liability.
- During the lease term, interest expense and depreciation expense are recognized.
- When the lease terminates, the Lease Obligation is zero and Leased Property – Acc. Depr. = 0.

- Lease inception: Dr. Leased Property Cr. Lease Obligation
 - Leased Property = PV of Lease payments
- Each lease period:
 - Dr. Interest Expense Dr. Lease Obligation Cr. Cash
 - Dr. Depreciation Expense Cr. Accumulated Depreciation
 - Interest Expense = interest rate * Beginning balance of Lease Obligation

Deferred Tax

- Permanent differences: Differences between pre-tax GAAP income and pre-tax taxable income that will **never** be reversed, e.g. Government Fines, Tax-Exempt Revenue.
- Temporary timing differences: Differences between pretax GAAP income and pre-tax taxable income that will be reversed at some point in the future. Temporary differences create *Deferred Tax Liabilities* and *Deferred Tax Assets*.
- Deferred Tax Liabilities (DTL)
 - Taxable Income < Pre-tax GAAP income, Tax Payable < Tax Expense
 - Taxpayer pays lower taxes today. A liability must be recorded to account for the added taxes to be paid at some point in the future.
- Deferred Tax Assets (DTA)
 - Taxable Income > Pre-tax GAAP income, Tax Payable > Tax Expense
 - Taxpayer pays higher taxes today. An asset must be recorded to account for the value of lower taxes to be paid at some point in the future.

Deferred Tax – effective tax rate vs. statutory tax rate

- $(\text{GAAP pre-tax income} - \text{income from tax-exempt investments} - \text{foreign income taxed at rate lower than 35\%} - \text{inter-corporate dividends received}) * \text{statutory rate} = \text{Tax expense}$
- $\text{Tax expense} / \text{pre-tax GAAP income} = \text{effective tax rate}$
- $\text{Taxable income (including not only the adjustments above, but also different accounting treatments such as depre. Method)} * \text{statutory rate} = \text{Tax payable}$
- Conclusion: DTL/DTA does not contain permanent differences. However, the difference between effective tax rate and statutory tax rate is partially caused by permanent differences.

Marketable Securities

	Sale of Securities	Price change - not sold yet
Trading securities	I/S - Realized gains/losses	I/S - Unrealized holding gains/losses
Available-for-sales	I/S - Realized gains/losses	B/S (Other Equity) - Unrealized holding gains/losses

Marketable Securities - example

- Harvard, Ltd. And MIT Unlimited made the same investment – 200 shares of YOU Corporation at a cost of \$12/share on Nov.12,2002. Harvard accounts for this investment as a trading security and MIT accounts for this investment as AFS. On Dec.31,2002 the market value YOU Corp. at \$45/share. Both Harvard and MIT elected to keep the shares at this point of time and the tax rate is 30%. On Feb.14,2003 both Harvard and MIT decided to sell theirs shares in YOU, then trading at \$50/share. Record the effects on the BSE of these transactions.

Marketable Securities - example

□ Harvard, Ltd. – Trading securities

Date	Cash	Trading securities	Trading securities Adj.	=	DTL	Other Equity	Retained Earnings
11/12/02	-2,400	2,400					
12/31/02			6,600				6,600
12/31/02					1,980		-1980
EB	-2,400	2,400	6,600		1,980		4,620
02/14/03	10,000	-2,400	-6,600				1,000
02/14/03	-2,280				-1,980		-300
EB	5,320	0	0		0		5,320

Marketable Securities - example

□ MIT – AFS

Date	Cash	Trading securities	Trading securities Adj.	=	DTL	Other Equity	Retained Earnings
11/12/02	-2,400	2,400					
12/31/02			6,600			6,600	
12/31/02					1,980	-1980	
EB	-2,400	2,400	6,600		1,980	4,620	
02/14/03	10,000	-2,400	-6,600			-4,620	5,620
02/14/03	-2,280				-1,980		-300
EB	5,320	0	0		0		5,320