

***15.515 RECITATION AGENDA – SESSION 7***  
***MORE MARKETABLE SECURITIES & LONG-TERM DEBT***

- Questions on previous assignment
- Marketable Securities
- Long-Term Debt (Bonds)
  - Terminology
  - Balance Sheet Equation Effects
  - Sample Problems
- TA Questions

## ***Marketable Securities***

- Readily marketable – convertible to CASH on DEMAND

### **Classified**

- **Trading securities** - Profit from short term price change
  - Current asset
- **Available-for-sale** - Other trading securities
  - Current or non-current asset

### **Recorded Purchase Price include**

- Direct costs
- Incidental Acquisition costs

## Mark-to-market rule

**Readily marketable securities are to be carried at market price.**

Recording of gains and losses or price increase or decrease:

|                     | Sales of securities  | Price change – not sold yet                |
|---------------------|--|--|
| Trading securities  | IS – Realized gains/losses<br>From sales (from beginning of<br>period) | IS – Unrealized/Holding<br>gains/losses    |
| Available-for-sales | IS - Realized gains/losses<br>From sales (from acquisition)            | SE – Unrealized price<br>increase/decrease |

## ***LONG-TERM LIABILITIES – LONG-TERM DEBT***

### **Terminology**

- Par Value: stated or face value of the bond; the amount due at maturity
- Coupon Rate: the rate used to determine the periodic cash payments, if any. (Also called the “Stated Rate” in the book.) This rate is stated as the *annual* amount.
- Current Market Interest Rate: the rate used to determine the current market value of the bond (Price to purchase bond current). It is based on market conditions and risk characteristics of the borrower. This rate is stated as the *annual* amount.
- Market Rate of interest at issuance: the rate used to determine proceeds received by the firm when the bond is issued. This rate is used to determine interest expense. (Also called the “Effective Rate” in the book.)
- Book value of bond: Sometimes also called the “Net bond payable.” The book value of the bond is equal to the remaining promised payments (principal and coupon payments) discounted at the market rate of interest at issuance.
- Coupon Payment:  $\text{Cash Interest Payment} = \text{Par Value} \times \text{Coupon Rate}$
- Interest Expense:  $\text{Interest Expense} = \text{book value of bond} \times \text{Market Interest Rate at issuance}$
- Zero-Coupon Bond: Bond with Coupon Rate of 0%

**Bonds - Par/Discount/Premium**

| <b>Bond Sells</b> | <b>Market Rate<br/>at Issuance</b> | <b>Proceeds<br/>Rec'd at Issue</b> | <b>Coupon Payment</b> |
|-------------------|------------------------------------|------------------------------------|-----------------------|
| At Par            | = Coupon Rate                      | = Par Value                        | = Interest Expense    |
| At a Discount     | > Coupon Rate                      | < Par Value                        | < Interest Expense    |
| At a Premium      | < Coupon Rate                      | > Par Value                        | > Interest Expense    |

*(Be sure you understand bonds sold at Par, and Zero-Coupon Bonds.)*

**Long-Term Debt - Balance Sheet Equation**If bond is sold At Par*(Note: Market Value = Par Value, Coupon Payment = Interest Expense)*

|             | <b>Assets</b>    | = | <b>Liabilities</b>  | +                         | <b>S. E.</b>             |
|-------------|------------------|---|---------------------|---------------------------|--------------------------|
| <b>Date</b> | <b>Cash</b>      |   | <b>Bond Payable</b> | <b>Premium (Discount)</b> | <b>Retained Earnings</b> |
| Issue       | Market Value     |   | Par Value           |                           |                          |
| 6 mo.       | (Coupon Payment) |   |                     |                           | (Interest Expense)       |
| 1 yr.       | (Coupon Payment) |   |                     |                           | (Interest Expense)       |
| ...         |                  |   |                     |                           |                          |
| Maturity    | (Par Value)      |   | (Par Value)         |                           |                          |

If bond is Zero-Coupon (special case of bonds sold At Discount)

|             | <b>Assets</b> | = | <b>Liabilities</b>  | +                             | <b>S. E.</b>                    |
|-------------|---------------|---|---------------------|-------------------------------|---------------------------------|
| <b>Date</b> | <b>Cash</b>   |   | <b>Bond Payable</b> | <b>Premium (Discount)</b>     | <b>Retained Earnings</b>        |
| Issue       | Market Value  |   | Par Value           | (Discount) <sup>a</sup>       |                                 |
| 6 mo.       |               |   |                     | Discount Accrual <sup>c</sup> | (Interest Expense) <sup>b</sup> |
| 1 yr.       |               |   |                     | Discount Accrual <sup>c</sup> | (Interest Expense) <sup>b</sup> |
| ...         |               |   |                     |                               |                                 |
| Maturity    | (Par Value)   |   | (Par Value)         |                               |                                 |

<sup>a</sup> Discount = Par Value - Market Value<sup>b</sup> Interest Expense = Net Bond Payable x Market Rate of interest at issuance

= (Par Value + Premium (Discount) Balance) x Market Rate of interest at issuance

<sup>c</sup> Discount Accrual = Interest Expense (Only for Zero-Coupon Bonds)