Equity Analyst Training Program

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Discussion topics

- **Introduction to components and format of the balance sheet**
- **Current Assets**
  - Introduction to Current Assets
  - Cash and Cash Equivalents
  - Short Term Marketable Securities
  - Accounts Receivables / Accounts Receivables Turns
  - Inventory / Inventory Turns
  - Inventory Cost – Lower of Cost or Market (LCM)
  - Prepaid Expenses / Other Current Assets
- **Current Liabilities**
  - Introduction to Current Liabilities
  - Accounts payable / Accounts Payable Turns
  - Short-term debt / Current maturities of long-term debt
  - Unearned revenue / Other accrued liabilities
- **Working Capital**
  - Introduction to Working Capital
  - Introduction to Operating Working
  - Introduction to Cash Conversion Cycle

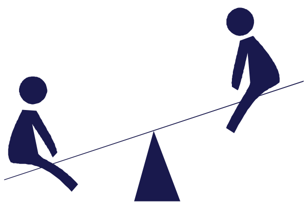
Balance Sheet

Introduction to Balance Sheet

- **“Snapshot" of a company's financial position at a given moment**
- Reports the amount of a company's
  - Assets – Current assets/Long term assets
  - Liabilities – Current liabilities/Long term liabilities
  - Stockholders' (or owner's) equity – Common stock / Retained earnings

FastTrack Movers & Packers Inc
Balance Sheet, December 31st 2007

Assets		Liabilities & Stockholder's Equity	
Current assets		**Current Liabilities**	
Cash	$ xxx	Short-term debt	$ xxx
Accounts Receivables	$ xxx	Accounts Payable	$ xxx
Inventory	$ xxx	Total current liabilities	$ xxx
Total current assets	$ xxx		
		Long term Liabilities	
Long term assets		Long term debt	$ xxx
Plant and Equipment	$ xxx		
Less:Acc depreciation	($ xxx)	**Stockholder's Equity**	
Net PPE	$ xxx	Common Stock	$ xxx
		Retained Earnings	$ xxx
		Total Stockholder's Equity	$ xxx
Total Assets	**$ xxx**	**Liabilities & Stockholder's Equity**	**$ xxx**



- **Accounting Equation**

Assets = **Liability** + **Shareholder’s Equity**

Current Assets

Introduction to Current Assets

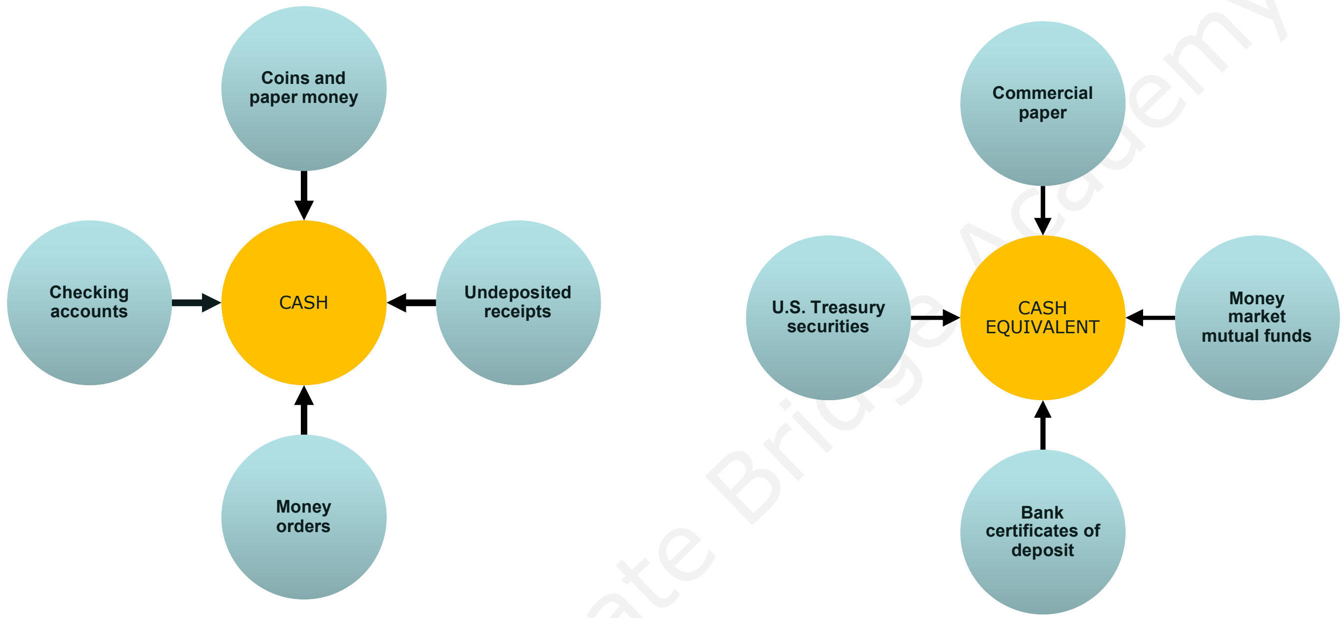
- Current assets are expected to be consumed, sold, or converted into cash
  - Either in one year or in the operating cycle, whichever is longer
- An operating cycle is the average time it takes to convert an investment in inventory back into cash
- Current assets are presented in order of liquidity

Valuation principles for current assets

- **Short-term investments at fair value**
  - The current fair value of an asset is the amount of cash (or equivalent) that could be obtained on the date of the balance sheet by selling the asset in an orderly liquidation.
- **Accounts receivable at net realizable value**
  - The net realizable value of an asset is the amount of cash (or equivalent) into which the asset is expected to be converted in the ordinary operations of the company, less any expected conversion costs
- **Inventory at lower of cost or market**

Cash & Cash Equivalents

- ❑ **Cash & Cash Equivalents**



- ❑ Cash could also include an amount required to be held for deposit to satisfy the terms of a lending agreement
- ❑ Cash equivalents are securities (e.g. US Treasury bills) that have term of less than or equal to 90 days
- ❑ Why should a firm hold cash?
  - **Speculation:** Take advantage of special opportunities that if acted upon quickly will favor the firm
  - **Precaution:** Holding cash as a precaution serves as an emergency fund for a firm
  - **Transaction:** Firms hold cash in order to satisfy the cash inflow and cash outflow needs that they have

Short Term Marketable Securities

- Short Term Marketable Securities primarily includes
  - Bond Investments
  - Capital Stock Investments
- Short Term Marketable Securities are not as ready as money in your account, but they provided added cushion if some immediate need were to arise
- Short Term Marketable Securities can be further classified into three:

Held to Maturity	Trading	Available for Sale
• Debt securities held to maturity • Reported at cost	• Debt & Equity securities actively traded • Reported at market value	• Debt & Equity securities not in the other two categories • Reported at market value

- Interest or dividends received from these investments are recorded as interest or dividends earned (income)
- Short term investments become important when company has idle cash such that it can earn slightly higher interest rate by investing in marketable securities

Microsoft Balance Sheet - Assets

❑ Microsoft 2007 Balance Sheet Assets

Example: Microsoft Corp		
Balance Sheet (in millions)	**2007**	**2006**
Assets		
Cash and equivalents	$6,111	$6,714
Short-term investments	17,300	$27,447
Total cash and short-term investments	$23,411	$34,161
Accounts receivable,	11,338	$9,316
Inventories	1,127	$1,478
Deferred income taxes	1,899	$1,940
Other	2,393	$2,115
Total current assets	$40,168	$49,010
Property and equipment, net	$4,350	$3,044
Equity and other investments	10,117	$9,232
Goodwill	4,760	$3,866
Intangible assets, net	878	$539
Deferred income taxes	1,389	$2,611
Other long-term assets	1,509	$1,295
Total assets	$63,171	$69,597

What is the % of Cash and Short-term Investments to Total Assets
HIGH!!!!!

Accounts Receivables

- Money that is owed to the company by the customers

Vijay Sales wants to order 100 new Sony 29" Television Sets. Sony receives the order, and within a week, ships the TVs to one of the Vijay Sales Warehouses. Included in the shipment is the bill (lets say $1,000 per TV of 1,000 Television Sets). Sony has already sent the Television Sets to Vijay Sales, even though Vijay Sales have not paid anything. Vijay sales is buying on credit and promising to pay Sony $1million

  - $1million goes into Sony's balance sheet as Accounts Receivables
- Generally a company that sells its products on credit sets a credit term
  - Credit term is the number of days within which the customer should pay the bill
  - Most terms are either 30,60 or 90 days
- Are accounts receivables good?
  - What if the customer does not pay you?
  - What if Vijay Sales went Bankrupt or simply didn't pay Sony
- **Introduction to Net Realizable Value**
  - The net realizable value is the amount of accounts receivable that the business expects to collect

Net Realizable Value = **Accounts Receivables** - **Allowance for bad debts**

- **Notes Receivables**
  - A note is a written promise to pay a specific amount at a specific future date
  - Notes typically include an interest charge for use of the money during the time period of the note

Accounts Receivables Turns

- **Receivables turnover** examines the management of accounts receivable
  - Balance sheet items are taken as average of the account

$$\text{Receivables Turnover} = \frac{\text{Net Annual Sales}}{\text{Average Receivables}}$$

- **Average collection period** is the average number of days it takes for the company's customer to pay their bills
  - It is desirable to have a collections period closer to the industry norm

$$\text{Average Receivables Collection Period} = \frac{365}{\text{Receivables Turnover}}$$

  - Collection period too high mean that customers are too slow in paying their bills, which implies too much capital is tied up in assets

Balance Sheet

Accounts Receivables Turns

- Find the accounts receivables turnover and Average Receivables Collection Period for McDonald’s

Example: Accounts Receivables		
McDonald's Part - Balance Sheet	**2007**	**2006**
Current Assets		
Cash and equivalents	$1,981	$2,128
Accounts and notes receivable	$1,054	$807
Inventories	$125	$112
Prepaid expenses and other current a:	$422	$319
Assets of businesses held for sale	$0	$1,632
Discontinued operations	$0	$195
Total current assets	$3,582	$5,192
Current Liabilities		
Notes payable	$1,127	$0
Accounts payable	$624	$669
Income taxes	$0	$242
Other taxes	$248	$203
Accrued interest	$148	$135
Accrued payroll and other liabilities	$1,487	$1,325
Current maturities of long-term debt	$865	$18
Liabilities of businesses held for sale	$0	$274
Discontinued operations	$0	$87
Total current liabilities	**$4,499**	**$2,952**

Total Sales	$51,122	$44,282
Cost of Goods Sold	$10,693	$7,650

- Is McDonald doing a good or bad job at managing receivables?

Inventory

- Inventory consists of merchandise a business owns but has not sold
- Classified as current assets because investor assumes that inventory can be sold in the near future, turning it into cash
- **Retail Firm**
  - Merchandize Inventory
- **Manufacturing Firm**
  - Finished Goods Inventory
  - Raw Material Inventory
  - Work-in Process Inventory
- The value of the inventory determines the costs of goods sold (COGS)
- Valuation methods used to determine cost of inventory sold ***(we will cover this in detail in later presentations!)***
  - Last-in-First-out (LIFO)
  - First-in-First-out (FIFO)
  - Weighted Average
  - Specific Identification

Inventory Turns

- **Inventory turnover** measures firm's efficiency with respect to its processing and inventory management
  - Balance sheet items are taken as average of the account

☞ $$\text{Inventory Turnover} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$$

- Given the turnover values, you can compute the average inventory processing time
  - It is desirable to have a collections period closer to the industry norm

☞ $$\text{Average Inventory Processing Period} = \frac{365}{\text{Inventory Turnover}}$$

Inventory Turns

- Find Inventory turnover and Average Inventory Processing Period for McDonald's

Example: Inventory		
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- Is McDonald doing a good or bad job at selling off its inventory?

Inventory Cost – Lower of Cost or Market (LCM)

- The inventory is valued using either FIFO, LIFO, Weighted Average or Specific Identification
- **Lower of the Cost or Market:** Inventory Value is compared with the replacement cost

Replacement Cost > Original Cost	→	**Do Nothing!**	
Replacement Cost < Original Cost	→	**Use Replacement Cost**	Ending inventory "written down" to lower replacement cost and loss is recorded

- **Item-by-Item Method**
  - Inventory value cost and replacement cost are compared for each item in inventory
  - Each individual item is then valued at the lower of the two amounts

- **Major Category Method**
  - Total inventory value and total replacement cost for categories of items are compared
  - Each major category is then valued at the lower of the two amounts

Inventory Example

Example: Lower-of-Cost-or-Market

Furniture Big Mart specializes in selling different beds and chairs. The owner has computed the store's inventory values using average cost and is not trying to analyze the inventory values on a lower-of-cost-or-market basis before putting together the store's financial statements. The owner would like to compare the impact of applying bot the item-by-item and the major category methods of LCM valuation.

	Quantity	Inventory Cost (per unit)	Replacement Cost (per unit)
Bed			
Single Bed (Teak wood)	5	$200	$180
Double Bed (Teak Wood)	4	$400	$410
Single Bed (Metal frame)	4	$150	$160
Double Bed (Metal frame)	6	$300	$250
Chairs			
Home Chair (Luxury)	10	$100	$90
Office Chairs	15	$125	$135

- What is the Inventory value using Item-by-Item Method?
- What is the Inventory value using Major Category Method?
- Points to remember!
  - LCM is not performed in lieu of LIFO, FIFO or other inventory methods
  - Company first value the inventory based on LIFO, FIFO etc and then the LCM method is applied

Prepaid Expenses and Other Current Assets

Prepaid Expenses

- Sometimes business will have to pay for goods or services before they actually receive the product
- Expenses that have been paid in the current fiscal period but that will not be subtracted from revenue until a subsequent fiscal period

On December 2 when Kartik contacts an insurance agent regarding insurance coverage for the Truck just purchased. The agent informs him that $1,200 will provide insurance protection for the next one year. Kartik immediately writes a check for $1,200.

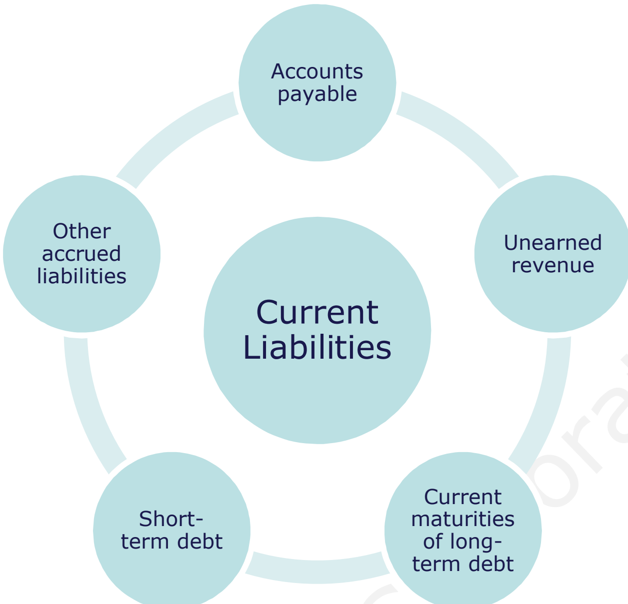
Other Current Assets

- Consists of other non-cash assets that are owed to the company within one year

Current Liabilities

Introduction to Current Liabilities

- Current liabilities are probable future payments of assets or services that a firm is obligated to make as a result of previous operations
- These obligations is expected to require the use of existing current assets, or the creation of other current liabilities
- **Classification of Current Liabilities**



These obligations are expected to be paid within one year

Accounts payable

- Amounts owed to suppliers for goods and services that have been purchased on credit
- Accounts payable are debts that must be paid off within a given period of time in order to avoid default

- **Payable Turns**
- **Payables turnover** measures the use of trade credit by the firm
  - Balance sheet items are taken as average of the account

$$\text{Payables Turnover} = \frac{\text{Cost of goods sold}}{\text{Average Payables}}$$

- Given the turnover values, we can compute the **average payment period** processing time
  - It is desirable to have a collections payment closer to the industry norm

$$\text{Average Payment Period} = \frac{365}{\text{Payable Turnover}}$$

Balance Sheet

Accounts Payable Turns

- Find Payables turnover and Average Payment Period for McDonald's

Example: Inventory		
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Total Sales	$51,122	$44,282
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- Is McDonald doing a good or bad job at paying off its creditors?
- Higher or lower payment period is desirable?

Short-term debt / Current maturities of long-term debt

- **Short Term Debt** is also referred to as **Notes Payable**
  - Sometimes when the demand is high, a company may raise short term loans to stock up the inventory (Utilizing leverage)
- **Current Maturities of Long Term Debt**
  - Any portion of long-term debt that is to be repaid within a year of the balance sheet date is reclassified from the noncurrent liability section to the current liability section under the title, current maturities on long-term debt
- Compare notes payable to Cash and Cash Equivalents of the company to find the financial strength/weakness

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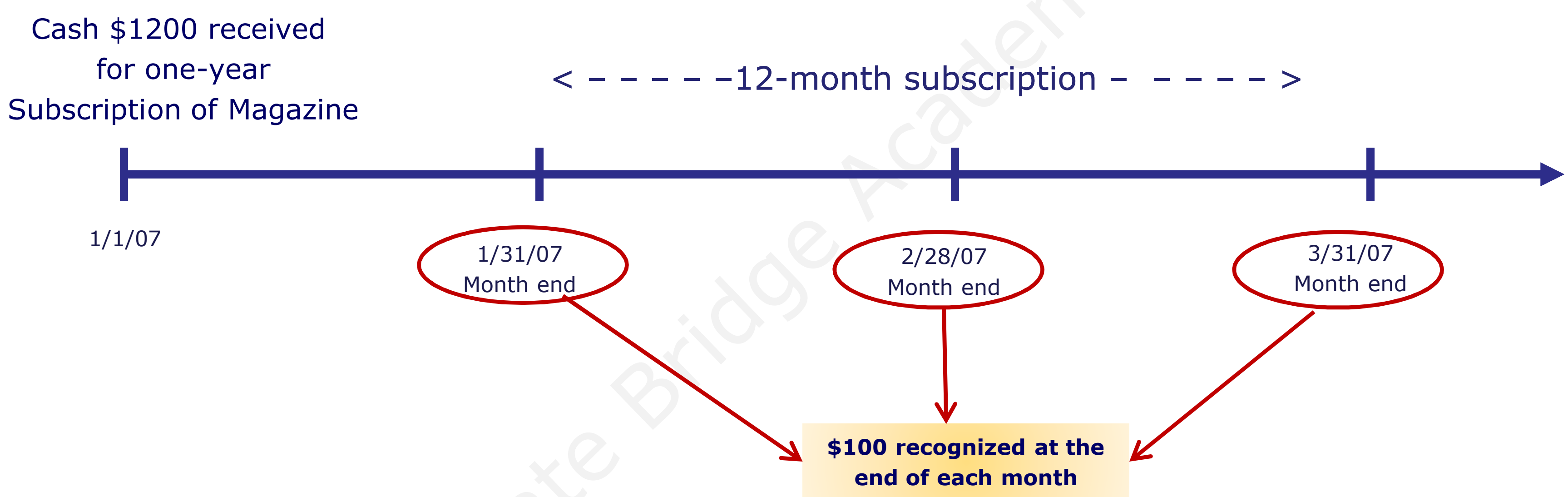
Is Cash and Cash Equivalents > (Notes Payable + Current portion of long term debt) for 2006 and 2007?

Unearned revenue / Other accrued liabilities

- Unearned revenue is created when customers pay for services or products before delivery



- **Other accrued liabilities**
  - Money owed to employees as salary and bonus that the company has not yet paid

Working Capital

Introduction to Working Capital

- Working capital tells us what would be left if a company raised all of its short term resources and used them to pay off its short term liabilities

Working Capital = **Current Assets** - **Current Liabilities**

- If working capital is positive, current assets are larger than current liabilities
- Helps to foresee any financial difficulties that may arise in future
- **Example**
  - A business with billion dollar in fixed assets may find itself in bankruptcy court if it can't pay its monthly bills

Poor Working Capital → Increased Borrowing, Late Payment to Creditors → Lower Credit Rating → Higher Interest Rate

- The goal of working capital management is to ensure that a firm is able to continue its operations and that it has sufficient ability to satisfy both maturing short-term debt and upcoming operational expenses

Working Capital Calculation

- Calculate the working capital of McDonald's Corp for 2006 and 2007

Example: Working Capital		
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Should "assets held for sales" and "Assets of Discontinued Operations" be included in calculation of working capital?

Should "liabilities held for sales" and "Assets and Liabilities of Discontinued Operations" be included in calculation of working capital?

- Negative Working Capital
  - Good
  - Bad (Bankrupt?)

Balance Sheet

Operating Working Capital Calculations

- Operating Working Capital
  - Do not include any accounts driven by investing or financing decisions
- Calculate the Operating working capital of McDonald’s Corp for 2006 and 2007

Example: Working Capital

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Working Capital as % of Sales
- Grocery Stores – 10-15% of the Total Sales (Higher cash conversion!)
- Manufacturing firms – 20-25% of the Total Sales (Higher inventory!)

- **Working capital for Car Manufacturing Firm – General Motors, Tata Motors?**

Balance Sheet

Cash Conversion Cycle

- **Cash Conversion Cycle c**ombines information from the receivables turnover, inventory turnover, and accounts payable turnover

Cash Con Cycle = **Receivable period** + **Inventory period** - **Payable period**

- High conversion cycle is undesirable
- Too high conversion cycle implies that company has excessive amount of capital investment in the sales process
- **What is the cash conversion cycle for McDonald's that we had discussed?**
  - It this good/bad?