Workshop II: Accounting

- The Accounting Equation
- Key Concepts
  - Stock vs Flow
  - Cash vs Accrual
  - Debits vs Credits
- U.S. GAAP
  - Balance Sheet
  - Income Statement
  - Statement of Cash Flows
- Sample Exercise
- Footnotes and Investment Decisions
- Questions
Accounting Equation

- Assets = Liabilities + Stockholders Equity
  - Assets: Something of value a company owns
  - Liabilities: Something the company owes to somebody else
  - Equity: What owners are entitled to after creditors are paid off
- Must ALWAYS balance.
- Debits vs Credits
  - Not confusing: Debit -> left hand side, Credit -> right hand side.
- Historical Cost Accounting
  - Conservative
  - Objective / Verifiable
  - Going Concern

Accounting Concepts

- Cash vs Accrual
  - Accrual records revenues and expenses in periods which they occur and matches expenses with the period in which the revenue is earned
  - Cash accounting records revenues and expenses as cash is received / paid out
  - Trade Credit: Accounts Receivable and Accounts Payable
  - Capital Expenditures and Depreciation…
    - Depreciation: Non cash charge to allow matching of a ‘big ticket asset’ to the periods that it is used in.
      - Land not depreciated
Accounting Concepts

- Flow vs Stock Variables
  - Flow represents the flow of water in and out of a tank
  - Stock represents the amount of water in a tank

Example:

- January 1: Issue capital stock to shareholders who invest $70,000 cash in the company
- January 8: Purchase land for $24,000 cash
- January 8: Purchase a building for $40,000 by paying $17,000 cash and a note payable for the remaining balance
- January 12: Sold half of the land to Smith for $15,000, which will be collected in the next few months
- January 18: Purchase machinery for $6,000 on credit
- January 28: Received $2,000 of the $15,000 Smith owes
- January 31: Paid $2,500 of the amount owed for the machinery
US G.A.A.P.

- Highest level of transparency required in the world
- Differs from IAS and other countries accounting standards
- Requires publication of various financial reports
  - 10-K
  - 10-Q
  - 8-K
  - Schedule 13
- Components of 10-K’s and 10-Q’s are
  - Income Statement
  - Balance Sheet
  - Statement of Cash flows

Income Statement

<table>
<thead>
<tr>
<th>Category</th>
<th>2014</th>
<th>2013</th>
<th>2012</th>
<th>2011</th>
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<tbody>
<tr>
<td>Operating Expenses</td>
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<tr>
<td>Research and Development</td>
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<td>Selling, General and Administrative</td>
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<td>Depreciation</td>
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<td>Selling, General and Administrative</td>
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<td>Other</td>
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<td>Total Operating Expenses</td>
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<tr>
<td>Net Sales</td>
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<td>Earnings Before Interest and Taxes</td>
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<td>Income Net of Income Taxes</td>
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<td>Net Income from Continuing Operations</td>
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<td>Income from discontinued operations</td>
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<td>Net Income from Discontinued Operations</td>
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<td>Gain/Loss on Disposal</td>
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<td>Effect of Acquiring治療 Changes</td>
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<td>Other Items</td>
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<tr>
<td>Net Income</td>
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- Income Statement (all numbers in thousands)
- Net Income: 3,212,000
Balance Sheet

Assets

Current Assets
Cash and cash equivalents 1,28,00,000 80,00,000 1,03,00,000
Short Term Investments 5,14,00,000 1,00,000 55,00,000
Prepaid Expenses 3,00,000 2,00,000 3,40,000
Inventories 2,14,00,000 1,75,00,000 1,42,00,000
Total Current Assets 8,81,00,000 7,36,00,000 6,44,00,000

Non-Current Assets
Property Plant & Equipment 2,90,00,000 2,50,00,000 2,10,00,000
Property Right 2,00,000 2,00,000 2,00,000
Intangible assets 50,00,000 50,00,000 50,00,000
Total Non-Current Assets 3,47,00,000 3,02,00,000 2,65,00,000

Total Assets 12,28,00,000 10,38,00,000 9,09,00,000

Liabilities

Current Liabilities
Accounts Payable 7,50,000 5,20,000 5,45,000
ShortTerm Loans 5,00,000 5,00,000 5,00,000
Total Current Liabilities 12,50,000 10,20,000 10,45,000

Non-Current Liabilities
Long Term Loans 2,50,000 2,50,000 2,50,000
Total Non-Current Liabilities 2,50,000 2,50,000 2,50,000

Total Liabilities 15,00,000 12,70,000 12,95,000

Shareholders' Equity

Paid-in Capital 1,00,000 1,00,000 1,00,000
Reserves 1,00,000 1,00,000 1,00,000
Total Shareholders' Equity 1,00,000 1,00,000 1,00,000

Total Equity 15,00,000 12,70,000 12,95,000

Net Assets 11,98,00,000 9,38,30,000 8,04,05,000

Cash Flow Statement

Year Ended 31st Dec.

Net Income 4,21,000 3,56,000 3,31,000

Operating Activities
Depreciation 1,00,000 1,20,000 1,10,000
Amortization to Non-Operating 0 (10,000) (10,000)
Changes in Operating Expenses - - -
Total Operating Activities 4,21,000 3,56,000 3,31,000

Investing Activities
Purchase of Equipment (50,000) (50,000) (50,000)
Total Investing Activities (50,000) (50,000) (50,000)

Financing Activities
Net Borrowings 1,00,000 1,00,000 1,00,000
Total Financing Activities 1,00,000 1,00,000 1,00,000

Net Change in Cash 4,21,000 3,56,000 3,31,000

Change in Cash and Cash Equivalents 4,21,000 3,56,000 3,31,000
Footnotes

- Off Balance Sheet Financing (leases)
- Pending Lawsuits
- Mergers and Acquisitions
- Bankruptcy
- New Equity / Debt issuances
- Anything goes!

Working Capital

- The capital that is tied up by a firm in order to maintain its operations and can be defined a number of ways
  - Accounting definition – Current assets – current liabilities
    - Current ratio – Current Assets / Current Liabilities
    - Quick ratio – (Current Assets – Inventory) / Current Liabilities
- In finance, we use something called net working capital because we are interested in the effect on cash, and because we have already calculated short term debt
  - Current non-cash assets – current non-debt liabilities
  - Accounts Receivables + Inventory – Accounts Payable
Free Cash Flow to the Firm

- The cash flow available to equityholders and debtholders after all other cash expenses.
- We use this in our Discounted Cash Flow Valuations.

- FCFF: EBIT * (1-t) + D&A – Capex – Change in Net Working Capital
- FCFF: Net Income + Interest Expense + D&A – Capex – Change in Net Working Capital
- FCFF: Net Cash from Operations + Net Cash from Investing + Interest Expense

Return on Capital

- Return on Capital – Profit divided by total invested
- Return on Capital versus Return on Equity
  - Return on equity is calculated with net income and total equity
  - Return on capital is calculated with net income plus interest, and debt plus equity

- Firm A has net income of $15, interest expense of $5, debt of $50, and equity of $50
  - Return on Equity = $15 / $50 = 30%
  - Return on Capital = ($15 + $5) / ($50 + $50) = 20%

- A good investment has higher return on capital than cost of capital
Questions?

- Workshop I: Financial Markets
- Workshop II: Financial Accounting
  Workshop III: Market Based Valuation
  Workshop IV: Intrinsic Discounted Cash Flow Valuation
  Workshop V: Analyzing Companies
  Workshop VI: Effective Presentations

Additional Workshops: Options, Alternative Investments, Excel
  Modeling, Efficient Markets, Investing Strategies