Income Statement: Results of Operating Performance

15.511 Corporate Accounting
Summer 2004

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Chapter 3: Income Statement
Accounting in a “one-period” world

Example: Shipping Expeditions in the 15th Century
- Ship sold at the end of a voyage: Finite project life
- No information flow from time ship left port until it returned
- Performance: Discounted Cash Flow (DCF)
Accounting in a “multi-period” world

- No pre-determined end to a firm's life - going concern
- Cash invested and generated at multiple points in time
- Subsequent actions affected by prior results - feedback
Principles in Preparing Financial Statements: Fiscal Period

- Artificially divide the life of an organization into annual periods for the purpose of financial reporting.
  - SEC requires quarterly reporting.
  - Internationally, trend toward quarterly reporting
- Why is there a demand for periodic performance measures?
  - Valuation
  - Evaluate management performance
    - Reward management
    - Decide whether to continue to trust the firm’s assets with the current management
- Ideally, all the relevant information with respect to a firm’s performance should be in the quarterly report on a timely basis. Is that the case?
Financial Accounting Principles: Objectivity and Conservatism

- **Objectivity**: financial accounting information must be verifiable and reliable.

- **Conservatism**
  - Asymmetry in the treatment of gains and losses
  - Greater degree of verification for gains than for losses
  - Required by GAAP, but arose voluntarily. Why?
    - Management’s incentive to report good information, hide bad information
    - Asymmetric payoff to bondholders
    - Credibility of information in valuation
  - Conservatism does not suggest that financial statements should arbitrarily understate assets and overstate liabilities.
Income Statement: Results of Operating Performance

- Revenues  -- Sales or service revenue
- Gains  -- e.g., selling an equipment for cash greater than its net book value
- Expenses  -- Cost of goods sold, operating expenses, etc.
- Losses
- Other revenues and expenses
  - Interest revenue, dividend income, interest expense for a manufacturing or merchandising firm.
Income Statement: Results of Operating Performance

- The income statement measures firm performance regardless of when cash is exchanged. Toward this end, two key principles are:

  - Revenue Recognition:
    - Earnings process substantially complete
    - Cash collection reasonably assured
      - Conservatism principle is applicable

  - The Matching Principle for Expenses:
    - Match efforts to the benefits generated
    - Capitalize expenditures that will benefit future periods, expense as benefits are realized
    - Recognize liabilities when efforts benefiting the current period require cash payment in the future
    - Produces a difference between cash flows and earnings
Matching Example

- Blockbuster video buys a copy of the Matrix Reloaded video for $20.

- Experience indicates that video will be rented:
  
<table>
<thead>
<tr>
<th>Year1</th>
<th>Year2</th>
</tr>
</thead>
<tbody>
<tr>
<td>50x</td>
<td>17x</td>
</tr>
</tbody>
</table>

- How much should Blockbuster recognize as an expense each year?
## Matching Example

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>50x</td>
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</table>

**Estimate:**

How much should Blockbuster recognize as an expense each year?

\[
\frac{50}{67} \quad \frac{17}{67} \quad (50+17)
\]
Matching Example

Estimate: \[
\begin{array}{c|c}
\text{Year 1} & 50x \\
\text{Year 2} & 17x \\
\end{array}
\]

How much does Blockbuster recognize as an expense each year?

\[
\begin{array}{c|c}
\text{Yearly Expenses} & \frac{50}{67} \text{ ($20)} & \frac{17}{67} \text{ ($20)} \\
$15 & $5 \\
\end{array}
\]
## Matching Example

<table>
<thead>
<tr>
<th></th>
<th>Year1</th>
<th>Year2</th>
<th>Year3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimate 2:</td>
<td>50%</td>
<td>25%</td>
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<table>
<thead>
<tr>
<th>Estimate 2:</th>
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<tr>
<td></td>
<td>50%</td>
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| Yearly Expenses | $10 | $5 | $5 |
Recording video expenses

<table>
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<tr>
<th>Cash</th>
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Buy Video
## Recording video expenses

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<td></td>
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<tr>
<td><strong>End of Y2</strong></td>
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**Total video expenses = $20**
## Recording video expenses

### Estimate 1 and Estimate 2

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<td></td>
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<td>(5)</td>
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<tr>
<td><strong>Total video expenses</strong></td>
<td>$20</td>
<td>$20</td>
<td></td>
</tr>
</tbody>
</table>
What is Cost of Goods Sold?

- Freshest Grocer buys $10,000 worth of cereals from Quality Foods for cash.
  - Assets = L + OE
  - Cash       Inventory
    -10,000   +10,000

- Exchange of one asset for another asset

- Operating outflow = $10,000
What is Cost of Goods Sold?

- Freshest Grocer sold one-half of the cereals for $8,000 cash
- Assets = L + Owners’ Equity
- Cash +8,000 Retained Earnings +8,000

- What is the most significant matching expense?
What is Cost of Goods Sold?

- The cost to Freshest Grocer of buying the cereal that was sold for $8,000
- one-half of $10,000 = $5,000
- = Cost of Goods Sold or Cost of Sales
- Assets = L + Owners’ Equity
- Inventory Retained Earnings
- -5,000 -5,000
What is Gross Profit or Margin?

- Assets = Liabilities + Owners’ Equity
- Cash    Inventory     Retained Earnings
  -10,000  +10,000
  +8,000
  -5,000

- Increase in retained earnings +3,000
- Gross Profit or Margin = Sales Revenue (-) Cost of Goods Sold = $3,000
- $3,000/$8,000 = 37.5%

GM rate = 37.5%
Components of Income

- Sales or Service Revenue
- (-) Cost of Goods Sold
- (-) Operating Expenses
- (-) Unusual or Infrequent items
- (-) Income Tax Expense

= Income from Continuing Operations (ICO)

All items disclosed below ICO are referred to as “below the line” items.
The below-the-line items are each shown net of income tax.
Components of Income - Staples

- **Sales**: 11,596,075
- **Cost of goods sold & Occupancy costs**: 08,652,593
- **Gross Profit**: 02,943,482
- **Operating expenses**
  - Operating & selling: 01,795,428
  - Pre-opening: 00,008,746
  - General & administrative: 00,454,501
  - Amortization on intangibles: 00,002,135
  - Amortization on goodwill: 0
  - Asset impairment charges: 0
  - Store closure charge: 0
  - Interest & other expenses: 00,020,609
- **Total operating & other expenses**: 02,281,419
- **Income before taxes**: 00,662,063
- **Income taxes**: 00,215,963
- **Net income**: 00,446,100

Cash Flow Statement

- Operating Activities
  - Net income  0,446,100
  - Adjustments,
    - Depreciation and amortization(+)  0,267,209
    - ------
  - Cash flow from operating  0,468,250

- Investing activities
  - Acquisition of property & equip  (0,264,692)
  - Acquisitions of businesses  (1,171,187)
  - ------
  - Net cash from investing  (1,436,226)

- Financing activities
  - Proceeds from sale of capital stock  0,078,895
  - Proceeds from borrowings  0,730,897
  - Payments on borrowings  (0,95,235)
  - ------?
  - Net cash from financing  0,714,083

- Net increase/(decrease)  0,201,240

Components of Income

- Income from Continuing Operations
- Discontinued Operations
  - Income or Loss from Discontinued Operations
  - Gain or Loss on Disposal of Discontinued Operations
- Extraordinary Items (Unusual and Infrequent)
- Cumulative Effect of Change in Accounting Principles
Advantages of Income Statement Components

- Forecasting future performance
- Distinguish between core operating performance (recurring items) versus transitory components (unusual and/or infrequent items)
- Disclosure on Discontinued Operations
- An example: Firm A has two business segments, i.e., M & N.
- In 1997, A’s total income was $100,000 (M earned $70,000 and N earned $30,000)
- All numbers are assumed after tax
Advantages of Income Statement Components

- 1997 Net Income (= ICO) = $100,000
- In 1998, the total income was $100,000 also.
- M earned $90,000 income whereas N earned only $10,000.
- **On December 31, 1998, Firm A decides** to discontinue the business segment N.
- It **expects to lose** $15,000 by disposing off the assets of N.
- i.e., it will generate $15,000 less cash compared to the net book value of the assets of segment N.
Advantages of Income Statement Components

- What would Firm A disclose in its 1998 financial statements?
- Usually comparative statements are provided

<table>
<thead>
<tr>
<th></th>
<th>1998</th>
<th>1997</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income from Cont. Ops.</td>
<td>$90,000</td>
<td>$70,000</td>
</tr>
<tr>
<td>Income from Disc. Ops.</td>
<td>10,000</td>
<td>30,000</td>
</tr>
<tr>
<td>Loss on sale of Disc. Ops.</td>
<td>(15,000)</td>
<td></td>
</tr>
<tr>
<td>Net Income</td>
<td>85,000</td>
<td>100,000</td>
</tr>
</tbody>
</table>
Summary

- Key principles underlying financial statement preparation
  - Objectivity
  - Conservatism
  - Matching
  - Revenue recognition

- Income statement
  - Preparing an income statement from transaction history
  - Presentation
  - Information in components of income