Financial Analysis and Planning

Authors:
Richard A. Jackson, PhD
Mercer University, Southern School of Pharmacy
Atlanta, Georgia
D.C. Huffman, Jr., PhD
American College of Apothecaries
Memphis, Tennessee
Learning Objectives

• Define and explain solvency, undertrading, overtrading, funded debt, inventory turn-over, networking capital, networking capital turnover, capital turnover, return on investment

• Define, calculate from the appropriate financial statement and state the acceptable value for the following ratios: acid test, current ration, NP/NS, NP/NW, INV turnover, A.R.C.P. and A.P.C.P.

• Given a financial ratio state, know whether it is indicative of solvency, efficiency or profitability
Learning Objectives

• Given a financial ratio that is outside the acceptable range, state the possible reason(s) and offer appropriate remedial action

• Given an income statement and/or balance sheet, compare the components with the appropriate NCPA Pharmacia Digest

• Describe and conduct a trend analysis

• Given the results of a financial analysis, develop a pro forma income statement and balance sheet based upon recommendations developed from the analysis
Financial Analysis

• Fiscal exam
• Physical exam
• (See Figure 1)
Financial Analysis

• Comparative analysis
• Ratio analysis
Comparative Analysis

• Express each financial statement component as a percent of sales
• Compare with Digest data
The NCPA Pharmacia Digest

- Income statement data (see Figure 2)
  - Sales volume
  - Prescription volume
- Balance sheet data (see Figure 3)
Financial Ratio Analysis Consists of:

- Completing a financial ratio analysis
- Properly segmenting the ratios compiled
- Comparing these ratios with ratios for the same enterprise during recent years
Financial Ratio Analysis Consists of:

- Comparing these ratios with a similar group of pharmacies as reported in the *NCPA Pharmacia Digest*
- Writing a financial ratio analysis report which describes the problems in all major areas of managerial control
- Listing specific financial objectives
Major Areas of Ratio Analysis

- Solvency
- Efficiency
- Profitability
Solvency

The overall ability of the firm to pay its legal debts
Efficiency

How well the manager is using available capital
Profitability

• The proverbial “bottom line”
• An important, but not only, measure of business success
Definition and Usual Range of Solvency Ratios

**Usual Range**

Current Ratio = \[
\frac{\text{Current Assets}}{\text{Current Liabilities}} \geq 2:1
\]

Acid Test Ratio: \[
\frac{\text{Cash + AR}}{\text{Current Liabilities}} \geq 1:1
\]
### Definition and Usual Range of Solvency Ratios

<table>
<thead>
<tr>
<th>Ratio Type</th>
<th>Formula</th>
<th>Usual Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Liabilities</strong></td>
<td>Average Inventory x 100</td>
<td>(≤ 50%)</td>
</tr>
<tr>
<td><strong>Total Liabilities</strong></td>
<td>Net Worth x 100</td>
<td>(≤ 100%)</td>
</tr>
</tbody>
</table>
Definition and Usual Range of Solvency Ratios

Fixed Assets x 100
Net Worth

Usual Range
(25-25%)

Long Term Debt (Funded Debt) x 100
Net working capital

(≤ 50%)
Definition and Usual Range of Efficiency Ratios

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Usual Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory</td>
<td>= COGS</td>
</tr>
<tr>
<td>Turnover Ratio</td>
<td>Avg. Inventory (3-8)</td>
</tr>
<tr>
<td>Net Sales</td>
<td></td>
</tr>
<tr>
<td>Average Inventory</td>
<td>(5-12)</td>
</tr>
</tbody>
</table>
Definition and Usual Range of Efficiency Ratios

NWC Turnover = \( \frac{\text{Net Sales}}{\text{NWC}} \)  

Usual Range: (3-8)

Degree of newness of fixed assets >50%
Definition and Usual Range of Efficiency Ratios

Usual Range

APCP = \frac{\text{Ending AR Outstanding}}{\text{Annual Credit Sales}/365} \quad (30-40 \text{ days})

APCP = \frac{\text{Ending AP Outstanding}}{\text{Annual Purchases}/365} \quad (15-25 \text{ days})
Definition and Usual Range of Profitability Ratios

Usual Range

Net Profit \times 100
\text{Net Sales}

Return on \text{Net Profit} \times 100
\text{Net Worth} \text{ Net Worth}

Usual Range

(3-8\%)

(20-30\%)
# Definition and Usual Range of Profitability Ratios

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Usual Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Profit x 100 / Total assets</td>
<td>(10-25%)</td>
</tr>
<tr>
<td>Net Profit x 100 / Inventory</td>
<td>(&gt;20%)</td>
</tr>
<tr>
<td>Net Profit x 100 / NWC</td>
<td>(20-30%)</td>
</tr>
</tbody>
</table>
Financial Planning for Independent Pharmacies: A Case Study

See Figures 4 and 5
Health Care Pharmacy
Anytown, USA

Income and Expense Statement
(for 8th fiscal year)
(See Figure 4)
## Cost of Goods Sold:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning Inventory</td>
<td>$140,000</td>
</tr>
<tr>
<td>Purchases</td>
<td>770,000</td>
</tr>
<tr>
<td>Ending Inventory</td>
<td>160,000</td>
</tr>
<tr>
<td>Total COGS Sold</td>
<td>$750,000</td>
</tr>
<tr>
<td>Gross Margin</td>
<td>$300,000</td>
</tr>
</tbody>
</table>

- Total COGS Sold: $750,000 (71.4% (75%))
- Gross Margin: $300,000 (28.6% (25%))
Expenses:

- Proprietor’s Salary: $50,000 4.8% (5.8%)
- Employee’s Wages: 105,000 10% (6.8%)
- Rent: 30,000
- Utilities: 10,000
- Accounting & Legal Fees: 4,000
- Taxes & Licenses: 14,000
Expenses:

- Insurance $11,000
- Interest Paid 6,000
- Computer 3,000
- Depreciation 5,000
- Miscellaneous 47,000

Total Expenses $285,000
Income

Net Profit $15,000 1.4% (3.4%)
Before Taxes

Add Proprietor’s 50,000 Withdrawals (Salary)

Total Income of $65,000 6.2% (9.2%)
Self-Employed Pharmacist
Health Care Pharmacy
Anytown, USA

Balance Sheet (for 8th fiscal year)
(See Figure 5)
Current Assets:

Cash $15,000  1.4%  (3.5%)
AR    75,000  7.1%  (4.2%)
Inventory 160,000  15.2%  (8.9%)

Total Current Assets  $250,000
### Current Liabilities:

<table>
<thead>
<tr>
<th>Liability</th>
<th>Amount</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP</td>
<td>$60,000</td>
<td>5.7%</td>
</tr>
<tr>
<td>Notes Payable (1 year)</td>
<td>30,000</td>
<td></td>
</tr>
<tr>
<td>Accrued Expenses</td>
<td>10,000</td>
<td></td>
</tr>
</tbody>
</table>

**Total Current Liabilities**  $100,000
Long-Term Liabilities

Notes Payable  $ 50,000  4.8%  (13.4%)
Net Worth  125,000  11.9%  (57%)
Financial Ratios

After its 6th, 7th and 8th years of operation
# Solvency Ratios

<table>
<thead>
<tr>
<th>Solvency Ratios</th>
<th>6th</th>
<th>7th</th>
<th>8th</th>
<th>Usual Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Current Ratio</td>
<td>3.5</td>
<td>3.1</td>
<td>2.5</td>
<td>≥ 2</td>
</tr>
<tr>
<td>2. Acid Test</td>
<td>1.3</td>
<td>1.1</td>
<td>0.9</td>
<td>≥ 1</td>
</tr>
</tbody>
</table>
## Solvency Ratios

<table>
<thead>
<tr>
<th>Solvency Ratios</th>
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<th>7th</th>
<th>8th</th>
<th>Usual Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. <strong>Current Liabilities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inventory*</td>
<td>.47</td>
<td>.55</td>
<td>.67</td>
<td>&lt;.50</td>
</tr>
<tr>
<td>4. <strong>Total Liabilities</strong></td>
<td></td>
<td></td>
<td></td>
<td>&lt;1.0</td>
</tr>
<tr>
<td>Net Worth</td>
<td>.85</td>
<td>.95</td>
<td>1.20</td>
<td></td>
</tr>
</tbody>
</table>
## Solvency Ratios

<table>
<thead>
<tr>
<th>Solvency Ratios</th>
<th>6th</th>
<th>7th</th>
<th>8th</th>
<th>Usual</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. <strong>Fixed Assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net Worth</td>
<td>.37</td>
<td>.25</td>
<td>.12</td>
<td>.25-.50</td>
<td></td>
</tr>
<tr>
<td>6. <strong>Long Term Liabilities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N.W.C.</td>
<td>.43</td>
<td>.38</td>
<td>.33</td>
<td>&lt;0.5</td>
<td></td>
</tr>
</tbody>
</table>
Solvency Report

- Current Ratio: OK, negative trend
- Acid Test: Decrease inventory
- CL/INV: Decrease current liabilities
- TL/NW: Decrease TL
- FA/NW: Increase FA
- LTL/NW: OK
Efficiency Ratios

<table>
<thead>
<tr>
<th>Efficiency Ratios</th>
<th>6th</th>
<th>7th</th>
<th>8th</th>
<th>Usual</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Inventory T.O.R.</td>
<td>5.3</td>
<td>5.2</td>
<td>5.0</td>
<td>4-8</td>
<td></td>
</tr>
<tr>
<td>2. Net Sales</td>
<td>7.5</td>
<td>7.3</td>
<td>7.0</td>
<td>5-12</td>
<td></td>
</tr>
<tr>
<td>Inventory</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Efficiency Ratios

<table>
<thead>
<tr>
<th>Efficiency Ratios</th>
<th>6&lt;sup&gt;th&lt;/sup&gt;</th>
<th>7&lt;sup&gt;th&lt;/sup&gt;</th>
<th>8&lt;sup&gt;th&lt;/sup&gt;</th>
<th>Usual</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. AR collection period</td>
<td>55</td>
<td>53</td>
<td>55</td>
<td>30-40</td>
<td></td>
</tr>
<tr>
<td>4. AP collection period</td>
<td>27</td>
<td>28</td>
<td>28.4</td>
<td>15-25</td>
<td></td>
</tr>
</tbody>
</table>
## Efficiency Ratios

<table>
<thead>
<tr>
<th>Efficiency Ratios</th>
<th>6\textsuperscript{th}</th>
<th>7\textsuperscript{th}</th>
<th>8\textsuperscript{th}</th>
<th>Usual</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. N.W.C. Turnover</td>
<td>6.6</td>
<td>6.8</td>
<td>7.0</td>
<td>5-12</td>
<td></td>
</tr>
<tr>
<td>6. Degree of Newness of Fixed Assets</td>
<td>55%</td>
<td>45%</td>
<td>33%</td>
<td>&gt;50%</td>
<td></td>
</tr>
</tbody>
</table>
Efficiency Report

- TOR: Decrease inventory
- ARCP: Decrease
  - Aggressive collection
  - Careful screening
- APCP: Decrease
- NWC TO: Increase NWC
- Newness FA: Increase
# Profitability Ratios

<table>
<thead>
<tr>
<th>Profitability Ratios</th>
<th>6th</th>
<th>7th</th>
<th>8th</th>
<th>Usual Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>Net Profit</strong> x 100</td>
<td>2.3%</td>
<td>2.0%</td>
<td>1.4%</td>
<td>2-4%</td>
</tr>
<tr>
<td>Net Sales</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Profitability Ratios

<table>
<thead>
<tr>
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<th>7th</th>
<th>8th</th>
<th>Usual Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Return on Invest</td>
<td>18%</td>
<td>16%</td>
<td>12%</td>
<td>15-25%</td>
</tr>
<tr>
<td>Net Worth</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. <strong>Net Profit x 100</strong></td>
<td>9.6%</td>
<td>7.8%</td>
<td>5.5%</td>
<td>&gt;10%</td>
</tr>
<tr>
<td>Total Assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Profitability Ratios

<table>
<thead>
<tr>
<th>Profitability Ratios</th>
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<th>7th</th>
<th>8th</th>
<th>Usual Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Net Profit x 100</td>
<td>15%</td>
<td>13%</td>
<td>10%</td>
<td>&gt;20%</td>
</tr>
<tr>
<td>Inventory</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Net Profit x 100</td>
<td>15%</td>
<td>14%</td>
<td>10%</td>
<td>20-30%</td>
</tr>
<tr>
<td>N.W.C.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Profitability Report (all down)

• Decrease COGS
  - Revise pricing
  - Cash discounts
  - Shoplifting/pilferage
  - Third parties

• Decrease payroll
Financial Objectives for the 9th Year

1. Project sales of $1,100,000 (NCPA Pharmacia Digest increase was 5.6%)
2. Make cost of goods sold 70% of sales
3. Make a net profit of 3% of sales and increase owner’s salary to 5.7% of sales
Financial Objectives for the 9th Year

4. Pay bills on time (decrease AP collection period to 25 days)
5. Project personnel expense at 9.4% of sales
6. Decrease inventory by $24,000
Financial Objectives for the 9th Year

7. Decrease accounts receivable $7,200
8. Don’t purchase new fixtures until the tenth year
9. Reinvest one-half of net profit in pharmacy
Development of Pro Forma Income Statement

Step 1:
Total Sales $1,100,000.00 (100%)
(see figure 6)
Development of Pro Forma Income Statement

Step 2:
Cost of Goods Sold $770,000 (70%)
(see figure 6)
Development of Pro Forma Income Statement

Step 3:
Gross Margin: $330,000 (30%)
(see figure 6)
Development of Pro Forma Income Statement

Step 4:
Proprietor’s/Manager’s Salary $62,700
(see figure 6)
Development of Pro Forma Income Statement

Step 5:
Employee’s Wages $103,400
(see figure 6)
Development of Pro Forma Income Statement

Step 6:
- Rent $30,000
- Utilities $11,000
- Accounting & Legal Fees $4,400
- Taxes & Licenses $14,000
- Insurance $11,500

(see figure 6)
Development of Pro Forma Income Statement

Step 6 (continued):
Interest Paid $  5,000
Computer $  3,000
Depreciation $  5,000
Miscellaneous $47,000
(see figure 6)
Development of Pro Forma Income Statement

Step 7:
Net Profit Before Taxes $33,000 (3%) 
(see figure 6)
Development of Pro Forma Income Statement

Step 8:
Total Expenses $297,000 (27%)
(see figure 6)
Development of Pro Forma Income Statement

Step 9:
Beginning Inventory $160,000
(see figure 6)
Development of Pro Forma Income Statement

Step 10:
Ending Inventory $136,000
(see figure 6)
Development of Pro Forma Income Statement

Step 11: Purchases $746,000
(see figure 6)
Development of Pro Forma Income Statement

Beginning Inventory $160,000
+ Purchases 746,000
COGAS 906,000
- EI -136,000
COGS $770,000
(see figure 6)
Development of Pro Forma Income Statement

Step 12:
Prescription Sales $880,000 (80%)
(see figure 6)
Development of Pro Forma Income Statement

Step 13:
Other Sales $220,000 (20%)
(see figure 6)
Development of Pro Forma Income Statement

Step 14:
Add proprietor’s withdrawals

(Salary) 62,700 (5.7%)

(see figure 6)
Development of Pro Forma Income Statement

Step 15:
Total Income of $95,700 (8.7%)
Self-Employed Pharmacist
(see figure 6)
Development of Pro Forma Balance Sheet

Step 1:
Accounts Receivable $67,800
(see figure 7)
Development of Pro Forma Balance Sheet

Step 2:
Inventory $136,000
(see figure 7)
Development of Pro Forma Balance Sheet

Step 3:
Original Fixtures & Equipment Cost $45,000
(see figure 7)
Development of Pro Forma Balance Sheet

Step 4: Less: Accumulated Depreciation $35,000 (see figure 7)
Development of Pro Forma Balance Sheet

Step 5:
Net Fixed Assets $10,000

(see figure 7)
Development of Pro Forma Balance Sheet

Step 6: Prepaid Expenses $10,000
(see figure 7)
Development of Pro Forma Balance Sheet

Step 7:
Accounts Payable $51,000
(see figure 7)
Development of Pro Forma Balance Sheet

To Decrease APCP to 25 Days

- APTO = \( \frac{365}{25} = 14.6 \)
- APTO = Purchases/AP
- 14.6 = \( \$746,000 \)/AP
- AP = \$51,000

(see figure 7)
Development of Pro Forma Balance Sheet

Step 8:
Notes Payable (1 year) $30,000
(see figure 7)
Development of Pro Forma Balance Sheet

Step 9:
Accrued Expenses $10,000
(see figure 7)
Development of Pro Forma Balance Sheet

Step 10:
Total Current Liabilities $91,000
(see figure 7)
Development of Pro Forma Balance Sheet

Step 11:
Notes Payable $45,000
(see figure 7)
Development of Pro Forma Balance Sheet

Step 12: Net Worth $141,500
(Old NW + ½ NP)
($125,000 + ½ [$33,000])
(see figure 7)
Development of Pro Forma Balance Sheet

Step 13:
Total Liabilities and Net Worth $277,500
(see figure 7)
Development of Pro Forma Balance Sheet

Step 14:
Total Assets $277,500
A – L = NW
A = NW + L
(see figure 7)
Development of Pro Forma Balance Sheet

Step 15: Total Current Assets $257,500 (see figure 7)
Development of Pro Forma Balance Sheet

Step 16:
Cash $53,700
(see figure 7)
Summary

• Conducted a complete and thorough financial analysis of a community pharmacy.
• Identified real and potential problems along with ways to solve or ameliorate those problems and plan for the future.
• Developed budgets and pro forma financial statements.