

Financial Analysis and Planning

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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: $\frac{\text{Cash} + \text{AR}}{\text{Current Liabilities}} \geq 1:1$

Definition and Usual Range of Solvency Ratios

Current Liabilities

Average Inventory x 100

Usual Range

(≤ 50%)

Total Liabilities

Net Worth x 100

(≤ 100%)

Definition and Usual Range of Solvency Ratios

Usual Range

Fixed Assets x 100

(25-25%)

Net Worth

Long Term Debt (Funded Debt) x 100

Net working capital

(≤ 50%)

Definition and Usual Range of Efficiency Ratios

| | | <u>Usual Range</u> |
|-------------------|----------------|--------------------|
| Inventory | = <u>COGS</u> | |
| Turnover Ratio | Avg. Inventory | (3-8) |
| <u>Net Sales</u> | | |
| Average Inventory | | (5-12) |

Definition and Usual Range of Efficiency Ratios

| | <u>Usual Range</u> |
|--|--------------------|
| NWC Turnover = $\frac{\text{Net Sales}}{\text{NWC}}$ | (3-8) |
| Degree of newness of fixed assets | >50% |

Definition and Usual Range of Efficiency Ratios

Usual Range

APCP = Ending AR Outstanding (30-40 days)
Annual Credit Sales/365

APCP = Ending AP Outstanding (15-25 days)
Annual Purchases/365

Definition and Usual Range of Profitability Ratios

| | <u>Usual Range</u> |
|--|--------------------|
| $\frac{\text{Net Profit} \times 100}{\text{Net Sales}}$ | (3-8%) |
| $\text{Return on} = \frac{\text{Net Profit} \times 100}{\text{Net Worth}}$ | (20-30%) |

Definition and Usual Range of Profitability Ratios

| | <u>Usual Range</u> |
|--|--------------------|
| $\frac{\text{Net Profit} \times 100}{\text{Total assets}}$ | (10-25%) |
| $\frac{\text{Net Profit} \times 100}{\text{Inventory}}$ | (>20%) |
| $\frac{\text{Net Profit} \times 100}{\text{NWC}}$ | (20-30%) |

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:

| | | |
|---------------------|------------------|--------------------|
| Beginning Inventory | | \$140,000 |
| Purchases | | 770,000 |
| Ending Inventory | | 160,000 |
| Total COGS Sold | <u>\$750,000</u> | <u>71.4%</u> (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 | <u>47,000</u> |
| Total Expenses | <u>\$285,000</u> |

Income

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

| | | | |
|--|---------------|--|--|
| Add Proprietor's Withdrawals (Salary) | <u>50,000</u> | | |
|--|---------------|--|--|

| | | | |
|---|-----------------|------|--------|
| Total Income of Self-Employed Pharmacist | <u>\$65,000</u> | 6.2% | (9.2%) |
|---|-----------------|------|--------|

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 | <u>160,000</u> | 15.2% | (8.9%) |

Total Current Assets \$250,000

Current Liabilities:

| | | |
|---------------------------|---------------|-------------|
| AP | \$60,000 | 5.7% (3.9%) |
| Notes Payable (1 year) | 30,000 | |
| Accrued Expenses | <u>10,000</u> | |
| Total Current Liabilities | \$100,000 | |

Long-Term Liabilities

| | | | |
|---------------|----------------|-------|---------|
| Notes Payable | \$ 50,000 | 4.8% | (13.4%) |
| Net Worth | <u>125,000</u> | 11.9% | (57%) |

Financial Ratios

After its 6th, 7th and 8th years of operation

Solvency Ratios

| <u>Solvency Ratios</u> | <u>6th</u> | <u>7th</u> | <u>8th</u> | <u>Usual Range</u> |
|------------------------|-----------------------|-----------------------|-----------------------|--------------------|
| 1. Current Ratio | 3.5 | 3.1 | 2.5 | ≥ 2 |
| 2. Acid Test | 1.3 | 1.1 | 0.9 | ≥ 1 |

Solvency Ratios

| <u>Solvency Ratios</u> | 6 th | 7 th | 8 th | <u>Usual Range</u> |
|------------------------|-----------------|-----------------|-----------------|--------------------|
|------------------------|-----------------|-----------------|-----------------|--------------------|

| | | | | |
|-------------------------------|--|--|--|--|
| 3. <u>Current Liabilities</u> | | | | |
|-------------------------------|--|--|--|--|

| | | | | |
|------------|-----|-----|-----|------|
| Inventory* | .47 | .55 | .67 | <.50 |
|------------|-----|-----|-----|------|

| | | | | |
|-----------------------------|-----|-----|------|------|
| 4. <u>Total Liabilities</u> | .85 | .95 | 1.20 | <1.0 |
|-----------------------------|-----|-----|------|------|

 Net Worth

Solvency Ratios

Solvency Ratios 6th 7th 8th Usual Range

5. Fixed Assets

| | | | | |
|-----------|-----|-----|-----|---------|
| Net Worth | .37 | .25 | .12 | .25-.50 |
|-----------|-----|-----|-----|---------|

6. Long Term Liabilities

| | | | | |
|--------|-----|-----|-----|------|
| N.W.C. | .43 | .38 | .33 | <0.5 |
|--------|-----|-----|-----|------|

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

| <u>Efficiency Ratios</u> | 6 th | 7 th | 8 th | <u>Usual Range</u> |
|----------------------------------|-----------------|-----------------|-----------------|--------------------|
| 1. Inventory T.O.R. | 5.3 | 5.2 | 5.0 | 4-8 |
| 2. <u>Net Sales</u> Inventory | 7.5 | 7.3 | 7.0 | 5-12 |

Efficiency Ratios

| <u>Efficiency Ratios</u> | <u>6th</u> | <u>7th</u> | <u>8th</u> | <u>Usual Range</u> |
|--------------------------|-----------------------|-----------------------|-----------------------|--------------------|
| 3. AR collection period | 55 | 53 | 55 | 30-40 |
| 4. AP collection period | 27 | 28 | 28.4 | 15-25 |

Efficiency Ratios

| <u>Efficiency Ratios</u> | <u>6th</u> | <u>7th</u> | <u>8th</u> | <u>Usual Range</u> |
|---|-----------------------|-----------------------|-----------------------|--------------------|
| 5. N.W.C. Turnover | 6.6 | 6.8 | 7.0 | 5-12 |
| 6. Degree of Newness of Fixed Assets | 55% | 45% | 33% | >50% |

Efficiency Report

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

Profitability Ratios

| <u>Profitability Ratios</u> | 6 th | 7 th | 8 th | Usual Range |
|---|-----------------|-----------------|-----------------|-------------|
| 1. <u>Net Profit</u> x 100 Net Sales | 2.3% | 2.0% | 1.4% | 2-4% |

Profitability Ratios

| <u>Profitability Ratios</u> | 6 th | 7 th | 8 th | Usual Range |
|--|-----------------|-----------------|-----------------|-------------|
| 2. Return on Invest Net Worth | 18% | 16% | 12% | 15-25% |
| 3. <u>Net Profit</u> x 100 Total Assets | 9.6% | 7.8% | 5.5% | >10% |

Profitability Ratios

| <u>Profitability Ratios</u> | 6 th | 7 th | 8 th | Usual Range |
|---|-----------------|-----------------|-----------------|-------------|
| 4. <u>Net Profit</u> x 100 Inventory | 15% | 13% | 10% | >20% |
| 5. <u>Net Profit</u> x 100 N.W.C. | 15% | 14% | 10% | 20-30% |

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
(see figure 6)

\$330,000 (30%)

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 |
| <u>+ Purchases</u> | <u>746,000</u> |
| COGAS | 906,000 |
| <u>- EI</u> | <u>-136,000</u> |
| 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

- $A_{PTO} = 365/25 = 14.6$
- $A_{PTO} = \text{Purchases}/AP$
- $14.6 = \$746,000/AP$
- $AP = \$51,000$

(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
(see figure 7)

\$10,000

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 + $\frac{1}{2}$ NP)

(\$125,000 + $\frac{1}{2}$ [\$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.