Chapter 17

Financial Forecasting and Planning
Slide Contents

• Learning Objectives
  1. An Overview of Financial Planning
  2. Developing a Long-term Financial Plan
  3. Developing a Short-Term Financial Plan

• Key Terms
Learning Objectives

1. Understand the goals of financial planning.
2. Use the percent of sales method to forecast the financing requirements of a firm including its discretionary financing needs.
3. Prepare a cash budget and use it to evaluate the amount and timing of a firm’s short-term financing requirements.
17.1 An Overview of Financial Planning
An Overview of Financial Planning

• What is the primary objective of preparing financial plans?
  – To estimate the future financing requirements in advance of when the financing will be needed.

• The process of planning is critical to force managers to think systematically about the future, despite the uncertainty of future.
An Overview of Financial Planning (cont.)

• Most firms engage (use) in three types of planning:
  – Strategic planning,
  – Long-term financial planning, and
  – Short-term financial planning

• **Strategic plan** defines, in very general terms, how the firm plans to make money in the future. It serves as a guide for all other plans.
An Overview of Financial Planning (cont.)

- The **long-term financial plan** generally encompasses a period of one to three/five years and incorporates estimates of the firm’s *income statements* and *balance sheets* for each year of the planning horizon.
An Overview of Financial Planning (cont.)

• The **short-term financial plan has got a** period of one year or less and is a very detailed (particular) description of the firm’s anticipated (forecasted) cash flows.

• The format typically used is a **cash budget**, which contains *revenue projections* and expenses in the month in which they are expected to occur for each operating unit of the company.
17.2 Developing a Long-Term Financial Plan
Developing a Long-Term Financial Plan

- Forecasting a firm’s future financing needs using a long-term financial plan can be thought of in terms of three basic steps:
  1. Construct a sales forecast
  2. Prepare pro-forma financial statements
  3. Estimate the firm’s financing needs
Developing a Long-Term Financial Plan (cont.)

- **Step 1**: Construct a Sales Forecast

  - Sales forecast is generally based on:
    1. past trend in sales; and
    2. the influence of any anticipated events that might materially affect that trend.
Developing a Long-Term Financial Plan (cont.)

**Step 2:** Prepare Pro Forma Financial Statements

- Pro forma financial statements help forecast a firm’s asset requirements needed to support the forecast of revenues (step 1).
- The most common technique is **percent of sales method** that expresses expenses, assets, and liabilities for a future period as a percentage of sales.
Developing a Long-Term Financial Plan (cont.)

• **Step 3**: Estimate the Firm’s Financing Needs
  
  – Using the pro forma statements we can extract (introduce) the cash flow requirements of the firm.
Financial Forecasting Example

• Table 17-1 illustrates how Ziegen, Inc. uses the percent of sales method to construct pro forma income statement and pro forma balance sheet.

• The company uses the three-step approach to financial planning.
Financial Forecasting Example (cont.)

**Step 1:** Forecast Revenues and Expenses

- Zeigen’s financial analyst estimate the firm will earn 5% on the projected sales of $12 million in 2010.
- Zeigen plans to retain (keep) half of its earnings and distribute the other half as dividends.
- See Table 17-1
Financial Forecasting Example (cont.)

- **Step 2**: Prepare Pro Forma Financial Statements

  - The firm’s need for assets to support firm sales is forecasted using percent of sales method, where each item in the balance sheet is assumed to vary in accordance with its percent of sales for 2010.
Financial Forecasting Example (cont.)

• **Step 3**: Estimate the Firm’s Financing Requirements
  
  - This involves *comparing* the projected level of assets *needed* to support the sales forecast to the *available* sources of financing.
  
  - In essence, we now forecast the liabilities and owner’s equity section of the pro forma balance sheet.
Financial Forecasting Example

Table 17.1: Using the Percent of Sales Method to Forecast Ziegen, Inc.'s Financing Requirements for 2011

Preparation of Ziegen's financial forecast for 2011 begins with a forecast of firm sales for the year. This forecast is followed by a projection of assets required to support the projected level of sales. Offsetting the firm's need for discretionary financing is the financing that the firm receives from accounts payable and accrued expenses, which arise automatically (or spontaneously) as a result of the firm's having made a sale. Ziegen's financial analysts forecast $12 million in sales for 2011, which will require that the firm invest a total of $7.2 million in assets. The $1.2 million increase in assets will be financed partially by the $400,000 increase in the levels of accounts payable and accrued expenses (equal to $2.4 million − $2.0 million). In addition, the analysts expect the firm to generate another $300,000 from the firm's retention of one-half the firm's 2011 net income. The firm's discretionary financing need of $500,000 is calculated by subtracting the $400,000 in accounts payable and accrued expenses and the $300,000 increase in retained earnings from the total increase in financing needs of $1.2 million.

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<tr>
<td>Sales</td>
<td>$10,000,000</td>
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<td>Sales growth rate = 20%</td>
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<tr>
<td>Net Income</td>
<td>$500,000</td>
<td>5.0%</td>
<td>$10m × (1 + .20) = $12,000,000</td>
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</table>

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</thead>
<tbody>
<tr>
<td>Current assets</td>
<td>$2,000,000</td>
<td>20.0%</td>
<td>Current assets .20 × 12m = $2,400,000</td>
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<tr>
<td>Net fixed assets</td>
<td>$4,000,000</td>
<td>40.0%</td>
<td>Net fixed assets .40 × 12m = $4,800,000</td>
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<tr>
<td>Total</td>
<td>$6,000,000</td>
<td></td>
<td>Total .10 × 12m = $7,200,000</td>
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<tr>
<td>Accounts payable</td>
<td>$1,000,000</td>
<td>10.0%</td>
<td>Accounts payable .10 × 12m = $1,200,000</td>
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<tr>
<td>Accrued expenses</td>
<td>$1,000,000</td>
<td>10.0%</td>
<td>Accrued expenses .10 × 12m = $1,200,000</td>
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<td>Notes payable</td>
<td>$500,000</td>
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<td>Notes payable No change $500,000</td>
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<tr>
<td>Current liabilities</td>
<td>$2,500,000</td>
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<td>Current liabilities $2,900,000</td>
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<tr>
<td>Long-term debt</td>
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<tr>
<td>Total liabilities</td>
<td>$4,500,000</td>
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<td>Total liabilities $4,900,000</td>
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<tr>
<td>Common stock (par)</td>
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<td>NA*</td>
<td>Common stock (par) No change $100,000</td>
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<tr>
<td>Paid-in-capital</td>
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<td>NA*</td>
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<td>Retained earnings</td>
<td>$1,200,000</td>
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<td>Retained earnings Calculation = $1,500,000</td>
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<tr>
<td>Common equity</td>
<td>$1,500,000</td>
<td></td>
<td>Common equity $1,800,000</td>
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</tr>
<tr>
<td>Total</td>
<td>$6,000,000</td>
<td></td>
<td>Projected sources of financing $6,700,000</td>
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</table>

Discretionary financing needs (DFN) for 2011 is a “plug figure” that equals the difference in the firm’s projected total financing requirements or total assets equal to $7,200,000 and projected sources of financing which is $6,700,000. In this scenario DFN is $500,000.

Table 17.1 notes:
* Not applicable. These account balances do not vary with sales.
* Projected retained earnings for 2011 equals $1,500,000 which is equal to the 2010 level of retained earnings of $1,200,000 plus net income of $600,000 less common dividends equal to 50% of projected net income or $300,000. 

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Sources of Spontaneous Financing – Accounts Payable and Accrued Expenses

- Accounts payable and accrued expenses are typically the only liabilities that vary directly with sales.
- Accounts payable and accrued expenses are referred to as sources of spontaneous financing. The percent of sales method can be used to forecast the levels of both these sources of financing.
Sources of Discretionary Financing

• Raising financing with notes payable, long-term debt and common stock requires managerial discretion and hence these sources of financing are called discretionary sources of financing.

• The retention of earnings is also a discretionary source as it is the result of firm’s discretionary dividend policy.
Summarizing Ziegen’s Financial Forecast (cont.)

\[
\text{Discretionary Financing Needs (DFN)} = \frac{\text{Pro Forma Total Assets}}{\text{Total Financing Needs}} - \frac{\text{Accounts Payable} - \text{Accrued Expenses} - \text{Notes Payable} - \text{Long-term Debt} - \text{Common Equity}}{\text{Existing discretionary sources of financing}} - \frac{\text{Projected spontaneous sources of financing}}{\text{Projected Sources of Financing}}
\]

\[
= \text{Discretionary Financing Needs (DFN)}
\]
Summarizing Ziegen’s Financial Forecast

• Discretionary Financing Needs (DFN)
  = \{\text{Total Financing Needs}\} \text{ less } \{\text{Projected Sources of Financing}\}
  = \{\$7.2\text{ m (increase in assets)}\} - \{\$2.4\text{m in spontaneous financing +} \$2.5\text{m in short and long-term debt +} \$1.8\text{ million in equity}\}
  = \$7.2\text{ million} - \$6.7\text{ million} = \$500,000
Summarizing Ziegen’s Financial Forecast (cont.)

- The firm has to raise $500,000 with some combination of borrowing (short-term or long-term) or the issuance of stock.

- Since they require a managerial decision, they are referred to as the firm’s discretionary financing needs (DFN).