

# Cash Flow and Financial Planning

Analyzing the Firm's Cash Flow

The Financial Planning Process

Cash Planning: Cash Budgets

Profit Planning: Pro Forma Statement

Preparing the Pro Forma Income Statement

Preparing the Pro Forma Balance Sheet

Evaluation of Pro Forma Statements

# Learning Goals

- Understand tax depreciation procedures and the effect of depreciation on the firm's cash flows.
- Discuss the firm's statement of cash flows, operating cash flow, and free cash flow.
- Understand the financial planning process, including long-term (strategic) financial plans and short-term (operating) financial plans.
- Discuss the cash-planning process and the preparation, evaluation, and use of the cash budget.
- Explain the simplified procedures used to prepare and evaluate the pro forma income statement and the pro forma balance sheet.
- Evaluate the simplified approaches to pro forma financial statement preparation and the common uses of pro forma statements.

## *Analyzing the Firm's Cash Flow*

**depreciation** A portion of the costs of fixed assets charged against annual revenues over time.

**operating flows** Cash flows directly related to sale and production of the firm's products and services.

**investment flows** Cash flows associated with purchase and sale of both fixed assets and equity investments in other firms.

**financing flows** Cash flows that result from debt and equity financing transactions; include incurrence and repayment of debt, cash inflow from the sale of stock, and cash outflows to repurchase stock or pay cash dividends.

**noncash charge** An expense that is deducted on the income statement but does not involve the actual outlay of cash during the period; includes depreciation, amortization, and depletion.

<u>Inflows (sources)</u>	<u>Outflows (uses)</u>
Decrease in any asset	Increase in any asset
Increase in any liability	Decrease in any liability
Net profits after taxes	Net loss
Depreciation and other noncash charges	Dividends paid
Sale of stock	Repurchase or retirement of stock

**TABLE 4.6****Baker Corporation Statement of Cash Flows (\$000)  
for the Year Ended December 31, 2012****Cash Flow from Operating Activities**

Net profits after taxes	\$180
Depreciation	100
Decrease in accounts receivable	100
Decrease in inventories	300
Increase in accounts payable	200
Decrease in accruals	( 100) <sup>a</sup>
Cash provided by operating activities	\$780

**Cash Flow from Investment Activities**

Increase in gross fixed assets	(\$300)
Changes in equity investments in other firms	<u>0</u>
Cash provided by investment activities	<u>(\$300)</u>

**Cash Flow from Financing Activities**

Decrease in notes payable	(\$100)
Increase in long-term debts	200
Changes in stockholders' equity <sup>b</sup>	0
Dividends paid	( 80)
Cash provided by financing activities	<u>\$ 20</u>
Net increase in cash and marketable securities	<u><u>\$500</u></u>

<sup>a</sup>As is customary, parentheses are used to denote a negative number, which in this case is a cash outflow.

<sup>b</sup>Retained earnings are excluded here, because their change is actually reflected in the combination of the "Net profits after taxes" and "Dividends paid" entries.

**operating cash flow (OCF)** The cash flow a firm generates from its normal operations; calculated as net operating profits after taxes (NOPAT) plus depreciation.

**net operating profits after taxes (NOPAT)** A firm's earnings before interest and after taxes,  $EBIT * (1 - T)$ .

**free cash flow (FCF)** The amount of cash flow available to investors (creditors and owners) after the firm has met all operating needs and paid for investments in net fixed assets and net current assets.

$$FCF = OCF - \text{Net fixed asset investment (NFAI)} \\ - \text{Net current asset investment (NCAI)}$$

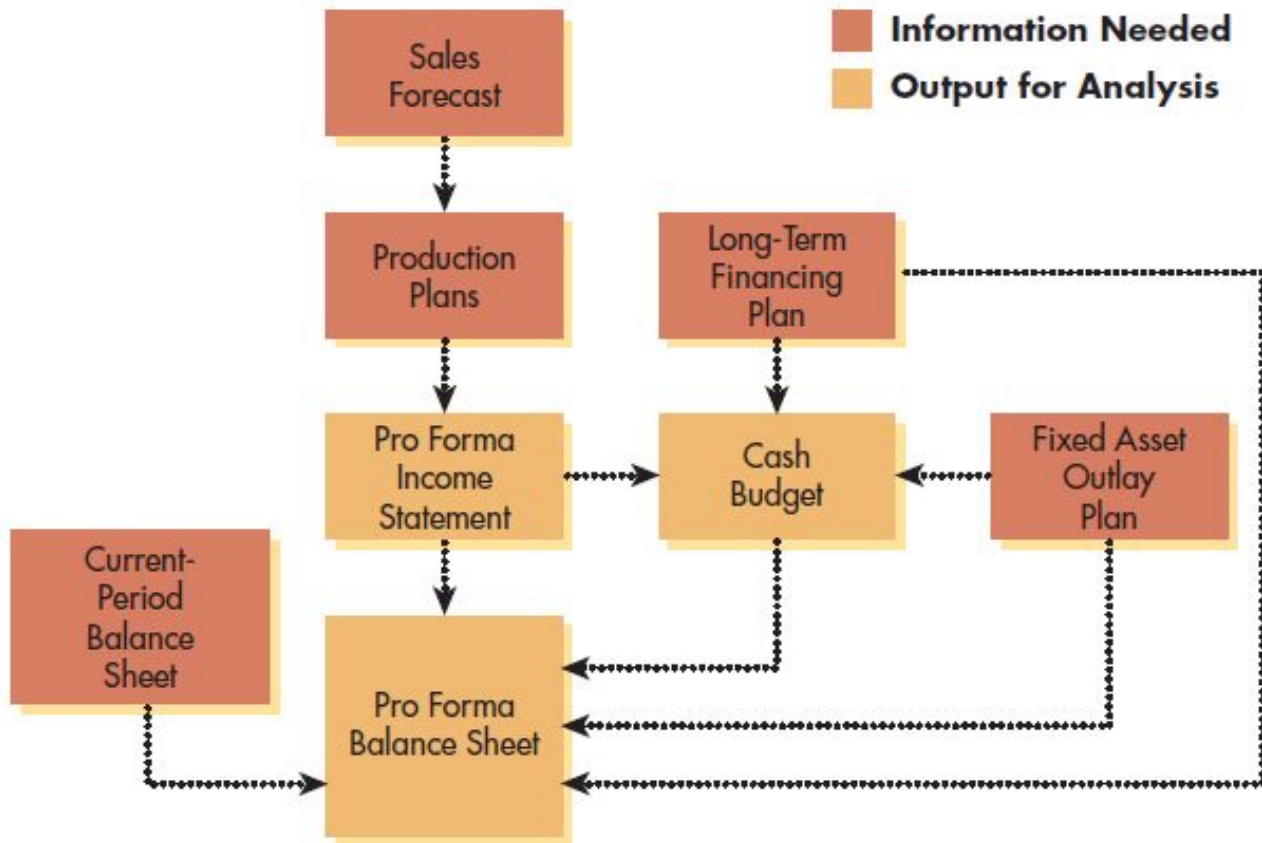
$$NFAI = \text{Change in net fixed assets} + \text{Depreciation}$$

# The Financial Planning Process

**financial planning process** Planning that begins with long-term, or strategic, financial plans that in turn guide the formulation of short-term, or operating, plans and budgets.

**long-term (strategic) financial plans** Plans that lay out a company's planned financial actions and the anticipated impact of those actions over periods ranging from 2 to 10 years.

**short-term (operating) financial plans** Specify short-term financial actions and the anticipated impact of those actions.



## *Cash Planning: Cash Budgets*

**cash budget (cash forecast)** A statement of the firm's planned inflows and outflows of cash that is used to estimate its short-term cash requirements.

**sales forecast** The prediction of the firm's sales over a given period, based on external and/or internal data; used as the key input to the short-term financial planning process.

**external forecast** A sales forecast based on the relationships observed between the firm's sales and certain key external economic indicators.

**internal forecast** A sales forecast based on a buildup, or consensus, of sales forecasts through the firm's own sales channels.

### *PREPARING THE CASH BUDGET*

	Jan.	Feb.	. . .	Nov.	Dec.
Cash receipts	\$XXX	\$XXG		\$XXM	\$XXT
Less: Cash disbursements	<u>XXA</u>	<u>XXH</u>	. . .	<u>XXN</u>	<u>XXU</u>
Net cash flow	\$XXB	\$XXI		\$XXO	\$XXV
Add: Beginning cash	<u>XXC</u>	<u>XXD</u>	<u>XXJ</u>	<u>XXP</u>	<u>XXQ</u>
Ending cash	\$XXD	\$XXJ		\$XXQ	\$XXW
Less: Minimum cash balance	<u>XXE</u>	<u>XXK</u>	. . .	<u>XXR</u>	<u>XXY</u>
Required total financing		\$XXL		\$XXS	
Excess cash balance	\$XXF				\$XXZ

**cash receipts** All of a firm's inflows of cash during a given financial period.

**cash disbursements** All outlays of cash by the firm during a given financial period.

**net cash flow** The mathematical difference between the firm's cash receipts and its cash disbursements in each period.

**ending cash** The sum of the firm's beginning cash and its net cash flow for the period.

**required total financing** Amount of funds needed by the firm if the ending cash for the period is less than the desired minimum cash balance; typically represented by notes payable.

**excess cash balance** The (excess) amount available for investment by the firm if the period's ending cash is greater than the desired minimum cash balance; assumed to be invested in marketable securities.

	Oct.	Nov.	Dec.
Total cash receipts <sup>a</sup>	\$210	\$320	\$340
Less: Total cash disbursements <sup>b</sup>	<u>213</u>	<u>418</u>	<u>305</u>
Net cash flow	(\$ 3)	(\$ 98)	\$ 35
Add: Beginning cash	<u>50</u>	<u>47</u>	<u>( 51)</u>
Ending cash	\$ 47 ↗	(\$ 51) ↗	(\$ 16)
Less: Minimum cash balance	<u>25</u>	<u>25</u>	<u>25</u>
Required total financing (notes payable) <sup>c</sup>		\$ 76	\$ 41
Excess cash balance (marketable securities) <sup>d</sup>	\$ 22		



## ***COPING WITH UNCERTAINTY IN THE CASH BUDGET***

	October			November			December		
	Pessi- mistic	Most likely	Opti- mistic	Pessi- mistic	Most likely	Opti- mistic	Pessi- mistic	Most likely	Opti- mistic
Total cash receipts	\$160	\$210	\$285	\$210	\$320	\$410	\$275	\$340	\$422
Less: Total cash disbursements	<u>200</u>	<u>213</u>	<u>248</u>	<u>380</u>	<u>418</u>	<u>467</u>	<u>280</u>	<u>305</u>	<u>320</u>
Net cash flow	(\$ 40)	(\$ 3)	\$ 37	(\$170)	(\$ 98)	(\$ 57)	(\$ 5)	\$ 35	\$102
Add: Beginning cash	<u>50</u>	<u>50</u>	<u>50</u>	<u>10</u>	<u>47</u>	<u>87</u>	( <u>160</u> )	( <u>51</u> )	<u>30</u>
Ending cash	\$ 10	\$ 47	\$ 87	(\$160)	(\$ 51)	\$ 30	(\$165)	(\$ 16)	\$132
Less: Minimum cash balance	<u>25</u>	<u>25</u>	<u>25</u>	<u>25</u>	<u>25</u>	<u>25</u>	<u>25</u>	<u>25</u>	<u>25</u>
Required total financing	\$ 15			\$185	\$ 76		\$190	\$ 41	
Excess cash balance		\$ 22	\$ 62			\$ 5			\$107

### ***Profit Planning: Pro Forma Statements***

**pro forma statements** Projected, or forecast, income statements and balance sheets.

**percent-of-sales method** A simple method for developing the pro forma income statement; it forecasts sales and then expresses the various income statement items as percentages of projected sales.

Sales revenue	\$135,000
Less: Cost of goods sold (0.80)	<u>108,000</u>
Gross profits	\$ 27,000
Less: Operating expenses (0.10)	<u>13,500</u>
Operating profits	\$ 13,500
Less: Interest expense (0.01)	<u>1,350</u>
Net profits before taxes	\$ 12,150
Less: Taxes (0.15 × \$12,150)	<u>1,823</u>
Net profits after taxes	\$ 10,327
Less: Common stock dividends	<u>4,000</u>
To retained earnings	<u><u>\$ 6,327</u></u>

**judgmental approach** A simplified approach for preparing the pro forma balance sheet under which the firm estimates the values of certain balance sheet accounts and uses its external financing as a balancing, or “plug,” figure.

**external financing required (“plug” figure)** Under the judgmental approach for developing a pro forma balance sheet, the amount of external financing needed to bring the statement into balance. It can be either a positive or a negative value.

Assets		Liabilities and Stockholders' Equity	
Cash	\$ 6,000	Accounts payable	\$ 8,100
Marketable securities	4,000	Taxes payable	455
Accounts receivable	16,875	Notes payable	8,300
Inventories		Other current liabilities	<u>3,400</u>
Raw materials	\$ 4,000	Total current liabilities	\$ 20,255
Finished goods	<u>12,000</u>	Long-term debt	<u>18,000</u>
Total inventory	<u>16,000</u>	Total liabilities	\$ 38,255
Total current assets	\$ 42,875	Common stock	30,000
Net fixed assets	<u>63,000</u>	Retained earnings	<u>29,327</u>
Total assets	<u><u>\$105,875</u></u>	Total	\$ 97,582
		External financing required <sup>a</sup>	<u>8,293</u>
		Total liabilities and stockholders' equity	<u><u>\$105,875</u></u>