

Chapter 3

Financial Statements, Cash Flow, and Taxes

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- T3-2 The Income Statement
- T3-3 Statement of Retained Earnings
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T3-1 The Balance Sheet

Jambers, Inc.
(in thousands)

Assets	2013	2014
Cash and Marketable Securities	25	80
Accounts Receivable	300	310
Inventories	<u>720</u>	<u>670</u>
<i>Total Current Assets</i>	1,045	1,060
Net Fixed Assets	1,200	1,400
<i>Total Assets</i>	2,245	2,460
 Liabilities and Equity		
Accounts Payable	95	40
Notes Payable	130	100
Accruals	<u>125</u>	<u>135</u>
<i>Total Current Liabilities</i>	350	275
Long-Term Debt	<u>740</u>	<u>507</u>
<i>Total Debt</i>	1,090	782
Preferred Stock (10,000 shares)	50	50
Common Stock (160,000 shares)	160	160
Capital in excess of par	640	640
Retained Earnings	<u>305</u>	<u>828</u>
<i>Total Common Equity</i>	1,105	1,628
<i>Total Liabilities and Equity</i>	2,245	2,460

T3-2 The Income Statement

Jambers, Inc. (in thousands)

	2013	2014
Net Sales	3,400	3,740
Costs (excluding depreciation)	<u>2,040</u>	<u>2,244</u>
EBITDA	1,360	1,496
Depreciation	120	135
Amortization (noncash chg to write off intangibles – patents goodwill, etc.)	<u>0</u>	<u>0</u>
Earnings before interest and taxes (EBIT)	1,240	1,361
Interest expense	<u>70</u>	<u>107</u>
Earnings before taxes (EBT)	1,170	1,254
Taxes (40%)	<u>468</u>	<u>502</u>
Net Income before preferred dividends	702	752
Preferred dividends	<u>5</u>	<u>5</u>
Net income available to common stkholders	697	747
Common dividends (d = .3)	<u>209</u>	<u>224</u>
Addition to Retained Earnings (r = .7)	488	523
<u>Per-Share Data:</u>		
Common Stock Price	\$28.00	\$31.00
Earnings per share (EPS)	\$ 4.36	\$ 4.67
Dividends per share (DPS)	\$ 1.31	\$ 1.40
Book Value per share (BVPS)	\$ 6.91	\$ 7.38

T3-3 Statement of Retained Earnings (Dec. 31, 2014)

Jambers, Inc.
(in thousands)

Balance of retained earnings, Dec. 31, 2013	\$305
<i>Add:</i> Net Income avail. to com. stkholders, 2014	747
<i>Less:</i> Dividends to common stockholders	(224)
Balance of retained earnings, December 31, 2014	828

Question: Why is the following statement true?

"Retained earnings as reported on the balance sheet do not represent cash and are not 'available' for the payment of dividends or anything else."

T3-4 Preparing for a Statement of Cash Flows

Source of Cash: Decrease in an asset account
 Increase in a liability or equity account

Use of Cash: Increase in an asset account
 Decrease in a liability or equity account

Transfer all sources/uses to the Statement of Cash Flows, but *instead* of using the change in **Retained Earnings**, use **Net Income** and **Payment of Dividends**. Let the change in Cash be derived by the statement.

Also, make sure you are using the change in Gross Fixed Assets, not Net Fixed Assets. (Add depreciation for the year to the change in Net Fixed Assets in order to get the change in Gross Fixed Assets.)

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T3-5 Statement of Cash Flows

Jambers, Inc.
(in thousands)

OPERATING ACTIVITIES

Net Income 752

Additions (Sources of Cash)

Depreciation 135

Decrease in inventories 50

Increase in accruals 10

Subtractions (Uses of Cash)

Increase in accounts receivable (10)

Decrease in accounts payable (55)

Net cash provided by operating activities **882**

LONG-TERM INVESTING ACTIVITIES

Net cash used to acquire gross fixed assets (add depr.) **(335)**

FINANCING ACTIVITIES

Decrease in notes payable (30)

Decrease in long-term debt (233)

Payment of common and preferred dividends (229)

Net cash provided by financing activities **(492)**

Net change in cash and marketable securities **55**

Cash and mkt. securities at beginning of year **25**

Cash and mkt. securities at end of year **80**

T3-6 Accounting Income Versus Net Cash Flow

A business's ***net cash flow*** generally differs from its ***accounting profit*** because some of the revenues and expenses were not paid in cash during the year.

Accounting Profit = Net Income

Net CF = Net Income - Noncash Revenues + Noncash charges

If you assume that all noncash items other than depreciation sum to zero, then:

Net Cash Flow = Net Income + Depreciation

Investors find it useful to calculate operating cash flow where interest expense is NOT subtracted since the cash flows will be discounted back to $t = 0$ using the weighted average cost of capital (which includes the cost of debt).

Operating Cash Flow = (EBIT) (1 - Tax rate) + Depreciation

Question:

Accounting emphasizes the calculation of *net income*. Why does *Finance* emphasize *net cash flow (NCF)* and *operating cash flow (OCF)*?

T3-7 Calculation of Net Income, NCF and OCF

Bloodworth Wholesale had \$8,000,000 in operating income (EBIT) last year. The company's depreciation expense was \$1,600,000 and its interest expense was \$600,000. The firm's tax rate was 40 percent, and the only noncash item was depreciation.

a. What was the firm's **net income** for the year?

b. What was the firm's **net cash flow**?

c. What was the company's **operating cash flow (OCF)**?

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T3-8 Other Modifications and Free Cash Flow

Operating Working Capital = CA used in operations

Net Operating WC = CA - (A/P + Accruals)

Total Operating Capital = Net Operating WC + Net FA

NOPAT = EBIT (1 - T)

Free Cash Flow - the cash flow actually available for distribution to all investors (stockholders and debtholders) after the company has made all the investments in fixed assets, new products, and working capital necessary to sustain ongoing operations

FCF = EBIT(1-T) + D - (Δ Net FA+D) - Δ CA + Δ (A/P+Accr)

Ex:

Calculate the FCF for Jambers, Inc. in 2014 (in thousands):

1361 (.6) + 135 - (200+135) - 15 + (-55 + 10) = 556.6

T3-9 Free Cash Flow Problem

Calculate the FCF for 2014 given the following information:

	<u>2013</u>	<u>2014</u>
Tax Rate	40%	40%
Sales	\$3,400,000	\$6,000,000
Depreciation	93,000	117,000
EBIT	120,000	820,000
Net Income	72,000	126,000
Current Assets	1,600,000	1,900,000
Net Fixed Assets	1,800,000	2,300,000
Accounts Payable	900,000	1,200,000
Notes Payable	490,000	470,000
Accruals	400,000	520,000

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Ans: 112,000

T3-10 Market Value Added (MVA)

Shareholder wealth is maximized by maximizing the cumulative *difference* between the market value of the firm's equity and the amount of equity capital that was supplied by investors. This is the **Market Value Added (MVA)**.

$$\begin{aligned}\text{MVA} &= \text{Mkt value of equity} - \text{Equity capital supplied by investors} \\ &= (\text{Shares outstanding}) (\text{Stock price}) - \text{Total common equity} \\ &= (160,000) (\$22) - \$1,628,000 = \$1,892,000 \text{ (Year 2014)}\end{aligned}$$

Can MVA be negative?

Problem:

Reif Wholesale has 4.5 million shares of common stock outstanding. Its stock price is \$27 per share. The company has \$62 million of common equity on its balance sheet. Calculate the company's Market Value Added (MVA). Ans: \$59.5 mil

T3-11 Economic Value Added (EVA)

Economic Value Added (EVA) focuses on a firm's managerial effectiveness in a specific year.

EVA = After-tax operating profit - After-tax cost of capital

$$= \text{EBIT} (1 - T) - [\text{Total capital} - (\text{A/P} + \text{Accr})] (\text{WACC})$$

$$= \$1,361,000(1 - .4) - \$2,285,000 (.125) = \$530,975$$

(vs. NI of \$747,000)

*Assumes WACC (weighted average cost of capital after-tax) = 12.5%.
Total capital includes N/P, LT Debt, P/S, and Common Equity.*

How is EVA useful?

- *good measure of addition to shareholder value*
- *can be used for divisions as well as for entire company*
- *provides useful basis for determining managerial compensation*
- *very strong correlation between EVA and firm's stock price*
- *if EVA is positive, then ROE exceeds cost of equity*

Problem:

Calculate a firm's EVA given the following information:

Ans: \$114,000

Net Income = \$480,000

Interest Expense = \$50,000

After-tax Cost of Capital = 11%

Total Capital Employed (less A/P and Accruals) = \$3,600,000

Tax Rate = 40%

T3-12 Federal Income Tax

INDIVIDUAL TAX RATES (2014) - Single Individuals

Taxable Income	Marginal Tax Rate
Up to 9,075	10%
\$9,076 - \$36,900	15%
\$36,901 - \$89,350	25%
\$89,351 - \$186,350	28%
\$186,351 - \$405,100	33%
\$405,101 - 406,750	35%
Over \$406,750	39.6%

INDIVIDUAL TAX RATES (2014) - Married Couples filing jointly

Taxable Income	Marginal Tax Rate
Up to \$18,150	10%
\$18,151 - \$73,800	15%
\$73,801 - \$148,850	25%
\$148,851 - \$226,850	28%
\$226,851 - \$405,100	33%
\$405,101 - \$457,600	35%
Over \$457,600	39.6%

CORPORATE TAX RATES (2014)

Taxable Income	Tax on Base of Bracket	Marginal Tax Rate	Average Tax Rate @ Top of Bracket
Up to \$50,000	\$ 0	15%	15.00%
\$50,000 - \$75,000	7,500	25%	18.33%
\$75,000 - \$100,000	13,750	34%	22.25%
\$100,000 - \$335,000	22,250	39%	34.00%
\$335,000 - \$10,000,000	113,900	34%	34.00%
\$10 million - \$15 million	3,400,000	35%	34.33%
\$15 million - \$18.333 mil.	5,150,000	38%	35.00%
Over \$18.333 million	6,416,667	35%	35.00%

T3-13 Calculation of Federal Income Tax for a Corporation

1. Calculate the tax liability on \$92,000 of taxable income.

Ans: \$19,530

2. Calculate the *tax liability* and *average tax rate* on \$245,000 of taxable income (EBT).

Ans: \$78,800, 32.16%

3. Calculate the tax liability on \$520,000 of taxable income.

Ans: \$176,800

T3-14 Individual Income Taxes

Healthcare Tax – 3.8% if >\$250K taxable income (married, joint)

Interest Income - taxed as ordinary income

Municipal Bonds

- called "munis"
- not subject to federal income taxes

(BTY on taxable bond) (1 - T) = Equivalent yield on muni

$$\begin{aligned} \text{Ex: } & 8\% (1 - .15) = 6.8\% \\ & 8\% (1 - .4) = 4.8\% \end{aligned}$$

Capital Gains vs. Ordinary Income

- A **capital gain** is made when a capital asset is sold for more than its purchase price.
- A **capital loss** is made when a capital asset is sold for less than its purchase price.
- **Short-term capital gain/loss** - sold within one year; taxed as ordinary income
- **Long-term capital gain/loss** - held for 1 year or longer; tax rate capped at 15% (except 0% capital gains tax for individuals in the 10% or 15% brackets, and 20% for 39.6% bracket)
- Invest to get **dividends or capital gains**? (discuss rate, deferred tax)
- **Excess capital loss** can offset up to \$3,000 of other income

Dividend Income - same caps as for capital gains

Why would the U.S. want to tax capital gains differently?

T3-15 Corporate Income Taxes

Interest Income - taxed as ordinary income

Dividend Income

- 70% dividend exclusion if less than 20% ownership
- 80% dividend exclusion if >20% but <80% ownership
- 100% dividend exclusion if >80% ownership

Alternative Minimum Tax

- prior to 1987, many large profitable corporations paid no income tax
- individuals/corporations must now calculate their tax 2 ways and pay the higher amount

Interest Expense - tax-deductible

Dividends Paid - not tax-deductible; paid with A-T dollars

$$\text{To pay \$1 of dividends} = \frac{\$1}{1 - T} = \frac{\$1}{1 - .4} = \$1.67$$

How does the tax treatment of interest and dividends paid by a corporation affect the corporation's choice for financing?

Corporate Capital Gains - taxed as ordinary income; preferential tax treatment prior to 1987

Consolidated Corporate Tax Returns - can consolidate tax returns if a corporation owns 80% or more of another corporation

S Corporation - taxed as sole proprietorship/partnership, but has limited liability; for small corporations that meet certain restrictions

T3-16 Loss Carry-Back and Carry-Forward

Rule: Ordinary corporate operating losses may be carried back 2 years and forward 20 years in order to offset taxable income.

Example:

The projected taxable income of Hidalgo Corporation, formed in 2007, is indicated in the table below (in thousands). Calculate the tax liability for each year, assuming a constant tax rate of 40 percent.

<u>Year</u>	<u>EBT</u>	<u>Tax</u>	<u>Credit</u>
2010	\$60		
2011	(80)		
2012	40		
2013	70		
2014	(30)		

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T3-17 Practice Problems

1. Savage Corporation had taxable income this year of \$347,000 from operations after all operating costs but before (1) interest expense of \$52,000, (2) dividends received of \$25,000 (assume 10% ownership), (3) dividends paid of \$31,000, (4) interest income of \$17,000, and (5) income taxes.

Calculate the firm's income tax liability and its after-tax income.

Ans: \$107,855, \$229,145

What are the firm's marginal and average tax rates on taxable income?

Ans: 39%, 33.76%

2. Which of the following investments would be best for your corporation, assuming they are equally risky and you want the best *after-tax* return? Assume a tax rate of 40% and dividend exclusion rate of 70%.

Ans: 4.95%, 4.875%, 4.928%

- a. Corporate bonds yielding 8.25%
- b. State of Florida muni bonds yielding 4.875%
- c. Corporate preferred stock with a dividend yield of 5.60%

T3-18 Practice Problems

3. The projected taxable income of Harding Wholesale, formed in 2010, is indicated in the table below (in thousands). Calculate the tax liability for each year, assuming a constant tax rate of 40 percent.

<u>Year</u>	<u>EBT</u>	<u>Tax</u>	<u>Credit</u>
2010	\$50		
2011	40		
2012	(80)		
2013	(30)		
2014	60		

Ans:

<u>Year</u>	<u>EBT</u>	<u>Adj. EBT</u>	<u>Tax</u>	<u>Credit</u>
2010	\$50	0	0	20
2011	40	0	0	16
2012	(80)	0	0	
2013	(30)	0	0	
2014	60	40	16	

4. The projected taxable income of Allred & Company, formed in 2010, is indicated in the table below (in thousands). Calculate the tax liability for each year, assuming a constant tax rate of 40 percent.

<u>Year</u>	<u>EBT</u>	<u>Tax</u>	<u>Credit</u>
2010	(\$20)		
2011	50		
2012	(10)		
2013	70		
2014	(15)		

Ans:

<u>Year</u>	<u>EBT</u>	<u>Adj. EBT</u>	<u>Tax</u>	<u>Credit</u>
2010	(\$20)	0	0	
2011	50	20	8	4
2012	(10)	0	0	
2013	70	55	22	6
2014	(15)	0	0	

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