Review of Accounting

Basic Financial Statements

Three basic types of financial statements

- Income statement
- Statement of retained earnings balance sheet
- Statement of cash flows

Income Statement [1]

Device to measure firm profitability

- Covers defined time period
- Presented in stair-step or progressive fashion to examine profit or loss after each type of expense item deducted

Table 2-1

- Income Statement for the Kramer Corporation

Table 2-1
Example Income Statement

KRAMER CORPORATION Income Statement For the Year Ended December 31, 2018	
1.Sales	$ 2,000,000
2. Cost of goods sold	1,500,000
3. Gross profit	$ 500,000
4. Selling and administrative expense	279,500
5. Depreciation expense	50,000
6. Operating profit (EBIT)*	$ 170,500
7. Interest expense	20,000
8. Earnings before taxes (EBT)	$ 150,500
9. Taxes	40,000
10. Earnings after taxes (EAT)	$ 110,500
11. Preferred stock dividends	10,500
12. Earnings available to common stockholders	$ 100,000
13. Common shares outstanding	100,000
14. Earnings per share	$ 1.00
*Earnings before interest and taxes.	

Income Statement₂

Sales – Cost of Goods Sold (COGS)

= Gross Profit (GP)

GP – expenses – depreciation = Earnings Before Interest and Taxes (EBIT) *or* Operating Income (OI)

EBIT – Interest = Earnings Before Taxes (EBT)

EBT – Taxes = Earnings After Taxes (EAT) *or* Net Income (NI)

Return to Capital

Three primary sources of capital

- Bondholders (receive interest)
- Preferred stockholders (receive dividends)
- Common stockholders (receive dividends after preferred stockholders)

Earnings per share

- Interpreted in terms of number of outstanding shares
- May be paid out in dividends or retained by company for subsequent reinvestment

Table 2-2
Statement of Retained Earnings

Indicates disposition of earnings with

- Adjustments to previously reported income
- Restrictions on cash dividends

STATEMENT OF RETAINED EARNINGS For the Year Ended December 31, 2018	
Retained earnings, balance, January 1, 2018......................................	$ 250,000
Add: Earnings available to common stockholders, 2018...................	100,000
Deduct: Cash dividends declared in 2018...	50,000
Retained earnings, balance, December 31, 2018.........	$ 300,000

Price-Earnings Ratio Applied to Earnings per Share [1]

Price-earnings ratio (P/E ratio)

- Multiplier applied to earnings per share to determine current value of common stock

Factors that influence P/E ratio

- Earnings and sales growth of firm
- Risk (volatility in performance)
- Debt-equity structure of firm
- Dividend payment policy
- Quality of management

Price-Earnings Ratio Applied to Earnings per Share 2

Allows relative market value comparison of many companies

Indicates expectations about the future of a company

Firms with higher expected returns have higher P/E ratio

Price-earnings ratios can be confusing

- Drop in earnings may not match magnitude of falloff in earnings, which causes increase in P/E ratio

Table 2-3 Price-Earnings Ratios for Selected U.S. Companies

	January 3, 1994	January 2, 1996	January 2, 2001	January 3, 2006	January 4, 2010	January 2, 2013	January 2, 2015	January 2, 2018
Bank of America	*dd	16	10	11	35	10	45	17
Cisco Systems	41	28	58	19	23	8	19	20
Ford Motor Co.	14	9	5	7	*dd	8	10	12
Intel Corp.	12	19	19	18	17	11	16	16
Johnson & Johnson	17	27	31	18	14	13	16	24
McDonald’s Corp.	19	21	23	17	16	15	19	25
Southwest Air	36	17	28	38	62	10	26	25
Textron Inc.	14	27	10	17	49	11	22	25
Walmart Stores	26	27	38	18	15	14	18	26
S&P 500 Index	23	25	23	17	18	14	19	26

*dd means the company is operating at a deficit and has no P/E ratio at the time because there are no positive earnings per share.

Note: January price-earnings ratios are based on the previous 12 months’ earnings per share and could change in later editions after annual earnings are announced.

Limitations of the Income Statement

Income gained or lost during given period is function of verifiable transactions

- Stockholders may perceive much smaller gain or loss from actual day-to-day operations

Flexibility in reporting transactions can result in differing measurements of income gained from similar events at end of time period

Balance Sheet

Indicates what the firm owns and how assets are financed in form of liabilities or ownership interest

- Delineates the firm's holdings and obligations
- Picture of the firm at point in time
- Items stated on original cost basis rather than current market value

Interpretation of Balance Sheet Items [1]

Asset accounts are listed in order of liquidity (convertibility to cash)

- Current assets
  - Items that can be converted to cash within one year
- Marketable securities
  - Temporary investments of excess cash
- Accounts receivable
  - Allowance for bad debts to determine anticipated collection value
- Inventory
  - Includes raw materials, goods in process, or finished goods

Interpretation of Balance Sheet Items 2

Prepaid expenses

- Represent future expense items already paid for

Investments

- Long-term commitment of funds (at least one year)
- Includes stocks, bonds, investments in other corporations

Plant and equipment

- Carried at original cost minus accumulated depreciation
- Accumulated depreciation is sum of past and present depreciation charges on currently owned assets

Table 2-4 Statement of Financial Position (Balance Sheet) 1

KRAMER CORPORATION Statement of Financial Position (Balance Sheet) December 31, 2018		
Assets		
Current assets:		
Cash..		$ 40,000
Marketable securities..		10,000
Accounts receivable..	$ 220,000	
Less: Allowance for bad debts....................................	20,000	200,000
Inventory..		180,000
Prepaid expenses...		20,000
Total current assets..		$ 450,000
Other assets:		
Investments..		50,000
Fixed assets:		
Plant and equipment, original cost............................	$ 1,100,000	
Less: Accumulated depreciation..................................	600,000	
Net plant and equipment...		500,000
Total assets...		$ 1,000,000

Table 2-4 Statement of Financial Position (Balance Sheet) 2

KRAMER CORPORATION Statement of Financial Position (Balance Sheet) December 31, 2018	
Liabilities and Stockholders' Equity	
Current liabilities:	
Accounts payable...	$ 80,000
Notes payable..	100,000
Accrued expenses..	30,000
Total current liabilities...	$ 210,000
Long-term liabilities:	
Bonds payable..	90,000
Total liabilities...	$ 300,000
Stockholders' equity:	
Preferred stock, $100 par value, 500 shares.....................	$ 50,000
Common stock, $1 par value, 100,000 shares...................	100,000
Capital paid in excess of par (common stock)....................	250,000
Retained earnings..	300,000
Total stockholders' equity...	$ 700,000
Total liabilities and stockholders' equity...............................	$ 1,000,000

Interpretation of Balance Sheet Items [3]

Total assets are financed through liabilities or stockholders' equity

Liabilities

- Represent financial obligations of the firm
- Move from current liabilities (due within one year) to longer-term obligations

Interpretation of Balance Sheet Items 4

Short-term obligations

- Accounts payable represents amount owed on open account to suppliers
- Notes payable are short-term signed obligations to the banker or other creditors
- Accrued expense is generated when a service has been provided and payment has not yet been received

Interpretation of Balance Sheet Items 5

Stockholders' Equity

- Represents total contribution and ownership interest of preferred and common stockholders
  - Preferred stock
  - Common stock
  - Capital paid in excess of par
  - Retained earnings
- Table 2-4
  - Represents the firm's cumulative earnings since inception minus dividends and other adjustments

Concept of Net Worth

Net worth or book value

- Stockholders' equity – Preferred stock component = Net worth

Market value is of primary concern to

- Financial manager
- Security analyst
- Stockholders

Limitations of the Balance Sheet 1

Most values based on historical or original cost basis

- Troublesome for plant, equipment, and inventory
- Value may be worth two or three times original cost
- May require many times original cost to replace

FASB reversed disclosure of inflation adjustments and is no longer required

- Voluntary act on part of company

Limitations of the Balance Sheet 2

Factors explaining differences between per share values

- Asset valuation
- Industry outlook
- Growth prospects
- Quality of management
- Risk-return expectations

Table 2-5 Comparison of Market Value to Book Value per Share in January 2018

Corporation	Market Price per Share	Book Value per Share	Ratio of Market Price to Book Value
UPS*	123.67	1.75	70.67
Verizon	53.53	6.58	8.14
IBM*	154.25	21.20	7.28
Kellogg*	67.97	5.59	12.16
PepsiCo*	118.06	9.45	12.49
Apple*	172.26	26.15	6.59
Adobe	177.70	17.19	10.34
Microsoft	85.95	11.61	7.40
Oracle	46.63	13.53	3.45
Google	1,065.00	226.11	4.71
eBay	38.06	10.76	3.54
Southern Co.	47.17	24.00	1.97
Kohl’s	56.35	29.93	1.88
Comstock Resources	9.01	−21.29	N/A

*Companies with large stock repurchases over time.

Statement of Cash Flows [1]

Emphasizes critical nature of cash flow to firm operations

Represents cash or cash equivalent items easily convertible to cash within 90 days

Advantage of accrual method

- Allows matching of revenues and expenses in period in which they occur to appropriately measure profits

Statement of Cash Flows 2

Disadvantage of accrual method

- Adequate attention not directed to firm's actual cash flow position

Cash-flow analysis helps in combating discrepancies faced through accrual method of accounting

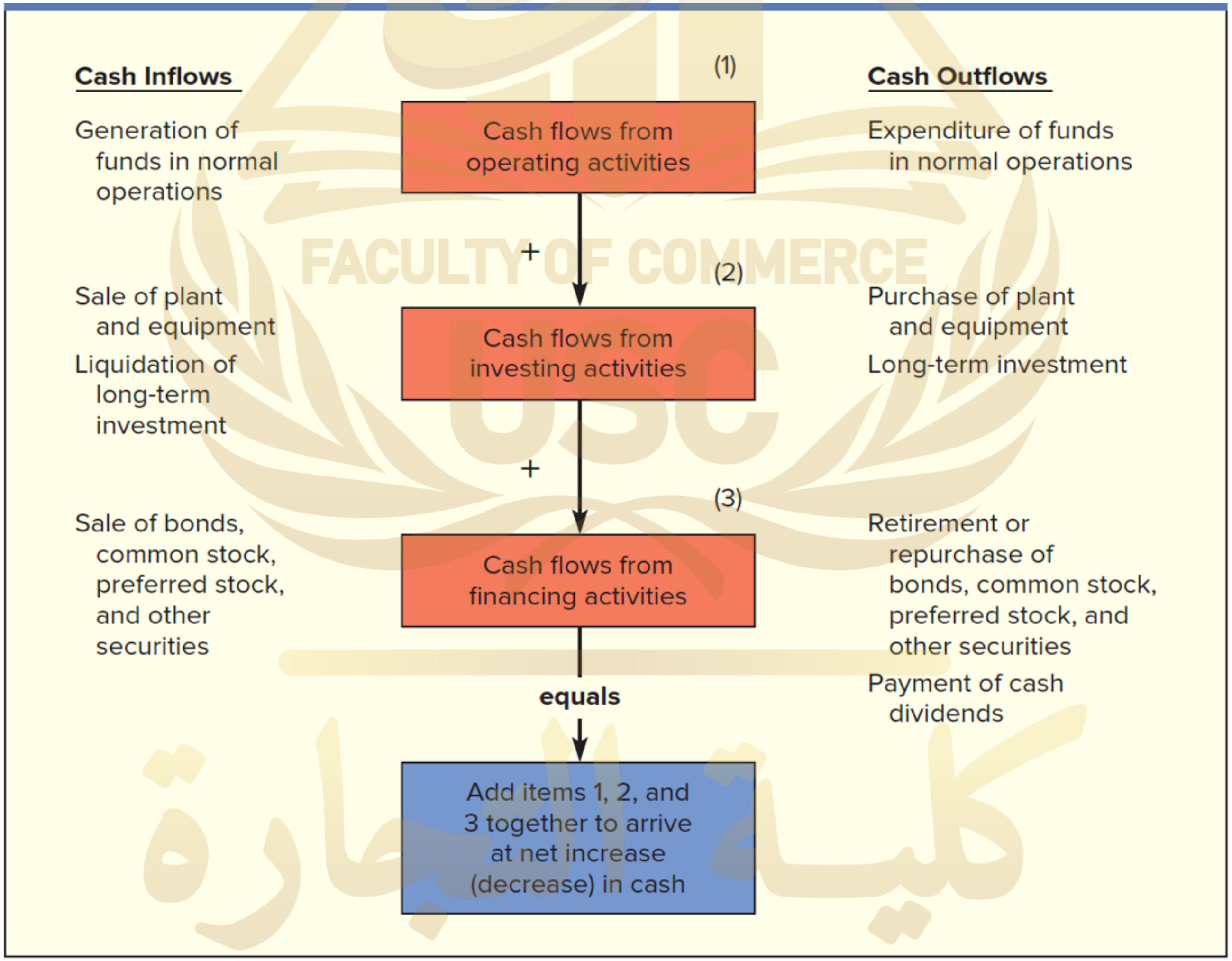
Developing an Actual Statement

Statement of cash flows

- Cash flows from operating activities
- Cash flows from investing activities
- Cash flows from financing activities

Results added together to compute net change in cash flow

Figure 2-1 Illustration of Concepts behind the Statement of Cash Flows



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Determining Cash Flows from Operating Activities [1]

Translation of income from operations from accrual to cash basis

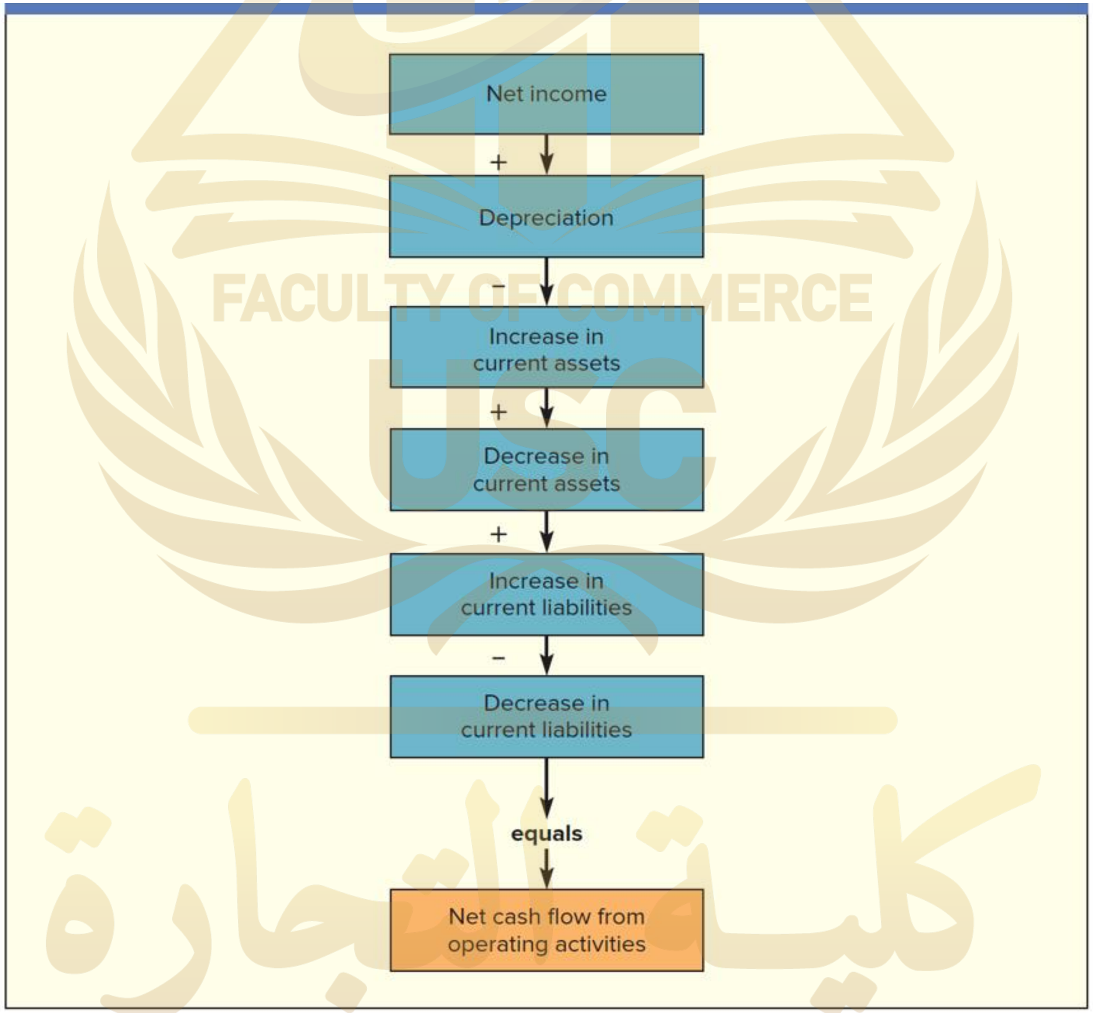
Direct method

- Every item on income statement adjusted from accrual to cash accounting

Indirect method (more popular)

- Net income represents starting point
- Adjustments are made to convert net income to cash flows from operations

Figure 2-2 Steps in Computing Net Cash Flows from Operating Activities Using the Indirect Method



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Determining Cash Flows from Operating Activities 2

Start with net income

Recognize depreciation is a noncash deduction

Recognize increases in current assets reduce cash balance

Recognize that decreases in current assets increase cash balance

Recognize that increases in current liabilities increase cash balance

Recognize that decreases in current liabilities decrease cash balance

Table 2-6 Comparative Balance Sheets[1]

KRAMER CORPORATION Comparative Balance Sheets				
		Year-End 2017		Year-End 2018
Assets				
Current assets:				
Cash..		$ 30,000		$ 40,000
Marketable securities..		10,000		10,000
Accounts receivable (net)......................................		170,000		200,000
Inventory..		160,000		180,000
Prepaid expenses..		30,000		20,000
Total current assets..		$ 400,000		$ 450,000
Investments (long-term)...		20,000		50,000
Plant and equipment..	$ 1,000,000		$ 1,100,000	
Less: Accumulated depreciation..............................	550,000		600,000	
Net plant and equipment.......................................		450,000		500,000
Total assets..		$ 870,000		$ 1,000,000

Table 2-6 Comparative Balance Sheets 2

KRAMER CORPORATION Comparative Balance Sheets		
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 45,000	$ 80,000
Notes payable	100,000	100,000
Accrued expenses	35,000	30,000
Total current liabilities	$ 180,000	$ 210,000
Long-term liabilities:		
Bonds, payable 2025	40,000	90,000
Total liabilities	$ 220,000	$ 300,000
Stockholders' equity:		
Preferred stock, $100 par value	$ 50,000	$ 50,000
Common stock, $1 par value	100,000	100,000
Capital paid in excess of par	250,000	250,000
Retained earnings	250,000	300,000
Total stockholders' equity	$ 650,000	$ 700,000
Total liabilities and stockholders' equity	$ 870,000	$ 1,000,000

Table 2-7 Cash Flows from Operating Activities

Net income (earnings after taxes) (Table 2-1).........................		$ 110,500
Adjustments to determine cash flow from operating activities:		
Add back depreciation (Table 2-1)..	$ 50,000	
Increase in accounts receivable (Table 2-6)..........................	(30,000)	
Increase in inventory (Table 2-6)..	(20,000)	
Decrease in prepaid expenses (Table 2-6)...........................	10,000	
Increase in accounts payable (Table 2-6).............................	35,000	
Decrease in accrued expenses (Table 2-6)...........................	(5,000)	
Total adjustments...		40,000
Net cash flows from operating activities..................................		$ 150,500

Determining Cash Flows from Investing Activities

Investing activities

- Long-term investment activities in mainly plant and equipment
  - Increasing investments represent *use* of funds
  - Decreasing investments represent *source* of funds
- Table 2-8 Cash Flows from Investing Activities

Table 2-8 Cash Flows from Investing Activities

Increase in investments (long-term securities) (Table 2-6).....................................	($30,000)
Increase in plant and equipment (Table 2-6)..	(100,000)
Net cash flows from investing activities...	($130,000)

Determining Cash Flows from Financing Activities

Financial activities apply to the sale or retirement of

- Bonds
- Common and preferred stock
- Other corporate securities
- Payment of cash dividends

Sale of firm’s securities is *source* of funds

Payment of dividends and repurchase of securities is *use* of funds

Table 2-9 Cash Flows from Financing Activities

Table 2-9 Cash Flows from Financing Activities

Increase in bonds payable (Table 2-6)...	$ 50,000
Preferred stock dividends paid (Table 2-1)..	(10,500)
Common stock dividends paid (Table 2-2)...	(50,000)
Net cash flows from financing activities..	($10,500)

Combining the Three Sections of the Statement

May require further analysis on how buildups in various accounts were financed

Adequate long-term financing and profits should exist to finance long-term needs

Short-term funds may be utilized to carry long-term needs

- High-risk situation as short-term sources of funds may dry up while long-term needs continue to demand funding

Table 2-10 Statement of Cash Flows 1

KRAMER CORPORATION Statement of Cash Flows For the Year Ended December 31, 2018		
Cash flows from operating activities:		
Net income (earnings after taxes)..		$ 110,500
Adjustments to determine cash flow from operating activities:		
Add back depreciation..	$ 50,000	
Increase in accounts receivable...	(30,000)	
Increase in inventory..	(20,000)	
Decrease in prepaid expenses..	10,000	
Increase in accounts payable...	35,000	
Decrease in accrued expenses...	(5,000)	
Total adjustments..		40,000
Net cash flows from operating activities..............................		$ 150,500

Table 2-10 Statement of Cash Flows 2

KRAMER CORPORATION Statement of Cash Flows For the Year Ended December 31, 2018		
Cash flows from investing activities:		
Increase in investments (long-term securities)........................	$ (30,000)	
Increase in plant and equipment...	(100,000)	
Net cash flows from investing activities................................		(130,000)
Cash flows from financing activities:		
Increase in bonds payable..	$ 50,000	
Preferred stock dividends paid...	(10,500)	
Common stock dividends paid..	(50,000)	
Net cash flows from financing activities................................		(10,500)
Net increase (decrease) in cash flows.......................................		$ 10,000

Depreciation and Funds Flow

Depreciation

- Noncash expense
- Not a “new” source of funds
- Added back to net income to determine amount of actual funds on hand
- Represents an attempt to allocate initial cost of asset over useful life

Charging of depreciation does not directly influence fund movement, but rather serves as an accounting entry

Table 2-11 Comparison of Accounting and Cash Flows

	Year 1 (A) Accounting Flows	Year 1 (B) Cash Flows
Earnings before depreciation and taxes (EBDT)......................	$ 1,000	$ 1,000
Depreciation..	100	100
Earnings before taxes (EBT)..	$ 900	$ 900
Taxes..	300	300
Earnings after taxes (EAT)..	$ 600	$ 600
Purchase of equipment...		(500)
Depreciation charged without cash outlay............................		100
Cash flow...		$ 200
	Year 2 (A) Accounting Flows	**Year 2 (B) Cash Flows**
Earnings before depreciation and taxes (EBDT)......................	$ 1,000	$ 1,000
Depreciation..	100	100
Earnings before taxes..	$ 900	$ 900
Taxes..	300	300
Earnings after taxes (EAT)..	$ 600	$ 600
Depreciation charged without cash outlay............................		100
Cash flow...		$ 700

Free Cash Flow

Free cash flow =

Cash flow from operating activities – Capital expenditures – Dividends

- Capital expenditures
  - Maintains productive capacity of firm
- Dividends
  - Maintains necessary payout on common stock and covers preferred stock obligations

Free cash flow used for special financing activities

Income Tax Considerations[1]

Corporate Tax Rates updated in 2017

- Federal flat rate of 21 percent
- Corporations may also pay state & foreign taxes

Cost of a Tax-Deductible Expense

- Include interest on business loans, travel expenditures, salaries, etc.

	Corporation A		Corporation B
Earnings before interest and taxes...............................	$ 400,000		$ 400,000
Interest...	100,000		0
Earnings before taxes (taxable income)........................	$ 300,000		$ 400,000
Taxes (25%)..	75,000		100,000
Earnings after taxes..	$ 225,000		$ 300,000
Difference in earnings after taxes................................		$ 75,000	

Income Tax Considerations 2

Depreciation as a Tax Shield

- Not new source of funds
- Provides tax shield benefits measurable as depreciation times tax rate

	Corporation A		Corporation B
Earnings before depreciation and taxes........................	$ 400,000		$ 400,000
Depreciation..	100,000		0
Earnings before taxes..	$ 300,000		$ 400,000
Taxes (25%)..	75,000		100,000
Earnings after taxes...	$ 225,000		$ 300,000
+ Depreciation charged without cash outlay.................	100,000		0
Cash flow...	$ 325,000		$ 300,000
Difference...		$ 25,000	