CHAPTER 12

Statement of Cash Flows

Study Objectives

- Indicate the primary purpose of the statement of cash flows.
- Distinguish among operating, investing, and financing activities.
- Explain the impact of the product life cycle on a company's cash flows.
- Steps in the Preparation of the Statement of Cash Flows
- Prepare a statement of cash flows using one of two approaches: (a) the indirect method or (b) the direct method.

Use the statement of cash flows to evaluate a company.

Chapter Outline

Study Objective 1 - Indicate the Primary Purpose of the Statement of Cash Flows
Study Objective 2 - Distinguish Among Operating, Investing, and Financing Activities

1. The primary purpose of the **statement of cash flows** is to provide information about cash receipts, cash payments, and the net change in cash resulting from the operating, investing, and financing activities of a company during the period.
    a. The Statement of Cash Flows (SFAS-95) identifies cash flows as being generated from three sources:
        i. Operating Activities
            1. **Operating activities** include the cash effects of all transactions that create revenues and expenses and thus enter into the determination of net income.
                i. In general Operating activities are those activities that the business was created to perform and also includes interest from any source and any other type or revenue producing (other revenue) types of activity
                    i. Operating activities is the most important category because it shows the cash provided or used by company operations.
                    ii. Cash provided by operations is generally considered to be the best measure of whether a company can generate sufficient cash to continue as a going concern and to expand.
        ii. Investing Activities
            1. include all those activities involve in long-term uses or sources of cash.
                i. purchasing and disposing of investments and productive long-lived assets using cash and
                ii. lending money and collecting the loans.
                    i. Note that any interest revenue or expenses from these activities are operating activities
        iii. Investing Activities
            1. Include obtaining cash from issuing debt and repaying the amounts borrowed and (b) obtaining cash from stockholders and paying them dividends
                i. Note that Dividends received or paid are operating activities

b. Activities involving cash are reported in a format that reconciles the beginning and ending cash balances.
    i. The statement of cash flows provides answers to the following important questions:
        1. Where did the cash come from during the period?
        2. What was the cash used for during the period?
        3. What was the change in the cash balance during the period?
    ii. The statement of cash flows also provides clues about whether dynamic companies will be able to thrive and invest in new opportunities or whether a struggling company will survive or perish.

2. Illustrating the Types of Cash Inflows and Outflows
    a. <u>Operating activities</u>
        i. Cash Inflows:
            1. From sale of goods or services.
            2. Returns on loans (interest received) and on equity securities (dividends received).
        ii. Cash outflows:
            1. To suppliers for inventory.
            2. To employees for services.
            3. To government for taxes.
            4. To lenders for interest.
            5. To others for expenses.
    b. <u>Investing activities</u>
        i. Cash inflows:
            1. From sale of property, plant, and equipment.
            2. From sale of debt or equity securities of other entities.
            3. From collection of principal on loans to other entities.
        ii. Cash outflows:
            1. To purchase property, plant, and equipment.
            2. To purchase debt or equity securities of other entities.
            3. To make loans to other entities.
    c. <u>Financing activities</u>
        i. Cash inflows:
            1. From sale of equity securities (company's own stock).
            2. From issuance of debt (bonds and notes).
        ii. Cash outflows:
            1. To stockholders as dividends.
            2. To redeem long-term debt or reacquire capital stock.

Some cash flows relating to investing or financing activities are classified as operating activities **<u>because these items are reported in the income statement</u>** <u>where results of operations are shown</u>.

- For example, receipts of investment revenue (interest and dividends) and payments of interest to lenders are classified as operating activities because these items are reported in the income statement.

- <u>As a general rule</u>:
    - Operating activities involve income statement items.
    - Investing activities involve cash flows resulting from changes in investments and long-term asset items.
    - Financing activities involve cash flows resulting from changes in long-term liability and stockholders' equity items.

- Not all of a company's significant activities involve cash. Here are four examples of significant noncash activities:
    1. Issuance of common stock to purchase assets.
    2. Conversion of bonds into common stock.
    3. Issuance of debt to purchase assets.
    4. Exchanges of plant assets.

> Note: Although they don't involve the use of cash, these items still must be fully reflected in the statement of cash flows (at bottom) or in Notes.

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3. <u>Significant financing and investing activities that do not affect cash</u> are not reported in the body of the statement of cash flows.
    a. They are reported either in a separate schedule at the bottom of the statement of cash flows or in a separate note or supplementary schedule to the financial statements.
    b. The reporting of significant activities not affecting cash in a separate or supplementary schedule satisfies the **full disclosure principle** because it identifies significant non-cash investing and financing activities of the enterprise.
    c. The three activities--operating, investing, and financing--plus the significant noncash investing and financing activities make up the general format of the statement of cash flows, plus the significant noncash investing and financing activities.

Study Objective 3 - Explain the Impact of the Product Life Cycle on a Company's Cash Flows

1. All products go through a series of phases called the product life cycle.
    a. The phases (in order of their occurrence) are often referred to as the
        i. **introductory phase,**
        ii. **growth phase,**
        iii. **maturity phase, and**
        iv. **decline phase.**

    b. The phase a company is in affects its cash flows.
        i. The **introductory phase** occurs at the beginning of a company's life, when the company is purchasing fixed assets and beginning to produce and sell products.
            1. When a company is in the introductory stage, one would expect that the company will not be generating positive cash from operations.
                a. It will be spending considerable amounts to purchase productive assets such as buildings and equipment.
                b. To support asset purchases the company will have to issue stock or debt.
                    i. One would expect cash from operations to be negative, cash from investing to be negative, and cash from financing to be positive.
        ii. During the **growth phase,** the company is striving to expand its production and sales.
            1. When a company is in the growth phase, one would expect to see the company start to generate small amounts of cash from operations.
                a. Cash from operations on the cash flow statement will be less than net income on the income statement during this phase.
                b. Because sales are projected to be increasing, the size of inventory purchases must increase.
                    i. However, less inventory will be expensed on an accrual basis than purchased on a cash basis in the growth phase.
                    ii. Cash collections on accounts receivable will lag behind sales, and because sales are growing, accrual sales during a period will exceed cash collections during that period.
                    iii. Cash needed for asset acquisitions will continue to exceed cash provided by operations, requiring that the company make up the deficiency by issuing new stock or debt.
                        1. Thus, the company continues to show negative cash from investing and positive cash from financing in the growth phase.
        iii. In the **maturity phase**, sales and production level off.
            1. Cash from operations and net income are approximately the same.
            2. Cash generated from operations exceeds investing needs.

3. Thus, in the maturity phase the company can actually start to retire debt or buy back stock.

iv. During the **decline phase**, sales of the product fall due to a weakening in consumer demand.

1. During this phase, cash from operations decreases.
   a. Cash from investing might actually become positive as the firm sells off excess assets.
   b. Cash from financing may be negative as the company buys back stock and retires debt.

- The information in a statement of cash flows should help investors, creditors, and others evaluate the following aspects of the company's financial position.
  - **The company's ability to generate future cash flows**. By examining relationships between items in the statement of cash flows, investors and others can better predict the amounts, timing, and uncertainty of future cash flows.
  - The company's ability to pay dividends and meet obligations. Employees, creditors, stockholders, and customers should be particularly interested in this statement because it alone shows the flows of cash in a business.
  - The reasons for the difference between net income and net cash provided (used) by operating activities. Many financial statement users investigate the reasons for the difference between net income and cash provided by operating activities and then they can assess for themselves the reliability of the income numbers.
  - The investing and financing transactions during the period. By examining a company's investing activities and financing activities, a financial statement reader can better understand why assets and liabilities increased or decreased during the period.

Study Objective 4 - Steps in the preparation of the Statement of Cash Flows

1. The statement of cash flows is prepared differently from the other basic financial statements.
   a. It is prepared by comparing the change in every account balances from the beginning to the end of the year.
      i. All accounts on the company books must be considered, even if their change was not related to the receipt or disbursement of cash or if there was no change in their balance (increases could have equaled decreases)

   b. The information to prepare the statement of cash flows usually comes from three sources.
      i. Balance Sheet numbers: Post-closing trial balance information from the prior period is compared to the adjusted trial balance of the current period.
         1. If no trial balance information is available, information in the **comparative balance sheets** indicates the amount of the changes in assets, liabilities, and stockholders' equities from the beginning to the end of the period.
            a. If comparative balance sheet information is used, one must insure that the Retained Earnings is the beginning of year balance (or the net income must be backed out if it is the end of year balance).
               i. This is because the income statement accounts must also be analyzed and if they are included in RE, they will be double counted.
      ii. Income Statement numbers: If the post-closing and adjusted trial balances are used, these numbers are automatically included.
         1. If comparative balance sheet numbers are used, the income statement numbers must be gleaned from the income statement.
            a. As noted above, insure that the RE number from the balance sheet is the beginning of the year balance to insure that nominal account balance changes are not counted twice (once on the income statement and once in RE).
      iii. **Additional information** includes transaction data that are needed to determine how cash was provided or used during the period.

2. Either the Direct or Indirect method or preparing the statement of cash flows is allowed.
   a. Direct Method

i. Computes the change in cash balance directly by analyzing the effect of every account on the cash account
    1. The FASB has expressed a preference for the direct method but allows the use of either method
    2. The direct method is more consistent with the objective of the statement of cash flows because it shows operating cash receipts and payments.

b. Indirect Method
    i. Computes the change in cash by starting with net income and then reconciling net income for the period to the change cash balance by adjusting from accrual accounting (revenue recognized when earned, expenses recognized when incurred) to cash basis accounting (revenue recognized when cash received, expenses recognized when cash paid).
        1. in The indirect method is used extensively in practice. Companies favor the indirect method for three reasons:
            a. Accountants claim it is easier to prepare…that is a red herring.
                i. It **is definitely more difficult for non-accountants to understand**
                    1. Just consider the difficulty you have as students in converting from accrual to cash basis.
            b. It focuses on the differences between net income and net cash flow from operating activities.
            c. **It tends to reveal less company information to competitors**.

> The last statement says it all…it tends to reveal less information to competitors. The point of financial statements is to enable investors and creditors to invest scarce cash in the most productive activity. It seems ludicrous that a method that intentionally obfuscates valuable information is allowed in this day of mass corporate and accounting industry fraud…but it is. Go Figure!

c. Differences between the direct and indirect methods:
    i. They differ in disclosing the items that make up the total amount of **operating activities**.
    ii. The investing activities and financing activities sections **are not affected by the choice of method.**

Study Objective 5a - Prepare a Statement of Cash Flows Using the Indirect Method

Computer services Company started in January 1, 2003, when it issued 50,000 shares of $1 par value common stock for $50,000 cash. The company rented its office space and furniture and performed consulting services throughout the first year. The comparative balance sheet for the beginning and end of 2003, showing increases or decreases appears as follows:

COMPUTER SERVICES COMPANY
Comparative Balance Sheet

Assets	**Dec. 31, 2003**	**Jan 1, 2003**	**Increase/Decrease**
Cash	$ 34,000	$ -0-	$ 34,000 increase
A/R	30,000	-0-	30,000 increase
Equipment	10,000	-0-	10,000 increase
Total	$ 74,000	$ -0-	
Liabilities and stockholders' equity			
A/P	$ 4,000	$ -0-	$ 4,000 increase
CS	50,000	-0-	50,000 increase
RE	20,000	-0-	20,000 increase
Total	$ 74,000	$ -0-	

COMPUTER SERVICES COMPANY
Income Statement
For the Year Ended December 31, 2003

Revenues	$85,000
Operating expenses	40,000
Income before income taxes	45,000
Income tax expense	10,000
Net income	$35,000

Note that RE is not dated in the Balance Sheet; This means that you must determine if it is the Beginning (BOY) or ending (EOY) balance to insure the income numbers are not counted twice.

Additional Information:
(a) Examination of selected data indicates that a dividend of $15,000 was declared and paid during the year.
(b) The equipment was purchased at the end of 2003. No depreciation was taken in 2003.

Data input for Statement of Cash Flows
First year of operations

Accounts	Balance 12/31/03 Unadjusted Balance	Balance 12/31/02 Post Closing	Adj Req (Dr)	JE Adj (CR)	TB 12/31/03 Adjusted EOY	TB Change for Worksheet
Cash	34,000				34,000	34,000
Acct/Rec	30,000				30,000	30,000
					0	0
Equpment	10,000				10,000	10,000
A/D-NCA2					0	0
	74,000					
A/P	(4,000)				(4,000)	(4,000)
Common Stock	(50,000)				(50,000)	(50,000)
PIC					0	0
RE (BOY)	0	0			0	0
Cash Div	15,000				15,000	15,000
Revenue	(85,000)				(85,000)	(85,000)
Other Revenue					0	0
COS					0	0
OpExp	40,000				40,000	40,000
Selling&AdminExp					0	0
Dep Exp					0	0
Int Exp					0	0
Tax Expense	10,000				10,000	10,000
					0	0
Gain/LossSaleLTA					0	0
Equip					0	
	(74,000)					
Balance	0	0	0	0	0	0

Note the balance in the RE account is zero. This is because income is $35,000 and a dividend of $15,000 was declared. An analysis of RE reveals the following:

Retained Earnings

	-0- Beginning balance
	Add: Net income $35,000
Deduct: Dividends $15,000	
	$20,000

Note that the ending balance is $20,000 and the beginning balance is zero. We must use the beginning balance of $-0- because we are going to use the nominal (income statement) accounts in our analysis. To include them in the Balance Sheet (by using the RE-EOY

Statement of Cash Flows

Statement of Cash Flows				Cash	Acct/Rec	Equipment	A/P	Common Stock	RE (BOY)	Cash Div	Revenue	OpExp	Tax Expense	Total
Computer Services														
For Year Ended		12/31/03		34,000	30,000	10,000	(4,000)	(50,000)	0	15,000	(85,000)	40,000	10,000	0
Operating Activities:														0
Accounts Recievable			(30,000)	30,000	(30,000)									0
			0	0										0
Cash Collections:		(30,000)												0
Revenue			85,000	(85,000)							85,000			0
OpExp			(40,000)	40,000								(40,000)		0
NI			0	0										0
Tax Expense			(10,000)	10,000									(10,000)	0
A/P			4,000	(4,000)			4,000							0
Net Cash from Operations:	9,000													0
Investing Activities:														0
Changes in NCA														0
Equipment			(10,000)	10,000		(10,000)								0
A/D-NCA2														0
Net Cash from Investing Activities	(10,000)													0
														0
Financing Activities:														0
Changes in Short/Long-Term Debt														0
Changes in Long-Term Debt			0	0										0
Common Stock			50,000	(50,000)				50,000						0
PIC														0
RE (BOY)														0
Cash Div			(15,000)	15,000						(15,000)				0
Net Cash from Financing Activities	35,000													0
Net Change in Cash	34,000													0
Add: Cash At BOY	0													0
Cash Balance At EOY	34,000													0
														0
				0	0	0	0	0	0	0	0	0	0	0

Procedure:

1. Taking into account every account in the trial balance, the accounts and the changes in balance are listed across the top two rows.
2. The Statement is to the left of the heavy line; the worksheet is to the right.
3. Every account in the trial balance must be accounted for with the change in balance listed under the cash column and a corresponding but opposite affect in the statement.
4. Note that every row and every column crossfoots or foots to zero.
5. The relationships are strictly mechanical; that is to say that the practitioner must only know and understand what type of effect (Operation, Investing or Financing) that a given change will create.

Book method of statement of cash flows (First year of operations):

You decide which method works for you!

- **Step 1—Determining the net increase or decrease in cash.**
  - As shown in the balance sheet above, Computer Services had no cash on hand at the beginning of 2003 and a balance of $34,000 at the end of the year. Therefore, the change in cash for 2003 was an increase of $34,000.

- **Step 2—Determining net cash provided/used by operating activities.**
  - To determine net cash provided by operating activities under the indirect method**, net income is adjusted for items that did not affect cash.**
  - Under generally accepted accounting principles most companies use the accrual basis of accounting, and under this method net income does not indicate the net cash provided by operating activities. Therefore, under the indirect method, net income must be adjusted to convert certain items to the cash basis.
  - **The indirect method adjusts net income for items that affected reported net income but did not affect cash.**
  - Noncash charges in the income statement are added back to net income. Likewise, noncash credits are deducted. The result is net cash provided by operating activities.
  - Receivables, payables, prepayments, and inventories should be analyzed for their effects on cash.
  - **Increase in Accounts Receivable--**When accounts receivable increase during the year, revenues on an accrual basis are higher than revenues on a cash basis. In other words, operations of the period led to revenues, **but not all of these revenues resulted in an increase in cash**.
  - For example, Computer Services Company had revenues of $85,000 in its first year of operations. However, it collected only $55,000 in cash. Although accrual basis revenue was $85,000, cash basis revenue would be only $55,000. Therefore the increase in accounts receivable of $30,000 must be deducted from net income. If accounts receivable decrease, the decrease must be added to net income.

  - **Increase in Accounts payable--**When accounts payable increase during a year, operating expenses on an accrual basis are higher than they are on a cash basis.
  - For Computer Services Company, operating expenses reported in the income statement were $40,000. However, since Accounts Payable increased $4,000, only $36,000 ($40,000 - $4,000) of the expenses was paid in cash.
  - To convert net income to net cash provided by operating activities, an increase in accounts payable must be added to net income. Conversely, a decrease in accounts payable would have to be subtracted from net income.
  - For Computer Services Company, the changes in accounts receivable and accounts payable were the only changes in current assets and current liability accounts. Therefore, any other revenues or expenses reported in the income statement were received or paid in cash, and no adjustment of net income is necessary.
  - The operating activities section of the statement of cash flows for Computer Services Company would appear as follows:

COMPUTER SERVICES COMPANY
Partial Statement of Cash Flows--Indirect Method
For the Year Ended December 31, 2003

Cash from operating activities			
Net income			$ 35,000
Adjustments to reconcile net income to net cash provided by operating activities:			
Increase in accounts receivable	$	(30,000)	
Increase in accounts payable		4,000	26,000)
Net cash provided by operating activities			**$ 9,000**

- **Step 3—Determining net cash provided/used by investing and financing activities.**

- Changes in each noncurrent account are analyzed using selected transaction data to determine the effect, if any, the changes had on cash.
- Computer Service Company's three noncurrent accounts are Equipment, Common Stock, and Retained Earnings, all three of which had increases during the year.
- No transaction data are given for the increases in Equipment of $10,000 and Common Stock of $50,000. When other explanations are lacking, we assume any differences involve cash.
- The increase in equipment is assumed to be a purchase of equipment for $10,000 cash. This purchase is reported as a cash outflow in the investing activities section.
- The increase of common stock is assumed to result from the issuance of common stock for $50,000 cash. It is reported as an inflow of cash in the financing activities section of the statement of cash flows.

- The reasons for the increase of $20,000 in the Retained Earnings account are determined by analysis.
  - First, net income increased retained earnings by $35,000.
  - Second, the additional information indicates that a cash dividend of $15,000 was declared and paid.
  - The $35,000 increase due to net income is reported in the operating activities section. The cash dividend paid is reported in the financing activities section. The $20,000 increase in Retained Earnings in 2003 is a **net** change.

- Having completed the three steps, we can prepare the statement of cash flows by the indirect method.

- The statement starts with the operating activities section, followed by the investing activities section, and then the financing section.

- Computer Services Company's statement of cash flows for 2003 in Illustration 12-12 shows that operating activities **provided** $9,000 cash; investing activities **used** $10,000 cash; and financing activities **provided** $35,000 cash.
  - The increase in cash of $34,000 reported in the statement of cash flows agrees with the increase of $34,000 shown as the change in the cash account in the comparative balance sheet.

Information related to the second year of operations for Computer Services Company is as follows:

COMPUTER SERVICES COMPANY
Comparative Balance Sheet
December 31

Assets	2004	2003	Increase/Decrease
Cash	$ 56,000	$ 34,000	$ 22,000 increase
A/R	20,000	30,000	10,000 decrease
Prepaid expense	4,000	-0-	4,000 increase
Land 1	30,000	-0-	130,000 increase
Building	160,000	-0-	160,000 increase
A/D--building	(11,000)	-0-	11,000 increase
Equipment	27,000	10,000	17,000 increase
A/D—equipment	(3,000)	-0-	3,000 increase
Total	$ 383,000	$ 74,000	

Liabilities and stockholders' equity	2004	2003	Increase/Decrease
A/P	$ 59,000	$ 4,000	$ 55,000 increase
Bonds payable	130,000	-0-	130,000 increase
Common stock	50,000	50,000	-0-
RE	144,000	20,000	124,000 increase
Total	$ 383,000	$ 74,000	

COMPUTER SERVICES COMPANY
Income Statement
For the Year Ended December 31, 2004

Revenues		$507,000
Op exp (excluding depreciation)	$261,000	
Depreciation expense	15,000	
Loss on sale of equipment	3,000	279,000
Income from operations		228,000
Income tax expense		89,000
Net income		$139,000

Again, it is essential to determine if the net income is included in the RE number on the balance sheet. It is apparent that it is ($139,000 NI - $15,000 Dividend = the $124,000 change in RE.
Therefore, use the RE-BOY number of $20,000.

Additional Information:
(a) In 2004 the company declared and paid a $15,000 cash dividend.
(b) The company obtained land through the issuance of $130,000 of long-term bonds.
(c) An office building costing $160,000 was purchased for cash; equipment costing $25,000 was also purchased for cash.
(d) During 2004 the company sold equipment with a book value of $7,000 (cost $8,000 less accumulated depreciation $1,000) for $4,000 cash.

Computer Services
12/31/04

Instructions:

1 Input account names in designated green cells below:
2 Input account balances in designated yellow cells below:
3 Enter adjustment required by "Other Data"
4 Enter last years post closing trial balance numbers

	Accounts	Balance 12/31/04 Unadjusted Balance	Balance 1/1/04 Post Closing	TB 12/31/04 Adjusted EOY	TB Change for Worksheet
CA1	Cash	56,000	34,000	56,000	22,000
CA2	Acct/Rec	20,000	30,000	20,000	(10,000)
CA3	Prepaid Exp	4,000		4,000	4,000
NCA1	Land	130,000		130,000	130,000
NCA2	Building	160,000		160,000	160,000
NCA3	A/D-NCA2	(11,000)		(11,000)	(11,000)
NCA4	Equipment	27,000	10,000	27,000	17,000
NCA5	A/D-NCA4	(3,000)		(3,000)	(3,000)
Total Assets:		383,000	74,000		
CL1	A/P	(59,000)	(4,000)	(59,000)	(55,000)
CL2	Bonds Pay	(130,000)		(130,000)	(130,000)
SHE CS	CS	(50,000)	(50,000)	(50,000)	0
PIC	PIC			0	0
RE	RE (BOY)	(20,000)	(20,000)	(20,000)	0
CashDiv	Cash Div	15,000		15,000	15,000
REV 1	Revenue	(507,000)		(507,000)	(507,000)
2	Other Rev			0	0
3	COS			0	0
4	OpExp	261,000		261,000	261,000
5	S&A Exp			0	0
6	Dep Exp	15,000		15,000	15,000
7	Int Exp			0	0
8	Tax Expense	89,000		89,000	89,000
9				0	0
10	G/LSaleNCA	3,000		3,000	3,000
Total Liabilities & SHE		(383,000)			
	Balance	0	74,000	0	0

On the following page you will find the worksheet and the statement of cash flows for year 2 on the indirect method.

				Cash	Acct/Rec	Prepaid Exp	Land	Building	A/D-NCA2	Equipment	A/D-NCA4	A/P	Bonds Pay	Cash Div	Revenue	OpExp	Dep Exp	Tax Expense	G/L Sale	Total
Statement of Cash Flows																				
Computer Services																				
For Year Ended		12/31/03		22,000	(10,000)	4,000		160,000	(11,000)	17,000	(3,000)	(55,000)		15,000	(507,000)	261,000	15,000	89,000	3,000	0
Operating Activities:																				0
Net Income		139,000																		0
Accounts Recievable			10,000	(10,000)	10,000															0
Cash Collections:		10,000																		0
Revenue			507,000	(507,000)											507,000					0
OpExp			(261,000)	261,000												(261,000)				0
Dep Exp			(15,000)	15,000													(15,000)			0
Tax Expense			(89,000)	89,000														(89,000)		0
G/LSaleNCA			(3,000)	3,000															(3,000)	0
																				0
Prepaid Exp			(4,000)	4,000		(4,000)														0
A/P			55,000	(55,000)								55,000								0
Change in A/D			14,000	(14,000)					11,000		3,000									0
		51,000																		0
Add back non cash items:																				0
Adj to A/D to Balance	1,000																			0
GaIn/Loss on sale of NCA	3,000	4,000																		0
																				0
																				0
Net Cash from Operations:	218,000																			0
Investing Activities:																				0
Changes in NCA:																				0
Land																				0
Building			(160,000)	160,000				(160,000)												0
																				0
Equipment			(17,000)	17,000						(17,000)										0
Less: NonCash affect on NCA Trans			(4,000)																	0
Net Cash from Investing Activities	(181,000)																			0
																				0
Financing Activities:																				0
Changes in Short/Long-Term Debt																				0
Changes in Long-Term Debt																				0
CS			0	0																0
PIC																				0
RE (BOY)																				0
CashDiv			(15,000)	15,000										(15,000)						0
Net Cash from Financing Activities	(15,000)																			0
Net Change in Cash	22,000																			0
Add: Cash At BOY	34,000																			0
Cash Balance At EOY	56,000																			0
				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Below is the text method of determining the statement of cash flows for year 2 using the indirect method.

- **Step 1—Determining the net increase/decrease in cash.**
  - Cash increased $22,000 ($56,000-$34,000).

- **Step 2—Determining net cash provided/used by operating activities.**
  - Net income on an accrual basis must be adjusted to arrive at net cash provided/used by operating activities. Explanations for the adjustments to net income for Computer Services Company in 2004 are as follows:
    - **Decrease in Accounts Receivable--**Accounts receivable decreases during the period because cash receipts are higher than revenues reported on an accrual basis. The decrease of $10,000 must be added to net income.
    - **Increase in Prepaid Expenses--**Prepaid expenses increase during a period because cash paid for expenses is greater than expenses reported on an accrual basis. Cash payments have been made in the current period, but expenses (as charges to the income statement) have been deferred to future periods.

      -To convert net income to net cash provided by operating activities, the increase of $4,000 in prepaid expenses must be deducted from net income.

      -If prepaid expenses decreased, net income would be increased by the amount of the decrease.
    - **Increase in Accounts Payable--**Like the increase in 2003, the 2004 increase of $55,000 in accounts payable must be added to net income to convert to net cash provided by operating activities.
    - **Depreciation expense--**During 2004 Computer Services Company reported depreciation expense of $15,000. An analysis of the accumulated depreciation accounts reveals that $11,000 related to the building and $4,000 related to the equipment.

      -Depreciation expense is a noncash charge, thus it is added back to net income in order to arrive at net cash provided by operating activities.

      -Other charges to expense **that do not require the use of cash**, such as the amortization of intangible assets, are treated in the same manner as depreciation.
    - **Loss on Sale of Equipment**--Computer Services Company reported a $3,000 loss on the sale of equipment (book value $7,000 less cash proceeds $4,000). The loss reduced net income but **did not reduce cash.** Thus, the $3,000 loss is **added to net income** in determining net cash provided by operating activities.
    - As a result of the previous adjustments, net cash provided by operating activities is $218,000.

- **Step 3—Determining net cash provided/used by investing and financing activities.**
  - After determining the net cash provided by operating activities, the remaining changes in balance sheet accounts must be analyzed in order to determine net cash provided/used by investing and financing activities.
    - **Increase in Building--**An office building was acquired using cash of $160,000. This transaction is a cash outflow reported in the investing activities section.
    - **Increase in Land--**Land of $130,000 was purchased through the issuance of long-term bonds. Although the exchange of bonds payable for land has no effect on cash, it is a significant noncash investing and financing activity that must be disclosed.
    - **Increase in Equipment--**The equipment account increased $17,000. The additional information provided reveals that this was a net increase resulting from two transactions (1) a purchase of equipment for $25,000 and (2) sale of equipment costing $8,000 for $4,000. The purchase of equipment should be shown as a $25,000 outflow of cash and the sale of equipment should be shown as a cash inflow of $4,000.
    - **Increase in Bonds Payable--**The bonds payable account increased by $130,000. As indicated earlier the issuance of bonds for land is a noncash transaction reported in a separate schedule at the bottom of the statement of cash flows.
    - **Increase in Retained Earnings--**Retained Earnings increased by $124,000. The increase is a net of (1) Net income of $139,000 that increased Retained Earnings and (2) Dividends of $15,000 that decreased Retained earnings.

      - Net income is converted to net cash provided by operations.

      -Payment of the dividend is a cash outflow that is reported as a financing activity.

- In summary, the statement of cash flows prepared by the indirect method starts with net income. It then adds or deducts items not affecting cash, to arrive at net cash provided by operating activities. The additions and deductions consist of (1) changes in specific current assets and current liabilities and (2) noncash charges reported in the income statement.

- A summary of the adjustments for current assets and current liabilities is provided in Illustration 12-19.

Study Objective 5b - Prepare a Statement of Cash Flows Using the Direct Method

- To illustrate the direct method, we use the transactions of Juarez Company for two years, 2003 and 2004, to prepare annual statements of cash flow.

- Juarez Company began business on January 1, 2003, when it issued 300,000 shares of $1 par value common stock for $300,000 cash. The company rented office and sales space along with equipment. The comparative balance sheets at the beginning and end of 2003, and the changes in each account are shown below:

JUAREZ COMPANY
Comparative Balance Sheet

Assets	Dec. 31, 2003	Jan 1, 2003	Increase/Decrease
Cash	$ 159,000	$ -0-	$ 159,000 increase
A/R	15,000	-0-	15,000 increase
Inventory	160,000	-0-	160,000 increase
Prepaid exp	8,000	-0-	8,000 increase
Land	80,000	-0-	80,000 increase
Total	$ 422,000	$ -0-	
Liabilities and stockholders' equity			
A/P	$ 60,000	$ -0-	$ 60,000 increase
Accrd exp payable	20,000	-0-	20,000 increase
Common stock	300,000	-0-	300,000 increase
RE	42,000	-0-	42,000 increase
Total	$ 422,000	$ -0-	

JUAREZ COMPANY
Income Statement
For the Year Ended December 31, 2003

Revenues from sales	$780,000
Cost of goods sold	450,000
Gross profit	330,000
Operating expenses	170,000
Income before income taxes	160,000
Income tax expense	48,000
Net income	$112,000

Additional Information:

(a) Dividends of $70,000 were declared and paid in cash.
(b) The accounts payable increase resulted from the purchase of merchandise.

Input data for Direct Method Juarez, Year 1

Accounts	Balance 12/31/03 Unadjusted Balance	TB 12/31/03 Adjusted EOY	TB Change for Worksheet
Cash	159,000	159,000	159,000
Acct/Rec	15,000	15,000	15,000
Inventory	160,000	160,000	160,000
Prepaid Exp	8,000	8,000	8,000
		0	0
		0	0
		0	0
		0	0
Land	80,000	80,000	80,000
		0	0
A/D-NCA2		0	0
		0	0
A/D-NCA4		0	0
	422,000		
A/P	(60,000)	(60,000)	(60,000)
AccrExpPay	(20,000)	(20,000)	(20,000)
CS	(300,000)	(300,000)	(300,000)
RE (BOY)	0	0	0
Cash Div	70,000	70,000	70,000
Revenue	(780,000)	(780,000)	(780,000)
Other Rev		0	0
COS	450,000	450,000	450,000
OpExp	170,000	170,000	170,000
Tax Expense	48,000	48,000	48,000
G/LSaleNCA		0	0
	(422,000)		
Balance	0	0	0

Statement of Cash Flows				Cash	Acct/Rec	Inventory	Prepaid Exp	Land	A/P	AccrExpPay	CS	RE (BOY)	Cash Div	Revenue	COS	OpExp	Tax Expense	Total
Juarez Co																		
For Year Ended		12/31/03		159,000	15,000	160,000	8,000	80,000	(60,000)	(20,000)	(300,000)	0	70,000	(780,000)	450,000	170,000	48,000	0
Operating Activities:																		0
Accounts Recievable			(15,000)	15,000	(15,000)													0
				0														0
Cash Collections:		765,000																0
Revenue			780,000	(780,000)										780,000				0
				0														
COS			(450,000)	450,000											(450,000)			0
OpExp			(170,000)	170,000												(170,000)		0
Tax Expense			(48,000)	48,000													(48,000)	0
Inventory			(160,000)	160,000		(160,000)												0
Prepaid Exp			(8,000)	8,000			(8,000)											0
A/P			60,000	(60,000)					60,000									0
AccrExpPay			20,000	(20,000)						20,000								
		(88,000)																0
Add back non cash items:																		0
Adj to A/D to Balance	0																	0
GaIn/Loss on sale of NCA	0	0																0
																		0
																		0
Net Cash from Operations:	9,000																	0
Investing Activities:																		0
Changes in NCA:																		0
Land			(80,000)	80,000				(80,000)										0
Less: NonCash affect on NCA Trans			0															0
Net Cash from Investing Activities	(80,000)																	0
																		0
Financing Activities:																		0
CS			300,000	(300,000)							300,000							0
RE (BOY)																		0
CashDiv			(70,000)	70,000									(70,000)					0
Net Cash from Financing Activities	230,000																	0
Net Change in Cash	159,000																	0
Add: Cash At BOY	0																	0
Cash Balance At EOY	159,000																	0
				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Text Method of Statement of Cash flows – Direct Method

Step 1—Determining the net increase or decrease in cash.

- The comparative balance sheets of Juarez Company show a zero cash balance at January 1, 2003, and a cash balance of $159,000 at December 31, 2003. Therefore, the change in cash for 2003 was a net increase of $159,000.

- **Step 2—Determining net cash provided/used by operating activities.**
  - Under the direct method, net cash provided by operating activities is computed by **adjusting each item in the income statement** from the accrual to the cash basis.
  - An efficient way to apply the direct method is to analyze the revenues and expenses reported in the income statement in the order in which they are listed and then determine cash receipts and cash payments related to these revenues and expenses.
  - Explanations for the adjustments for Juarez Company in 2003 are as follows:
    - **Cash receipts from customers.** The income statement for Juarez Company reported revenues from customers of $780,000. To determine the cash received for Juarez Company, the increase in accounts receivable of $15,000 is deducted from sales revenue. Thus, Juarez received $765,000 from its customers. If there were a decrease in accounts receivable, the decrease would be added to sales revenue.
    - **Cash payments to suppliers.** Juarez Company reported cost of goods sold on its income statement of $450,000. It is first necessary to find purchases for the year. To find purchases, cost of good sold is adjusted for the change in inventory. To determine the amount of purchases, the increase in inventory is added to the cost of goods sold. In 2003 Juarez Company's inventory increased $160,000. Purchases, therefore are computed as cost of goods sold plus the increase in inventory ($450,000 + $160,000) or $610,000. Cash payments to suppliers are determined by adjusting purchases for the change in accounts payable. To determine cash payments to suppliers, an increase in accounts payable is deducted from purchases. For Juarez Company, cash payments to suppliers were $550,000 ($610,000 - $60,000).
    - **Cash payments for operating expenses**. Operating expenses of $170,000 were reported on Juarez Company's income statement. To determine the cash paid, the amount must be adjusted for any changes in prepaid expenses and accrued expenses payable. To convert operating expenses to cash payments for prepaid operating expenses, an increase must be added to operating expenses. To determine cash payments for operating expenses, an increase in accrued expenses payable is deducted from operating expenses. Juarez Company's cash payments for operating expenses were $158,000, computed as follows:

Operating expenses	$ 170,000
Add: Increase in prepaid expenses	8,000
Deduct: Increase in accrued expenses payable	(20,000)
Cash payments for operating expenses	$ 158,000

    - **Cash payments for income taxes**. The income statement for Juarez Company shows income tax expense of $48,000. This amount equals the cash paid since the comparative balance sheet indicates no income taxes payable at the beginning or end of the year.

- **Step 3—Determining net cash provided/used by investing and financing activities**
  - Preparing the investing and financing activities sections of the statement of cash flows begins by determining the changes in noncurrent accounts reported in the comparative balance sheets. The change in each account is then analyzed to determine the effect, if any, the change had on cash.
    - **Increase in Land.** No additional information is given for the increase in land. Therefore you should assume that the increase affected cash. Thus an outflow of cash of $80,000 for the purchase of land should be reported in the investing activities section.
    - **Increase in common stock.** The issuance of common stock is a financing activity. Thus, an inflow of $300,000 from the issuance of common stock is reported in the financing activities section.
    - **Increase in Retained Earnings.** Net income increased retained earnings by $112,000. The additional information indicates that a cash dividend of $70,000 was declared and paid.

Juarez Company Yr 2, Direct Method

Information for the second year of operations, 2004, is presented below.

JUAREZ COMPANY

Comparative Balance Sheet

Assets	2004	2003	Increase/Decrease
Cash	$ 191,000	$ 159,000	$ 32,000 increase
A/R	12,000	15,000	3,000 decrease
Inventory	130,000	160,000	30,000 decrease
Prepaid exp	6,000	8,000	2,000 decrease
Land	180,000	80,000	100,000 increase
Equipment	160,000	-0-	160,000 increase
A/D —equip	(16,000)	-0-	16,000 increase
Total	$ 663,000	$ 422,000	
Liabilities and stockholders' equity			
A/P	$ 52,000	$ 60,000	$ 8,000 decrease
Acrd exp pay	15,000	20,000	5,000 decrease
Inc tax pay	12,000	-0-	12,000 increase
Bonds payable	90,000	-0-	90,000 increase
Common stock	400,000	300,000	100,000 increase
RE	94,000	42,000	52,000 increase
Total	$ 663,000	$ 422,000	

JUAREZ COMPANY
Income Statement
For the Year Ended December 31, 2004

Revenues from sales		$ 975,000
Cost of goods sold	660,000	
Operating exp (ex depreciation)	176,000	
Depreciation expense	18,000	
Loss on sale of store equipment	1,000	855,000
Income before income taxes		120,000
Income tax expense		36,000
Net income		$ 84,000

Additional Information:

(a) Dividends of $32,000 were declared and paid in cash.
(b) Bonds were issued at face value for $90,000 in cash.
(c) Equipment costing $180,000 was purchased for cash.
(d) Equipment costing $20,000 was sold for $17,000 cash when its book value was $18,000.
(e) Common stock of $100,000 was issued to acquire land.

Input Sheet for Juarez Co, Direct Method Yr 2

	Accounts	Balance 12/31/04 Unadjusted Balance	Balance 1/1/04 Post Closing	TB 12/31/04 Adjusted EOY	TB Change for Worksheet
CA1	Cash	191,000	159,000	191,000	32,000
CA2	Acct/Rec	12,000	15,000	12,000	(3,000)
CA3	Inventory	130,000	160,000	130,000	(30,000)
CA4	Prepaid Exp	6,000	8,000	6,000	(2,000)
NCA1	Land	180,000	80,000	180,000	100,000
NCA2	Equip	160,000		160,000	160,000
NCA3	A/D-NCA2	(16,000)		(16,000)	(16,000)
Total Assets:		663,000	422,000		
CL1	A/P	(52,000)	(60,000)	(52,000)	8,000
CL2	AccrExpPay	(15,000)	(20,000)	(15,000)	5,000
CL3	Tax Liab	(12,000)		(12,000)	(12,000)
NCL1	B/P	(90,000)		(90,000)	(90,000)
SHE CS	CS	(400,000)	(300,000)	(400,000)	(100,000)
RE	RE (BOY)	(42,000)	(42,000)	(42,000)	0
CashDiv	Cash Div	32,000		32,000	32,000
REV 1	Revenue	(975,000)		(975,000)	(975,000)
2	Other Rev			0	0
3	COS	660,000		660,000	660,000
4	OpExp	176,000		176,000	176,000
6	Dep Exp	18,000		18,000	18,000
8	Tax Expense	36,000		36,000	36,000
10	G/LSaleNCA	1,000		1,000	1,000

Total Liabilities & SHE	(663,000)	

				Cash	Acct/Rec	Invtry	PrepExp	Land	Equip	A/D-NCA2	A/P	AccrExpPay	Tax Liab	B/P	CS	RE (BOY)	Cash Div	Revenue	COS	OpExp	Dep Exp	Tax Expense	G/LSale	Total
Statement of Cash Flows																								
Juarez Co																								
For Year Ended		12/31/04		32,000	3,000	30,000	(2,000)	100,000	160,000	(16,000)	8,000	5,000	(12,000)	(90,000)	(100,000)	0	32,000	(975,000)	660,000	176,000	18,000	36,000	1,000	0
Operating Activities:																								0
Accounts Recievable	-		3,000	(3,000)	3,000																			0
Cash Collections:	-	978,000																						0
Revenue	-		975,000	975,000														975,000						0
COS	-		(660,000)	660,000															(660,000					0
OpExp			(176,000)	176,000																(176,000				0
Dep Exp	-		(18,000)	18,000																	(18,000			0
Tax Expense			(36,000)	36,000																		(36,000)		0
G/LSaleNCA			(1,000)	1,000																			(1,000)	0
Inventory	-		30,000	(30,000)		30,000																		0
Prepaid Exp	-		2,000	(2,000)			2,000																	0
A/P	-		(8,000)	8,000							(8,000													0
AccrExpPay	-		(5,000)	5,000								(5,000)												
Tax Liab			12,000	(12,000)									12,000											0
Change in A/D			16,000	(16,000)						16,000														0
		31,000																						0
Add back non cash items:																								0
Adj to A/D to Balance	2,000																							0
GaIn/Loss on sale of NCA	1,000	3,000																						0
Net Cash from Operations:	137,000																							0
Investing Activities:																								0
Changes in NCA:																								0
Land			(100,000)	100,000				100,000																0
Equip			(160,000)	160,000					(160,000)															0
Less: NonCash affect on NCA Trans			(3,000)																					0
Net Cash from Investing Activities	163,000																							0
Financing Activities:																								0
Changes in Short/Long-Term Debt			90,000	(90,000)										90,000										0
CS			100,000	100,000											100,000									0
CashDiv			(32,000)	32,000													(32,000)							0
Net Cash from Financing Activities	58,000																							0
Net Change in Cash	32,000																							0
Add: Cash At BOY	159,000																							0
Cash Balance At EOY	191,000																							0
NonCah investing and Financing Activites			100,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Textbook Method to produce a statement of cash flows under the direct method

- **Step 1—Determining the net increase or decrease in cash.**
  - The comparative balance sheets of Juarez Company show a beginning cash balance of $159,000 and an ending cash balance of $191,000. Thus, there is a net increase in cash in 2004 of $32,000.

- **Step 2—Determining net cash provided/used by operating activities.**
  - **Cash receipts from customers.** Since accounts receivable decreased $3,000, cash receipts from customers were greater than revenue. Cash receipts from customers were $978,000 computed as follows:

Revenues from sales	$975,000
Add: Decrease in accounts receivable.	3,000
Cash receipts from customers	$978,000

  - **Cash payments to suppliers.** For 2004, purchases are computed using cost of goods sold of $660,000 from the income statement and the decrease in inventory of $30,000 from the comparative balance sheets. Purchases are then adjusted by the decrease in accounts payable of $8,000. Cash payment to suppliers were $638,000, computed as follows:

Cost of goods sold	$660,000
Deduct: Decrease in inventory	30,000
Purchases	630,000
Add: Decrease in accounts payable	8,000
Cash payments to suppliers	$638,000

  - **Cash payments for operating expenses.** Prepaid expenses decreased $2,000 during the year. To determine cash payments for operating expenses, the decrease in prepaid expenses is deducted from operating expenses. Accrued expenses payable decreased $5,000 during the period. The decrease in accrued expenses payable is added to operating expenses.
  - **Depreciation expense and loss on sale of equipment.** Depreciation expense in 2004 was $18,000. Depreciation expense is not shown in the statement of cash flows under the direct method because it is a noncash charge. The loss on sale of store equipment of $1,000 is also a noncash charge.
  - **Cash payments for income taxes**. Income taxes payable increased by $12,000. Cash payments for income taxes were therefore $24,000 ($26,000 - $12,000).

- **Step 3—Determining net cash provided/used by investing and financing activities**
  - **Increase in Land.** Additional information indicates that common stock was issued to purchase land. The issuance of common stock for land has no effect on cash. But **it is a significant noncash investing and financing transaction** that requires disclosure in a separate schedule at the bottom of the statement of cash flows.
    - **Increase in equipment.** The increase of $160,000 resulted from two investing transactions: (1) Equipment costing $180,000 was purchased for cash. (2) Equipment costing $20,000 was sold for $17,000 cash when its book value was $18,000. The $180,000 purchase of equipment was an outflow of cash and the $17,000 sale of equipment was an inflow of cash. **The two amounts should not be netted. Both flows should be shown.**
    - **Increase in bonds payable.** The additional information indicates that bonds with a face value of $90,000 were issued for $90,000 cash. The issuance of bonds is a financing activity. Therefore there is an inflow of cash of $90,000 from the issuance of bonds payable.
    - **Increase in common stock.** The issuance of common stock is a financing activity. Additional information indicates that land was acquired from the issuance of common stock. The transaction is a **significant noncash investing and financing transaction** that should be reported in a separate schedule at the bottom of the statement.
    - **Increase in Retained Earnings.** Net income increased retained earnings by $52,000. The additional information indicates that a cash dividend of $32,000 was declared and paid. **Net income is not reported in**

the statement of cash flows under the direct method. Cash dividends paid are reported in the financing activities section as an outflow of cash.

♦ The statement of cash flows for Juarez Company is shown in Illustration 12-44 of the textbook.

Study Objective 6 - Use the Statement of Cash Flows to Evaluate a Company

1. Traditionally, the ratios most commonly used by investors and creditors have been based on accrual accounting.
   a. We have been introduced to some cash-based ratios that are gaining increased acceptance among analysts. In this section we review some of those measures as well as introduce new measures.

2. **Free Cash Flow--**In the statement of cash flows, cash from operations is intended to indicate the cash-generating capability of the company.
   a. However, that **cash provided by operating activities fails to take into account that a company must invest in new fixed assets** just to maintain its current level of operations and it must at least **maintain dividends at current levels** to satisfy investors.
      1. **Free cash flow** is the term used to describe the cash left from operations after adjustment for capital expenditures and dividends.
         1. For example, suppose that MPC produced and sold 10,000 personal computers this year. It reported $100,000 cash provided by operating activities. In order to maintain production at 10,000 computers, MPC invested $15,000 in equipment. It chose to pay $5,000 in dividends. Its free cash flow was $80,000 ($100,000 - $15,000 - $5,000).

3. ***Assessing Liquidity, Solvency, and Profitability Using Cash Flows***
   a. In this chapter ratios that are cash-based rather than accrual-based are used for the first time.
      1. Rather than using numbers from the income statement, these ratios use numbers from the statement of cash flows.
      2. Many analysts are critical of accrual-based numbers because they feel that the adjustment process allows too much management discretion.
         1. One disadvantage to the cash-based measures is that, unlike the more commonly employed accrual-based measures, there are no readily available published industry averages for comparison.
      3. In computing cash flow-based ratios to analyze Microsoft, the following information is needed in addition to the cash flow information provided in Illustration 12-46 of Kimmel 3rd ed :

($ in millions)	2001	2000
Current liabilities	$ 11,132	$ 9,755
Total liabilities	11,968	10,782
Sales	25,296	22,956

         1. We know that **Liquidity** is the ability of a business to meet its immediate obligations.
            a. Earlier, we learned that one measure of *liquidity* is the current ratio. *Current ratio* is computed by dividing current assets by current liabilities.
            b. A disadvantage of the current ratio is that it uses year-end balances of current assets and current liabilities, which may not be representative of a company's position during most of the year.
               i. A ratio that partially corrects this problem is the **current cash debt coverage ratio,** computed by dividing cash provided from operating activities by average current liabilities.
               ii. Because cash from operations involves the entire year rather than a balance at one point in time, it is often considered a better representation of liquidity on the average day.

iii. The current cash debt coverage ratio is computed for Microsoft and comparative numbers are given for Oracle below. In addition, each company's current ratio is included for comparative purposes.

Current Cash Debt Coverage Ratio = Cash Provided by Operations ÷ Average Current Liabilities

$$\textbf{Current Cash Debt Coverage Ratio} = \frac{\$13{,}422}{(\$11{,}132 + \$9{,}755)/2} = 1.29 \text{ times}$$

	Current cash coverage ratio	Current ratio
Microsoft	**1.29 times**	**3.56:1**
Oracle	**.45 times**	**2.29:1**

- Microsoft's net cash provided from operating activities is nearly approximately one-third greater than its average current liabilities.
- Although Oracle's ratio of .45 is much lower there is no cause for concern. Remember the Oracle's current ratio is 2.29:1.

2. **Solvency** is the ability of a firm to survive over the long term.
    a. One measure of solvency is the debt to total assets ratio.
    b. A measure of solvency that uses cash figures is the **cash debt coverage ratio--**the ratio of cash provided by operations to total debt as represented by average total liabilities.
    c. This ratio measures a company's ability to repay its liabilities from cash generated from operations.
        i. The cash debt coverage ratio for Microsoft is computed as follows:

Cash Debt Coverage Ratio = Cash Provided by Operations ÷ Average Total Liabilities

$$\textbf{Cash Debt Coverage Ratio} = \frac{\$13{,}422}{(\$11{,}968 + \$10{,}782)/2} = 1.18 \text{ times}$$

	Cash coverage ratio	Debt to total assets ratio
Microsoft	**1.18 times**	**20%**
Oracle	**.38 times**	**43%**

- Microsoft has very few long-term obligations, therefore its cash debt coverage ratio is similar to its current cash debt coverage ratio.
- Oracle has some long-term debt, but like Microsoft, its cash debt coverage ratio suggests that its long-term financial health is strong.
- Neither cash nor accrual measures suggest any cause for concern.

Chapter 12 Review

- ✓ What is the primary purpose -of the statement of cash flows? What questions does information contained in the statement of cash flows answer?

- ✓ Define operating, investing, and financing activities. Give an example of each.

- ✓ List the phases of the product life cycle. How is a company's cash flow affected by each phase in the product's life cycle?

- ✓ Prepare a statement of cash flows using one of two approaches: (a) the indirect method or (b) the direct method.

- ✓ Use the ratios discussed in this chapter to evaluate a company. Be sure you understand the difference in the ratios that are accrual-based and those that are cash-based. In which of the ratios would you place more confidence, the accrual-based ratios or the cash based ratios?

Reading Comprehension Check I **Name** ________________

Chapter 12

The statement of cash flows classifies cash receipts and cash payments into ______________, _____________________, and ____________________ activities.

1. Operating activities include the cash effects of transactions that create _______________ and ________________ and thus enter into the determination of ___________ ___________.
2. Investing activities include (a) purchasing and disposing of investments and productive ___________________ using cash and (b) lending ____________________________ and collecting the _____.
3. Financing activities include (a) obtaining cash from _________________ ________________ and _______ the amounts _____________________ and (b) obtaining cash from _____________________ and paying them ____________________.

______________________ ____________________ is the most important category because it shows the cash provided or used by company ____________________. Ultimately a company must generate cash from its _________ ___________________ in order to continue as a going concern and to expand.

Solutions - Reading Comprehension Check I

Chapter 12

The statement of cash flows classifies cash receipts and cash payments into ____**operating**____, _____**investing**, and _____**financing**___ activities.

1. Operating activities include the cash effects of transactions that create ____**revenues**_____ and ____**expenses**__ and thus enter into the determination of ________**net**_______ _____**income**____.
2. Investing activities include (a) purchasing and disposing of investments and productive ________**long-lived assets**_______ using cash and (b) lending ______**money**_____ and collecting the _______**loans**______.
3. Financing activities include (a) obtaining cash from _________**issuing**________ __________**debt**________ and **repaying**______ the amounts _______**borrowed**______ and (b) obtaining cash from ____**stockholders** and paying them ______**dividends**_____.

______**Operating**______ _____**activities**_____ is the most important category because it shows the cash provided or used by company _____**operations**_______. Ultimately a company must generate cash from its ___**operating activities**____ in order to continue as a going concern and to expand.

Reading Comprehension Check II **Name ________________**

Chapter 12

The phase a company is in affects its ____________________ ____________________. When a company is in the ________________________ ________________________, we expect that it will be spending considerable amounts to purchase productive assets, but it will not be generating positive _________________________ from operations. That is, ___________________ used in operations will exceed ___________________________ generated by operations during _________ ____________________. To support its asset purchases it may have to issue _______________________ or __________________. Thus, during the _________________ _________________we expect cash from operations to be _________________________, cash from investing to be ___________________________, and cash from financing to be ________________.

During the growth phase, we expect to see the company start to generate small amounts of cash from ________. During the maturity phase, cash from ____ and ____________ are approximately the same. Cash generated from operations exceeds _________________ needs. Thus, in the maturity phase the company can actually start to retire ____________________________________ or buy back __.

Finally during the decline phase, cash from operations _____________________. Cash from investing might actually become __________________________________ as the firm sells off excess assets, and cash from financing may be _______ as the company buys back stock and retires debt.

Solutions - Reading Comprehension Check II

Chapter 12

The phase a company is in affects its _________**cash**________ _________**flows**______. When a company is in the **introductory**___ ________**phase**_______, we expect that it will be spending considerable amounts to purchase productive assets, but it will not be generating positive ___________**cash**__________ from operations. That is, _________**cash** used in operations will exceed __________**cash**________ generated by operations during _____**introductory**_ _______**phase** __. To support its asset purchases it may have to issue _______**stock**_______ or _________**debt**______. Thus, during the _**introductory**___ ________**phase**_____ we expect cash from operations to be _______**negative**______, cash from investing to be ________**negative**_____, and cash from financing to be ______**positive**______.

During the growth phase, we expect to see the company start to generate small amounts of cash from ___**operations** __. During the maturity phase, cash from _____**operations**___ and _________**net**________ _______**income**______ are approximately the same. Cash generated from operations exceeds ____**investing**___ needs. Thus, in the maturity phase the company can actually start to retire _________**debt**______ or buy back ________**stock**________.

Finally during the decline phase, cash from operations _______**decreases**______. Cash from investing might actually become _______**positive**_______ as the firm sells off excess assets, and cash from financing may be ______**negative**_____ as the company buys back stock and retires debt.

Vocabulary Quiz **Name ________________**

Chapter 12

____ 1. A basic financial statement that provides information about the cash receipts and cash payments of an entity during a period, classified as operating, investing, and financing activities, in a format that reconciles the beginning and ending cash balances.

____________ 2. A method of determining net cash provided by operating activities by adjusting each item in the income statement from the accrual basis to the cash basis.

____________ 3. Cash flow activities that include the cash effects of transactions that create revenues and expenses and thus enter into the determination of net income.

____________ 4. A cash-basis ratio used to evaluate solvency, calculated as net cash provided by operating activities divided by average total liabilities.

____________ 5. Cash flow activities that include (a) purchasing and disposing of investments and productive long-lived assets using cash and (b) lending money and collecting on those loans.

____________ 6. A series of phases in a product's sales and cash flows over time; these phases, in order of occurrence, are introductory, growth, maturity, and decline.

____________ 7. A method of preparing a statement of cash flows in which net income is adjusted for items that do not affect cash, to determine net cash provided by operating activities.

____________ 8. A cash-basis ratio used to evaluate liquidity, calculated as net cash provided by operating activities divided by average current liabilities.

____________ 9. Cash from operations adjusted for charge for investments made to maintain the current level of operations.

____________ 10. Cash flow activities that include (a) obtaining cash from issuing debt and repaying the amounts borrowed and (b) obtaining cash from stock-holders and providing them with a return on their investment.

Solutions to Vocabulary Quiz

Chapter 12

1. Statement of cash flows
2. Direct method
3. Operating activities
4. Cash debt coverage ratio
5. Investing activities
6. Product life cycle
7. Indirect method
8. Current cash debt coverage ratio
9. Free cash flow
10. Financing activities

Multiple Choice Quiz **Name _______________**

Chapter 12

1. The statement of cash flows classifies cash receipts and cash payments into which of the following activities?
   a. Investing activities
   b. Financing activities
   c. Operating activities
   d. All of the above

2. Cash flow activities that include the cash effects of transactions that create revenues and expenses and thus enter into the determination of net income are referred to as
   a. investing activities
   b. financing activities
   c. operating activities
   d. all of the above

3. The source of cash generally considered to be the best measure of whether a company can generate sufficient cash to continue as a going concern and to expand is provided by
   a. investing activities
   b. financing activities
   c. operating activities
   d. all of the above

4. Cash outflows to purchase property, plant and equipment; to purchase debt or equity securities or other entities; to make loans to other entities are examples of
   a. investing activities
   b. financing activities
   c. operating activities
   d. all of the above

5. Significant noncash activities include:
   a. conversion of bonds into common stock.
   b. payment of bank note.
   c. exchanges of plant assets.
   d. both a and c.

6. During which phase in the product life cycle will the company be spending considerable amounts to purchase productive assets, but not generating much (if any) cash from operations?
   a. Introductory phase
   b. Growth phase
   c. Maturity phase
   d. Decline Phase

7. The information in a statement of cash flows should help investors, creditors, and others evaluate all of the following aspects of the firm's financial position **except:**
   a. The entity's ability to generate future cash flows.
   b. The entity's ability to pay dividends and meet obligations.
   c. The reasons for the differences between net income and net cash provided (used) by financing activities.
   d. The cash investing and financing transactions during the period.

8. All of the following are used in preparing a statement of cash flows **except:**
   a. a trial balance.
   b. comparative balance sheet.
   c. current income statement.
   d. additional information.

9. Which of the following is **not** correct concerning the indirect method of preparing the statement of cash flows?
   a. It is easier to prepare.
   b. It is required by the FASB.
   c. It focuses on the differences between net income and net cash flow from operating activities.
   d. It tends to reveal less company information to competitors.

10. A cash-basis ratio used to evaluate liquidity, calculated as net cash provided by operating activities divided by average current liabilities is the
    a. capital expenditure ratio.
    b. free cash flow.
    c. cash return on sales ratio.
    d. current cash debt coverage ratio.

Solutions to Multiple Choice Quiz

Chapter 12

1. d
2. c
3. c
4. a
5. d
6. a
7. c
8. a
9. b
10. d

Exercise 1 - World Wide Web Research and Cash Flow Activity

Chapter 12

To find an interactive toolbox for preparing a statement of cash flows go to **www.onlinewbc.gov**. Click on **Business Basics**, **Accounting and Finance**. Find the Financial Statement Aid for the Cash Flow Statement. Read through the tutorial and answer the following questions.

1. What are the components of cash flow? Describe each.

2. How do you practice good cash management?

3. Summarize the steps in preparing the cash flow statement.

4. Use the blank worksheet to complete Requirement 1 of Problem 12-7B in your textbook.

Solutions: Information available on website.

Note: The website is constantly being updated. Please check to see that the information requested in this exercise is available.

Exercise 2 - Cash Flow Communication Activity

Chapter 12

Renee Ashay is the sole proprietor of Renee's School of Cosmetology. Renee intends to expand her course curriculum to include an esthetician program (skin care). Renee must hire a certified instructor, purchase a line of skin care products, purchase additional equipment, and promote the new program. In order to secure a loan to finance her expansion, Renee's banker asked her for a complete set of financial statements, including a cash flow statement. Renee is able to prepare her accrual-basis income statement, statement of owner's equity, and balance sheet from her trial balance. However, she has come to you because she is unfamiliar with the statement of cash flows, and does not understand the need for this statement. Prepare a letter to Renee explaining the purpose of the cash flow statement and why the banker is interested in this financial statement.

Solution:

Dear Renee:

This letter is in response to your request concerning the purpose of the cash flow statement and why it is a required financial statement. Your balance sheet, income statement, and statement of owner's equity prepared on an accrual basis provide only a limited amount of information about your company's cash flows. For example, your income statement shows net income, but does not indicate the amount of cash generated by your operating activities. The cash flow statement provides detailed information about your net change in cash as a result of operating, investing, and financing activities during the period.

The primary purpose of the cash flow statement is to provide information about cash receipts, cash payments, and the net change in cash resulting from the operating, investing, and financing activities of a company during the period. It also reconciles the beginning and ending cash balances. The statement of cash flows provides answers to the following questions about an entity:

- **Where did cash come from during the period?**
- **What was the cash used for during the period?**
- **What was the change in the cash balance during the period?**

The information in the statement of cash flows should help creditors and others evaluate the following aspects of your company's financial position:

- **The company's ability to generate future cash flows.**
- **The company's ability to pay dividends and meet obligations.**
- **The reasons for the differences between net income and net cash provided (used) by operating activities.**
- **The investing and financing transactions during the period.**

If you need additional information about the statement of cash flows, please contact me.

Exercise 3 - Creative Cash Flow Activity

Chapter 12

Financial statement preparers have two choices in preparing the statement of cash flows: the indirect method and the direct method. The indirect method is used extensively in practice even though the FASB has expressed a preference for the direct method

1. List two similarities and one difference of the direct and indirect methods.
2. What are the advantages of using the indirect method?
3. What are the advantages of using the direct method?

Solutions:

1. **Similarities:**
    a. **Both the direct and indirect methods use the three components: operating, investing, and financing activities.**
    b. **Both methods arrive at the same total amount for each activity.**
    c. **The investing activities and financing activities sections are not affected by the choice of method.**

    Differences:
    a. **The indirect method adjusts net income for items that did not affect cash whereas the direct method adjusts each item in the income statement.**

2.
    a. **The indirect method is easier to prepare.**
    b. **It focuses on the differences between net income and net cash flow from operating activities.**
    c. **It tends to reveal less company information to competitors.**

3.
    a. **The direct method is more consistent with the objective of a statement of cash flows because it shows operating cash receipts and payments.**
    b. **The FASB has expressed a preference for the direct method.**

Exercise 4 - Library or World Wide Web Research and Financial Statement Analysis Activity

Chapter 12

American Home Products and Merck are large pharmaceutical companies operating in the United States. Research your school library or the Internet to find current annual reports for AHP and Merck. If researching the web go to **www.ahp.com** to find information for American Home Products. Merck can be found at **www.merck.com**. Using information contained in the annual reports compute the following cash-based measures for American Home Products and Merck:

1. Free cash flow

2. Current cash debt coverage ratio

3. Cash debt coverage ratio

Solutions: Information available on website.

Note: The website is constantly being updated. Please check to see that the information requested in this exercise is available.

Exercise 5 - Library or World Wide Web Research and Cash Flow Activity

Chapter 12

Home Depot is a large retailer of building materials and home improvement products with headquarters in Atlanta. Locate the most recent annual report for Home Depot in your school library or on the World Wide Web. Visit Home Depot on the web at **www.homedepot.com**. Using the Consolidated Statement of Cash Flows provide a narrative of Home Depot's activities for the year.

Solutions: Information available on website.

Note: The website is constantly being updated. Please check to see that the information requested in this exercise is available.

Exercise 6 - Library or World Wide Web Research Activity

Chapter 12

Cash management is an important issue for all businesses. To learn more about cash management, go to **www.eubfn.com**. Click on **Financial Services – Cash Management**.

Read and summarize one of the leading articles on cash management.

Solutions: Information available on website.

Note: The website is constantly being updated. Please check to see that the information requested in this exercise is available.

Exercise 7 - Ethics Activity

Chapter 12

We-Tow-U Wrecker Service recently purchased three new wreckers by signing a $250,000 note at the local bank. When you prepare the financial statements for We-Tow-U, the owner, Mike Mounds, confronts you about the information you included in the statement of cash flows. Mike is outraged that you showed non-cash items on the statement. He insists that providing his competitors with the information about the cost of wreckers will have a negative effect on his business. He goes on to explain that he negotiated with the wrecker dealer to get the new wreckers at a price well below the price that his competitors would have to pay. He also explains that he assured the dealer that he would not let anyone know what a great deal he got on the wreckers. How would you respond to Mike's demand that you provide only cash information on the statement of cash flows?

Solution:

You should explain to Mike that generally accepted accounting principles require that significant non-cash transactions be reported either in a separate schedule at the bottom of the statement of cash flows or in a separate note or supplementary schedule to the financial statements. This satisfies the full disclosure principle. Explain to Mike that even though his competitors may obtain this information, it is important that his creditors have all information (cash and non-cash) in order to make informed credit decisions. Also explain to Mike that the information does not give the detail of how many or what types of wreckers were purchased. You might explain to Mike that if he did not sell any wreckers during the year, his competitors might figure out the cost of his purchased wreckers by comparing the current-year balance with the prior-year balance on the balance sheet.

Exercise 8 - World Wide Web Accounting Careers Research Activity

Chapter 12

All products go through a series of phases called the product life cycle. The product life cycle has a direct impact on a company's cash flows.

1. Summarize the four phases (in order of their occurrence) in the product life cycle.

2. For each of the four phases, explain the impact of the cycle on a company's cash flow.

Solutions:

1. **The four phases are often referred to as follows:**
   a. **Introductory phase – occurs at the beginning of a company's life, when it is purchasing fixed assets and beginning to produce and sell products.**
   b. **Growth phase – the company is striving to expand its production and sales.**
   c. **Maturity phase – sales and production level off.**
   d. **Decline phase – sales of the product fall due to a weakening in consumer demand.**

2. **Each phase impacts a company's cash flow differently:**
   a. **Introductory phase – we expect cash from operations to be negative, cash from investing to be negative, and cash from financing to be positive. Cash used in operations will exceed cash generated by operations. The company will be spending considerable amounts to purchase productive assets such as buildings and equipment. The company will have to issue stock or debt.**
   b. **Growth phase – we expect the company to generate small amounts of cash from operations. The company continues to show negative cash from investing and positive cash from financing. Cash from operations will be less than net income because the company will be building its inventories. Collections on accounts receivable will lag behind sales, and accrual income will exceed cash collections during that period. Cash needed for asset acquisitions will continue to exceed cash provided by operations, requiring the issuance of additional debt or new stock.**
   c. **Maturity phase – cash from operations and net income are approximately the same. Cash generated from operations exceeds investing needs. Thus, the company can actually start to retire debt or buy back stock.**
   d. **Decline phase – cash from operations decreases. Cash from investing might actually become positive as the company sells off excess assets. Cash from financing may be negative as the company buys back stock and retires debt.**