CHAPTER 13

Statement of Cash Flows

After studying this chapter, you should be able to:

Learning Objectives

LO13-1 Explain the purposes and uses of a statement of cash flows.

LO13-2 Describe how cash transactions are classified in a statement of cash flows.

LO13-3 Compute the major cash flows relating to operating activities.

LO13-4 Compute the cash flows relating to investing and financing activities.

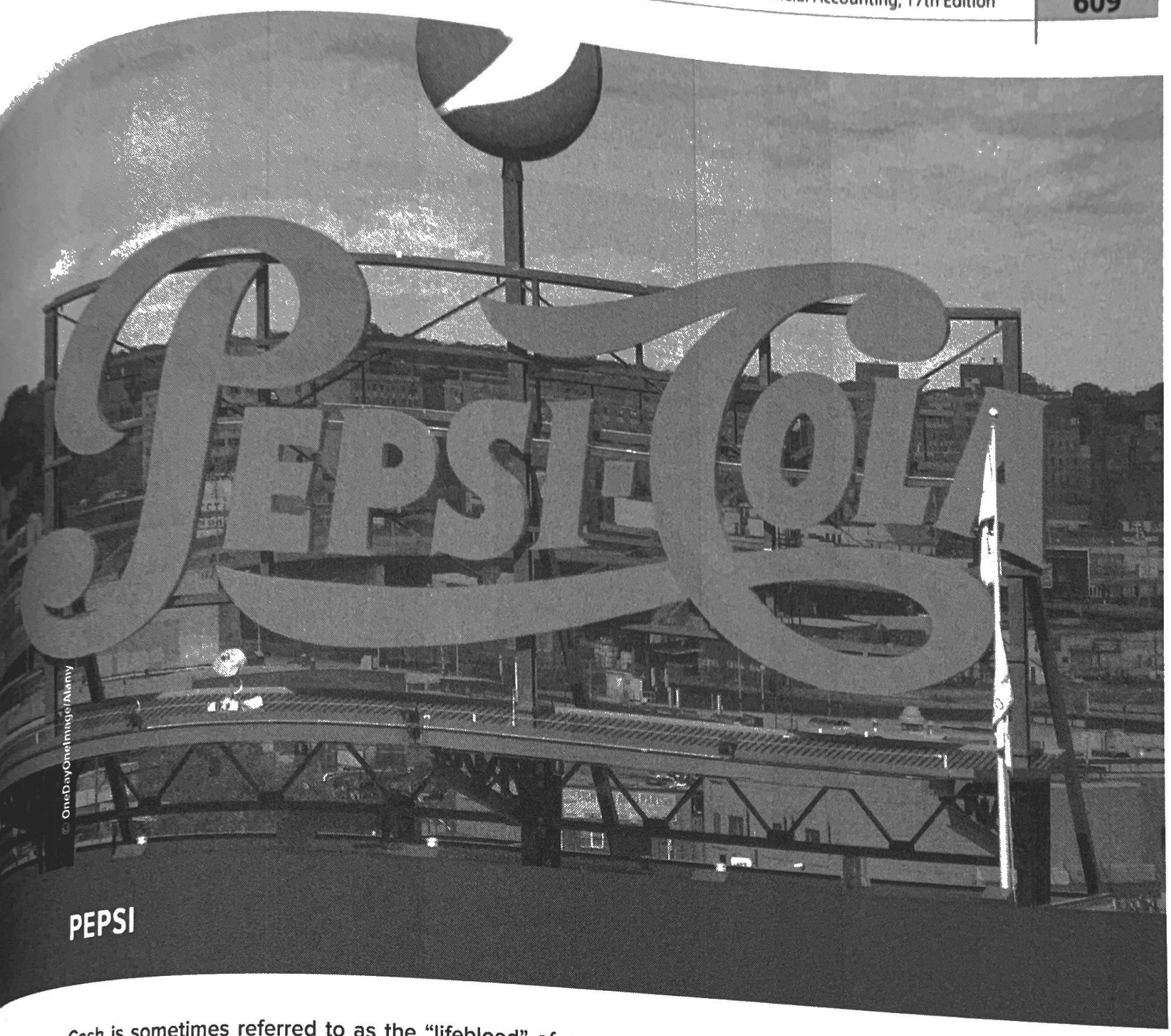
LO13-5 Distinguish between the direct and indirect methods of reporting operating cash flows.

LO13-6 Explain why net income differs from net cash flows from operating activities.

LO13-7 Compute net cash flows from operating activities using the indirect method.

LO13-8 Discuss the likely effects of various business strategies on cash flows.

LO13-9 Explain how a worksheet may be helpful in preparing a statement of cash flows.



Cash is sometimes referred to as the "lifeblood" of a company, implying that companies require cash to be successful and to even continue to exist. Cash is required on a daily basis to meet current obligations and to position the company for future success. Cash requirements include activities as broad ranging as meeting payroll requirements for employees, purchasing inventory to meet the shopping needs of customers, repaying debt when it is due, paying dividends to stockholders, and from time to time expanding the business by acquiring plant assets or even entire other businesses.

Cash flow is particularly important for large companies like PepsiCo, Inc. as it continuously seeks to expand its markets. Pepsi's 2014 annual report includes three-year comparative statements of cash flows for 2014, 2013, and 2012. These statements are presented in three major categories: operating activities, investing activities, and financing activities. Pepsi's statements show $8.5 to $10.5 billion positive cash flows from operations each year. This cash was used for many purposes, including capital spending, repayment of debt, repurchasing the company's common stock, and paying dividends to stockholders.

Efficiently managing cash flows of this magnitude is an important responsibility of the company's management team and is critical for the company's continued success. ■

CASH IS KING! This phrase is sometimes used to emphasize how important positive cash flow is for all companies. Cash flow information about a company is helpful to investors and creditors in judging future cash flows. If the company itself does not have strong cash flow, it is unlikely that the company will be in a cash position to provide strong cash flows to its employees, suppliers, investors, and creditors. We introduced in Chapter 2 the idea of a financial statement that describes cash flows, and in Chapter 13 we go into greater depth regarding this important financial statement. The statement of cash flows shows how the company's cash changed during the period and explains how the company managed its cash in terms of its operating, investing, and financing activities.

Statement of Cash Flows

PURPOSES OF THE STATEMENT

LO13-1

LEARNING OBJECTIVE
Explain the purposes and uses of a statement of cash flows.

The objective of a statement of cash flows is to provide information about the cash receipts and cash payments of a business entity during the accounting period. The term **cash flows** includes both cash receipts and payments. In a statement of cash flows, information about cash receipts and cash payments is classified in terms of the company's operating activities, investing activities, and financing activities. The statement of cash flows assists investors, creditors, and others in assessing such factors as:

- The company's ability to generate positive cash flows in future periods.
- The company's ability to meet its obligations and to pay dividends.
- The company's need for external financing.
- Reasons for differences between the amount of net income and the related net cash flows from operating activities.
- Both the cash and noncash aspects of the company's investment and financing transactions for the period.
- Causes of the change in the amount of cash and cash equivalents between the beginning and the end of the accounting period.

Stated simply, a statement of cash flows helps users of financial statements evaluate a company's ability to have sufficient cash—both on a short-run and on a long-run basis. For this reason, information found in the the statement of cash flows is useful to virtually everyone interested in the company's financial health: short- and long-term creditors, investors, employees, suppliers, management—and both current and prospective competitors.

EXAMPLE OF A STATEMENT OF CASH FLOWS

An example of a statement of cash flows appears in Exhibit 13–1. Cash outflows are shown in parentheses.[1]

CLASSIFICATION OF CASH FLOWS

LO13-2

LEARNING OBJECTIVE
Describe how cash transactions are classified in a statement of cash flows.

The cash flows shown in the statement are presented in three major categories: (1) **operating activities**, (2) **investing activities**, and (3) **financing activities**.[2] We will now look briefly at the way cash flows are classified among these three categories.

Operating Activities The operating activities section shows the cash effects of revenue and expense transactions. Stated another way, the operating activities section of the statement of cash flows includes the cash effects of those transactions reported in the continuing

[1] In this illustration, net cash flows from operating activities are determined by the *direct method*. An alternative approach, called the *indirect method,* is illustrated later in this chapter.

[2] To reconcile to the ending cash balance, "effects of changes in exchange rates on cash" is used in the cash flow statements of companies with foreign currency holdings. This classification, as well as other complexities, is discussed in more advanced accounting courses.

Statement of Cash Flows

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ALLISON CORPORATION
STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED DECEMBER 31, 2018

Cash flows from operating activities:		
Cash received from customers	$ 870,000	
Interest and dividends received	10,000	
Cash provided by operating activities		$ 880,000
Cash paid to suppliers and employees	$ (764,000)	
Interest paid	(28,000)	
Income taxes paid	(38,000)	
Cash disbursed for operating activities		(830,000)
Net cash flows from operating activities		$ 50,000
Cash flows from investing activities:		
Purchases of marketable securities	$ (65,000)	
Proceeds from sales of marketable securities	40,000	
Loans made to borrowers	(17,000)	
Collections on loans	12,000	
Purchases of plant assets	(160,000)	
Proceeds from sales of plant assets	75,000	
Net cash flows from investing activities		(115,000)
Cash flows from financing activities:		
Proceeds from short-term borrowing	$ 45,000	
Payments to settle short-term debts	(55,000)	
Proceeds from issuing bonds payable	100,000	
Proceeds from issuing capital stock	50,000	
Dividends paid	(40,000)	
Net cash flows from financing activities		100,000
Net increase (decrease) in cash		$ 35,000
Cash and cash equivalents, Jan. 1, 2018		20,000
Cash and cash equivalents, Dec. 31, 2018		$ 55,000

EXHIBIT 13–1
Allison Corporation Statement of Cash Flows

operations section of the income statement. To illustrate this concept, consider the effects of credit sales. Credit sales are reported in the income statement in the period when the sales occur. But the cash effects occur later—when the receivables are collected in cash. For many credit sales, cash will be received in the same financial reporting period. If the credit sale and the cash receipt occur in different accounting periods, however, the income statement and the operating activities section of the statement of cash flows will differ. Similar differences may exist between the recognition of an expense and the related cash payment. Consider, for example, the expense of postretirement benefits earned by employees during the current period. If this expense is not funded with a trustee, the cash payments may not occur for many years—after today's employees have retired.

Cash flows from operating activities include the following.

Cash Receipts	Cash Payments
Collections from customers for sales of goods and services	Payments to suppliers of merchandise and services, including payments to employees
Interest and dividends received	Payments of interest
Other receipts from operations; for example, proceeds from settlement of litigation	Payments of income taxes
	Other expenditures relating to operations; for example, payments in settlement of litigation

Notice that receipts of interest and dividends and payments of interest are classified as operating activities, not as investing or financing activities.

Investing Activities Cash flows relating to investing activities present the cash effects of transactions involving plant assets, intangible assets, and investments. They include the following.

Cash Receipts	Cash Payments
Cash proceeds from selling investments and plant and intangible assets	Payments to acquire investments and plant and intangible assets
Cash proceeds from collecting principal amounts on loans	Amounts paid to borrowers

Financing Activities Cash flows classified as financing activities include the following items that result from debt and equity financing transactions.

Cash Receipts	Cash Payments
Proceeds from both short-term and long-term borrowing	Repayment of amounts borrowed (excluding interest payments)
Cash received from owners (for example, from issuing stock or sale of treasury stock)	Payments to owners, such as cash dividends
	Purchase of treasury shares

Repayment of amounts borrowed refers to repayment of loans, not to payments made on accounts payable or accrued liabilities. Payments of accounts payable and of accrued liabilities are payments to suppliers of merchandise and services related to revenues and expenses and are classified as cash outflows from operating activities. Also, remember that all interest payments are classified as operating activities.

Why Are Receipts and Payments of Interest Classified as Operating Activities? A case can be made that interest and dividend receipts are related to investing activities, and that interest payments are related to financing activities. The Financial Accounting Standards Board (FASB) considered this point of view but decided instead to require companies to present interest and dividend receipts and interest payments as operating activities. The FASB position reflects the view that cash flows from operating activities should include the cash effects of the revenue and expense transactions entering into the determination of net income. Because dividend and interest revenue and interest expense enter into the determination of net income, the FASB determined that the related cash flows should be presented as operating activities in the statement of cash flows. Payments of dividends, however, do *not* enter into the determination of net income. Therefore, dividend payments are classified as financing activities.

Cash and Cash Equivalents For purposes of preparing a statement of cash flows, cash is defined as including both cash and cash equivalents. **Cash equivalents** are short-term,

INTERNATIONAL CASE IN POINT

Both the Financial Accounting Standards Board in the United States and the International Accounting Standards Board require companies to present a statement of cash flows organized into three categories: operating activities, investing activities, and financing activities. One difference in these two sets of financial reporting standards is the classification of interest received on investments and interest paid on debt financing. As you have learned in this chapter, the FASB requires these to be presented as part of operating cash flows. IASB standards, on the other hand, allow interest received to be classified as either operating or investing and interest paid to be classified as either operating or financing.

highly liquid investments, such as money market funds, commercial paper, and Treasury bills that will mature within 90 days from the acquisition date. These are so near cash that they are considered the same as cash.

If an item is determined to not be a cash equivalent, its cash flows are presented in the investing activities section of the statement of cash flows. The amount shown as *cash and cash equivalents* in the balance sheet must be the same as the amount shown on the statement of cash flows. Transfers of money between a company's bank accounts and cash equivalents are not viewed as cash receipts or cash payments. Money is considered cash regardless of whether it is held in currency, in a bank account, or in the form of cash equivalents. Interest received from holding cash equivalents is included in cash receipts from operating activities.

Marketable securities, such as investments in the stocks and bonds of other companies, do not qualify as cash equivalents. Therefore, purchases and sales of marketable securities do result in cash flows that are reported in the statement of cash flows as investing activities.

In the long run, a company must have a strategy that generates positive net cash flows from its operating activities if it is to be successful. A business with a consistent pattern of negative cash flows from operations will not be able to raise cash from other sources indefinitely. In fact, the ability of a business to raise cash through financing activities is highly dependent on its ability to generate cash from its normal business operations. Creditors and stockholders are reluctant to invest in a company that does not generate enough cash from operating activities to ensure prompt payment of maturing liabilities, interest, and dividends.

Similarly, companies cannot expect to survive indefinitely on cash provided by investing activities. At some point, plant assets, investments, and other assets available for sale will be depleted.

Cash versus Accrual Information The items in an income statement and a statement of financial position (balance sheet) represent the balances of specific general ledger accounts. Notice, however, that the captions used in the statement of cash flows do not correspond to specific ledger accounts. A statement of cash flows summarizes cash transactions during the accounting period. The general ledger, however, is usually maintained on the **accrual basis** of accounting, not the cash basis. An amount such as "Cash received from customers. . . $870,000" does not appear as the balance in a specific ledger account, but it is derived from one or more such accounts.

In a small business, it may be practical to prepare a statement of cash flows directly from the special journals for cash receipts and cash payments. For most businesses, however, it is easier to prepare the statement of cash flows by examining the income statement and the changes during the period in all of the balance sheet accounts except for Cash. This approach is based on the double-entry system of accounting; any transaction affecting cash must also affect some other asset, liability, or owners' equity account.[3] The change in these other accounts determines the nature of the cash transaction, as we see in the example that follows.

Preparing a Statement of Cash Flows

Earlier in this chapter we illustrated the statement of cash flows of Allison Corporation. We will now show how this statement was developed from the company's accrual-basis accounting records.

Basically, a statement of cash flows can be prepared from the information contained in an income statement and comparative balance sheets at the beginning and end of the period. It is also necessary, however, to have some detailed information about the changes occurring during the period in certain balance sheet accounts. Shown in Exhibit 13–2 is Allison's income statement, and in Exhibit 13–3 the firm's comparative balance sheets for the current year are presented.

Additional Information An analysis of changes in the balance sheet accounts of Allison Corporation provides the following information about the company's activities in the current year. To assist in the preparation of a statement of cash flows, we have classified this information into the categories of operating activities, investing activities, and financing activities.

[3] Revenue, expenses, and dividends represent changes in owners' equity and, therefore, may be regarded as owners' equity accounts.

EXHIBIT 13–2
Allison Corporation Income Statement

ALLISON CORPORATION
INCOME STATEMENT
FOR THE YEAR ENDED DECEMBER 31, 2018

Revenue and gains:		
Net sales		$900,000
Dividend revenue		3,000
Interest revenue		6,000
Gain on sales of plant assets		31,000
Total revenue and gains		$940,000
Costs, expenses, and losses:		
Cost of goods sold	$500,000	
Operating expenses (including depreciation of $40,000)	300,000	
Interest expense	35,000	
Loss on sales of marketable securities	4,000	
		839,000
Income before income tax		$101,000
Income tax expense		36,000
Net income		$ 65,000

OPERATING ACTIVITIES

1. Accounts receivable increased by $30,000 during the year.
2. Dividend revenue is recognized on the cash basis, but interest revenue is recognized on the accrual basis. Accrued interest receivable decreased by $1,000 during the year.
3. Inventory increased by $10,000 and accounts payable increased by $15,000 during the year.
4. During the year, short-term prepaid expenses increased by $3,000 and accrued expenses payable (other than for interest or income taxes) decreased by $6,000. Depreciation for the year amounted to $40,000.
5. The accrued liability for interest payable increased by $7,000 during the year.
6. The accrued liability for income taxes payable decreased by $2,000 during the year.

INVESTING ACTIVITIES

7. Analysis of the Marketable Securities account shows debit entries of $65,000, representing the cost of securities purchased, and credit entries of $44,000, representing the cost of securities sold. (No marketable securities are classified as cash equivalents.)
8. Analysis of the Notes Receivable account shows $17,000 in debit entries, representing cash loaned by Allison Corporation to borrowers during the year, and $12,000 in credit entries, representing collections of notes receivable. (Collections of interest were recorded in the Interest Revenue account and are considered cash flows from operating activities.)
9. Allison's plant asset accounts increased by $116,000 during the year. An analysis of the underlying transactions indicates the following.

	Effect on Plant Asset Accounts
Purchased $200,000 in plant assets, paying $160,000 cash and issuing a long-term note payable for the $40,000 balance	$200,000
Sold for $75,000 cash plant assets with a book value of $44,000	(44,000)
Recorded depreciation expense for the period	(40,000)
Net change in plant asset controlling accounts	$116,000

ALLISON CORPORATION
COMPARATIVE STATEMENTS OF FINANCIAL POSITION
(BALANCE SHEETS)
DECEMBER 31, 2018 AND 2017

Assets	2018	2017
Current assets:		
Cash and Cash Equivalents	$ 55,000	$ 20,000
Marketable Securities	85,000	64,000
Notes Receivable	17,000	12,000
Accounts Receivable	110,000	80,000
Accrued Interest Receivable	2,000	3,000
Inventory	100,000	90,000
Prepaid Expenses	4,000	1,000
Total current assets	$373,000	$270,000
Plant and Equipment (net of accumulated depreciation)	616,000	500,000
Total assets	$989,000	$770,000
Liabilities & Stockholders' Equity		
Current liabilities:		
Notes Payable (short-term)	$ 45,000	$ 55,000
Accounts Payable	76,000	61,000
Interest Payable	22,000	15,000
Income Taxes Payable	8,000	10,000
Other Accrued Expenses Payable	3,000	9,000
Total current liabilities	$154,000	$150,000
Long-term liabilities:		
Notes Payable (long-term)	40,000	–0–
Bonds Payable	400,000	300,000
Total liabilities	$594,000	$450,000
Stockholders' equity:		
Capital Stock	$ 60,000	$ 50,000
Additional Paid-in Capital	140,000	100,000
Retained Earnings	195,000	170,000
Total stockholders' equity	$395,000	$320,000
Total liabilities & stockholders' equity	$989,000	$770,000

EXHIBIT 13–3
Allison Corporation Balance Sheets

FINANCING ACTIVITIES

10. During the year, Allison Corporation borrowed $45,000 cash by issuing short-term notes payable to banks. Also, the company repaid $55,000 in principal amounts due on these loans and other notes payable. (Interest payments are classified as operating activities.)
11. The company issued bonds payable for $100,000 cash.
12. The company issued 1,000 shares of $10 par value capital stock for cash at a price of $50 per share.
13. Cash dividends declared and paid to stockholders amounted to $40,000 during the year.

CASH AND CASH EQUIVALENTS

14. Cash and cash equivalents as shown in Allison Corporation's balance sheets amounted to $20,000 at the beginning of the year and $55,000 at year-end—a net increase of $35,000.

Using this information, we will now illustrate the steps in preparing Allison Corporation's statement of cash flows and a supporting schedule disclosing the noncash investing and financing activities. In our discussion, we often refer to these items of additional information by citing the paragraph numbers shown in the list just described.

The distinction between accrual-basis measurements and cash flows is fundamentally important in understanding financial statements and other accounting reports. To assist in making this distinction, we use two colors in our illustrated computations. We show in blue the accrual-based data from Allison Corporation's income statement and the preceding numbered paragraphs. The cash flows that we compute from these data are shown in red.

CASH FLOWS FROM OPERATING ACTIVITIES

LO13-3

LEARNING OBJECTIVE
Compute the major cash flows relating to operating activities.

As shown in the statement of cash flows in Exhibit 13–1, net cash flows from operating activities are determined by combining certain cash inflows and subtracting certain cash outflows. The inflows are cash received from customers and interest and dividends received; the outflows are cash paid to suppliers and employees, interest paid, and income taxes paid.

In computing each of these cash flows, our starting point is an income statement amount, such as net sales, cost of goods sold, or interest expense. As you study each computation, be sure that you understand why the income statement amount must be increased or decreased to determine the related cash flows. You will find that an understanding of these computations will do more than show you how to compute cash flows; it will also strengthen your understanding of the income statement and the statement of financial position (balance sheet).

Cash Received from Customers To the extent that sales are made for cash, there is no difference between the amount of cash received from customers in the statement of cash flows and the amount included as sales revenue in the income statement. Differences arise, however, when sales are made on account. If accounts receivable increase during the year, credit sales will have exceeded collections of cash from accounts receivable. Therefore, we deduct the increase in accounts receivable from net sales to determine the amount of cash received during the year. If accounts receivable decrease, collections of these accounts will have exceeded credit sales. In that case, we add the decrease in accounts receivable to net sales to determine the amount of cash received during the year. The relationship between cash received from customers and net sales is summarized as follows.

$$\text{Cash Received from Customers} = \text{Net Sales} \begin{Bmatrix} + \text{ Decrease in Accounts Receivable} \\ \text{or} \\ - \text{ Increase in Accounts Receivable} \end{Bmatrix}$$

In our Allison Corporation example, paragraph 1 of the additional information tells us that accounts receivable increased by $30,000 during the year. This means that $30,000 of credit sales have not yet been received in cash. The income statement shows net sales for the year of $900,000. Therefore, the amount of cash received from customers is computed as follows.

Net sales (accrual basis)	$900,000
Less: Increase in accounts receivable	30,000
Cash received from customers	$870,000

Interest and Dividends Received Our next step is to determine the amounts of cash received during the year from dividends and interest on the company's investments. As explained in paragraph **2** of the additional information, dividend revenue is recorded on the cash basis. Therefore, the $3,000 shown in the income statement also represents the amount of cash received as dividends.

Interest revenue, on the other hand, is recognized on the accrual basis. We have already shown how to convert one type of revenue, net sales, from the accrual basis to the cash basis. We use the same approach to convert interest revenue from the accrual basis to the **cash basis.** Our formula for converting net sales to the cash basis may be modified to convert interest revenue to the cash basis as follows.

$$\text{Interest Received} = \text{Interest Revenue} \begin{cases} + \text{ Decrease in Interest Receivable} \\ \text{or} \\ - \text{ Increase in Interest Receivable} \end{cases}$$

The income statement for Allison Corporation shows interest revenue of $6,000, and paragraph 2 states that the amount of accrued interest receivable decreased by $1,000 during the year. This means that $1,000 more cash was received than the amount of interest revenue. The amount of cash received as interest is computed as follows.

Interest revenue (accrual basis)	$6,000
Add: Decrease in accrued interest receivable	1,000
Interest received (cash basis)	$7,000

The amounts of interest and dividends received in cash are combined for presentation in the statement of cash flows.

Interest received (cash basis)	$ 7,000
Dividends received (cash basis)	3,000
Interest and dividends received	$10,000

CASH PAYMENTS FOR MERCHANDISE AND FOR EXPENSES

The next item in the statement of cash flows, "Cash paid to suppliers and employees," includes all cash payments for purchases of merchandise and for operating expenses (excluding interest and income taxes). Payments of interest and income taxes are listed as separate items in the statement. The amounts of cash paid for purchases of merchandise and for operating expenses are computed separately.

Cash Paid for Purchases of Merchandise An accrual basis income statement reflects the cost of goods sold during the year, regardless of whether the merchandise was acquired or paid for in that period. The statement of cash flows, on the other hand, reports the cash paid for merchandise during the year, even if the merchandise was acquired in a previous period or remains unsold at year-end. The relationship between cash payments for merchandise and the cost of goods sold depends on the changes during the period in two related balance sheet accounts: inventory and accounts payable to suppliers of merchandise. This relationship may be stated as follows.

$$\text{Cash Payments for Purchases} = \text{Cost of Goods Sold} \begin{cases} \text{Increase in} \\ + \text{ Inventory} \\ \text{or} \\ - \text{ Decrease in} \\ \text{Inventory} \end{cases} \text{ and } \begin{cases} \text{Decrease in} \\ + \text{ Accounts Payable} \\ \text{or} \\ - \text{ Increase in} \\ \text{Accounts Payable} \end{cases}$$

Using information from the Allison Corporation income statement and paragraph 3, the cash payments for purchases is computed as follows.

Cost of goods sold	$500,000
Add: Increase in inventory	10,000
Net purchases (accrual basis)	$510,000
Less: Increase in accounts payable to suppliers	15,000
Cash payments for purchases of merchandise	$495,000

Here is the logic behind this computation: If a company is increasing its inventory, it is buying more merchandise than it sells during the period. If the company is increasing its accounts payable to merchandise creditors, it is not paying cash for all of these purchases in the current period. Payment for some portion of the purchases is being delayed and will be paid in the next period.

Cash Payments for Expenses Expenses, as shown in the income statement, represent the cost of goods and services used up during the period. However, the amounts shown as expenses may differ from the cash payments made during the period. Consider, for example, depreciation expense. Recording depreciation expense requires no cash payment, but does increase total expenses determined on the accrual basis. In converting accrual-basis expenses to the cash basis, we deduct depreciation expense and any other noncash expenses from our accrual-basis operating expenses. Other noncash expenses—expenses not requiring cash outlays—include amortization of intangible assets, any unfunded portion of postretirement benefits expense, and amortization of bond discount.

A second type of difference arises from short-term timing differences between the recognition of expenses and the actual cash payments. Expenses are recorded in accounting records when the related goods or services are used. However, the cash payments for these expenses might occur (1) in an earlier period, (2) in the same period, or (3) in a later period. Let us briefly consider each case.

1. If payment is made in advance, the payment creates an asset, termed a prepaid expense, or, in our formula, a "prepayment." To the extent that prepaid expenses increase over the year, cash payments exceed the amount recognized as expense.
2. If payment is made in the same period, the cash payment is equal to the amount of expense.
3. If payment is made in a later period, the payment reduces a liability for an accrued expense payable. To the extent that accrued expenses payable decrease during the year, cash payments exceed the amount recognized as expense.

The relationship between cash payments for expenses and accrual-basis expenses is summarized as follows.

$$\text{Cash Payments for Expenses} = \text{Expenses} \left\{ \begin{array}{l} \text{Depreciation} \\ -\ \text{and Other} \\ \text{Noncash} \\ \text{Expenses} \end{array} \right\} \text{and} \left\{ \begin{array}{l} \text{Increase in} \\ +\ \text{Related} \\ \text{Prepayments} \\ \text{or} \\ \text{Decrease in} \\ -\ \text{Related} \\ \text{Prepayments} \end{array} \right\} \text{and} \left\{ \begin{array}{l} \text{Decrease in} \\ +\ \text{Related Accrued} \\ \text{Liabilities} \\ \text{or} \\ \text{Increase in} \\ -\ \text{Related Accrued} \\ \text{Liabilities} \end{array} \right\}$$

In a statement of cash flows, cash payments for interest and for income taxes are shown separately from cash payments for operating expenses. Using information from Allison Corporation's income statement and from paragraph 4, we may compute the company's cash payments for operating expenses as follows.

Operating expenses (including depreciation)		$300,000
Less: Noncash expenses (depreciation)		40,000
Subtotal		$260,000
Add: Increase in short-term prepayments	$3,000	
Decrease in accrued liabilities	6,000	9,000
Cash payments for operating expenses		$269,000

Cash Paid to Suppliers and Employees The caption used in our cash flow statement, "Cash paid to suppliers and employees," includes cash payments for both purchases of merchandise and for operating expenses. This cash outflow may now be computed by combining the two previous calculations.

Cash payments for purchases of merchandise	$495,000
Cash payments for operating expenses	269,000
Cash payments to suppliers and employees	$764,000

Cash Payments for Interest and Taxes Interest expense and income taxes expense may be converted to cash payments with the same formula we used to convert operating expenses. Allison Corporation's income statement shows interest expense of $35,000, and paragraph **5** states that the liability for interest payable increased by $7,000 during the year. The fact that the liability for unpaid interest increased over the year means that not all of the interest expense shown in the income statement was paid in cash in the current year. To determine the amount of interest actually paid, we subtract from total interest expense the portion that has been financed through an increase in the liability for interest payable. The computation is as follows.

Interest expense	$35,000
Less: Increase in related accrued liability	7,000
Interest paid	$28,000

Similar reasoning is used to determine the amount of income tax paid by Allison Corporation during the year. The accrual-based income tax expense reported in the income statement amounts to $36,000. However, paragraph **6** states that the company reduced its liability for income taxes payable by $2,000 during the year. Incurring income tax expense increases the tax liability; making cash payments to tax authorities reduces it. If the liability decreased over the year, cash payments to tax authorities must have been greater than the income tax expense for the current year. The amount of the cash payments is determined as follows.

Income tax expense	$36,000
Add: Decrease in related accrued liability	2,000
Income tax paid	$38,000

A Quick Review We have now shown the computation of each cash flow relating to Allison Corporation's operating activities. In Exhibit 13–1 we illustrated a complete statement of cash flows for the company. For your convenience, we again show the operating activities section of that statement, illustrating the information developed in the preceding paragraphs.

Cash flows from operating activities:		
Cash received from customers	$ 870,000	
Interest and dividends received	10,000	
Cash provided by operating activities		$ 880,000
Cash paid to suppliers and employees	$ (764,000)	
Interest paid	(28,000)	
Income taxes paid	(38,000)	
Cash disbursed for operating activities		(830,000)
Net cash flows from operating activities		$ 50,000

CASH FLOWS FROM INVESTING ACTIVITIES

LO13-4

LEARNING OBJECTIVE
Compute the cash flows relating to investing and financing activities.

Paragraphs **7** through **9** in the additional information for our Allison Corporation example provide most of the information necessary to determine the cash flows from investing activities. In the following discussion, we illustrate the presentation of these cash flows and explain the sources of the information contained in the numbered paragraphs.

Much information about investing activities can be obtained simply by looking at the changes in the related asset accounts during the year. Debit entries in these accounts represent purchases of the assets, or cash outlays. Credit entries represent sales of the assets, or cash receipts. However, credit entries in asset accounts represent the cost (or book value) of the assets sold. To determine the cash proceeds from these transactions, we must adjust the amount of the credit entries for any gains or losses recognized on the sales.

Purchases and Sales of Securities To illustrate, consider paragraph 7, which summarizes the debit and credit entries to the Marketable Securities account. As explained earlier in this chapter, the $65,000 in debit entries represents purchases of marketable securities. The $44,000 in credit entries represents the cost of marketable securities sold during the period. However, the income statement shows that these securities were sold at a *$4,000 loss*. Thus the cash proceeds from these sales amounted to only *$40,000* ($44,000 cost, minus $4,000 loss on sale). In the statement of cash flows, these investing activities are summarized as follows.

Purchases of marketable securities	$(65,000)
Proceeds from sales of marketable securities	40,000

Loans Made and Collected Paragraph 8 provides all the information necessary to summarize the cash flows from making and collecting loans.

Loans made to borrowers	$(17,000)
Collections on loans	12,000

This information comes directly from the Notes Receivable account. Debit entries in the account represent new loans made during the year; credit entries indicate collections of the principal amount on outstanding notes (loans). (Interest received is credited to the Interest Revenue account and is included among the cash receipts from operating activities.)

YOUR TURN You as a Sales Manager

Assume you are a regional sales manager for Wiggins Foods, Inc., a distributor of bulk food products to schools, nursing homes, hospitals, prisons, and other institutions. Recently, the purchasing agent for Baggins Preschools, Inc., tells you the company will likely have to forgo its normal monthly order because of cash flow problems. The purchasing agent tells you other companies are helping it through the cash flow squeeze and asks if your company could loan the payment to Baggins. The purchasing agent suggests you could record the sale as revenue and increase notes receivable (rather than accounts receivable) by the same amount. Baggins is one of your largest customers. Without its order, you will not meet your sales goals for the month—so you are tempted to say yes. However, on reflection you wonder if it might be unethical for the company to lend its customer money to finance purchases. What should you do?

(See our comments in Connect.)

Cash Paid to Acquire Plant Assets Paragraph 9 states that Allison Corporation purchased plant assets during the year for $200,000, paying $160,000 in cash and issuing a long-term note payable for the $40,000 balance. Notice that only the $160,000 cash payment appears in the statement of cash flows. However, one objective of this financial statement is to show all of the company's investing and financing activities during the year. Therefore, the noncash aspects of these transactions are shown in a supplementary schedule, as follows.

Supplementary Schedule of Noncash Investing and Financing Activities	
Purchases of plant assets	$200,000
Less: Portion financed through issuance of long-term debt	40,000
Cash paid to acquire plant assets	$160,000

This supplementary schedule accompanies the statement of cash flows.

Proceeds from Sales of Plant Assets Assume that an analysis of the plant asset accounts shows net credit entries totaling $44,000 in the year. ("Net credit entries" means all credit entries, net of related debits to accumulated depreciation when assets were sold.) These net credit entries represent the book value of plant assets sold during the year. However, the income statement shows that these assets were sold at a gain of $31,000. Therefore, the cash proceeds from sales of plant assets amounted to $75,000, as follows.

Book value of plant assets sold	$44,000
Add: Gain on sales of plant assets	31,000
Proceeds from sales of plant assets	$75,000

The amount credited to the Accumulated Depreciation account during the year is not a cash flow and is not included in the statement of cash flows.

A Quick Review We have now shown the computation of each cash flow related to Allison Corporation's investing activities. In Exhibit 13–1 we illustrated a complete statement of cash flows for the company. For your convenience, we again show the investing activities section of that statement, illustrating the information developed in the preceding paragraphs.

Cash flows from investing activities:	
Purchases of marketable securities	$ (65,000)
Proceeds from sales of marketable securities	40,000
Loans made to borrowers	(17,000)
Collections on loans	12,000
Purchases of plant assets	(160,000)
Proceeds from sales of plant assets	75,000
Net cash flows from investing activities	$(115,000)

An important feature of the investing activities section of a statement of cash flows is that increases and decreases in cash from similar transactions are presented separately rather than being combined and netted against each other. For example, in this illustration the negative cash flow from purchasing marketable securities ($65,000) is shown separately from the positive cash flow from the sales of marketable securities ($40,000) rather than netting the two to a single negative figure of $25,000 ($65,000 – $40,000).

CASH FLOWS FROM FINANCING ACTIVITIES

Cash flows from financing activities are determined by analyzing the debit and credit changes recorded during the period in the related liability and stockholders' equity accounts. Cash flows from financing activities are more easily determined than those relating to investing activities, because financing activities seldom involve gains or losses.[4] The debit or credit changes in the balance sheet accounts usually are equal to the amounts of the related cash flows.

Credit changes in such accounts as Notes Payable and the accounts for long-term debt and paid-in capital usually indicate cash receipts; debit changes indicate cash payments.

Short-Term Borrowing Transactions To illustrate, consider paragraph 10, which provides the information supporting the following cash flows.

Proceeds from short-term borrowing	$45,000
Payments to settle short-term debts	(55,000)

[4] An early retirement of debt is an example of a financing transaction that may result in a gain or a loss.

Both the proceeds from short-term borrowing of $45,000 (a positive cash flow) and the payments to settle short-term debts of $55,000 (a negative cash flow) are presented in the statement of cash flows. Presenting both directions of the changes in cash, rather than combining the two and presenting a net amount of $10,000 ($55,000 – $45,000), is an important feature of the statement of cash flows. Presenting both positive and negative cash flows is referred to as presenting *gross* cash flows rather than presenting *net* cash flows.

Is it possible to determine the proceeds of short-term borrowing transactions throughout the year without carefully reviewing each cash receipt? The answer is yes—the proceeds from short-term borrowing are equal to the sum of the credit entries in the short-term Notes Payable account. Payments to settle short-term debts are equal to the sum of the debit entries in this account.

Proceeds from Issuing Bonds Payable and Capital Stock Paragraph **11** states that Allison Corporation received cash of $100,000 by issuing bonds payable. This amount was determined by summing the credit entries in the Bonds Payable account. The Bonds Payable account included no debit entries during the year, so we know that no bonds were retired.

Paragraph **12** states that during the year Allison Corporation issued capital stock for $50,000. The proceeds from issuing stock are equal to the sum of the credit entries made in the Capital Stock and Additional Paid-in Capital accounts ($10,000 + $40,000).

Cash Dividends Paid to Stockholders Paragraph **13** states that Allison Corporation declared and paid cash dividends of $40,000 during the year. If dividends are both declared and paid during the same year, the cash payments are equal to the related debit entries in the Retained Earnings account.

If the balance sheet includes a liability for dividends payable, the amounts debited to Retained Earnings represent dividends *declared* during the period, which may differ from the amount of dividends *paid.* To determine cash dividends paid, we adjust the amount of dividends declared by adding any decrease (or subtracting any increase) in the Dividends Payable account over the period.

A Quick Review We have now shown the computation of each cash flow related to Allison Corporation's financing activities. In Exhibit 13–1 we illustrated a complete statement of cash flows for the company. For your convenience, we again show the financing activities section of that statement, illustrating the information developed in the preceding paragraphs.

Cash flows from financing activities:		
Proceeds from short-term borrowing	$ 45,000	
Payments to settle short-term debts	(55,000)	
Proceeds from issuing bonds payable	100,000	
Proceeds from issuing capital stock	50,000	
Dividends paid	(40,000)	
Net cash flows from financing activities		$100,000

RELATIONSHIP BETWEEN THE STATEMENT OF CASH FLOWS AND THE STATEMENT OF FINANCIAL POSITION

The first asset appearing in the statement of financial position (balance sheet) is Cash and Cash Equivalents. The statement of cash flows explains in great detail the change in this one asset from one balance sheet date to the next. The last three lines in the statement of cash flows illustrate this relationship, as shown in our Allison Corporation example.

Net increase (decrease) in cash and cash equivalents	$35,000
Cash and cash equivalents, beginning of year	20,000
Cash and cash equivalents, end of year	$55,000

This is referred to as a reconciliation of the beginning and ending cash balances.

CASE IN POINT

Successful companies sometimes experience reductions in cash. Often these reductions are intentional in order to more productively use the company's cash in different ways. For example, in the years ending June 30, 2010 and 2012 combined, Microsoft Corporation reported decreases in cash in excess of $3 billion! Does this mean that the company was experiencing extreme financial difficulty? Not necessarily. In these years, operations provided $24,073 million (2010) and $31,626 million (2012). The overall declines were due to very large amounts being used in investing and financing activities, primarily for acquiring other companies and investments, paying cash dividends to stockholders, and purchasing treasury stock.

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Lessons to be learned from this example are twofold. First, a decrease in cash does not necessarily signal financial problems, and second, a company's cash position may change in ways very different from its net income.

REPORTING OPERATING CASH FLOWS BY THE INDIRECT METHOD

In determining cash flows from operating activities for Allison Corporation, we have followed what is commonly referred to as the direct method. To this point in our study of the statement of cash flows, we have emphasized the direct method because we consider it to be the more informative and more readily understood approach. The direct method is recommended by the FASB, although companies are permitted to use either the direct or indirect method. Before completing our Allison Corporation illustration of preparing a statement of cash flows, we look more carefully at the indirect method.

Exhibit 13–4 includes a comparison of the direct and indirect methods of determining net cash provided by operating activities for Allison Corporation. The direct method is the same as discussed earlier in this chapter. The two methods are more similar than it may appear at first glance. Both methods are based on the same underlying information, and they result in the same net cash flow amount—in Allison Corporation's case, $50,000 positive cash flow from operations. Both methods convert information originally prepared on the accrual basis to information prepared on the cash basis. In Exhibit 13–4, accrual-based data appear in blue; cash flows are shown in red.

To illustrate the similarity in the computations, look briefly at the formulas for computing the cash inflows and outflows shown under the direct method in the previous "Cash Flows from Operating Activities" section. Each formula begins with an income statement amount and then adds or subtracts the change during the period in related balance sheet accounts. Now look at our illustration of the indirect method in Exhibit 13–4. Notice that this computation also focuses on the net changes during the period in balance sheet accounts.

The difference between the two methods lies only in approach. However, the two approaches provide readers of the statement of cash flows with different types of information. The direct method informs these readers of the nature and dollar amounts of specific positive (inflows) and negative (outflows) of cash that comprise the operating activities of the business. The indirect method, in contrast, explains why the net cash flows from operating activities differ from another measurement of performance—net income that is prepared on the accrual basis. As you can see, the indirect method starts with net income and essentially works backwards through a series of adjustments to reach the net cash provided by operating activities amount.

EXHIBIT 13–4
Comparison of Direct and Indirect Methods

Direct Method		
Cash flows from operating activities:		
Cash received from customers	$ 870,000	
Interest and dividends received	10,000	
Cash provided by operating activities		$880,000
Cash paid to suppliers and employees	$(764,000)	
Interest paid	(28,000)	
Income taxes paid	(38,000)	
Cash disbursed for operating activities		(830,000)
Net cash provided by operating activities		$ 50,000

Indirect Method		
Net income		$ 65,000
Add: Depreciation expense		40,000
Decrease in accrued interest receivable		1,000
Increase in accounts payable		15,000
Increase in accrued interest liabilities		7,000
Nonoperating loss on sales of marketable securities		4,000
Subtotal		$132,000
Less: Increase in accounts receivable	$30,000	
Increase in inventory	10,000	
Increase in prepaid expenses	3,000	
Decrease in accrued operating expenses payable	6,000	
Decrease in accrued income taxes payable	2,000	
Nonoperating gain on sales of plant assets	31,000	82,000
Net cash provided by operating activities		$ 50,000

LO13-5

LEARNING OBJECTIVE
Distinguish between the direct and indirect methods of reporting operating cash flows.

RECONCILING NET INCOME WITH NET CASH FLOWS

LO13-6

LEARNING OBJECTIVE
Explain why net income differs from net cash flows from operating activities.

To further your understanding of the indirect method, we now discuss common adjustments required to reconcile net income with net cash flows from operating activities. The nature and dollar amounts of these adjustments are determined by an accountant using a worksheet or a computer program; they are *not* entered in the company's accounting records.

1. *Adjusting for Noncash Expenses*

   Depreciation is an example of a noncash expense—that is, depreciation expense reduces net income but does not require any cash outlay during the period. The cash outflow related to depreciation resulted when the asset was purchased and was presented as an investing activity at that time—before any depreciation was ever recognized. To reconcile net income with net cash flows from operations, we add back to net income the amount of depreciation and any other noncash expenses. (Other noncash expenses include unfunded pension expense, amortization of intangible assets, depletion of natural resources, and amortization of bond discount.) By adding back depreciation and other noncash expenses, we are not saying they are sources of cash. What we are saying is that depreciation and other noncash expenses are not a use of cash and we add them back to offset the fact that they were deducted in determining net income.

2. *Adjusting for Timing Differences*

   Timing differences between elements of net income and net cash flows arise whenever revenue or expenses are recognized by debiting or crediting an account other than Cash. Changes during the period in the balances of these asset and liability accounts represent differences between the amount of revenues and expenses recognized in the income statement on the accrual basis and the net cash flows from these same items. The balance sheet accounts that give rise to these timing differences include Accounts Receivable, Inventories, Prepaid Expenses, Accounts Payable, and Accrued Expenses Payable.

3. *Adjusting for Nonoperating Gains and Losses*

Nonoperating gains and losses include gains and losses from sales of investments, plant assets, and discontinued operations (which relate to investing activities); and gains and losses on early retirement of debt (which relate to financing activities).

We have learned in this chapter that cash flows are classified as operating activities, investing activities, or financing activities. Nonoperating gains and losses, by definition, do not affect operating activities. However, these gains and losses do enter into the determination of net income. Therefore, in converting net income to net cash flows from operating activities, we add back any nonoperating losses and deduct any nonoperating gains included in net income. The full cash effect of the underlying transaction is then presented as an investing activity (for example, sale of a building) or as a financing activity (for example, retirement of debt) in the statement of cash flows.

THE INDIRECT METHOD: A SUMMARY

The adjustments to net income explained in our preceding discussion are summarized as follows.

Net income	
Add:	Depreciation
	Decrease in accounts receivable
	Decrease in inventories
	Decrease in prepaid expenses
	Increase in accounts payable
	Increase in accrued expenses payable
	Increase in deferred income taxes payable
	Nonoperating losses deducted in computing net income
Deduct:	Increase in accounts receivable
	Increase in inventories
	Increase in prepaid expenses
	Decrease in accounts payable
	Decrease in accrued expenses payable
	Decrease in deferred income taxes payable
	Nonoperating gains added in computing net income
Net cash provided by (used in) operating activities	

LO13-7

LEARNING OBJECTIVE
Compute net cash flows from operating activities using the indirect method.

INDIRECT METHOD MAY BE REQUIRED IN A SUPPLEMENTARY SCHEDULE

The FASB recommends use of the direct method in presenting net cash flows from operating activities. The majority of companies, however, elect to use the indirect method. One reason is that the FASB requires companies using the direct method to meet an additional reporting requirement.

They are required to provide a supplementary schedule showing the computation of net cash flows from operating activities by the indirect method. However, no supplementary computations are required of companies that present the indirect method computations in their cash flow statements because this same information is already presented in the body of the statement.

THE STATEMENT OF CASH FLOWS: A SECOND LOOK

We have now completed our explanation of Allison Corporation's statement of cash flows. We have analyzed each type of cash flow by reconciling amounts included in the other two financial statements—the income statement and the statement of financial position (balance sheet)—to determine the amounts of individual operating, investing, and financing cash flows. In computing cash flows from operating activities, we began by using the direct method, in which major categories of both positive and negative cash flows were determined and presented.

We also illustrated the indirect method to determine the amount of operating cash flows. Rather than adjusting each individual operating cash flow category for changes in balance sheet accounts, these same adjustments were made to net income.

Exhibit 13–5 includes an expanded statement of cash flows for Allison Corporation. This statement uses the direct method for operating activities and includes two supplementary schedules.

EXHIBIT 13–5
Allison Corporation (Expanded) Statement of Cash Flows

ALLISON CORPORATION
STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED DECEMBER 31, 2018

Cash flows from operating activities:		
Cash received from customers	$ 870,000	
Interest and dividends received	10,000	
Cash provided by operating activities		$ 880,000
Cash paid to suppliers and employees	$(764,000)	
Interest paid	(28,000)	
Income taxes paid	(38,000)	
Cash disbursed for operating activities		(830,000)
Net cash provided by operating activities		$ 50,000
Cash flows from investing activities:		
Purchases of marketable securities	$ (65,000)	
Proceeds from sales of marketable securities	40,000	
Loans made to borrowers	(17,000)	
Collections on loans	12,000	
Cash paid to acquire plant assets (see Supplementary Schedule B)	(160,000)	
Proceeds from sales of plant assets	75,000	
Net cash used in investing activities		(115,000)
Cash flows from financing activities:		
Proceeds from short-term borrowing	$ 45,000	
Payments to settle short-term debts	(55,000)	
Proceeds from issuing bonds payable	100,000	
Proceeds from issuing capital stock	50,000	
Dividends paid	(40,000)	
Net cash provided by financing activities		100,000
Net increase (decrease) in cash		$ 35,000
Cash and cash equivalents, Jan. 1, 2018		20,000
Cash and cash equivalents, Dec. 31, 2018		$ 55,000
Supplementary Schedule A: Net Cash Provided by Operating Activities		
Net income		$ 65,000
Add: Depreciation expense		40,000
Decrease in accrued interest receivable		1,000
Increase in accounts payable		15,000
Increase in accrued liabilities		7,000
Nonoperating loss on sales of marketable securities		4,000
Subtotal		$ 132,000
Less: Increase in accounts receivable	$ 30,000	
Increase in inventory	10,000	
Increase in prepaid expenses	3,000	
Decrease in accrued liabilities	8,000	
Nonoperating gain on sales of plant assets	31,000	82,000
Net cash provided by operating activities		$ 50,000
Supplementary Schedule B: Noncash Investing and Financing Activities		
Purchases of plant assets		$ 200,000
Less: Portion financed through issuance of long-term debt		40,000
Cash paid to acquire plant assets		$ 160,000

A=L+LOE

Notice this supplementary schedule illustrates the indirect method of determining cash flows from operations

Supplementary Schedule A in Exhibit 13–5 illustrates the determination of net cash flows from operating activities by the indirect method. Supplementary Schedule B in Exhibit 13–5 discloses any noncash aspects of the company's investing and financing activities. This type of supplementary schedule is required whenever some of the company's investing and financing activities do not coincide with cash flows occurring within the current period.

How would the statement of cash flows in Exhibit 13–5 differ if the indirect method were used? The information included in Supplementary Schedule A would be substituted for the direct method information in the "Cash flows from operating activities" section of the financial statement and would no longer be required as a supplemental disclosure. In fact, this is one reason for the popularity of the indirect method. Because the indirect method calculation is required to be disclosed if the direct method is used, many companies prefer to include the reconciliation of net income to net cash from operating activities in the body of the statement of cash flows and avoid the supplemental disclosure of that same information.

PATHWAYS CONNECTION

In making investment, credit, and other financial decisions, the users of financial statements are particularly interested in the net cash flows from operating activities. Is the amount large enough to meet ongoing cash needs to pay employees and suppliers, service long-term debt, and provide for necessary replacements of plant assets? Will additional debt or equity financing be required in the future? Is the amount of cash generated by operations sufficient to sustain the recent amount of dividends to stockholders, or even increase that amount?

Consider two competitors in the import craft supplies business, Gonzalez, Inc., and Alvarez Company. These companies have approximately the same size assets, liabilities, and sales. Selected information from their most recent statements of cash flows follows.

	Beginning Cash Balance	Net Cash Flow from (in thousands)			Ending Cash Balance
		Operating Activities	Investing Activities	Financing Activities	
Gonzalez	$150	$600	$(500)	$400	$650
Alvarez	150	50	500	(50)	650

Which company is in the stronger cash flow position? Although both have the same beginning and ending cash balances ($150,000 and $650,000, respectively), Gonzalez is in the stronger position because of its strong operating cash flows of $600,000. Gonzalez has been able to invest $500,000 in operating assets, while financing only $400,000, and still has a $650,000 ending cash balance. Alvarez, on the other hand, has generated only a small amount of cash from operations ($50,000) and has sold assets ($500,000) to generate cash to support its ending cash balance. Whether Alvarez will be able to sustain its cash position over time, and be able to meet its recurring obligations in the future, is questionable.

Even more important than net cash flows from operating activities in any one year is the trend in cash flows over a period of years—and the consistency of that trend from year to year. The best results are net cash flows from operating activities that increase each year by a substantial—but also predictable—percentage.[5]

Net cash flows from operating activities		$ 50,000
Less: Net cash used for acquiring plant assets ($160,000 – $75,000 proceeds)	$85,000	
Dividends paid	40,000	125,000
Free cash flow		$(75,000)

[5] Percentage change is the dollar amount of change from one year to the next, expressed as a percentage of (divided by) the amount from the *earlier* of the two years. For example, if net cash provided by operating activities was $100,000 in the first year and $120,000 in the second year, the percentage increase is 20 percent, computed as follows: ($120,000 – $100,000) ÷ $100,000.

A=L+LOE What's left for discretionary purposes?

FREE CASH FLOW

Some analysts compute an amount called **free cash flow**. Free cash flow represents the cash flow available to management for discretionary purposes, after the company has met all of its basic obligations relating to business operations. The term *free cash flow* is widely cited within the business community. Different analysts compute this measure in different ways. For example, are all expenditures for plant assets "basic obligations," or only those expenditures made to maintain the current level of productive capacity?

One common method of computing free cash flow is to deduct from the net cash flows from operating activities net cash used to purchase plant assets (that is, cash paid to purchase, less cash received from sales) and any dividends paid. This computation follows, using information from the Allison Corporation statement of cash flows shown earlier.

$50,000 – $160,000 – $40,000 = ($150,000)

This computation suggests that Allison Corporation did *not* generate enough cash from operations to meet its basic obligations. As a result, management had to raise cash from other sources. But, of course, an analyst always should look behind the numbers. For example, was Allison's purchase of plant assets during the year a basic obligation, or did it represent a discretionary expansion of the business?

YOUR TURN — YOU AS A FINANCIAL ANALYST

You are working for the same stock market research firm as in Chapter 12, but unlike your previous boss (who tended to focus on growth and relative value, both based on reported earnings), your new boss focuses primarily on free cash flow and dividends in choosing stocks.

Your new boss is interested in stocks where free cash flow equals at least 50 percent of cash flow from operations. He also wants dividends to be 25 percent or more of cash flow from operations. You are considering the same stocks as before: Home Depot, Intel, Coca-Cola, and Amazon. Your new boss provides you with the following information that he has taken from recent financial statements and asks you to recommend which stocks are consistent with his investment criteria.

	In Millions		
Company	Cash Flow from Operations (CFO)	Net Capital Expenditures	Dividends
Home Depot	$ 6,975	$ 1,312	$1,743
Intel	18,884	11,027	4,350
Coca-Cola	10,645	2,780	4,595
Amazon	4,180	3,785	—

He also tells you that a potential new client is going to be calling you this afternoon. This potential client is an elderly widow and experienced investor who is quite wealthy. She is interested in learning why the relative levels of free cash flow and dividends are important metrics. She also doesn't understand why all firms don't pay dividends. Your boss tells you to be prepared to answer this prospective client's questions.

(See our comments in Connect.)

Managing Cash Flows

Management can do much to influence the cash flows of a particular period. In fact, it has a responsibility to manage cash flows. No business can afford to run out of cash and default on its obligations. Even being a few days late in meeting payrolls, or paying suppliers or creditors, can severely damage important business relationships. One of management's most basic responsibilities is to ensure that the business has enough cash to meet its obligations as they come due.

BUDGETING: THE PRIMARY CASH MANAGEMENT TOOL

A primary tool used by management to anticipate and shape future cash flows is a cash budget. A **cash budget** is a forecast of future cash receipts and payments. This budget is *not* a financial statement and is not widely distributed outside the organization. To managers, however, it is among the most useful of all accounting reports.

In many ways, a cash budget is similar to a statement of cash flows. However, the budget shows the results expected in future periods, rather than those achieved in the past. Also, the cash budget is more detailed, usually showing expected cash flows month by month and separately for every department within the organization.

Cash budgets serve many purposes. Among the most important are:

- Encouraging managers to plan and coordinate their activities in advance.
- Providing managers with advance notice of the resources at their disposal and the results they are expected to achieve.
- Providing targets useful in evaluating performance.
- Providing advance warnings of potential cash shortages.

WHAT PRIORITY SHOULD MANAGERS GIVE TO INCREASING NET CASH FLOWS?

LO13-8

LEARNING OBJECTIVE
Discuss the likely effects of various business strategies on cash flows.

Creditors and investors look to a company's cash flows to protect their investment and provide future returns. Trends in key cash flows (such as from operations and free cash flow) affect a company's credit rating, stock price, and access to additional investment capital. For these reasons, management is under constant pressure to improve the key measures of cash flow. Unfortunately, the pressure to report higher cash flows in the current period may conflict with managers' long-run responsibilities.

Short-Term Results versus Long-Term Growth Often, short-term operating results can be improved at the expense of long-term growth. For example, reducing expenditures for developing new products may increase earnings and net cash flows in the current period. But over time, this strategy may lessen the company's competitiveness and long-term profitability. Many of the most successful products took many years to develop and test before they contributed positive cash flows to the company.

One-Time Boosts to Cash Flows Some strategies can increase the net cash flows of the current period, but without having much effect on future cash flows. Such strategies include collecting receivables more quickly and reducing the size of inventory.

Assume, for example, that a company offers 60-day terms to its credit customers. Credit sales made in January are collected in March, and credit sales made in February are collected in April. Notice that in each month, the company is collecting about one month's amount of credit sales, but the receipt of cash is delayed two months from the point of sale.

Now assume that on March 1 the company changes its policies to allow only 30-day credit terms. In April, the company will collect two months of credit sales—those made in February (under the former 60-day terms) and those made in March (under the new 30-day terms).

This significantly increases the cash received from customers for the one month of April. But it does not signal higher cash flows for the months ahead. In May, the company will collect only those credit sales made in April. It quickly returns to the pattern of collecting about one month's credit sales in the current month. Shortening the collection period provided only a one-time boost in cash receipts.

A similar one-time boost may be achieved by reducing the size of inventory. This reduces the need for purchasing merchandise, but only while inventory levels are falling. Once the company stabilizes the size of its inventory at the new and lower level, its monthly purchases must return to approximately the quantity of goods sold during the period. Reducing the size of inventory may have other consequences, such as not having products available to meet customer demands.

SOME STRATEGIES FOR PERMANENT IMPROVEMENTS IN CASH FLOW

Several strategies may improve cash flows in *both* the short and long term. These are deferring income taxes, peak pricing, and developing an effective product mix.

Deferring Income Taxes *Deferring* income taxes means using accounting methods for income tax purposes that legally postpone the payment of income taxes. An example is using an accelerated depreciation method for income tax purposes.

Deferring taxes may benefit a growing business every year. As a result, it is an effective and popular cash management strategy.[6]

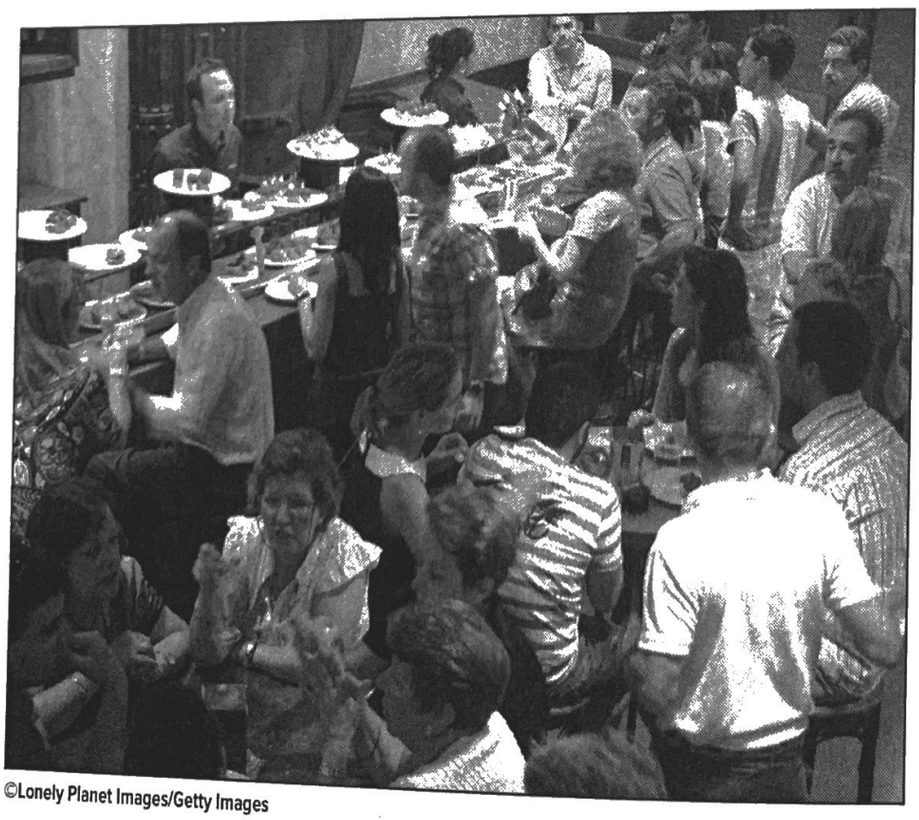
Peak Pricing Some businesses have more customers than they can handle—at least at certain times of the day or year. Examples of such businesses include popular restaurants, resort hotels, communications companies, and providers of electricity.

Peak pricing is a strategy of using sales prices both to increase revenue and to ration goods and services when total demand exceeds supply (or capacity). A higher price is charged during the peak periods of customer demand and a lower price during off-peak periods. For example, a restaurant might charge a higher price during the peak dinner hours than the rest of the day. A theater might charge a higher price in the peak week and evening hours than the rest of the week. Peak pricing has two related goals. First, it increases the seller's revenue during the periods of greatest demand. Second, as customers alter their purchasing practices, it shifts some of the demand to off-peak periods, when the business is better able to service additional customers.

Peak pricing may make goods and services available to customers who otherwise could not afford them. Also, peak pricing may prevent systems, such as cellular telephones, from becoming so overloaded that they simply cannot function. Peak pricing is not always appropriate. For example, we would not expect hospitals or physicians to raise their prices during epidemics or natural disasters. The alternative to peak pricing is a single price all the time.

Develop an Effective Product Mix

Another tool for increasing revenue and cash receipts is the mix of products offered for sale. The dual purposes of an effective **product mix** are to (1) increase total sales and (2) increase gross margins (that is, the excess of the selling price over the cost of the product).



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Some products complement one another, meaning the customer who buys one product often may purchase the other. Common examples of **complementary products** include french fries at a hamburger restaurant, snacks at a movie theater, and a car wash connected to a gas station.

Some complementary products are essential to satisfying the customer. (Would you be happy at a sports stadium that didn't sell food?) Others increase sales by attracting customers who also purchase other types of merchandise.

Some complementary products appear to be only incidental to the company's main product lines. But, in reality, these incidental items may be among the company's most important products.

[6] The Modified Accelerated Cost Recovery System (MACRS) is an accelerated method widely used for income tax purposes. Deferred income taxes were discussed briefly in Chapter 10. The reason a growing business can benefit from deferred taxes every year is that each year it defers a greater amount than comes due from the past.

ETHICS, FRAUD, & CORPORATE GOVERNANCE

As discussed in this chapter, cash flow from operations is the subtotal on the statement of cash flows that is most closely scrutinized by financial statement readers. A large and growing cash flow from operations is viewed positively for at least three reasons. First, companies pay bills with cash, not with earnings. Second, a company with significant cash flows from operations is better positioned to fund future growth with self-generated cash flows rather than having to borrow additional amounts or issue more stock. Third, the quality of a company's earnings is viewed as better if cash flow from operations closely matches reported net income.

Although it may be difficult to manipulate cash flows from operations, it is not impossible, as the Securities and Exchange Commission (SEC) enforcement action involving Dynegy, Inc., illustrates. Dynegy produces and delivers energy, including natural gas, electricity, and coal, to customers throughout North America and Europe, and its shares are traded on the New York Stock Exchange. Dynegy entered into a structured transaction (hereafter referred to as Project Alpha) that resulted in Dynegy reporting $300 million in cash flow from operations that should have been reported as cash flow from financing activities. A primary motivation for Dynegy's involvement with Project Alpha was to bring cash flow from operations closer to reported net income.

Project Alpha had a five-year term and worked as follows. Dynegy sponsored a special-purpose entity, ABG Supply, to sell Dynegy natural gas. In the first year of the five-year term of Project Alpha, ABG Supply sold Dynegy gas at below-market prices. Dynegy then sold this gas at a $300 million profit and reported the resulting cash flow in the operating activities portion of the statement of cash flows. In the remaining four years of Project Alpha's life, Dynegy was obligated to buy gas from ABG Supply at above-market prices. These purchases at above-market prices would be sufficient to pay back the $300 million, plus interest. In substance, the original sale of gas to Dynegy in year 1 at $300 million below market prices represented a loan, and transactions in years 2 through 5 would result in the loan being repaid with interest. As such, the $300 million cash flow in year 1 should have been reported in the financing activities portion of the statement of cash flows—not in the operating activities portion of the statement.

Three midlevel Dynegy tax executives were largely responsible for Project Alpha's structure, and they participated in an active scheme to hide the details of the structure from Dynegy's outside auditors. Two of these executives pled guilty to federal criminal charges and testified against the third executive. The third executive, Jamie Olis, was convicted of criminal charges and was sentenced to over 20 years in federal prison (although this sentence was reduced substantially on appeal). This case clearly illustrates the personal risk of violating securities laws, particularly when there is an active scheme to hide the true nature of transactions from auditors, investors, and other outside parties.

A Worksheet for Preparing a Statement of Cash Flows

A statement of cash flows is developed by systematically analyzing all changes in the noncash balance sheet accounts. This process can be formalized and documented through the preparation of a specially designed worksheet. The worksheet also provides the accountant with visual assurance that the changes in balance sheet accounts have been fully explained.

LO13-9

LEARNING OBJECTIVE
Explain how a worksheet may be helpful in preparing a statement of cash flows.

DATA FOR AN ILLUSTRATION

We will illustrate the worksheet approach using the 2018 financial data of Auto Supply Co.[7] Shown in Exhibit 13–6 are the balances in Auto's balance sheet accounts at the beginning and end of 2018. (Notice in this illustration that the account balances at the end of the current year appear in the right-hand column. This format also is used in the worksheet.)

[7] Our example involving Allison Corporation was quite comprehensive. Therefore, a worksheet for Allison Corporation would be too long and detailed for use as an introductory illustration of a worksheet for the statement of cash flows.

EXHIBIT 13–6
Auto Supply Co. Balance Sheets

AUTO SUPPLY CO.
COMPARATIVE BALANCE SHEETS

	December 31, 2017	December 31, 2018
Assets		
Cash	$ 50,000	$ 45,000
Marketable Securities	40,000	25,000
Accounts Receivable	320,000	330,000
Inventory	240,000	235,000
Plant and Equipment (net of accumulated depreciation)	600,000	640,000
Totals	$1,250,000	$1,275,000
Liabilities & Stockholders' Equity		
Accounts Payable	$ 150,000	$ 160,000
Accrued Expenses Payable	60,000	45,000
Mortgage Note Payable (long-term)	–0–	70,000
Bonds Payable (due in 2023)	500,000	350,000
Capital Stock (no par value)	160,000	160,000
Retained Earnings	380,000	490,000
Totals	$1,250,000	$1,275,000

A=L+OE Changes in the noncash accounts are the key to identifying cash flows

Additional Information The following information also is used in the preparation of the worksheet. (Accrual-based measurements appear in blue, cash flows in red.)

1. Net income for the year amounted to $250,000. Cash dividends of $140,000 were declared and paid.
2. Auto's only noncash expense was depreciation, which totaled $60,000.
3. Marketable securities costing $15,000 were sold for $35,000 cash, resulting in a $20,000 nonoperating gain.
4. The company purchased plant assets for $100,000, making a $30,000 cash down payment and issuing a $70,000 mortgage note payable for the balance of the purchase price.

THE WORKSHEET

Auto Supply Co. reports cash flows from operating activities by the indirect method.[8] A worksheet for preparing a statement of cash flows appears in Exhibit 13–7.

To set up the worksheet, the company's balance sheet accounts are listed in the top portion of the worksheet, with the beginning balances in the first column and the year-end balances in the last (right-hand) column. (For purposes of illustration, we have shown these accounts and account balances in black.)

The two middle columns are used to (1) explain the changes in each balance sheet account over the year and (2) indicate how each change affected cash.

Entries in the Two Middle Columns The entries in the top portion of the worksheet summarize the transactions recorded in the account over the year. (Because these entries summarize transactions recorded on the accrual basis, they are shown in blue.)

For each summary entry in the top portion of the worksheet, we make an offsetting entry (in the opposite column) in the bottom portion of the worksheet indicating the cash effects of

[8] If the worksheet utilizes the direct method, numerous subclassifications are required within the operating activities section. Such worksheets are illustrated in more advanced accounting courses.

A Worksheet for Preparing a Statement of Cash Flows

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AUTO SUPPLY CO.
WORKSHEET FOR A STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED DECEMBER 31, 2018

Balance sheet effects:	Beginning Balance	Effects of Transactions: Debit Changes	Effects of Transactions: Credit Changes	Ending Balance
Assets				
Cash and Cash Equivalents	50,000			
Marketable Securities	40,000		(x) 5,000	45,000
Accounts Receivable	320,000	(4) 10,000	(8) 15,000	25,000
Inventory	240,000			330,000
Plant and Equipment (net of accumulated depreciation)	600,000	(9) 100,000	(5) 5,000	235,000
Totals	1,250,000		(3) 60,000	640,000
				1,275,000
Liabilities & Stockholders' Equity				
Accounts Payable	150,000			
Accrued Expenses Payable	60,000	(7) 15,000	(6) 10,000	160,000
Mortgage Note Payable	–0–			45,000
Bonds Payable	500,000	(10) 150,000	(9) 70,000	70,000
Capital Stock	160,000			350,000
Retained Earnings	380,000	(2) 140,000	(1) 250,000	160,000
Totals	1,250,000	415,000	415,000	490,000
				1,275,000

Cash effects:	Sources	Uses
Operating activities:		
Net income	(1) 250,000	
Depreciation expense	(3) 60,000	
Increase in accounts receivable		(4) 10,000
Decrease in inventory	(5) 5,000	
Increase in accounts payable	(6) 10,000	
Decrease in accrued expenses payable		(7) 15,000
Gain on sales of marketable securities		(8) 20,000
Investing activities:		
Proceeds from sales of marketable securities	(8) 35,000	
Cash paid to acquire plant assets		(9) 30,000
Financing activities:		
Dividends paid		(2) 140,000
Payments to retire bonds payable		(10) 150,000
Subtotals	360,000	365,000
Net decrease in cash	(x) 5,000	
Totals	365,000	365,000

EXHIBIT 13–7
Worksheet for a Statement of Cash Flows

A=L+LOE **At the top of the worksheet we summarize the changes in each noncash account**

A=L+LOE **At the bottom of the worksheet we identify and classify the related cash effects of these changes**

Cash provided by operations—$280,000

Cash provided by investing activities—$5,000

Cash used in financing activities—$290,000

the transactions. These cash effects are classified as operating, investing, or financing activities and are explained with a descriptive caption. (Entries representing the cash effects of transactions and the related descriptive captions appear in red.)

Entries in the two middle columns may be made in any sequence, but we recommend the following approach.

1. Explain the change in the Retained Earnings account.
2. Account for depreciation expense (and any other noncash expenses).
3. Account for timing differences between net income and cash flows from operating activities.
4. Explain any remaining changes in balance sheet accounts other than Cash. (Hint: Changes in asset accounts represent investing activities; changes in liability and equity accounts represent financing activities.)
5. Compute and record the net increase or decrease in cash.

Using this approach, we next explain the entries in our illustrated worksheet. The numbers in the following explanation refer to the entry numbers in the two middle columns of the worksheet.

ENTRY

A=L+LOE **Step 1: Explain the changes in retained earnings**

1. Auto's net income explains a $250,000 credit to the Retained Earnings account. In the bottom portion of the working paper, an offsetting entry is made in the Sources column and is classified as an operating activity.[9]
2. Cash dividends of $140,000 caused a debit to the Retained Earnings account during the year. The offsetting entry is made in the Uses column; payments of dividends are classified as a financing activity.

With these first two entries, we have explained how Auto's Retained Earnings account increased during the year from $380,000 to $490,000.

A=L+LOE **Step 2: Account for noncash expenses**

3. Auto's only noncash expense was depreciation. In the top portion of the worksheet, depreciation explains a $60,000 credit (decrease) in Plant and Equipment (which includes the Accumulated Depreciation accounts). The offsetting entry in the bottom of the worksheet is placed in the Sources column. We have explained that depreciation is not a source of cash, but that it is added back to net income as a step in computing the cash flows from operating activities to offset the fact that it was treated as an expense in determining net income.

A=L+LOE **Step 3: Account for timing differences**

4–7. Fluctuations in current assets and current liabilities create timing differences between net income and the net cash flows from operating activities. In the top portion of the worksheet, entries (4) through (7) summarize the changes in these current asset and current liability accounts. In the bottom portion, they show how these changes affect the computation of cash flows from operating activities.

A=L+LOE **Step 4: Explain any remaining changes in noncash accounts**

8. During the year, Auto sold marketable securities with a cost of $15,000 for $35,000 cash, resulting in a $20,000 nonoperating gain. In the top portion of the worksheet, the entry explains the $15,000 credit change in the Marketable Securities account. In the bottom portion, it reports cash proceeds of $35,000. The difference? The $20,000 nonoperating gain, which is removed from the Operating Activities section of the worksheet and included instead within the amount reported as "Proceeds from sales of marketable securities" in the Investing Activities category.
9. Auto purchased $100,000 in plant assets, paying $30,000 cash and issuing a $70,000 note payable. These events explain a $100,000 debit in Plant and Equipment and the $70,000 credit change in Mortgage Note Payable; they involved a cash outlay of $30,000, which is classified as an investing activity. (The $70,000 financed by issuance of a note payable is a noncash investing and financing activity.)

[9] When the *indirect method* is used, net income serves as the starting point for computing net cash flows from operating activities.

10. The $150,000 debit change in Auto's Bonds Payable account indicates that this amount of the liability has been repaid—that is, $150,000 in bonds has been retired. This is included in the financing activities category.

A=L+LOE **Step 5: Compute and record the net change in cash**

At this point, we should check to determine that our entries in the two middle columns fully explain the differences between the beginning and ending balance of each noncash balance sheet account. If the top portion of the worksheet explains the changes in every noncash account, the bottom section should include all of the cash flows for the year.

(x) We now total the Sources (cash increases) and Uses (cash decreases) columns in the bottom portion of the worksheet. The difference between these column subtotals represents the net increase or decrease in cash. In our example, the Sources column totals $360,000, while the Uses column totals $365,000, indicating a $5,000 decrease in cash over the period. Notice that this is exactly the amount by which Cash decreased during the year: $50,000 – $45,000 = $5,000. Our last entry, labeled *(x)*, explains the credit change in the Cash account at the top of the worksheet and brings the bottom of the worksheet into balance.

The formal statement of cash flows, reporting the cash flows from operating activities by the indirect method, can be prepared directly from the bottom portion of this worksheet. In Exhibit 13–8, amounts appearing in accrual-based accounting records are shown in blue; cash flows appear in red.

AUTO SUPPLY CO.
STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED DECEMBER 31, 2018

Cash flows from operating activities:		
Net income		$ 250,000
Add: Depreciation expense		60,000
Decrease in inventory		5,000
Increase in accounts payable		10,000
Subtotal		$ 325,000
Less: Increase in accounts receivable	$ 10,000	
Decrease in accrued expenses payable	15,000	
Gain on sales of marketable securities	20,000	45,000
Net cash provided by operating activities		$ 280,000
Cash flows from investing activities:		
Proceeds from sales of marketable securities	$ 35,000	
Cash paid to acquire plant assets (see supplementary schedule below)	(30,000)	
Net cash provided by investing activities		5,000
Cash flows from financing activities:		
Dividends paid	$ (140,000)	
Payments to retire bonds payable	(150,000)	
Net cash used for financing activities		(290,000)
Net decrease in cash		$ (5,000)
Cash and cash equivalents, Jan. 1, 2018		50,000
Cash and cash equivalents, Dec. 31, 2018		$ 45,000
Supplementary Schedule: Noncash Investing and Financing Activities		
Purchases of plant assets		$ 100,000
Less: Portion financed through issuance of long-term debt		70,000
Cash paid to acquire plant assets		$ 30,000

EXHIBIT 13–8
Auto Supply Co. Statement of Cash Flows

A=L+LOE **Compare the content of this statement with the worksheet in Exhibit 13–7**

Concluding Remarks

In this chapter, we have discussed the importance of cash flow information for investors and creditors and how that information is arranged and presented in the statement of cash flows. We delayed in-depth coverage of this important topic to this point in this text because of the importance of understanding accounting for assets, liabilities, and stockholders' equity as a forerunner to understanding how cash flow information differs from accrual accounting information.

As stated earlier, companies have an option of presenting cash flow from operations information by either the direct or the indirect method. Although we have presented both in this chapter, our emphasis has been on the direct method despite the fact that most companies employ the indirect method in their financial reporting. We have done this for two reasons. First, we believe the direct method is more readily understood by students and others who are learning for the first time how cash-based and accrual-based information relate. Second, and perhaps more important, investors appear to generally favor the direct method, as evidenced by the following quote from the former chief accountant of the Securities and Exchange Commission, speaking to a group of certified public accountants:

> I've heard many investors express a strong preference for use of the direct method of preparing the statement of cash flows. It's widely understood and believed by many to be a more informative presentation. We are not requiring a change, but it is an action you could consider to promote transparency given the importance to investors of cash flow information.[10]

In the next chapter, we take a broader look at financial statement analysis, including how information about cash flows is combined with information from the other financial statements, to better understand a company's financial activities. Managers and investors alike must look beyond short-term changes in earnings and cash flows from one period to the next. They must consider factors that cause these changes and how they may affect future operations. Throughout this text, we have introduced analytical techniques that are useful in better understanding a company. In Chapter 14, we bring those techniques together into a comprehensive model for analyzing financial statements in a way that assists informed decision makers in understanding a company's business activities and in anticipating the long-term effects of business strategies.