

# Statement of Cash Flows: A Closer Look

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## Learning Objectives

1. Review the rationale for the statement of cash flows, particularly regarding why net income differs from cash flows.
2. Cement an understanding of the effect on the statement of cash flows of various transactions studied in **Chapters 6** through **12**.
3. Develop more effective skills in analyzing and interpreting the statement of cash flows.

**Chapter 4** introduced the statement of cash flows, discussing its rationale and illustrating a columnar work sheet for preparing this financial statement. Subsequent chapters briefly described the impact that various transactions have on the statement of cash flows. This reading synthesizes these chapter-by-chapter discussions by providing a comprehensive example of a statement of cash flows.

## *Review of Concepts Underlying the Statement of Cash Flows*

**Chapter 4** discussed the following concepts underlying the statement of cash flows:

1. The statement of cash flows explains the reasons for the changes in cash and cash equivalents during a period. This statement classifies the reasons as relating to operating, investing, and financing activities.
2. Revenues from sales of goods or services to customers do not necessarily equal cash received from customers during a particular period. The receipt of cash may precede, coincide with, or follow the recognition of revenue. Expenses incurred to generate revenues do not necessarily equal cash expended for the goods and services consumed in operations during a particular period. The expenditure of cash may precede, coincide with, or follow the recognition of expenses. Thus, net income for a particular period will likely differ from cash flow from operations.
3. Firms typically report cash flows from operations using the indirect method. The indirect method starts with net income, then adds expenses that do not use cash in the amount of the expense, and subtracts revenues that do not provide cash in the amount of the revenue. The adjustments to convert net income to cash flow from operations generally involve (1) adding the amount by which an expense exceeds the related cash expenditure for the period (for depreciation, the entire amount), (2) subtracting the amount by which a revenue exceeds the related cash receipt for the period (such as equity method earnings exceeding dividends), (3) adding credit changes in operating working capital accounts, such as accounts receivable, inventories, accounts payable, and (4) subtracting debit changes in operating working capital accounts.
4. Cash flow from investing activities includes purchases and sales of marketable securities, investments in securities, property, plant, and equipment, and intangibles.
5. Cash flow from financing activities includes increases and decreases in short-term and long-term borrowing, increases and decreases in common and preferred stock, and dividends.

## *The Cash Equation Underlying the Statement of Cash Flows*

The statement of cash flows explains the change in cash using the following relations:

$$\Delta C = \Delta L + \Delta SE - \Delta N\$A$$

where:

- $\Delta C$  = change in cash, meaning cash plus cash equivalents  
 $\Delta L$  = change in liabilities  
 $\Delta SE$  = change in shareholders' equity  
 $\Delta N\$A$  = change in noncash assets

## *Comprehensive Illustration of the Statement of Cash Flows (Indirect Method)*

The comprehensive illustration that follows uses data for Ellwood Corporation for Year 2. **Exhibit SCF.1** presents an income statement for Year 2; **Exhibit SCF.2** presents a comparative balance sheet for December 31, Year 1 and Year 2; and **Exhibit SCF.3** presents a statement of cash flows with cash flow from operations presented with the indirect method. **Exhibit SCF.4** shows direct method's presentation of cash flow from operations.

### EXHIBIT SCF.1

#### ELLWOOD CORPORATION Consolidated Income Statement for Year 2

<b>Revenues</b>	
Sales . . . . .	\$10,500
Interest and Dividends . . . . .	320
Equity in Earnings of Affiliate . . . . .	480
Gain on Sale of Equipment . . . . .	30
Total Revenues . . . . .	<u>\$11,330</u>
<b>Expenses</b>	
Cost of Goods Sold . . . . .	\$ 6,000
Selling and Administration . . . . .	3,550
Loss on Sale of Marketable Securities Available for Sale . . . . .	30
Interest . . . . .	450
Income Taxes . . . . .	300
Total Expenses . . . . .	<u>\$10,330</u>
Net Income . . . . .	<u>\$ 1,000</u>

## EXHIBIT SCF.2

ELLWOOD CORPORATION  
Consolidated Balance Sheet

	December 31	
	Year 1	Year 2
<b>ASSETS</b>		
<b>Current Assets</b>		
Cash . . . . .	\$ 1,150	\$ 1,050
Certificate of Deposit . . . . .	1,520	790
Marketable Securities Available for Sale . . . . .	280	190
Accounts Receivable (net) . . . . .	3,400	4,300
Inventories . . . . .	1,500	2,350
Prepayments . . . . .	800	600
Total Current Assets . . . . .	<u>\$ 8,650</u>	<u>\$ 9,280</u>
<b>Investments</b>		
Investment in Company A (15%) . . . . .	\$ 1,250	\$ 1,270
Investment in Company B (40%) . . . . .	<u>2,100</u>	<u>2,420</u>
Total Investments . . . . .	<u>\$ 3,350</u>	<u>\$ 3,690</u>
<b>Property, Plant, and Equipment</b>		
Land . . . . .	\$ 1,000	\$ 1,000
Buildings . . . . .	8,600	8,900
Equipment . . . . .	10,840	11,540
Less Accumulated Depreciation . . . . .	<u>(6,240)</u>	<u>(6,490)</u>
Total Property, Plant, and Equipment . . . . .	<u>\$14,200</u>	<u>\$14,950</u>
<b>Intangible Assets</b>		
Patent . . . . .	\$ 2,550	\$ 2,550
Less Accumulated Amortization . . . . .	(600)	(750)
Total Intangible Assets . . . . .	<u>\$ 1,950</u>	<u>\$ 1,800</u>
Total Assets . . . . .	<u>\$28,150</u>	<u>\$29,720</u>
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>		
<b>Current Liabilities</b>		
Bank Notes Payable . . . . .	\$ 2,000	\$ 2,750
Accounts Payable (for inventory) . . . . .	2,450	3,230
Warranties Payable . . . . .	1,200	1,000
Advances from Customers . . . . .	600	900
Total Current Liabilities . . . . .	<u>\$ 6,250</u>	<u>\$ 7,880</u>
<b>Noncurrent Liabilities</b>		
Bonds Payable . . . . .	\$ 2,820	\$ 1,370
Capitalized Lease Obligation . . . . .	1,800	2,100
Deferred Income Taxes . . . . .	550	650
Total Noncurrent Liabilities . . . . .	<u>\$ 5,170</u>	<u>\$ 4,120</u>
<b>Shareholders' Equity</b>		
Preferred Stock . . . . .	\$ 1,000	\$ 1,200
Common Stock . . . . .	2,000	2,100
Additional Paid-in Capital . . . . .	4,000	4,200
Accumulated Other Comprehensive Income:		
Unrealized Holding Loss on Marketable Securities . . . . .	(30)	(40)
Unrealized Holding Gain on Investments in Securities . . . . .	50	70
Retained Earnings . . . . .	<u>9,960</u>	<u>10,570</u>
Total . . . . .	<u>\$16,980</u>	<u>\$18,100</u>
Less Cost of Treasury Stock . . . . .	<u>(250)</u>	<u>(380)</u>
Total Shareholders' Equity . . . . .	<u>\$16,730</u>	<u>\$17,720</u>
Total Liabilities and Shareholders' Equity . . . . .	<u>\$28,150</u>	<u>\$29,720</u>

**EXHIBIT SCF.3****ELLWOOD CORPORATION****Consolidated Statement of Cash Flows for Year 2**

<b>OPERATIONS</b>	
(1) Net Income . . . . .	\$ 1,000
<b>Noncash Revenues, Expenses, Gains, and Losses Included in Income:</b>	
(2) Depreciation of Buildings and Equipment . . . . .	700
(3) Amortization of Patent . . . . .	150
(4) Loss on Sale of Marketable Securities Available for Sale . . . . .	30
(5) Deferred Income Taxes . . . . .	100
(6) Excess of Coupon Payments over Interest Expense . . . . .	(50)
(7) Gain on Sale of Equipment . . . . .	(30)
(8) Equity in Undistributed Earnings of Affiliate . . . . .	(320)
(9) Decrease in Prepayments . . . . .	200
(10) Increase in Accounts Payable (for inventory) . . . . .	780
(11) Increase in Advances from Customers . . . . .	300
(12) Increase in Accounts Receivable (net) . . . . .	(900)
(13) Increase in Inventories . . . . .	(850)
(14) Decrease in Warranties Payable . . . . .	<u>(200)</u>
Cash Flow from Operations . . . . .	\$ 910
<b>INVESTING</b>	
(15) Sale of Marketable Securities Available for Sale . . . . .	\$ 50
(16) Sale of Equipment . . . . .	180
(17) Acquisition of Equipment . . . . .	<u>(1,300)</u>
Cash Flow from Investing . . . . .	(1,070)
<b>FINANCING</b>	
(18) Short-term Bank Borrowing . . . . .	\$ 750
(19) Long-term Bonds Issued . . . . .	400
(20) Preferred Stock Issued . . . . .	200
(21) Retirement of Long-term Debt at Maturity . . . . .	(1,500)
(22) Acquisition of Common Stock . . . . .	(130)
(23) Dividends . . . . .	<u>(390)</u>
Cash Flow from Financing . . . . .	<u>(670)</u>
Net Change in Cash . . . . .	\$ (830)
Cash, Beginning of Year 2 . . . . .	2,670
Cash, End of Year 2 . . . . .	<u><u>\$ 1,840</u></u>

**Line 1: Net Income**

The income statement indicates net income for the year of \$1,000. The indirect method starts with the fiction that all income produced cash from operations. The effect of net income on the cash change equation is as follows:

$$\begin{aligned} \Delta C &= \Delta L + \Delta SE - \Delta N\$A \\ \text{Operations} + \$1,000 &= \$0 + \$1,000 - \$0 \end{aligned}$$

**Line 2: Depreciation of Buildings and Equipment**

Internal records indicate that depreciation on manufacturing facilities totaled \$500 and on selling and administrative facilities totaled \$200 during the year. The firm included these amounts in cost of goods sold and selling and administrative expenses respectively in the income statement in **Exhibit SCF.1**. None of this \$700 of depreciation required an operating cash flow during Year 2. The firm reported cash expenditures for these assets as investing activities in the earlier periods when it acquired them. Thus indirect method adds back depreciation to net income in deriving cash flow from operations.

**Addback for Depreciation as a Product Cost** The addback for the \$500 of depreciation on manufacturing facilities requires elaboration. **Chapter 7** explains that accountants count such depreciation charges as a product cost, not a period expense. The accountant debits Work-in-Process Inventory for this \$500. If, during the period, the firm sells all the goods it produces, cost of goods sold includes this \$500. Because cost of goods sold includes an amount that does not use cash, the addback to net income cancels the depreciation included in cost of goods sold.

Suppose, however, that the firm does not sell all the goods it produces during the period. The ending inventory of Work-in-Process Inventory or Finished Goods Inventory includes a portion of the \$500 depreciation charge. Assume, for example, that the firm sold 80 percent of the units produced during the period. Cost of goods sold includes \$400 of the depreciation, and inventory accounts include the remaining \$100. The statement of cash flows adds back to net income the entire \$500 of depreciation on manufacturing facilities for the period. The \$100 of depreciation included in the cost of units not sold caused the inventory accounts to increase. Under the indirect method of computing cash flow from operations, the accountant subtracts this increase in inventories in computing cash flow from operations. The \$500 addition for depreciation less the \$100 subtraction for the increase in inventories nets to a \$400 addition to income. Because cost of goods sold includes only \$400 of depreciation, the addition required to cancel the depreciation included in cost of goods sold equals \$400. Thus, **line 2** of the statement of cash flows shows an addback for the full amount of depreciation for the period (both as a product cost and as a period expense), not just the amount included in cost of goods sold; then, **line 13** of the statement of cash flows includes a subtraction for the \$100 increase in inventories caused by adding depreciation to work in process.

### Line 3: Amortization of Patent

The effect of patent amortization on cash flow is conceptually identical to that of depreciation. Company records indicate that cost of goods sold for Year 2 includes patent amortization of \$150, so the indirect method shows an addback of \$150, to offset the subtraction for this amount that would otherwise reduce cash flow from operations.

### Line 4: Loss on Sale of Marketable Securities Available for Sale

The accounting records indicate that Ellwood Corporation sold marketable securities available for sale held as a short-term investment during Year 2. Ellwood Corporation acquired these securities for \$80 during Year 1, wrote them down to their market value of \$70 at the end of Year 1, and sold them during Year 2 for \$50. The firm made the following entries in the accounting records to record this sale:

(4) Cash (Asset Increase) . . . . .	50	
Retained Earnings (Realized Loss on Sale of Marketable Securities Available for Sale) (Shareholders' Equity Decrease) . . . . .	30	
Marketable Securities Available for Sale (Asset Decrease) . . . . .		80
Marketable Securities Available for Sale (Asset Increase) . . . . .	10	
Accumulated Other Comprehensive Income (Unrealized Holding Loss on Marketable Securities Available for Sale) (Shareholders' Equity Increase) . . . . .		10

The statement of cash flows classifies all \$50 cash proceeds as an investing activity on **Line 15** and none as an operating activity. Net income on **Line 1** in **Exhibit SCF.3** includes a subtraction for the loss on the sale of marketable securities available for sale. To avoid understating the amount of cash flow from operations, the accountant adds back the loss to net income. This addback offsets the loss included in the calculation of net income and eliminates its effect on cash flow from operations. **Line 15** shows the cash proceeds from the sale as an investing activity. The analyst might reasonably view purchases and sales of marketable securities available for sale as operating activities because these transactions involve the use of temporarily excess cash. Most, but not all, firms consider these transactions sufficiently peripheral to the firms' principal operating activity—selling goods and services to customers—that they classify such purchases and sales as investing activities.

### Line 5: Deferred Income Taxes

Notes to the financial statements of Ellwood Corporation indicate that income tax expense of \$300 comprises \$200 currently payable taxes and \$100 deferred to future periods. Ellwood Corporation made the following entry during the year to recognize income tax expense.

(5) Retained Earnings (Income Tax Expense) (Shareholders' Equity Decrease) . . . . .	300	
Cash (Asset Decrease) . . . . .		200
Deferred Income Taxes (Liability Increase) . . . . .		100

The \$100 of deferred income taxes reduced net income but did not require a cash outflow during Year 2. The indirect method must, therefore, add back deferred income taxes to net income to derive cash flow from operations.

## Line 6: Excess of Coupon Payments Over Interest Expense

Bonds Payable on the balance sheet includes one series of bonds initially issued at a premium (that is, the coupon rate exceeded the required market rate of interest when Ellwood Corporation issued the bonds, so that initial issue proceeds exceeded face value). The amortization of bond premium makes interest expense over the life of the bonds less than the periodic debt service payments for coupons. The entry made in the accounting records for interest expense during the period was as follows:

(6) Retained Earnings (Interest Expense) (Shareholders' Equity Decrease) . . . . .	450	
Bonds Payable (Liability Decrease) . . . . .	50	
Cash (Asset Decrease) . . . . .		500

The firm spent \$500 of cash even though it subtracted only \$450 of interest expense in computing net income. The indirect method subtracts an additional \$50 from net income to derive cash flow from operations.

The statement of cash flows classifies cash used for interest expense as an operating activity because it views interest as a cost of carrying out operations. Some security analysts suggest that this \$50 use of cash for principal repayment is a financing activity for debt service, not an operating activity, and would place it in the Financing section. The Financial Accounting Standards Board *Statement of Financial Accounting Standards No. 95*, however, classifies the \$50 cash outflow as an operating activity.

## Line 7: Gain on Sale of Equipment

The accounting records indicate that the firm sold for \$180 during Year 2 a machine originally costing \$600, with accumulated depreciation of \$450. The journal entry made to record this sale was as follows:

(7) Cash (Asset Increase) . . . . .	180	
Accumulated Depreciation (Asset Decrease) . . . . .	450	
Equipment (Asset Decrease) . . . . .		600
Retained Earnings (Gain on Sale of Equipment) (Shareholders' Equity Increase) . . .		30

**Line 16** shows all the cash proceeds of \$180 as an increase in cash from an investing activity. **Line 1** includes the \$30 gain on sale. To avoid overstating the amount of cash derived from this sale, the accountant subtracts the \$30 gain from net income in computing cash flow from operations.

The statement of cash flows classifies all cash proceeds as investing activities and none as operating activities. Most firms acquire and sell fixed assets with the objective of providing a capacity to carry out operations rather than as a means of generating operating income.

Fixed assets sold at a loss instead of a gain require an addback to net income in deriving cash flow from operations.

## Line 8: Equity in Undistributed Earnings of Affiliate

The balance sheet indicates that Ellwood Corporation owns 40 percent of the common stock of Company B. During Year 2, Company B earned \$1,200 and paid \$400 of dividends. Ellwood Corporation made the following entries on its books during the year.

(8) Investment in Company B (Asset Increase) . . . . .	480	
Retained Earnings (Equity in Earnings of Affiliate) (Shareholders' Equity Increase) . .		480
Records equity in earnings of \$480 = 0.40 x \$1,200.		
Cash (Asset Increase) . . . . .	160	
Investment in Company B (Asset Decrease) . . . . .		160
Records dividends received of \$160 = 0.40 x \$400.		

Net income of Ellwood Corporation on **Line 1** of **Exhibit SCF.3** includes \$480 of equity income. It received only \$160 of cash. Thus, the indirect method sheet subtracts \$320 (= \$480 - \$160) from net income in deriving cash from operations.

## Line 9: Decrease in Prepayments

Because prepayments decreased by \$200 during Year 2, the firm spent less cash during Year 2 for new prepayments than it expensed prepayments of earlier years. Assume that all prepayments relate to selling and administrative activities. The journal entries that Ellwood Corporation made in the accounting records during the year had the following combined effect:

(9) Retained Earnings (Selling and Administrative Expenses) (Shareholders' Equity Decrease) . . . . .	3,550	
Cash (Asset Decrease) . . . . .		3,350
Prepayments (Asset Decrease) . . . . .		200

The indirect method adds back \$200 to net income for the credit change in an operating current asset account so that cash flow from operations reports expenditures, not expenses.

## Line 10: Increase in Accounts Payable

An increase in accounts payable indicates that new purchases on account during Year 2 exceeded payments during Year 2 for previous purchases on account. This increase in accounts payable, a credit change in an operating current liability account, implicitly provides cash. If you think of this source of cash as financing, you have the right idea. Suppliers have provided financing so that Ellwood Corporation can acquire goods on account. You might think of it this way. Imagine a firm borrows from a supplier, debiting Cash and crediting Notes Payable. Then the firm uses the cash to acquire inventory or other items. You can see that the supplier has provided cash, and the firm increases a current liability account. A firm buying on account has achieved the same result, except that it credits Accounts Payable, not Notes Payable. Because the supplier ties the financing to the purchase of goods used in operations, accounting classifies this source of cash in the operating, not financing, section of the statement of cash flows.

## Line 11: Increase in Advances from Customers

The \$300 increase in customer advances means that the firm received \$300 more cash during Year 2 than it recognized as revenue. The indirect method adds this excess to net income in deriving cash flow from operations.

## Line 12: Increase in Accounts Receivable (Net)

The increase in accounts receivable (net) indicates that the firm collected less cash from customers than the amount shown for sales on account. The indirect method subtracts the increase in accounts receivable, a debit change in an operating current asset account, in deriving cash flow from operations. This treatment automatically incorporates the effect of any change in the Allowance for Uncollectible Accounts.

## Line 13: Increase in Inventories

The increase in inventories indicates the firm purchased more merchandise than it sold during Year 2. The indirect method subtracts this debit change in inventory in deriving cash flow from operations.

## Line 14: Decrease in Warranties Payable

Firms estimate future warranty costs on current sales using the allowance method for warranties. The Warranties Payable account increases for the estimated cost of future warranty services on products sold during the period and decreases by the actual cost of warranty services performed. During Year 2, the firm paid \$200 more in warranty claims than it reported as expenses on the income statement. Ellwood Corporation includes estimated warranty expense of \$920 in selling and administrative expenses in its income statement in **Exhibit SCF.1**. The firm made entries during the year with the following combined effect:

(9a) Selling and Administrative Expenses . . . . .	920	
Warranties Payable . . . . .	200	
Cash . . . . .		1,120

The indirect method sheet subtracts this decrease in Warranties Payable, a debit change in an operating current liability account, so that cash flow from operations reports cash expenditures, not expenses.

Cash flow from operations is \$910 for Year 2.

## Lines 15 and 16

See the discussion for **Lines 4** and **7**, which report Investing inflows of \$230 (= \$50 + \$180)

## Line 17: Acquisition of Equipment

The firm acquired equipment costing \$1,300 during Year 2. The entry for this investing activity is as follows:

(17a) Equipment .....	1,300	
Cash (Investing—Acquisition of Equipment) .....		1,300

Cash flow from investing for Year 2 is a net outflow of \$1,070, that is the expenditure of \$1,300 reduced by the proceeds of \$230 reported on **Lines 15** and **16**.

## Line 18: Short-Term Bank Borrowing

Ellwood Corporation borrowed \$750 during Year 2 from its bank under a short-term borrowing arrangement. Even though this loan is short-term, the statement of cash flows classifies it as a financing instead of an operating activity.

## Line 19: Long-Term Bonds Issued

The firm issued long-term bonds totaling \$400 during Year 2.

## Line 20: Preferred Stock Issued

The firm issued preferred stock totaling \$200 during the year.

## Line 21: Retirement of Long-Term Debt at Maturity

Ellwood Corporation retired \$1,500 of long-term debt at maturity. The income statement in Exhibit SCF.1 shows no gain or loss on retirement of debt. Thus, Ellwood Corporation must have retired the debt at its book value. If the firm had retired the debt prior to maturity, the firm would likely have recognized a gain or loss. The indirect method would eliminate the gain or loss from net income in computing cash flow from operations and classify as a financing activity the full amount of cash used to retire the debt.

## Line 22: Acquisition of Common Stock

The firm acquired common stock costing \$130 during Year 2. **Chapter 12** explains the balance sheet treat of such acquisitions of treasury shares. The statement of cash flows treats this acquisition as a distribution of cash to owners, much like a dividend.

## Line 23: Dividends

Ellwood Corporation declared and paid \$390 of dividends to its shareholders during Year 2.

Net cash outflow for financing totaled \$670 during the year.

## Noncash Investing and Financing Transactions

Some investing and financing transactions do not involve cash and therefore do not appear on the statement of cash flows. These transactions nevertheless help explain changes in balance sheet accounts. The accountant must consider these transactions in the indirect method to account fully for all balance sheet changes and compute correctly the portion of the changes affecting cash.



**Write-Down of Marketable Securities Available for Sale** During Year 2, Ellwood Corporation wrote down marketable securities available for sale to their market value. The journal entry made for this write-down is as follows:

Accumulated Other Comprehensive Income (Unrealized Holding Loss on Marketable Securities Available for Sale) (Shareholders' Equity Decrease) . . . . .	20	
Marketable Securities Available for Sale (Asset Decrease) . . . . .		20

This entry does not affect cash and therefore does not appear in the statement of cash flows.

**Write-Up of Investment in Securities** During Year 2, Ellwood Corporation also wrote up its Investment in Company A to reflect market value. The journal entry for the write-up is as follows:

Investment in Company A (Asset Increase) . . . . .	20	
Accumulated Other Comprehensive Income (Unrealized Holding Gain on Investment in Securities) (Shareholders' Equity Increase) . . . . .		20

This transaction has no effect on cash nor net income so the indirect method reports no part of it.

**Capitalization of Leases** During Year 2, Ellwood Corporation signed a long-term lease for a building. It classified the lease as a capital lease and recorded it in the accounts as follows:

Building (Asset Increase) . . . . .	300	
Capitalized Lease Obligation (Liability Increase) . . . . .		300

This entry does not affect cash. It does affect the investing and financing activities of Ellwood Corporation and requires disclosure in a supplementary schedule or notes to the financial statements.

**Conversion of Debt into Equity** During Year 2, investors in bonds of Ellwood Corporation exercised their option to convert their debt securities into shares of common stock. The entry made in the accounting records to record the conversion is as follows:

(27) Bonds Payable (Liability Decrease) . . . . .	300	
Common Stock (Shareholders' Equity Increase) . . . . .		100
Additional Paid-in Capital (Shareholders' Equity Increase) . . . . .		200

## *Illustration of the Direct Method for Cash Flows from Operations*

**Exhibit SCF.4** shows Cash Flows from Operations presented with the direct method for Ellwood Corporation. While the direct method's presentation of cash flow requires less understanding of the contrast between cash and accrual accounting, its derivation requires the same understanding as does the indirect method. We do not show how to derive **Exhibit SCF.4**, but the shaded area contains all the work required for the derivation. It starts with the components of the income statement, which shows revenues and expenses, excluding gains and losses not in income. Then, it gives the balance sheet changes, which indicate how we convert those revenues and expenses to receipts and expenditures. Every addback and subtraction in the indirect presentation (except those for gains and losses) appears in the direct method's derivation, but not its presentation.

**EXHIBIT SCF.4****ELLWOOD CORPORATION****Cash Flow From Operations From Consolidated Statement of Cash Flow for Year 2***Shaded Material Does Not Appear in the Conventional Statement*

Direct Method	Year 2	<i>Source of Data (Does Not Appear in Statement)</i>	
Years ended December 31		<i>From</i>	<i>From</i>
		Income Statement	Balance Sheet Changes
		[Income = \$1,000]	
<b>CASH PROVIDED BY OPERATING ACTIVITIES</b>			
Sources of Cash			
Cash Received from Customers . . . . .	\$9,900	[1] = 10,500	- 900 + 300
Less: Cash Paid to Suppliers and Employees . . . . .	(8,770)	[2] = - 6,000 - 3,550	+ 700 + 150 + 200 + 780 - 850 - 200
Net Cash Margin . . . . .	\$1,130	[3] = [1] + [2]	
<i>Cash Contribution Margin Percentage.</i> . . . . .	<i>11.4%</i>		
Dividends Received from Equity Affiliate. . . . .	160	[4] = 480	- 320
Interest and Dividends Received, Other . . . . .	320	[5] = 320	
Cash Inflows from Operating Activities. . . . .	<u>\$1,610</u>	[6] = [3] + [4] + [5]	
<b>OTHER OPERATING USES OF CASH</b>			
Interest Paid. . . . .	\$ 500	[7] = 450	+ 50
Income Taxes Paid. . . . .	200	[8] = 300	- 100
Cash Outflows to Support Operating Activities. . . . .	<u>\$ 700</u>	[9] = [7] + [8]	
Net Cash Provided by Operating Activities. . . . .	<u>\$ 910</u>	[10] = [6] - [9]	
<b>Reconciliation of Net Income to Cash Provided by Operating Activities (Indirect Method)</b>			
(1) Net Income. . . . .	\$1,000		
<b>Adjustments to Reconcile Net Income to Net Cash Provided:</b>			
(2) Depreciation of Buildings and Equipment . . . . .	700	[2]	
(3) Amortization of Patent. . . . .	150	[2]	
(4) Loss on Sale of Marketable Equity Securities . . . . .	30		
(5) Deferred Income Taxes . . . . .	100	[8]	
(6) Excess of Coupon Payments over Interest Expense . . . . .	(50)	[7]	
(7) Gain on Sale of Equipment . . . . .	(30)		
(8) Equity in Undistributed Earnings of Affiliate . . . . .	(320)	[4]	
(9) Decrease in Prepayments . . . . .	200	[2]	
(10) Increase in Accounts Payable (for Inventory) . . . . .	780	[2]	
(11) Increase in Advances from Customers. . . . .	300	[1]	
(12) Increase in Accounts Receivable (net) . . . . .	(900)	[1]	
(13) Increase in Inventories. . . . .	(850)	[2]	
(14) Decrease in Warranties Payable . . . . .	(200)	[2]	
Net Cash Provided by Operating Activities. . . . .	<u>\$ 910</u>		

To see the relation between the indirect and direct methods, consider the following contrast of the equivalent arithmetic used for the two derivations of cash flow from operations.

- The indirect method starts with the total for net income and removes the effects of gains and losses from non-operating transactions. Then, it adds or subtracts balance sheet changes involving operating accounts. Take net income stripped of non-operating gains and losses, then list under it, vertically, additions and subtractions for balance sheet changes.
- The direct method starts with the components of income, the individual revenues and expenses, but not gains and losses, then adds or subtracts the same balance sheet changes involving the same operating accounts. Take an income statement line, then list next to it, horizontally, additions and subtractions.

The indirect method presents the net of revenues less expenses, then adds to, and subtracts from, that total. The direct method starts with a line of the income statement, then adds to, and subtracts from, that component. Because the amounts for balance sheet changes added and subtracted are the same, the final result, cash flow from operations must be the same.

We think you will better understand cash flow from operations if you master the direct method, because its presentation, if not its derivation, will match your intuition. In addition, understanding the cause of changes from period to period in cash flow from operations comes easier from the direct method's presentation. Few firms use the direct method in their public presentations and none of them shows, as does **Exhibit SCF.4**, the shaded Cash Contribution Margin Percentage. Even though management can manipulate that percentage a bit through the purposeful timing of payments, comparison of that percentage over time will provide insight into the causes of changes in operating cash flow.

## Problem SCFlows.1 for Self-Study

**Effects of transactions on the statement of cash flows.** Exhibit 4.12 in Chapter 4 presents a simplified statement of cash flows. For each of the transactions that follow, indicate the number(s) of the line(s) in Exhibit 4.12 affected by the transaction and the amount and direction (increase or decrease) of the effect. If the transaction affects net income, be sure to indicate whether it increases or decreases. Ignore income tax effects.

- A firm sells for \$12,000 equipment that originally cost \$30,000 and has accumulated depreciation of \$16,000 at the time of sale.
- A firm owns 25 percent of the common stock of an investee acquired several years ago at book value and uses the equity method. The investee had net income of \$80,000 and paid dividends of \$20,000 during the period.
- A firm, as lessee (tenant), records lease payments of \$50,000 on capital leases for the period, of which \$35,000 represents interest expense.
- Income tax expense for the period totals \$120,000, of which the firm pays \$90,000 immediately and defers the remaining \$30,000 because of temporary differences between the accounting principles used for financial reporting and those used for tax reporting.
- A firm owns 10 percent of the common stock of an investee acquired at its book value several years ago and accounts for it at market value as a long-term investment. The investee had net income of \$100,000 and paid dividends of \$40,000 during the period. The market value at the end of the period equaled the market value at the beginning of the period.

## Interpreting the Statement of Cash Flows

Chapter 4 points out that the proper interpretation of information in the statement of cash flows requires

- an understanding of the economic characteristics of the industries in which a firm conducts operations, and
- a multiperiod view.

This section provides more on interpreting the statement of cash flows.

## Relation between Net Income and Cash Flow from Operations

Net income and cash flow from operations differ for three principal reasons:

1. Changes in noncurrent assets and noncurrent liabilities
2. Changes in operating working capital accounts
3. Net income can contain significant gains and losses, which are not operating sources or uses of cash.

**Changes in Noncurrent Assets and Noncurrent Liabilities** The extent to which a firm adjusts net income for changes in noncurrent assets and noncurrent liabilities in deriving cash flow from operations depends on the nature of its operations. Capital-intensive firms will likely show a substantial addback to net income for depreciation expense, whereas service firms will show a smaller amount. Rapidly growing firms usually show an addback for deferred tax expense, whereas firms that stop growing or that shrink show a subtraction. Firms that grow or diversify by acquiring minority ownership positions in other businesses will often show a subtraction from net income for equity in undistributed earnings. Firms that decrease in size will usually show additions or subtractions for losses and gains on the disposal of assets.

**Changes in Operating Working Capital Accounts** The adjustment for changes in operating working capital accounts depends in part on a firm's rate of growth. Rapidly growing firms usually experience significant increases in accounts receivable and inventories. Some firms use suppliers or other creditors to finance these working capital needs (classified as operating activities), whereas other firms use short- or long-term borrowing or equity financing (classified as financing activities).

**Non-operating Gains and Losses** Companies have no predictable pattern of non-operating gains and losses, which affect income. The indirect method identifies these and they appear in the direct method's reconciliation of net income to operating cash flow, so these items should never confuse the user.

## Relations between Cash Flows from Operating, Investing, and Financing Activities

The product life-cycle concept from microeconomics and marketing provides useful insights into the relations between cash flows from operating, investing, and financing activities.

During the introduction phase, cash outflow exceeds cash inflow from operations because operations are not yet earning profits while the firm must invest in accounts receivable and inventories. Investing activities result in a net cash outflow to build productive capacity. Firms must rely on external financing during this phase to overcome the negative cash flow from operations and investing.

The growth phase portrays cash flow characteristics similar to the introduction phase. The growth phase reflects sales of successful products, and net income turns positive. A growing firm makes more sales, but it also needs to acquire more goods to sell. Because it usually must pay for the goods it acquires before it collects for the goods it sells, the growing firm finds itself ever short of cash from operations. The faster it grows (even though profitable), the more cash it needs. Banks do not like to lend for such needs. They view such needs (even though for current assets) as a permanent part of the firm's financing needs. Thus banks want firms to use shareholders' equity or long-term debt to finance growth in nonseasonal inventories and receivables.

The maturing of a product alters these cash flow relations. Net income usually reaches a peak, and working capital stops growing. Operations generate positive cash flow, enough to finance expenditures on property, plant, and equipment. Capital expenditures usually maintain, rather than increase, productive capacity. Firms use the excess cash flow to repay borrowing from the introduction and growth phases and to begin paying dividends to shareholders.

Weakening profitability—from reduced sales or reduced profit margins on existing sales—signals the beginning of the decline phase, but ever-declining accounts receivable and inventories can produce positive cash flow from operations. In addition, sales of unneeded property, plant, and equipment can result in positive cash flow from investing activities. Firms can use the excess cash flow to repay remaining debt or diversify into other areas of business.

Biotechnology firms are in their growth phase, consumer foods companies are in their mature phase, and steel manufacturers are in the late maturity or, perhaps, the early decline phase.

### Solution to Self-Study Problem

#### SUGGESTED SOLUTION TO PROBLEM SCFLOWS.1 FOR SELF-STUDY

(Effects of transactions on the statement of cash flows.)

a. The journal entry to record this transaction, for selling equipment, is as follows:

Cash (Asset Increase) . . . . .	12,000	
Accumulated Depreciation (Asset Increase) . . . . .	16,000	
Retained Earnings (Loss on Sale of Equipment) (Shareholders' Equity Decrease) . . . . .	2,000	
Equipment (Asset Decrease) . . . . .		30,000

The debit to the Cash account results in an increase on Line (11) of \$12,000. Selling equipment is an investing transaction, so Line (6) increases by \$12,000. The loss on the sale reduces net income, so Line (3) decreases by \$2,000. Because the loss does not use cash, Line (4) increases by \$2,000 to add back the loss to net income when computing cash flow from operations.

b. The journal entry to record this transaction, for equity method, is as follows:

Cash (Asset Increase) . . . . .	5,000	
Investment in Securities (Asset Increase) . . . . .	15,000	
Retained Earnings (Equity in Earnings of Affiliate) (Shareholders' Equity Increase) . . . . .		20,000

The debit to the Cash account results in an increase on Line (11) of \$5,000. Line (3) increases by \$20,000 for the equity in earnings. Because the firm receives \$5,000 in cash, Line (1) increases by \$5,000 for the dividends and Line (3) must increase by \$15,000 to subtract from earnings the excess of equity in earnings over the dividends received.

c. The journal entry to record this transaction, for lessee in capital lease, is as follows:

Retained Earnings (Interest Expense) (Shareholders' Equity Decrease) . . . . .	35,000	
Capitalized Lease Obligation (Liability Decrease) . . . . .	15,000	
Cash . . . . .		50,000

The credit to the Cash account reduces Line (11) by \$50,000. This payment for interest expense is operating, so the amount subtracted on Line (2) increases by \$35,000. The recognition of interest expense reduces net income on Line

(3) by \$35,000. This amount represents an operating use of cash and therefore requires no addback or subtraction in computing cash flow from operations. The remaining cash payment of \$15,000 is a financing use of cash, so Line (9) increases by \$15,000.

- d. The journal entry to record this transaction, for income tax expense, is as follows:

Retained Earnings (Income Tax Expense) (Shareholders' Equity Decrease) . . . . .	120,000	
Deferred Tax Liability (Liability Increase) . . . . .		30,000
Cash (Asset Decrease) . . . . .		90,000

The credit to the Cash account results in a reduction on Line (11) by \$90,000. Because the firm used only \$90,000 in cash for income taxes this period, Line (2) increases by that amount. The recognition of income tax expense reduces net income on Line (3) by \$120,000. Line (4) increases by \$30,000 for the portion of the expense that did not use cash.

- e. The journal entry to record this transaction, for dividends on long-term investment, is as follows:

Cash (Asset Increase) . . . . .	4,000	
Retained Earnings (Dividend Revenue) (Shareholders' Equity Increase) . . . . .		4,000

The debit to the Cash account results in an increase on Line (11) of \$4,000. The \$4,000 was all revenue, so Line (1) increases by \$4,000. The recognition of dividend revenue increases net income on Line (3) by \$4,000. Because dividends received from investments in securities are operating transactions and the amount of the dividends revenue equals the amount of cash received, the reconciliation from income to cash flow requires no further adjustment.

## Problems and Cases

**SCFlows.1 Effects of transactions on statement of cash flows.** Exhibit 4.12 in Chapter 4 provides a simplified statement of cash flows. For each of the transactions that follow, indicate the number(s) of the line(s) in Exhibit 4.12 affected by the transaction and the amount and direction (increase or decrease) of the effect. If the transaction affects net income on line (3) or cash on line (11), be sure to indicate if it increases or decreases the line. Ignore income tax effects.

- A firm declares cash dividends of \$15,000, of which it pays \$12,000 immediately to its shareholders; it will pay the remaining \$3,000 early in the next accounting period.
- A firm borrows \$75,000 from its bank.
- A firm sells for \$20,000 machinery originally costing \$40,000 and with accumulated depreciation of \$35,000.
- A firm as lessee records lease payments on operating leases of \$28,000 for the period.
- A firm acquires, with temporarily excess cash, marketable equity securities costing \$39,000.
- A firm writes off a fully depreciated truck originally costing \$14,000.
- A marketable equity security (available for sale) acquired during the current period for \$90,000 has a market value of \$82,000 at the end of the period. Indicate the effect of any year-end adjusting entry to apply the market value method.
- A firm records interest expense of \$15,000 for the period on bonds issued several years ago at a discount, comprising a \$14,500 cash payment and a \$500 addition to Bonds Payable.
- A firm records an impairment loss of \$22,000 for the period on goodwill arising from the acquisition several years ago of an 80-percent investment in a subsidiary.

**SCFlows.2 Effects of transactions on statement of cash flows.** Exhibit 4.12 in Chapter 4 provides a simplified statement of cash flows. For each of the transactions that follow, indicate the number(s) of the line(s) in Exhibit 4.12 affected by the transaction and the amount and direction (increase or decrease) of the effect. If the transaction affects net income on line (3) or cash on line (11), be sure to indicate if it increases or decreases the line. Ignore income tax effects.

- A firm acquires a building costing \$400,000, paying \$40,000 cash and signing a promissory note to the seller for \$360,000.
- A firm using the allowance method records \$32,000 of bad debt expense for the period.
- A firm using the allowance method writes off accounts totaling \$28,000 as uncollectible.
- A firm owns 30 percent of the common stock of an investee acquired several years ago at book value. The investee had net income of \$40,000 and paid dividends of \$50,000 during the period.
- A firm sells for \$22,000 marketable equity securities (available for sale) originally costing \$25,000 and with a book value of \$23,000 at the time of sale.
- Holder of a firm's preferred stock with a book value of \$10,000 convert their preferred shares into common stock with a par value of \$2,000. Use the book value method.
- A firm gives land with an acquisition cost and market value of \$5,000 in settlement of the annual legal fees of its corporate attorney.
- A firm reduces the liability account Rental Fees Received in Advance for \$8,000 when it provides rental services.
- A firm reclassifies long-term debt of \$30,000, maturing within the next year, as a current liability.

**SCFlows.3 Effects of transactions on statement of cash flows.** Exhibit 4.12 in Chapter 4 provides a simplified statement of cash flows. For each of the transactions that follow, indicate the number(s) of the line(s) in Exhibit 4.12 affected by the transaction and the amount and direction (increase or decrease) of the effect. If the transaction affects net income on line (3) or cash on line (11), be sure to indicate if it increases or decreases the line. Ignore income tax effects.

- a. A firm using the percentage-of-completion method for long-term contracts recognizes \$15,000 of revenue for the period.
- b. A local government donates land with a market value of \$50,000 to a firm as an inducement to locate manufacturing facilities in the area.
- c. A firm writes down long-term investments in securities by \$8,000 to reflect the market value method.
- d. A firm records \$60,000 depreciation on manufacturing facilities for the period. The firm has sold all goods it manufactured this period.
- e. A firm using the allowance method recognizes \$35,000 as warranty expense for the period.
- f. A firm using the allowance method makes expenditures totaling \$28,000 to provide warranty services during the period.
- g. A firm recognizes income tax expense of \$80,000 for the period, comprising \$100,000 paid currently and a \$20,000 reduction in the Deferred Income Tax Liability account.
- h. A firm writes down inventories by \$18,000 to reflect the lower-of-cost-or-market valuation.

**SCFlows.4 Effect of transactions on cash changes equation.** Indicate the effect of each of the transactions in Problem SCFlows.1 on the cash change equation:  $\Delta C = \Delta L + \Delta SE - \Delta N\$A$ , where  $\Delta C$  = change in cash,  $\Delta L$  = change in liabilities,  $\Delta SE$  = change in shareholders' equity, and  $\Delta N\$A$  = change in noncash assets. For example, the sale of land, originally costing \$100, for \$120 in cash affects the cash change equation as follows:

$$\begin{aligned}\Delta C &= \Delta L + \Delta SE - \Delta N\$A \\ +\$120 &= \$0 + \$20 - -\$100\end{aligned}$$

**SCFlows.5 Effect of transactions on cash changes equation.** Follow the instructions in the preceding problem for the transactions in Problem SCFlows.2.

**SCFlows.6 Effect of transactions on cash changes equation.** Follow the instructions in the preceding two problems for the transactions in Problem SCFlows.3.

**SCFlows.7 Working from the indirect method to the direct method for the statement of cash flows.** Exhibit SCF.5 presents an income statement and a statement of cash flows using the indirect method for cash flow from operations for Alcoa for Year 9. The balance sheet shows no separate lines for neither Interest Payable nor Income Taxes Payable. Notes to the financial statements report that cost of goods sold includes \$433.0 of depreciation, with the rest included in general and administrative expenses.

Prepare a section for a statement of cash flows for Year 9 using the direct method for cash flows from operations. You need not prepare a reconciliation of net income to cash flows from operations.

**EXHIBIT SCF.5****ALCOA  
(Problem SCFlows.7)****Income Statement for Year 9 (all dollar amounts in millions)**

Sales Revenues . . . . .	\$20,465.0
Gain on Sale of Marketable Securities . . . . .	20.8
Equity in Earnings of Affiliates . . . . .	214.0
Total Revenues and Gains . . . . .	<u>\$20,699.8</u>
Cost of Goods Sold . . . . .	\$ 9,963.3
General and Administrative Expenses . . . . .	5,570.2
Interest Expense . . . . .	2,887.3
Income Tax Expense . . . . .	911.6
Total Expenses . . . . .	<u>\$19,332.4</u>
Net Income . . . . .	<u>\$ 1,367.4</u>

**Statement of Cash Flows for Year 9 (all dollar amounts in millions)****OPERATIONS**

(1) Net Income . . . . .	\$ 1,367.4
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**Adjustments for Noncash Transactions:**

(2) Depreciation . . . . .	664.0
(3) Increase in Deferred Tax Liability . . . . .	82.0
(4) Equity in Undistributed Earnings of Affiliates . . . . .	(47.1)
(5) Gain from Sale of Marketable Securities . . . . .	(20.8)
(6) (Increase) Decrease in Accounts Receivable . . . . .	74.6
(7) (Increase) Decrease in Inventories . . . . .	(198.9)
(8) (Increase) Decrease in Prepayments . . . . .	(40.3)
(9) Increase (Decrease) in Accounts Payable . . . . .	33.9
(10) Increase (Decrease) in Other Current Liabilities . . . . .	(110.8)
Cash Flow from Operations . . . . .	<u>\$ 1,804.0</u>

**INVESTING**

(11) Sale of Marketable Securities . . . . .	\$ 49.8
(12) Acquisition of Marketable Securities . . . . .	(73.2)
(13) Acquisition of Property, Plant, and Equipment . . . . .	(875.7)
(14) Acquisition of Subsidiaries . . . . .	(44.5)
Cash Flow from Investing . . . . .	<u>\$ (943.6)</u>

**FINANCING**

(15) Common Stock Issued to Employees . . . . .	\$ 34.4
(16) Repurchase of Common Stock . . . . .	(100.9)
(17) Dividends Paid to Shareholders . . . . .	(242.9)
(18) Additions to Short-term Borrowing . . . . .	127.6
(19) Additions to Long-term Debt . . . . .	121.6
(20) Payments on Long-term Debt . . . . .	(476.4)
Cash Flow from Financing . . . . .	<u>\$ (536.6)</u>
Change in Cash . . . . .	\$ 323.8
Cash, Beginning of Year . . . . .	506.8
Cash, End of Year . . . . .	<u>\$ 830.6</u>

**SUPPLEMENTARY INFORMATION**

(21) Acquisition of Property, Plant, and Equipment by Mortgaged Borrowing . . . . .	\$ 76.9
(22) Acquisition of Property, Plant, and Equipment by Capital Leases . . . . .	98.2
(23) Conversion of Debt into Common Stock . . . . .	47.8

**SCFlows.8 Interpreting the statement of cash flows.** Exhibit SCF.6 presents a statement of cash flows for L.A. Gear, manufacturer of athletic shoes and sportswear, for three recent years.

**EXHIBIT SCF. 6****L.A. GEAR****Statement of Cash Flows (all dollar amounts in thousands) (SCFlows.8)**

	Year 8	Year 9	Year 10
<b>OPERATIONS</b>			
Net Income . . . . .	\$ 4,371	\$ 22,030	\$ 55,059
Depreciation . . . . .	133	446	1,199
Noncash Compensation to Employees . . . . .	—	—	558
Increase in Accounts Receivable . . . . .	(12,410)	(34,378)	(51,223)
Increase in Inventories . . . . .	(1,990)	(50,743)	(72,960)
Increase in Prepayments . . . . .	(599)	(2,432)	(8,624)
Increase in Accounts Payable . . . . .	1,656	7,197	17,871
Increase (Decrease) in Other Current			
Liabilities . . . . .	(537)	11,193	10,587
Cash Flow from Operations . . . . .	<u>\$ (9,376)</u>	<u>\$(46,687)</u>	<u>\$(47,533)</u>
<b>INVESTING</b>			
Sale of Marketable Securities . . . . .	\$ 5,661	—	—
Acquisition of Property, Plant, and			
Equipment . . . . .	(874)	\$ (2,546)	\$ (6,168)
Acquisition of Other Noncurrent Assets . . . . .	(241)	(406)	(246)
Cash Flow from Investing . . . . .	<u>\$ 4,546</u>	<u>\$ (2,952)</u>	<u>\$ (6,414)</u>
<b>FINANCING</b>			
Increase (Decrease) in Short-term			
Borrowing . . . . .	\$ 4,566	\$ 50,104	\$(19,830)
Issue of Common Stock . . . . .	—	495	69,925
Cash Flow from Financing . . . . .	<u>\$ 4,566</u>	<u>\$ 50,599</u>	<u>\$ 50,095</u>
Change in Cash . . . . .	\$ (264)	\$ 960	\$ (3,852)
Cash, Beginning of Year . . . . .	3,509	3,245	4,205
Cash, End of Year . . . . .	<u>\$ 3,245</u>	<u>\$ 4,205</u>	<u>\$ 353</u>

- What is the likely reason for the negative cash flow from operations?
- How did L.A. Gear finance the negative cash flow from operations during each of the three years? Suggest reasons for L.A. Gear's choice of financing source for each year.
- Expenditures on property, plant, and equipment substantially exceeded the addback for depreciation expense each year. What is the likely explanation for this difference in amounts?
- The addback for depreciation expense is a relatively small proportion of net income. What is the likely explanation for this situation?
- L.A. Gear had no long-term debt in its capital structure during Year 7 through Year 9. What is the likely explanation for such a financial structure?

**SCFlows.9 Interpreting the statement of cash flows.** Exhibit SCF.7 presents a statement of cash flows for Campbell Soup Company for three recent years. Campbell Soup Company is in the consumer foods industry, a relatively mature industry in the United States.

- Cash flow from operations each year approximately equals net income plus addbacks for depreciation, deferred taxes, and other. What is the likely explanation for this relation?
- In the Investing section of Campbell's statement of cash flow, what are the indications that the company is in a relatively mature industry?
- In the Financing section of Campbell's statement of cash flows, what are the indications that the company is in a relatively mature industry?



**EXHIBIT SCF.7****CAMPBELL SOUP COMPANY****Statement of Cash Flows (all dollar amounts in millions) (SCFlows.9)**

	Year 6	Year 7	Year 8
<b>OPERATIONS</b>			
Net Income . . . . .	\$ 223	\$247	\$ 274
Depreciation . . . . .	127	145	171
Deferred Income Taxes . . . . .	29	46	31
Other Addbacks . . . . .	21	34	11
(Increase) in Accounts Receivable . . . . .	(19)	(40)	(55)
(Increase) Decrease in Inventories . . . . .	13	(13)	6
(Increase) in Prepayments . . . . .	(7)	(11)	(40)
Increase in Accounts Payable . . . . .	27	53	72
Increase (Decrease) in Other Current Liabilities . . . . .	29	2	(1)
Cash Flow from Operations . . . . .	<u>\$ 443</u>	<u>\$ 463</u>	<u>\$ 469</u>
<b>INVESTING</b>			
Sale of Property, Plant, and Equipment . . . . .	\$ 30	\$ 21	\$ 41
Sale of Marketable Securities . . . . .	328	535	319
Acquisition of Property, Plant, and Equipment . . . . .	(275)	(250)	(245)
Acquisition of Marketable Securities . . . . .	(472)	(680)	(70)
Acquisition of Investments in Securities . . . . .	—	—	(472)
Other Investing Transactions . . . . .	(5)	(34)	(48)
Cash Flow from Investing . . . . .	<u>\$(394)</u>	<u>\$(408)</u>	<u>\$(475)</u>
<b>FINANCING</b>			
Increase in Short-term Borrowing . . . . .	—	\$ 5	\$ 86
Increase in Long-term Borrowing . . . . .	\$ 220	29	103
Issue of Common Stock . . . . .	4	2	—
Decrease in Short-term Borrowing . . . . .	(3)	—	(5)
Decrease in Long-term Borrowing . . . . .	(168)	(27)	(106)
Acquisition of Common Stock . . . . .	—	—	(28)
Dividends . . . . .	(84)	(92)	(103)
Cash Flow from Financing . . . . .	<u>\$ (31)</u>	<u>\$ (83)</u>	<u>\$ (53)</u>
Change in Cash . . . . .	<u>\$ 18</u>	<u>\$ (28)</u>	<u>\$ (59)</u>
Cash, Beginning of Year . . . . .	155	173	145
Cash, End of Year . . . . .	<u>\$ 173</u>	<u>\$ 145</u>	<u>\$ 86</u>

**SCFlows.10 Interpreting the statement of cash flows.** Prime Contracting Services provides various services to government agencies under multi-year contracts. In Year 6, the services primarily involved transportation services of equipment and household furniture. Beginning in Year 7, the firm began exiting these transportation services businesses and began offering more people-based services (clerical, training). Sales increased at a compounded annual rate of 28.9 percent during the five-year period. **Exhibit SCF.8** presents a statement of cash flows for Prime Contracting Services for Year 6 to Year 10. Changes in Other Current Liabilities primarily represent salaries.

- What evidence do you see of the strategic shift from asset-based to people-based services?
- What are the likely reasons that net income decreased between Year 6 and Year 8 while cash flow from operations increased during the same period?
- What are the likely reasons that net income increased between Year 8 and Year 10 while cash flow from operations was less during Year 9 and Year 10 than in Year 8?
- How has the risk of Prime Contracting Services changed during the five years?

**EXHIBIT SCF.8****PRIME CONTRACTING SERVICES**

Statement of Cash Flows (all dollar amounts in millions) (SCFlows.10)

	Year 6	Year 7	Year 8	Year 9	Year 10
<b>OPERATIONS</b>					
Net Income . . . . .	\$ 261,243	\$ 249,438	\$ 46,799	\$ 412,908	\$ 593,518
Depreciation . . . . .	306,423	616,335	826,745	664,882	606,633
Deferred Income Taxes . . . . .	158,966	179,584	55,000	(110,116)	(154,000)
Loss (Gain) on Disposition of Assets . . . . .	20,000	—	—	(117,804)	(35,077)
Other . . . . .	2,200	(7,226)	(51,711)	(19,377)	9,100
(Increase) Decrease in Accounts Receivable . . . . .	(1,420,783)	(647,087)	(263,164)	(864,555)	175,408
(Increase) Decrease in Other Current Assets . . . . .	(38,031)	(25,792)	(40,067)	(9,333)	127,548
Increase (Decrease) in Accounts Payable . . . . .	507,386	(177,031)	(32,732)	(272,121)	(166,672)
Increase (Decrease) in Other Current Liabilities . . . . .	266,260	99,417	422,929	927,478	(416,856)
Cash Flow from Operations . . . . .	<u>\$ 63,664</u>	<u>\$ 287,638</u>	<u>\$ 963,799</u>	<u>\$ 611,962</u>	<u>\$ 739,602</u>
<b>INVESTING</b>					
Fixed Assets Sold . . . . .	\$ 80,000	—	—	\$ 117,804	\$ 175,075
Employee and Officer Loans . . . . .	(16,960)	\$ 62,894	—	—	—
Fixed Assets Acquired . . . . .	(2,002,912)	(911,470)	\$ (56,370)	(19,222)	(48,296)
Cash Flow from Investing . . . . .	<u>\$(1,939,872)</u>	<u>\$(848,576)</u>	<u>\$ (56,370)</u>	<u>\$ 98,582</u>	<u>\$ 126,779</u>
<b>FINANCING</b>					
Net Increase (Decrease) in Notes Payable . . . . .	\$ 204,817	\$ 275,475	\$(126,932)	\$ 12,650	\$ 325,354
Borrowings under Equipment Loans . . . . .	943,589	793,590	208,418	—	—
Borrowings under Capital Leases . . . . .	915,596	—	—	—	—
Borrowings from Shareholder Loans . . . . .	127,500	117,422	—	—	—
Repayments under Equipment Loans . . . . .	(236,229)	(389,268)	(564,585)	(437,660)	(736,793)
Repayments under Capital Leases . . . . .	(124,012)	(268,556)	(296,495)	(304,054)	—
Repayments under Shareholder Loans . . . . .	(63,077)	—	(150,000)	—	( 28,710)
Cash Flow from Financing . . . . .	<u>\$ 1,768,184</u>	<u>\$ 528,663</u>	<u>\$(929,594)</u>	<u>\$(729,064)</u>	<u>\$(440,149)</u>
Change in Cash . . . . .	\$ (108,024)	\$ (32,275)	\$ (22,165)	\$ (18,520)	\$ 426,232
Cash, Beginning of Year . . . . .	186,897	78,873	46,598	24,433	5,913
Cash, End of Year . . . . .	<u>\$ 78,873</u>	<u>\$ 46,598</u>	<u>\$ 24,433</u>	<u>\$ 5,913</u>	<u>\$ 432,145</u>

**SCFlows.11 Interpreting the statement of cash flows.** Refer to the data in **Exhibit SCF.8** for Prime Contracting Services.

- Describe the events that likely occurred to cause the pattern of numbers on the third line, the Deferred Income Taxes, which go from \$158,966 in Year 6 through -\$154,000 in Year 10.
- Explain why the loss of \$20,000 in Year 6 results in an addition in the column for Year 6.
- Assume that the proceeds of disposition of assets referred to in part b for the transaction generating the \$20,000 loss in Year 6 were the entire \$80,000 shown in the first line of the investing section. What was book value of those assets at the time of disposition?

**SCFlows.12 Interpreting the statement of cash flows.** **Exhibit SCF.9** presents a statement of cash flows for Cypres Corporation.

- What are the likely reasons that net income increased between Year 11 and Year 13 but cash flow from operations decreased?
- What are the likely reasons for the increased cash flow operations between Year 13 and Year 15?
- How has the risk of Cypres Corporation changed over the five-year period?

**EXHIBIT SCF.9****CYPRES CORPORATION****Statement of Cash Flows (all dollar amounts in thousands) (SCFlows.11)**

	Year 11	Year 12	Year 13	Year 14	Year 15
<b>OPERATION</b>					
Net Income . . . . .	\$ 1,045	\$ 1,733	\$ 3,716	\$ 6,583	\$ 6,602
Depreciation and Amortization . . . . .	491	490	513	586	643
Other Addbacks . . . . .	20	25	243	151	299
Other Subtractions . . . . .	0	0	0	0	(97)
Working Capital Provided by Operations . . . . .	\$ 1,556	\$ 2,248	\$ 4,472	\$ 7,320	\$ 7,447
(Increase) Decrease in Receivables . . . . .	(750)	(2,424)	(3,589)	(5,452)	4,456
(Increase) Decrease in Inventories . . . . .	(1,387)	(4,111)	(7,629)	1,867	1,068
Increase (Decrease) Accts. Pay-Trade . . . . .	1,228	2,374	1,393	1,496	(2,608)
Increase (Decrease) in Other Current Liabilities . . . . .	473	2,865	4,737	1,649	(1,508)
Cash from Operations . . . . .	<u>\$ 1,120</u>	<u>\$ 952</u>	<u>\$ (616)</u>	<u>\$ 6,880</u>	<u>\$ 8,855</u>
<b>INVESTING</b>					
Fixed Assets Acquired (net) . . . . .	\$ (347)	\$ (849)	\$ (749)	\$(1,426)	\$(1,172)
Marketable Securities Acquired . . . . .	0	0	0	0	(3,306)
Other Investment Transactions . . . . .	45	0	81	(64)	39
Cash Flow from Investing . . . . .	<u>\$ (302)</u>	<u>\$ (849)</u>	<u>\$ (668)</u>	<u>\$(1,490)</u>	<u>\$(4,439)</u>
<b>FINANCING</b>					
Increase in Short-term Borrowing . . . . .	\$ 0	\$ 700	\$ 2,800	\$ 0	\$ 0
Increase in Long-term Borrowing . . . . .	0	0	0	0	0
Issue of Capital Stock . . . . .	0	0	0	0	315
Decrease in Short-term Borrowing . . . . .	0	0	0	(3,500)	0
Decrease in Long-term Borrowing . . . . .	(170)	(170)	(170)	(170)	(170)
Acquisition of Capital Stock . . . . .	(27)	0	0	0	0
Dividends . . . . .	(614)	(730)	(964)	(1,427)	(2,243)
Other Financing Transactions . . . . .	0	0	0	0	0
Cash Flow from Financing . . . . .	<u>\$ (811)</u>	<u>\$ (200)</u>	<u>\$ 1,666</u>	<u>\$(5,097)</u>	<u>\$(2,098)</u>
Change in Cash . . . . .	\$ 7	\$ (97)	\$ 382	\$ 293	\$ 2,318
Cash, Beginning of Year . . . . .	955	962	865	1,247	1,540
Cash, End of Year . . . . .	<u>\$ 962</u>	<u>\$ 865</u>	<u>\$ 1,247</u>	<u>\$ 1,540</u>	<u>\$ 3,837</u>