

5

The Statement of Cash Flows

Overview

You have finally arrived at the third of the “big three” required financial statements. The statement of cash flows is the newest of the three, having only been required since 1988. Although it usually isn’t given as much weight as the balance sheet or income statement, it can be a very useful statement for decision makers.

Like the other two statements, items are grouped according to categories. In the case of the statement of cash flows, the categories are referred to as activities: operating, investing, and financing.

There is one standard format for the investing and financing sections of the statement of cash flows. For the operating activities section, however, there are two possible methods: direct and indirect. Many people feel that the direct method is the better of the two methods. However, nearly all companies use the indirect method, so this method is the manner of the operating activities section that we will place our focus. In addition, the few companies that do use the direct method must perform a reconciliation, which essentially is the indirect method.

By analyzing a statement of cash flows, you can begin to understand where a company may be headed in the future or at what point in a company’s life cycle it is currently functioning. These pieces of information are sometimes easier to glean from a statement of cash flows than from a balance sheet or income statement (the latter two of which are prepared using the accrual method).

The statement of cash flows is the only one of the required financial statements not prepared on an accrual basis. It is prepared for a period of time, similar to the income statement and different from the balance sheet.

Learning Objectives

Refer to the Review of Learning Objectives at the end of the chapter. It is crucial that this section of the chapter is second nature to you before you attempt the homework, a quiz, or exam. This important piece of the chapter serves as your CliffsNotes or “cheat sheet” to the basic concepts and principles that must be mastered.

If after reading this section of the chapter you still don't feel comfortable with all of the Learning Objectives covered, you will need to spend additional time and effort reviewing those concepts that you are struggling with.

The following “Tips, Hints, and Things to Remember” are organized according to the Learning Objectives (LOs) in the chapter and should be gone over after reading each of the LOs in the textbook.

Tips, Hints, and Things to Remember

LO1 – Describe the circumstances in which the cash flow statement is a particularly important companion of the income statement.

Why? In some instances, information on the income statement can be misleading in terms of how the company is actually doing and how they will perform in the future. Since some expenses are estimates, (like depreciation or provisions for future obligations) but don't adversely affect cash, the company may be doing better in terms of current cash flow than the income statement indicates if these noncash expenses are very large.

The cash flow statement isn't based on estimates and judgement calls like the income statement frequently is. It is based on the actual cash that came in or went out during the period. Hence, the statement of cash flows is an important financial statement that should be examined in conjunction with the other financial statements and should not be ignored or completely discounted.

LO2 – Outline the structure of and information reported in the three main categories of the cash flow statement: operating, investing, and financing.

How? Do you really need to memorize which of the three categories any possible transaction can fall under? Yes and no. Yes, you do need to know which of the three categories any given transaction falls under. No, you should not try memorizing a long list of transactions. Instead, rely on your knowledge of the balance sheet and income statement, information you hopefully have mastered from the prior two chapters, to make learning this chapter a piece of cake. With only a few exceptions, the following holds true:

Operating activities relate to those activities found on the income statement and in the current asset and current liability sections of the balance sheet. What are the exceptions? Just because cash (and equivalents) is a current asset doesn't mean that a change in cash (and equivalents) indicates an operating activity has taken place. Cash (and equivalents) balances can change from any of the three types of activities so the change in the account balance of cash (and equivalents) should be ignored when computing the operating activities.

Another exception includes gains and losses on the income statement related to the sale of long-term assets. Yet another exception exists with respect to the balance sheet, and that is the paying off of long-term debt that has been reclassified as current for the period since it will be paid off soon. A recent reclassification of debt from long-term to current doesn't change the type of activity from financing into operating.

Investing activities relate to those activities found in the long-term asset section of the balance sheet.

Financing activities relate to those activities found in the long-term liability and equity sections of the balance sheet.

Here is a visual of the prior discussion, ignoring the few exceptions:

Income Statement	Balance Sheet	
Operating Activities	<u>Current Assets</u>	<u>Current Liabilities</u>
	Operating Activities	Operating Activities
	<u>Long-Term Assets</u>	Long-Term Liabilities and Equity
	Investing Activities	Financing Activities

LO3 – Compute cash flow from operations using either the direct or the indirect method.

How? The *direct* method cash flow from the operations section of the statement is basically the same as an income statement recast on a cash, instead of accrual, basis. Start with cash received from customers and then subtract cash paid for inventory, wages, etc. and you have a cash flow from operations using the direct method. It isn't very difficult nor is it very common to see a cash flow statement using this method. Hence, you should focus your efforts on learning how to compute cash flow from operations using the indirect method.

How? The *indirect* method cash flow from the operations section of the statement requires two pieces of information: an income statement and a comparative balance sheet. The first two items for the statement of cash flows are plucked off the income statement; they are net income (or loss) and depreciation/amortization expense. These two numbers are always added together since depreciation/amortization are noncash expenses. Basically, this first step gets one to net income before depreciation and amortization.

The next step is an analysis of the change in some current assets and current liabilities from the comparative balance sheet. Rather than trying to memorize that if a current asset (other than cash) decreases you then add the difference to net income (and vice versa for increases to current assets and vice versa from current assets for current liabilities), since you are sure to forget such things in the long run and possibly reverse them in your head for an exam, it is better to think of a specific example and take it from there.

So let's use accounts receivable as our specific example. What does it mean if an accounts receivable balance decreases? It means that cash is being collected from customers faster than products are being provided or services are being rendered. That means that we should add decreases in accounts receivable (and other current assets) relative to net income to derive cash flows from operating activities. That's easy enough to remember, or intuitively come up with at any point in time, correct?

If you are a visual learner, or like to put your knowledge on paper rather than risk it being jumbled in your head, then write out something like the following with the above accounts receivable information in mind:

	Account Balance Change	Effect on Cash Flows Relative to Net Income
Current Assets	–	+
Current Liabilities		

With only that one example, you can then fill in the rest of the table. Current asset increases go in the opposite direction as decreases, and current liabilities move in the exact opposite direction as current assets. Your completed table should then look like the following:

	Account Balance Change	Effect on Cash Flows Relative to Net Income
Current Assets	-	+
Current Liabilities	+	-

Again, don't try memorizing the table. Rather, know how to create it from any given example. A current asset decrease from one period to the next means that either more cash was collected (in the case of accounts receivable, for instance) or cash wasn't used as much (in the case of inventory declining, for instance), so an increase in cash flow relative to net income results. The reverse is also true for assets (an increase will result in a decrease of cash flow relative to net income) and just the opposite happens in the case of current liabilities.

LO4 – Prepare a complete statement of cash flows and provide the required supplemental disclosures.

How? A statement of cash flows is not complete unless it reconciles the beginning and ending cash balance. Even if you aren't asked to prepare a complete statement of cash flows, it is a good idea to reconcile your beginning and ending cash. Doing so allows you to check your work. Coming up with a change in cash on your statement of cash flows that equals your change in cash on your balance sheet will not guarantee that your statement of cash flows is correct (as you may have misclassified a financing activity as an investing activity for instance), but it will provide you with some confidence that you have at least captured every item and not made any errors in your calculations.

LO5 – Assess a firm's financial strength by analyzing the relationships among cash flows from operating, investing, and financing activities and by computing financial ratios based on cash flow data.

Why? Exhibit 5-9 is very important to understand. Obviously, the magnitude of the numbers should also make a difference in your analysis. A company in position 6 who has -\$10 in investing isn't necessarily "growing rapidly." Negative 10 dollars simply doesn't mean much; whereas, -\$5 billion in investing certainly does.

Situations 2 and 4, assuming the numbers are significant, are the best situations to be in. A negative number in investing is actually a favorable sign. A company in situation 6 may be a company still in its start-up phase. Situations 5 and 7 are the worst positions to be in.

LO6 – Demonstrate how the three primary financial statements tie together, or articulate, in a unified framework.

LO7 – Use knowledge of how the three primary financial statements tie together in order to prepare a forecasted statement of cash flows.

How? When creating a forecasted, or pro-forma, statement of any type, start with the prior year's statement as your "skeleton." Then fill in the given items or items that aren't changing. Finally, fill in the items that need to be solved for. You will have to create, or be given, a forecasted income statement and balance sheet before you can prepare a forecasted statement of cash flows.

For a forecasted income statement, be sure to adjust for variable costs and changes in the balance sheet numbers. In other words, if sales revenue goes up by 10 percent, cost of goods sold should also go up by 10 percent unless you are told otherwise. Other examples of items that are "tied" to the balance sheet include depreciation and interest expenses. If fixed assets go up, then depreciation should also usually go up. If debt goes up, then so should the interest expense (unless a lower interest rate is obtained on new debt while old debt is retired), etc.

The following sections, featuring various multiple choice questions, matching exercises, and problems, along with solutions and approaches to arriving at the solutions, is intended to develop your problem-solving and critical-thinking abilities. While learning through trial and error can be effective for improving your quiz and exam scores, and it can be a more interesting way to study than merely re-reading a chapter, that is only a secondary objective in presenting this information in this format.

The main goal of the following sections is to get you thinking, "How can I best approach this problem to arrive at the correct solution—even if I don't know enough at this point to easily come up with the proper results?" There is not one simple approach that can be applied to all questions to arrive at the right answer. Think of the following approaches as possibilities, as tools that you can place in your problem-solving toolkit—a toolkit that should be consistently added to. Some of the tools have yet to even be created or thought of. Through practice, creative thinking, and an ever-expanding knowledge base, you will be the creator of the additional tools.

Multiple Choice

MC5-1 (LO1) The most likely situation in which reported earnings are positive but operating activities are consuming rather than generating cash would be a

- a. company reporting large noncash expenses.
- b. rapidly growing company.
- c. company selling their property, plant, and equipment at a loss.
- d. company paying large cash dividends to its shareholders.

MC5-2 (LO2) Cash receipts on the sale of a plant asset, with a book value, in the ordinary course of business should be presented in a statement of cash flows prepared using the indirect method as a(n)

- a. cash inflow from investing activities.
- b. cash inflow from financing activities.
- c. addition to net income.
- d. deduction from net income.

MC5-3 (LO3) If taxes payable increased during the year, the cash paid for taxes would equal

- a. tax expense.
- b. tax expense plus taxes payable at the beginning of the year.
- c. tax expense plus the increase in taxes payable from the beginning to the end of the year.
- d. tax expense less the increase in taxes payable from the beginning to the end of the year.

MC5-4 (LO3) The following information was taken from the 2011 financial statements of Vaughn Corporation:

Accounts Receivable, January 1, 2011	\$ 110,000
Accounts Receivable, December 31, 2011	150,000
Sales on account and cash sales	2,200,000

No accounts receivable were written off or recovered (from previous write-offs) during the year. What amount was collected from customers in 2011?

- a. \$2,160,000
- b. \$2,200,000
- c. \$2,240,000
- d. \$2,350,000

MC5-5 (LO3) Mays Company's income statement for the year ended December 31, 2011, reported net income of \$360,000. The financial statements also disclosed the following information:

Amortization	\$ 25,000
Depreciation	60,000
Increase in accounts receivable	140,000
Increase in inventory	48,000
Decrease in accounts payable	76,000
Increase in salaries payable	28,000
Dividends paid	120,000
Purchase of equipment	150,000
Increase in long-term note payable	300,000

Net cash provided by operating activities for 2011 should be reported as

- \$89,000.
- \$209,000.
- \$239,000.
- \$329,000.

MC5-6 (LO3) In a statement of cash flows (indirect method), an increase in inventories with no change in the balance of Accounts Payable should

- be presented in the investing activities section.
- not be presented.
- be presented as a deduction from net income.
- be presented as an addition to net income.

MC5-7 (LO4) Supplemental disclosures required only when the statement of cash flows is prepared using the indirect method include

- a schedule reconciling net income with net cash provided by (used in) operating activities.
- amounts paid for interest and taxes.
- amounts deducted for depreciation and amortization.
- significant noncash investing and financing activities.

MC5-8 (LO4) Woods Company sold a computer for \$50,000. The computer's original cost was \$250,000, and the accumulated depreciation at the date of sale was \$175,000. The sale of the computer should appear on Woods' annual statement of cash flows (indirect method) as

- a \$50,000 reduction in cash flows from operating activities and a \$50,000 increase in cash flows from investing activities.
- only a \$50,000 increase in cash flows from operating activities.
- only a \$50,000 increase in cash flows from investing activities.
- a \$25,000 increase in cash flows from operating activities and a \$50,000 increase in cash flows from investing activities.

MC5-9 (LO4) Pantheon Incorporated declared and paid cash dividends of \$100,000 on their stock. Pantheon also received a cash dividend of \$50,000 from a company they have heavily invested in. These dividends should be presented in Pantheon's statement of cash flows as a

- \$150,000 reduction in cash flows from investing activities.
- \$50,000 reduction in cash flows from financing activities.
- \$100,000 reduction in cash flows from financing activities and a \$50,000 increase in cash flows from investing activities.
- \$100,000 reduction in cash flows from financing activities and a \$50,000 increase in cash flows from operating activities.

MC5-10 (LO4) During 2011, Ryan Corporation acquired buildings for \$300,000, paying \$100,000 cash and signing a 10 percent annual rate note payable due in 10 years for the balance. The transaction (not the interest) should be shown in the cash flow statement for Ryan Corporation in 2011 as

- a \$300,000 reduction in cash flows from investing activities and a \$100,000 increase in cash flows from financing activities.
- only a \$300,000 reduction in cash flows from investing activities.
- only a \$100,000 reduction in cash flows from investing activities.
- only a \$200,000 increase in cash flows from financing activities.

MC5-11 (LO4) Using the same facts as **MC5-10** and assuming that Ryan Corporation acquired the buildings at the beginning of the year and paid the interest on the note at the end of the year for the entire year, the interest should be shown in the cash flow statement for Ryan Corporation in 2011 as a

- \$20,000 reduction in cash flows from investing activities.
- \$20,000 increase in cash flows from investing activities.
- \$20,000 reduction in cash flows from operating activities.
- \$20,000 reduction in cash flows from financing activities.

MC5-12 (LO5) The following choices are the cash flow patterns for four different companies in the same industry. Assume that the numbers are all significant (i.e., they are all in the millions and none are nearly zero). Which of the following cash flow patterns describes the company that is likely having the most problems?

	<u>Operating</u>	<u>Investing</u>	<u>Financing</u>
a.	+	-	-
b.	+	-	+
c.	-	-	+
d.	-	+	+

Matching

Matching 5-1 (LO1, LO2, LO3, LO4) Listed below are the terms and associated definitions from the chapter for LO1 through LO4. Match the correct definition letter with each term number.

- | | |
|---|--|
| ___ 1. articulation | a. an approach to calculating and reporting cash flow from operating activities that reconciles net income with operating cash flow |
| ___ 2. direct method | b. includes transactions and events that normally enter into the determination of net income, including interest and taxes |
| ___ 3. financing activities | c. primarily includes purchases and sales of noncurrent assets such as land, buildings, and nontrading financial instruments |
| ___ 4. indirect method | d. an example is the purchase of land by issuing stock |
| ___ 5. investing activities | e. a forecast or projection of the amounts that will be in the cash flow statement in a future period |
| ___ 6. noncash investing and financing activities | f. one of the three primary financial statements, separated into operating, investing, and financing activities |
| ___ 7. operating activities | g. an approach to calculating and reporting cash flow from operating activities that itemizes the major operating cash receipt and cash payment categories |
| ___ 8. pro forma cash flow statement | h. three primary financial statements are not isolated lists of numbers but are an integrated set of reports on a company's financial health |
| ___ 9. statement of cash flows | i. includes transactions and events whereby cash is obtained from or repaid to owners and creditors |

Matching 5-2 (LO5) Listed below are the terms and associated definitions from the chapter for LO5. Match the correct definition letter with each term number.

- | | |
|---|--|
| ___ 1. cash flow adequacy ratio | a. ratio used to analyze the cash flow relationship between cash from operations and reported net income |
| ___ 2. cash flow-to-net income ratio | b. cash from operations divided by expenditures for fixed asset additions and acquisitions of new businesses |
| ___ 3. cash times interest earned ratio | c. measure used to indicate a company's interest-paying ability |

Problems

Problem 5-1 (LO3) Partial balance sheet data and additional information for Rasta Industries are given below:

Rasta Industries Partial Balance Sheet December 31, 2011 and 2010		
	2011	2010
Assets		
Cash	\$70,000	\$20,000
Accounts receivable	80,000	90,000
Inventory	65,000	40,000
Liabilities		
Accounts payable	\$95,000	\$77,000

Additional Information:

- a. Net income for 2011 was \$55,000.
- b. Depreciation expense for 2011 was \$28,000.

Prepare the operating activities section of the statement of cash flows, using the indirect method, for the year ending December 31, 2011.

Were there nonoperating activities during the year? How do you know?

Problem 5-2 (LO3) Partial balance sheet data and additional information for Henry and McHenry are given below:

Henry and McHenry Comparative Balance Sheet December 31, 2011 and 2010		
	2011	2010
Assets		
Land, buildings, and equipment	\$332,000	\$210,000
Accumulated depreciation	(75,000)	(50,000)
Equity		
Common stock (\$1 par)	\$300,000	\$200,000
Additional paid-in capital	150,000	0
Retained earnings	30,000	20,000

Additional information:

- a. July 21, 2011—issued 100,000 shares of common stock for cash. No shares were repurchased or retired during the year.
- b. August 1, 2011—purchased new equipment for cash. No land, buildings, or equipment were sold during the year.
- c. December 31, 2011—paid cash dividends of \$60,000.
- d. December 30, 2011—received cash dividends of \$10,000.

Prepare the investing and financing activities sections of the statement of cash flows for the year ending December 31, 2011.

Problem 5-3 (LO5) The following pertains to Lansford Company for the year ended December 31, 2011.

Depreciation expense	\$ 10,000
Issuance of common stock	105,000
Cash dividends paid	19,000
Increase in inventory	43,000
Decrease in accounts receivable	68,000
Decrease in accounts payable	27,000
Retirement (paying off) of long-term debt	120,000
Net income	150,000
Proceeds from sale of equipment (\$12,000 loss)	63,000
Purchase of equipment	84,000
Cash and cash equivalents, beginning of year	200,000

Prepare a statement of cash flows in good form using the indirect method. Calculate the cash flow to net income and cash flow adequacy ratios for the company.

How would you characterize Lansford Company based only on your completed statement of cash flows (healthy and growing/expanding, startup phase, cash cow, financially distressed, etc.)?

Problem 5-4 (LO7) Uffizi Company is preparing a forecast of its net income for the year 2011. In addition, Uffizi plans to construct a forecasted statement of cash flows for 2011. The balance sheet and income statement data for 2010 are presented below as well as a forecasted balance sheet for 2011. Management expects sales in 2011 to rise to \$6,000,000. In order to achieve this level of increase, management estimates that operating expenses (specifically sales commissions) will rise to \$410,134.

Prepare a forecasted income statement and forecasted statement of cash flows (using the indirect method) for the year ended December 31, 2011, for Uffizi Company. Calculate the cash flow to net income and cash flow adequacy ratios.

Uffizi Company
Balance Sheet
Years Ending December 31, 2010 and 2011

	2010	2011 (forecast)
Cash	\$ 132,000	\$ 212,000
Other current assets	756,000	1,196,000
Property, plant, and equipment, net	<u>440,000</u>	<u>852,000</u>
Total assets	<u><u>\$1,328,000</u></u>	<u><u>\$2,260,000</u></u>
Accounts payable	\$ 76,000	\$ 112,000
Bank loans payable	324,000	796,000
Total stockholders' equity	<u>928,000</u>	<u>1,352,000</u>
Total liabilities and equity	<u><u>\$1,328,000</u></u>	<u><u>\$2,260,000</u></u>

Uffizi Company
Income Statement
For Year Ended December 31, 2010

Sales	\$3,172,000
Cost of goods sold	<u>2,532,000</u>
Gross margin	640,000
Depreciation expense	14,576
Other operating expenses	<u>216,824</u>
Operating profit	408,600
Interest expense	<u>48,600</u>
Income before taxes	360,000
Income taxes	<u>108,000</u>
Net income	<u><u>\$ 252,000</u></u>

Solutions, Approaches, and Explanations

MC5-1

Answer: b

Approach and explanation: The example from the textbook is Home Depot, who, in the mid-1980s, was spending a lot of cash on inventory. Even though they were still profitable, the ramping up of inventory levels to keep up with customer demand and provide for future income was consuming more cash than it was generating.

Choice a is entirely false. A company with large noncash expenses (like depreciation and amortization) could be generating positive cash flows from operations while having negative earnings, just the opposite of what the question states.

Choice *c* has nothing to do with operating activities. Property, plant, and equipment are investing activities. However, if the selling off of investing activities resulted in substantial gains, which made reported earnings positive, choice *c* could be the correct answer.

Choice *d* couldn't be correct regardless of the size of the cash dividend. Since dividends aren't an expense they don't affect earnings. The paying of dividends isn't an operating activity.

Dividends are one of the trickiest items when it comes to the statement of cash flows. Paying a dividend is a financing activity, but receiving a dividend is an operating activity. To keep that straight, remember the illustration on page 5-3. Since the paying of cash dividends reduces retained earnings (an equity account), it is a financing activity. The receipt of a dividend, on the other hand, doesn't affect equity directly. It shows up on the income statement and, hence, falls under the operating activity category.

MC5-2

Answer: a

Approach and explanation: The method (direct or indirect) doesn't affect the correct answer on this question since the item we are looking at is the cash receipt and not the gain. But what if we changed the question to read as follows?

“A gain on the sale of a plant asset in the ordinary course of business should be presented in a statement of cash flows prepared using the indirect method as...”

The correct answer would then change to choice *d* from choice *a*. How is that you ask? The gain (not the amount of cash received if it had a book value) made it into net income. Since the sale of plant assets (not inventory) is not an operating activity, the gain must be backed out of net income to get the operating activities section to the correct number. The cash receipts are then added to the cash inflows from investing activities.

Need some real numbers to look at to help make sense of this? OK, here goes... Let's say there is a factory that was purchased 10 years ago for \$600,000, and it is being depreciated over 30 years using the straight-line method. Depreciation of \$200,000 has been taken on the plant asset over those 10 years ($\$600,000/30 \times 10$). So the current book, or carrying, value is \$400,000 ($\$600,000 - \$200,000$). If the factory is now sold for \$550,000 in cash, the gain is \$150,000 ($\$550,000 - \$400,000$), but the cash receipts are \$550,000. The gain of \$150,000 shows up as part of net income. Assuming total net income is \$800,000, part of the indirect statement of cash flows will look like the following:

Partial Statement of Cash Flows—Operating Activities

Cash flows from operating activities:		
Net income		\$800,000
Adjustments:		
Gain on sale of plant assets	\$(150,000)	

In other words, our cash flow from operating activities without considering other items and after removing the nonoperating activity item of the gain on the sale of an investing activity is \$650,000.

On the same statement, we will find the following in the investing activities section:

Partial Statement of Cash Flows—Investing Activities

Cash flows from investing activities:	
Proceeds from the sale of plant assets	\$550,000

Gains and cash receipts will only equal each other when the asset being sold has been fully depreciated. Therefore, say the question was worded to say the following:

“Cash receipts on the sale of a plant asset, without a book value, in the ordinary course of business should be presented in a statement of cash flows prepared using the indirect method as a(n)...”

There would be two correct answers. Both choices *a* and *d* would be correct.

From this you can hopefully see how crucial it is to read every word in a question very carefully. Minor changes in wording can alter which answer is correct.

MC5-3

Answer: d

Approach and explanation: Rather than attempt a question like this in your head or try to recall a memorized formula, your best bet may be to use T-accounts and actually “see” what happens to the accounts. First, sketch out something like this with some fake beginning balances:

	Cash	Taxes Payable	Tax Expense
Beginning balance	11,000	2,000	

Now let's assume that taxes payable increased:

	Cash		Taxes Payable		Tax Expense	
Beginning balance	11,000			2,000		
Tax accrual				?	?	
Tax payment		?	?			
Ending balance				3,000		

Let's also assume that we accrue taxes at a time other than when we pay them (leaving us with a missing debit to Taxes Payable as follows):

	Cash		Taxes Payable		Tax Expense	
Beginning balance	11,000			2,000		
Tax accrual				10,000	10,000	
Tax payment		?	?			
Ending balance				3,000		

Finally, we can assume that no other items affected cash and fill in the blanks to make the correct answer apparent:

	Cash		Taxes Payable		Tax Expense	
Beginning balance	11,000			2,000		
Tax accrual				10,000	10,000	
Tax payment		9,000	9,000			
Ending balance	2,000			3,000	10,000	

There are quicker ways to come up with the answer, but they don't prove the answer as clearly as the above.

For instance, if you understand the table presented on page 5-5 and had already written down something like the following on your quiz or exam

CA	+	-
	-	+
CL	+	+
	-	-

then you can see that when a current liability, like taxes payable, increases, you have a positive adjustment to net income to arrive at cash flow from operating activities. Hence, you can infer that cash flow would be tax expense less the increase in taxes payable. In other words, as a company doesn't pay its current liabilities, cash flow relative to net income (of which tax expense is a deduction to arrive at net income) will be more positive (or, in other words, less cash will be paid).

MC5-4

Answer: a

Approach and explanation: The most important understanding that is necessary for this question is knowing what Accounts Receivable is. Accounts Receivable is an account that makes up the sales on account which have yet to be collected. That being the case, we can see that if it went up in balance during the year, it means less cash has been collected than was in Sales. Hence, the increase in the balance of \$40,000 ($\$150,000 - \$110,000$) should be subtracted from \$2,200,000 to come up with the correct answer.

What if the dates were switched and the account balance went down by \$40,000? Then choice c would be the correct answer.

MC5-5

Answer: b

Approach and explanation: The first thing to do on a problem like this is clearly identify what is being asked. You are looking for cash provided by operating activities. Therefore, you can omit financing and investing activities from your calculation. To do so, you should label what kind of activity each item is.

Write a small *O* next to the \$360,000 of net income. Write a small *O* next to the first six items on the list since they are all operating activities as well. Write a small *F* next to "Dividends paid" and "Increase in long-term note payable" and then cross them both off. Write a small *I* next to "Purchase of equipment" and then cross it off too. Now you are left with just the data you need.

Next, add your depreciation and amortization to net income. Subtract your increases in current assets. Add your increase in the only current liability that went up and subtract your increase to the only current liability that went down.

If, at this point, you come up with an answer that is not one of the choices, do *not* circle the closest answer and call it good. You should come up with an exact answer that matches one of the choices. Never just go with the next closest choice unless you have run out of time or it is a question that allows for minor rounding differences and you are only off by a dollar or so. Instead, start from scratch and work the problem in a slightly different way to try and figure out where you went wrong the first time. You may have just added wrong or left off a number. Or you may have misclassified an item. In any case, keep working it, time permitting, until you come up with an exact match.

MC5-6

Answer: c

Approach and explanation: Since inventory is a current asset (other than cash or a cash equivalent), you should know that it is not an investing or financing activity. Because the balance changed, you should know that it should be presented when the indirect method is being used. Hence, you can rule out choices *a* and *b*.

Now the question is, does an increase in inventories increase or decrease cash flows relative to net income? Here is a simple way to illustrate the answer assuming that a company had no transactions during the year except for the purchase of \$1,000 of inventory with cash (or on credit that was subsequently paid off and, hence, no change in the Accounts Payable balance):

Cash basis:

Cash flow = \$(1,000)

Accrual basis:

Net income = \$0 (since cost of goods sold isn't recognized until the inventory is sold)

Therefore, the statement of cash flows would look like this:

Net income	\$ 0
Adjustments:	
Increase in inventories	<u>(1,000)</u>
Net cash flow from operating activities	<u><u>\$(1,000)</u></u>

Inventory balance changes may not be as intuitive to you as another account, like Accounts Receivable. Hence, you may want to use Accounts Receivable as your thought example and then just infer that since both Inventory and Accounts Receivable are current assets, they both move in the same direction (as subtractions for determining cash flow relative to net income when the balances increase).

MC5-7

Answer: b

Approach and explanation: The key portion of this question is the fact that we are looking *only* for disclosures required when the indirect method is used. In other words, the disclosure is not needed when the direct method is used. According to FASB *Statement No. 95* (step 6 in the textbook), amounts paid for interest and taxes must be disclosed. If the direct method is used, these items are already included in the operating activities section, so no supplemental disclosure is required. That is not the case if the indirect method is used, and that is why choice *b* is the correct one.

As far as the incorrect choices go... Choice *a* would be correct if we changed the word "indirect," in the question, to "direct."

Amounts deducted for depreciation and amortization (choice *c*) are already disclosed in a statement of cash flows using the indirect method, so they need not be included in any supplemental disclosure.

Significant noncash investing and financing activities (choice *d*) are required supplemental disclosures regardless of which method (direct or indirect) is used.

MC5-8

Answer: d

Approach and explanation: See the explanation for **MC5-2** on page 5-17 for details on how to solve questions like this one.

MC5-9

Answer: d

Approach and explanation: Dividends are a somewhat difficult item on the statement of cash flows because the treatment is different depending on whether the dividends are paid or received. Don't net the dividends. Think of the inflow as showing up on the income statement and, hence, being an operating activity. Think of the outflow as being a reduction in Retained Earnings and, hence, a financing activity (see the discussion on pages 5-3 and 5-4). See, also, the explanation for **MC5-1** on page 5-16.

MC5-10

Answer: c

Approach and explanation: Cash is the key when dealing with this chapter. So even though Ryan Corporation will report a building on its balance sheet at \$300,000 and a liability on its balance sheet of \$200,000, the only item that will show up on the face of the statement of cash flows is the actual cash outflow of \$100,000 in the investing activities section.

Ryan Corporation will also need to disclose this significant noncash investing and financing activity of \$200,000 in accordance with FASB *Statement No. 95*, par. 32.

MC5-11

Answer: c

Approach and explanation: Debt is another tricky issue when it comes to the statement of cash flows. Again, I think it is best to think about where the components of debt show up on the other financial statements to figure out where they should appear on the statement of cash flows.

- Company A's debt that Company B has invested in (in order to earn interest on it) will show up as a long-term asset to Company B (unless Company B plans to sell it soon) and, hence, should show up as an investing activity to Company B in the year in which the investment in Company A's debt is purchased.
- The debt of Company A will show up as a long-term liability (unless it comes due in the next year) on Company A's balance sheet. Therefore, it should show up as a financing activity on Company A's statement of cash flows in the year in which the cash initially comes in.
- The interest on the debt will show up on Company A's income statement as interest expense and on Company B's income statement as interest income. Therefore, it should show up on both companies' statement of cash flows as operating activities (since it isn't one of the few exceptions like gains/losses on the sale of plant assets that show up on an income statement that are not operating activities).

To summarize, the principle on debt will show up as either a financing or investing activity depending on whose debt it is (financing for the issuer and investing for the purchaser). The interest on debt will show up as an operating activity regardless of whether the interest is for the issuer or the purchaser. Of course, the interest payments/receipts will be a cash outflow for the issuer and a cash inflow for the purchaser so the treatment isn't exactly identical for interest on debt.

MC5-12

Answer: d

Approach and explanation: The most important column is the operating activities. A company with significant positive cash flow from operating activities is not likely to be the one having the most problems. With that in mind, you can safely cross out choices *a* and *b*.

Before we look closer at the remaining choices of *c* and *d*, let's see what general descriptions would fit for choices *a* and *b* just in case a problem like this that appears on a test isn't looking for the company with the most problems.

Choice *a* is a company doing very well on operations. They are using the excess cash that operating activities are generating to invest in the future and to pay off debt and/or pay dividends to shareholders or buy back outstanding shares of stock.

Choice *b* is a company in a similar situation except that instead of paying off debt and paying dividends, they are increasing their debt burden and/or issuing additional shares of company stock. They may be doing this because the growth prospects are so good that they want to spend a lot of money on investments. They could be buying up other companies or expanding their own facilities very rapidly.

Situations like choices *a* and *b* are the best situations to be in. As an investor, or a potential investor, these are the companies to look for if you want to increase your odds of maximizing your long-term gains.

Choice *c* is actually a fairly common situation for companies in their first years of business. Eventually, the company must generate positive cash flow from operating activities if it wants to stay in existence, but in the early going, companies frequently don't make money as their products or services are not yet known well enough in the marketplace. So long as they are investing in the future and they can come up with adequate financing to do so and to cover their initial losses, then they may be fine in the long run.

Choice *d* is not a pleasant situation to be in. It means the company is selling off its future in order to cover its present operating cash flow problems. In addition, the operating cash flow short falls are causing this company to have to obtain additional debt (probably at unfavorable rates) and/or find more equity investors. If choice *d* persists for significant periods of time, then the company will likely go bankrupt.

All three components are important to examine, but after operating activities, investing activities tend to be the next most important. You want to see a negative number there for a healthy and growing company.

The number for financing isn't usually as important as the other two. As a debt or equity investor, you may want to look at the details behind the bottom-line number, however. As a creditor, you'd like to see money being used to pay off existing debt and new money coming into the company from owners rather than from additional creditors. As an owner (equity investor), you'd like to see money coming in from creditors (not additional owner contributions, thus diluting your stake in the business), and you'd like to see dividends being paid, assuming there aren't better ways for the company to invest their excess cash.

Matching 5-1

1. h
2. g
3. i
4. a
5. c
6. d
7. b
8. e
9. f

Complete these terminology matching exercises without looking back at the textbook or on to the glossary. After all, you probably won't have those as a reference at test time. Learning through trial and error causes the item to be learned better and to stick in your memory longer than if you just look at the textbook, glossary, or a dictionary and "cook book" the answers. Sure you may get the answer correct on your first attempt, but missing something is sometimes best for retention. Don't be afraid of failure while studying and practicing.

Matching 5-2

1. b
2. a
3. c

Problem 5-1

Rasta Industries
 Partial Statement of Cash Flows—Operating Activities
 For the Year Ended December 31, 2011

Cash flows from operating activities:			
Net income			\$55,000
Adjustments:			
Depreciation	\$ 28,000		
Decrease in accounts receivable	10,000		
Increase in inventory	(25,000)		
Increase in accounts payable	18,000		<u>31,000</u>
Net cash provided by operating activities			<u>\$86,000</u>

Yes, there were other nonoperating activities during the year. If there weren't, the net cash provided by operating activities would have equaled \$50,000, the amount by which cash increased during the year (\$70,000 – \$20,000). The financing and investing activities combined decreased cash by \$36,000 during the year (\$86,000 – \$50,000).

When a problem asks you to prepare a statement of cash flows, make sure to include a proper header. You may lose points if you don't include a header or score bonus points by including one. The header should include the name of the company, the name of the statement, and the time period covered. For a statement of cash flows, make sure that it is for a period of time and not just dated 12/31/11. This date doesn't tell you if the statement of cash flows is for the month of December, the quarter ending in December, or the year ending in December.

If you had troubles figuring out what to do with the current assets and liabilities, go back and review the **How?** on pages 5-4 and 5-5. I frequently see something like the following sketched on the corner of my students' tests:

CA	+	–
	–	+
CL	+	+
	–	–

Feel free to do likewise. Just don't try and memorize the above or you'll get things flip-flopped in your head. Think of one specific current asset or current liability and what would happen to cash relative to net income if the balance in that account went up or down. Then fill in the rest of the grid.

One *mistake* that I sometimes see is an indirect statement that looks like this, in part:

Adjustments:	
Increase in cash	(50,000)
Decrease in accounts receivable	10,000
Increase in inventory	(25,000)

The change in the cash balance is *not* one of the current assets that you adjust for in the operating section. Rather, at the bottom of a complete statement of cash flows, you will show how the three activities add up to the change in cash on the balance sheet.

Problem 5-2

Henry and McHenry
 Partial Statement of Cash Flows—Investing and Financing Activities
 For the Year Ended December 31, 2011

Cash flows from investing activities:		
Purchase of equipment	<u>\$(122,000)</u>	
Net cash used in investing activities		<u>\$(122,000)</u>
Cash flows from financing activities:		
Proceeds from sale of stock	\$ 250,000	
Payment of dividends	<u>(60,000)</u>	
Net cash provided by financing activities		<u>\$ 190,000</u>

Recall that dividends are only financing activities if they are paid. Dividends received are operating activities.

What if shares were repurchased during the year? Those would be cash outflows for financing.

What if some land, buildings, or equipment were sold during the year? Let's say equipment was also sold for \$10,000 that had a book value of \$20,000. That would increase the cash outflow for purchases under investing to \$142,000 (\$332,000 + \$20,000 – \$210,000). It would also create a cash inflow of \$10,000 under investing.

What if the dividends paid amount wasn't given, but you were told that net income was \$50,000? You could then compute the dividends paid as being the difference between beginning and ending retained earnings with net income figured in or \$40,000 (\$20,000 + \$50,000 – \$30,000) in paid dividends.

Note that Retained Earnings receives a debit when dividends are declared—not paid. So when dividends are declared near the end of a period and not paid until the following period, they won't show up on the statement of cash flows until the following period.

Another thing to be wary of is which way your signs are going. Students frequently list numbers as positive when they are actually cash outflows. So make sure that if a company is buying equipment you show the amount as negative (as was the case here).

Problem 5-3

Lansford Company
Statement of Cash Flows
For the Year Ended December 31, 2011

Cash flows from operating activities:		
Net income		\$ 150,000
Adjustments:		
Depreciation	\$ 10,000	
Loss on sale of equipment	12,000	
Decrease in accounts receivable	68,000	
Increase in inventory	(43,000)	
Decrease in accounts payable	<u>(27,000)</u>	<u>20,000</u>
Net cash provided by operating activities		\$170,000
Cash flows from investing activities:		
Proceeds from sale of equipment	\$ 63,000	
Purchase of equipment	<u>(84,000)</u>	
Net cash used in investing activities		(21,000)
Cash flows from financing activities:		
Issuance of common stock	\$ 105,000	
Retirement of long-term debt	(120,000)	
Payment of dividends	<u>(19,000)</u>	
Net cash used in financing activities		<u>(34,000)</u>
Net increase in cash and cash equivalents		\$115,000
Cash and cash equivalents, beginning of year		<u>200,000</u>
Cash and cash equivalents, end of year		<u>\$315,000</u>

Ratios:

$$\begin{aligned} \text{Cash Flow to Net Income} &= \text{Cash Flow from Operations/Net Income} \\ &= \$170,000/\$150,000 \\ &= 1.13 \end{aligned}$$

$$\begin{aligned} \text{Cash Flow Adequacy} &= \text{Cash Flow from Operations}/(\text{Cash Paid for Capital Expenditures} \\ &\quad + \text{Cash Paid for Acquisitions}) \\ &= \$170,000/(\$84,000 + \$0) \\ &= 2.02 \end{aligned}$$

The company is in situation 2 as portrayed by Exhibit 5-9 in the textbook. This means the company is doing well on the operations side of things (which is of most importance in the long run) and using the excess cash from operations to expand and grow as well as pay off debt and provide cash to owners. Situation 2 is a very good situation to be in. As an investor, or potential investor, in Lansford Company, you would like to see the positive cash flow from operating activities continue to get larger and the negative cash flow for investing activities become even more negative.

A few items to note: As mentioned in earlier chapters and in the approach to Problem 5-1, make sure to include a complete and proper header. Also, don't forget to do the cash reconciliation at the end. Your statement is incomplete if you end at the \$115,000 number. Another reason to reconcile the beginning cash balance to the ending cash balance is to check your work.

For instance, if this problem had told you that the ending cash balance was \$315,000 and you came up with an ending cash balance of \$353,000, you could fairly easily figure out where your error was.

Step 1: Take your \$353,000 and subtract the real ending balance of \$315,000 to arrive at \$38,000.

Step 2: Scan the problem for the number \$38,000.

Step 3: Since there isn't a \$38,000 figure, you probably haven't just omitted or double counted a number. The next thing to do is to divide your number from step 1 by 2 to arrive at \$19,000.

Step 4: Scan the problem for the number \$19,000.

Step 5: You notice that the dividends are \$19,000 and you have added them to cash flows for financing activities. Change your signs from + to – and you are now at the correct answer of \$315,000.

The above steps work well if you make only one error (+ or – sign going the wrong way), double count, or omission. They don't work so well if you made multiple errors, double counts, and/or omissions. They also don't catch misclassifications (i.e., investing activities reported as financing or operating activities).

Finally, make sure to be careful about which way your + and – (parentheses for – in the case of the above solution) signs are going. That may be the most common error I have seen students make on these kinds of problems. Think through each item independently as to whether it is increasing or decreasing cash and record the correct sign accordingly.

Problem 5-4

Uffizi Company
Income Statement
For Years Ended December 31, 2010 and 2011

Description	2010	2011 (Forecast)	Explanations
Sales	\$3,172,000	\$6,000,000	Given
Cost of Goods Sold	2,532,000	4,789,407	Same percentage of sales as last year
Gross Margin	640,000	1,210,593	
Depreciation Expense	14,576	28,224	Same percentage of PP&E as last year
Other Operating Expenses	216,824	410,134	Given
Operating Profit	408,600	772,235	
Interest Expense	48,600	119,400	Same as prior year: 15% of ending bank loan balance
Income before Taxes	360,000	652,835	
Income Taxes	108,000	195,850	Same as prior year: 30% of Income before Taxes
Net Income	252,000	456,985	

Uffizi Company
Statement of Cash Flows
For the Year Ended December 31, 2011

Cash flows from operating activities:	
Net income	\$ 456,985
Adjustments:	
Depreciation	28,224
Increase in other current assets	(440,000)
Increase in accounts payable	<u>36,000</u>
Net cash provided by operating activities	\$ 81,209
Cash flows from investing activities:	
Purchase of property, plant, and equipment	<u>(440,224)</u>
Net cash used in investing activities	(440,224)
Cash flows from financing activities:	
Payment of dividends	\$ (32,985)
Borrowings on bank loans	<u>472,000</u>
Net cash used in financing activities	<u>(439,015)</u>
Net increase in cash and cash equivalents	\$ 80,000
Cash and cash equivalents, beginning of year	132,000
Cash and cash equivalents, end of year	<u><u>\$ 212,000</u></u>

Ratios:

$$\begin{aligned}\text{Cash Flow to Net Income} &= \text{Cash Flow from Operations/Net Income} \\ &= \$81,209/\$456,985 \\ &= 0.18\end{aligned}$$

$$\begin{aligned}\text{Cash Flow Adequacy} &= \text{Cash Flow from Operations}/(\text{Cash Paid for Capital Expenditures} \\ &\quad + \text{Cash Paid for Acquisitions}) \\ &= \$81,209/(\$440,224 + \$0) \\ &= 0.19\end{aligned}$$

If the first part of this problem was difficult for you, be sure to review the discussion under LO7 beginning on page 5-6.

Glossary

Note that Appendix C in the rear portion of the textbook contains a comprehensive glossary for all of the terms used in the textbook. That is the place to turn to if you need to look up a word but don't know which chapter(s) it appeared in. The glossary below is identical with one major exception: It contains only those terms used in Chapter 5. This abbreviated glossary can prove quite useful when reviewing a chapter, when studying for a quiz for a particular chapter, or when studying for an exam which covers only a few chapters including this one. Use it in those instances instead of wading through the 19 pages of comprehensive glossary in the textbook trying to pick out just those words that were used in this chapter.

articulation The three primary financial statements are not isolated lists of numbers but are an integrated set of reports on a company's financial health.

cash flow adequacy ratio Computed as cash from operations divided by expenditures for fixed asset additions and acquisitions of new businesses; indicates whether a business is a "cash cow."

cash flow-to-net income ratio Financial ratio used to analyze the cash flow relationship between cash from operations and reported net income; computed as cash from operations divided by net income.

cash times interest earned ratio A measure used to indicate a company's interest-paying ability; computed as pretax cash flow divided by cash paid for interest.

direct method An approach to calculating and reporting cash flow from operating activities that itemizes the major operating cash receipt and cash payment categories.

financing activities One of three major categories included in a statement of cash flows; includes transactions and events whereby cash is obtained from or repaid to owners and creditors.

indirect method An approach to calculating and reporting cash flow from operating activities that reconciles net income with operating cash flow; net income is adjusted for noncash revenues and expenses, for any gains or losses associated with investing financing activities, and for changes in current operating assets and liabilities that indicate noncash sources of revenues and expenses.

investing activities One of three major categories included in a statement of cash flows; primarily includes purchases and sales of noncurrent assets such as land, buildings, and nontrading financial instruments.

noncash investing and financing activities Investing and financing transactions that affect a company's financial position but not the cash flows during the period; an example is the purchase of land by issuing stock.

operating activities One of three major categories included in a statement of cash flows; includes transactions and events that normally enter into the determination of net income, including interest and taxes.

pro forma cash flow statement A forecast or projection of the amounts that will be in the cash flow statement in a future period.

statement of cash flows One of the three primary financial statements. The cash flow statement provides information about the cash receipts (inflows) and cash payments (outflows) of a company during a period of time. The statement is separated into cash flows from operating, investing, and financing activities.