chapter

13

Statement of Cash Flows

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OPENING COMMENTS

This chapter demonstrates that the statement of cash flows is necessary for a complete picture of a company’s financial condition. Both the direct and indirect methods of preparing a statement of cash flows are presented. Because the indirect method is the most commonly used method for reporting cash flows, it is the focus of the chapter. The direct method is covered in Appendix 2 of this chapter. If you choose to cover only the direct method, be aware that you will still need to refer students to the information on financing and investing activities in the chapter.

The chapter ends with a description and illustration of the value of evaluating a company’s free cash flow. The first appendix describes how to use an electronic spreadsheet to develop a statement of cash flows using the indirect method. The second appendix explains the direct method of preparing a statement of cash flows.

After studying the chapter, your students should be able to:

1. Describe the cash flow activities reported on the statement of cash flows.
2. Prepare the cash flows from operating activities section of the statement of cash flows using the indirect method.
3. Prepare the cash flows from investing activities section of the statement of cash flows.
4. Prepare the cash flows from financing activities section of the statement of cash flows.
5. Prepare a statement of cash flows.

ADM Describe and illustrate the use of free cash flow in evaluating a company’s cash flow.

KEY TERMS

cash flow per share

cash flows from financing activities

cash flows from investing activities

cash flows from operating activities

direct method

free cash flow

indirect method

statement of cash flows

STUDENT FAQS

* Why do most preparers of cash flow statements prefer the indirect method?
* I just don’t see a need for the cash flow statement. Who cares about the cash flow statement since it tells the reader only where the company’s money came from and where the company’s money was spent?
* Why does the cash flow statement have to equal the change in the cash account?
* Why does only the Operating section of the cash flow statement change when preparing the statement under the two different methods?
* If the cash flow statement is so important and helpful, why don’t we prepare all the financial statements on a cash basis?
* Why do we have to prepare a schedule of important noncash items to accompany this statement? After all, this is the statement that is based on the cash inflows and outflows.
* Why are there two methods to prepare the statement of cash flows?
* Why are gains and losses on disposals of assets treated as adjustments to the cash flows from operations but the cash part of the transaction is a source of funds under investing? Shouldn’t it all go under one section?
* Why can’t you assume that a company is financially healthy and liquid if it has a positive cash flow?

OBJECTIVE 1

Describe the cash flow activities reported in the statement of cash flows.

SYNOPSIS

The statement of cash flows reports a company’s cash inflows and outflows. It provides information that answers questions about how the company generates cash from operations, how it maintains or expands its operations, how it meets its financial obligations, and whether it has the cash to pay dividends. The cash flow statement is used by both external and internal users. The cash flow statement is divided into three sections: the operating activities are the cash flows from transactions that affect the net income of the company, the investing activities are the cash flows from transactions that affect investment in noncurrent assets, and the financing activities are the cash flows from transactions that affect the debt and equity of the company. The ending cash on the statement of the cash flows equals the cash reported on the balance sheet at the end of the year.

Cash flows from operating activities report the cash inflow and outflow from a company’s day-to-day operations. In the direct method, the primary operating inflows of cash are received from customers, and the primary outflows of cash are for merchandise, operating expenses, interest, and tax payments. The indirect method reports cash flows from operating activities beginning with net income and adjusting it for revenues and expenses that do not involve the receipt or payment of cash. Both methods result in the same net cash flow from activities; however, due to the accessibility of the information, the indirect method is more commonly used. A company may enter into transactions that do not directly affect cash; they are reported in a separate section at the bottom of the statement of cash flows. The statement of cash flows format is shown in Exhibit 3.

# *Key Terms and Definitions*

* **Cash Flow per Share** - Normally computed as cash flow from operations per share.
* **Cash Flows from Financing Activities** - The section of the statement of cash flows that reports cash flows from transactions affecting the equity and debt of the business.
* **Cash Flows from Investing Activities** - The section of the statement of cash flows that reports cash flows from transactions affecting investments in noncurrent assets.
* **Cash Flows from Operating Activities** - The section of the statement of cash flows that reports the cash transactions affecting the determination of net income.
* **Direct Method** - A method of reporting the cash flows from operating activities as the difference between the operating cash receipts and the operating cash payments.
* **Indirect Method** - A method of reporting the cash flows from operating activities as the net income from operations adjusted for all deferrals of past cash receipts and payments and all accruals of expected future cash receipts and payments.
* **Statement of Cash Flows** - A summary of the cash receipts and cash payments for a specific period of time, such as a month or a year.

*Relevant Check Up Corner and Exhibits*

* Exhibit 1 – Sources and Uses of Cash
* Exhibit 2 – Cash Flow from Operations: Direct and Indirect Methods—NetSolutions
* Exhibit 3 – Order of Reporting Statement of Cash Flows
* Check Up Corner 13-1 – Classifications of Cash Flows

SUGGESTED APPROACH

Provided below is a Writing Exercise to introduce the statement of cash flows. The exercise asks students to evaluate financial data from two companies. The goal is to point out that a firm’s profits do not paint a total picture of its operations; cash flow data is also needed. Follow the Writing Exercise [Transparency Master (TM) 13-1] by reviewing TM 13-2, which lists the benefits of a statement of cash flows. A Lecture Aid is also provided here for reviewing the content of each section of the cash flow statement.

WRITING EXERCISE—Importance of the Statement of Cash Flows

TM 13-1 presents financial information taken from the accounting records of two companies. These companies have the same net incomes but very different cash flows. Even though both companies have the same sales, Company B did not collect as much cash from its customers. In addition, Company B did not invest as much cash in fixed assets; this could inhibit future growth.

Show this data to your students and ask them to comment, in writing, on any strengths or weaknesses they see in the two companies. After giving them a few minutes to study the information and write their comments, review their responses.

**Possible response:** Company B has maintained its cash position by selling fixed assets, while Company A is investing in fixed assets. This would bring into question the ability of Company B to remain competitive with Company A for future production. Additionally, the inability to collect from customers would bring into question the credit decisions Company B has been making, possibly granting credit to questionable customers to maintain sales. Company A has also been able to invest some surplus cash to provide returns, from which Company B will not have the same benefits.

LECTURE AID—Statement of Cash Flows

TMs 13-3 and 13-4 list the three sections of the statement of cash flows and the transactions included in each section. TM 13-5 defines the content of the schedule of noncash investing and financing activities.

After reviewing these TMs, you may want to discuss the treatment of interest on debt and interest/dividends on investments in the statement of cash flows. These transactions can be called the “three foolers,” because students typically want to identify them as financing and investing activities instead of operating activities. Use TM 13-6 for this purpose.

Have students identify cash flows from operating, investing, and financing activities from their personal experiences. Some examples are listed below:

Operating activities: Cash inflows from a job, cash outflows for food or rent

Financing activities: Cash inflow from a student loan

Investing activities: Cash outflow for an automobile; cash inflow from selling a motorcycle

OBJECTIVE 2

Prepare the cash flows from operating activities section of the statement of cash flows using the indirect method.

SYNOPSIS

Using the indirect method of reporting cash flows for operating activities, a comparison is made between the account balances at the beginning and end of the year. By analyzing changes in noncash balance sheet accounts, changes in the cash account are determined indirectly. The equation, change in cash = change in liabilities + change in stockholders’ equity – noncash assets, shows how this method is used. To prepare the statement of cash flows, an income statement for the period is required and two balance sheets, one from the beginning of the period and one from the end of the period. Because net income is determined using the accrual method, it must be adjusted to determine cash flows from operating activities. Exhibit 5 shows the adjustments to net income for the direct method: expenses that do not affect cash are added, losses on the disposal of assets are added and gains are deducted, and finally changes in current assets and liabilities are added or deducted. Exhibit 6 demonstrates how the operating activities are calculated.

*Relevant Check Up Corner and Exhibits*

* Exhibit 4 – Income Statement and Comparative Balance Sheet
* Exhibit 5 – Adjustments to Net Income (Loss) Using the Indirect Method
* Exhibit 6 – Net Cash Flow From Operating Activities—Indirect Method
* Check Up Corner 13-2 – Cash Flows from Operating Activities

SUGGESTED APPROACH

Open your discussion of the indirect method with a basic outline of the reconciliation prepared in the Operating Activities section. TM 13-7 presents an overview of the reconciliation process. You will also want to illustrate this process by preparing a statement of cash flows as a demonstration problem.

LECTURE AID—Indirect Method

During your discussion of TM 13-7 (the reconciliation of net income to net cash flows from operating activities), stress the following points:

1. Noncash expenses must be added to remove these expenses from net income. They must be removed from net income because they did not cause cash to be paid out.

 Ask your students to identify examples of noncash items reported on the income statement and whether they would be added to or deducted from net income to determine cash flows from operating activities. Several examples are listed below.

 **Noncash Item** **Treatment**

 Depreciation Added to net income

 Amortization of bond discount Added to net income

 Amortization of bond premium Deducted from net income

 Amortization of patents Added to net income

 Depletion expense Added to net income

1. Any gains or losses on investing and financing activities affect the amount of cash that was received from selling investments or the amount of cash paid when settling debts. Because these activities are reported in the investing and financing sections of the statement of cash flows, the gain or loss included in the calculation of net income must be removed to isolate operating cash flows.

 For example, a building with a $50,000 book value is sold for $125,000—a $75,000 gain. The $75,000 gain must be removed from net income because it does not represent cash received from operations (buying and selling merchandise). The entire $125,000 cash proceeds from the building (which includes the gain) will be disclosed in the investing activities section. Remind students that losses are added and gains are subtracted to remove them from the net income.

1. Changes in current assets and current liability accounts related to operating activities must be considered to remove the effects of accrual accounting from net income and return to a cash-basis measure of operations. Emphasize that net cash flow from operating activities is different from net income because the income statement is based on the accrual basis of accounting. The statement of cash flows presents cash basis accounting.

DEMONSTRATION PROBLEM—Preparing a Statement of Cash Flows: Indirect Method

Because of the amount of data required to prepare a statement of cash flows, it is appropriate to use a problem from the text to demonstrate the preparation of the statement of cash flows. Use Problem 13-1A or 13-1B to demonstrate the indirect method.

Instruct your students to complete a couple of preparatory steps before attacking a cash flow problem. First, ask them to calculate the increase or decrease for every account on the balance sheet and write it in the margin of the text. When working through a demonstration problem, give them a few minutes of class time to complete this step on their own.

You may want to use the following algebraic proof to demonstrate why students need to calculate the amount by which each account on the balance sheet has increased or decreased:

 Assets = Liabilities + Stockholders’ Equity

 Cash + Noncash Assets = Liabilities + Stockholders’ Equity

 Change in Change in Change in Change in

 Cash + Noncash Assets = Liabilities + Stockholders’ Equity

or

 Change in Change in Change in Change in

 Cash = Liabilities + Stockholders’ Equity – Noncash Assets

If you can explain what caused your Noncash Assets, Liabilities, and Stockholders’ Equity account balances to change, you have explained what caused the Cash account balance to change.

The second preparatory step is to go through the balance sheet accounts and note where the change in each account balance will be reported (“O” for operating activities, “I” for investing activities, and “F” for financing activities). A few accounts, namely Retained Earnings and Accumulated Depreciation, must be considered when preparing two sections of the statement of cash flows.

You will probably want to lead students through this step, instructing them to place an O, I, or F by each account title in the example problem. The accounts in Problem 13-1A or 13-1B would be coded as follows:

 Cash (no code—this is the number we are trying to explain)

 Accounts Receivable—O

 Inventories—O

 Investments—I

 Land—I

 Equipment—I

 Accumulated Depreciation—O and I

 Accounts Payable—O

 Accrued Expenses—O

 Dividends Payable— F

 Common Stock—F

 Paid-in Capital—F

 Retained Earnings—O and F

Now your students are ready to attack the problem, beginning with the Operating Activities section. Students should be encouraged to use a “check-off” method in completing the statement of cash flows. The basics of the check-off method are as follows: When the total change in an account has been explained, check it off. After an account has been checked off, you don’t need to look at it again.

For example, the first step in the Operating Activities section is to show the amount of net income. This information is obtained from the income statement or, in accounting class, from the “additional information” accompanying the problem. Net income is closed to the retained earnings account. If a change in the account balance has not been fully explained, the account cannot be checked off. Students must look at retained earnings again when preparing the Financing Activities section.

The next step in the Operating Activities section is to add back any depreciation, amortization, or depletion. What account on the balance sheet would contain the depreciation for the year? (Answer: Accumulated Depreciation) However, that account is also affected by entries to remove fixed assets when sold or discarded. If there were no disposals of equipment, the only entry in the accumulated depreciation account would be the adjusting entry for the year’s depreciation expense. All changes in the account balance must be fully explained before all accounts can be checked off. Those are the basic steps in the check-off method.

At this time, instruct your students to review the additional information given with the problem to look for any gains and losses on investing and financing activities. Remind them that gains and losses occur only when assets are sold and liabilities settled.

Ask your students to answer the following questions: (1) If there had been a loss of $20,000 on the sale of investments, how would this be reported in the Operating Activities section of the statement of cash flows? (Answer: The loss would be added to net income.) (2) If fully depreciated equipment had been sold for $2,000, how would this be reported in the Operating Activities section of the statement of cash flows? (Answer: The $2,000 gain would be deducted from net income.)

Now it is time to look at the current assets and current liabilities related to operations. Instruct your students to go through the accounts coded with “O” and write down whether each account increased or decreased and by what amount. Then, ask your students to determine whether the change had a positive or negative effect on cash. Many students want to cling to text Exhibit 4 to assist with this task, so try to give them a logical approach to determine how account changes affect cash.

The suggested explanations are overly simplified and, therefore, not “totally” accurate. However, most of your students will find them useful. For example, if accounts receivable went up, did you sell more or less on credit? More. If you sold more on credit, did you sell more or less for cash? Less. If you sold less on cash, what was the effect on the Cash account? It decreased. Therefore, the change in accounts receivable is subtracted. Now, in reality, accounts receivable may have increased because customers are paying more slowly. Accounts receivable also may have increased simply because total sales increased without a corresponding increase in cash sales. When insightful students bring up these arguments, agree with them. Point out that the original explanation is useful because it is simple and tends to make sense to most students.

When accounts receivable decrease, your explanation is the inverse: The company sold less on credit, so it sold more for cash and the Cash account is increased. Explanations for changes in other accounts follow:

1. Increase in Inventory: The company bought more inventory, so it has to pay for more inventory. Cash is decreased.
2. Decrease in Inventory: The company bought less inventory, so it doesn’t have to pay for as much inventory. Cash is increased.
3. Increase in Prepaid Expense: The company has prepaid more expenses using its cash. Cash is decreased.
4. Decrease in Prepaid Expense: The company has prepaid fewer expenses, saving its cash. Cash is increased.
5. Increase in Accounts Payable: The company has bought more on credit, so it has bought less with cash. Cash is increased.
6. Decrease in Accounts Payable: The company has bought less on credit, so it is buying more with cash. Cash is decreased.

After all accounts marked “O” have been checked off, it is time to move on to the investing and financing accounts.

Objective 3

Prepare the cash flows from investing activities section of the statement of cash flows.

SYNOPSIS

Investing activities are cash inflows and outflows related to a company’s long-term assets. It includes investments in the company such as the purchase and sale of fixed assets. Investments can be made outside the company as well. For example, buying and selling equity and debt securities, loaning money to another company, and collecting principal payments from a company that borrowed money.

*Relevant Check Up Corner*

* Check Up Corner 13-3 – Cash Flows from Investing Activities

SUGGESTED APPROACH

Ask students for examples of long-term assets and how their value can be changed. Define effects of the changes as positive or negative on the company’s financial status.

LECTURE AID—Investing Activities

Use the Cash Flows from Investing Activities from TM 13-3 to categorize the assets as investments in yourself or others. Discuss the effect of depreciation on investments.

Objective 4

Prepare the cash flows from financing activities section of the statement of cash flows.

SYNOPSIS

Financing activities are cash inflows and outflows related to a company’s long-term liabilities and equities. It includes activities that obtain and repay funds used to finance a company’s operations.

*Relevant Check Up Corner*

* Check Up Corner 13-4 – Cash Flows from Financing Activities

SUGGESTED APPROACH

Ask students for examples of financing activities. Define the effects of the activities on the company’s financial status.

LECTURE AID—Financing Activities

Use the Cash Flows from Financing Activities from TM 13-4 to categorize the activities as equity financing or debt financing. Discuss the effect of the financing activities.

Objective 5

Prepare a statement of cash flows.

SYNOPSIS

In this section, the pieces come together in a complete statement of cash flows.

*Relevant Exhibit*

* Exhibit 7 – Statement of Cash Flows—Indirect Method

SUGGESTED APPROACH

Use Exhibit 7 to demonstrate the layout of a finished statement of cash flows.

**Optional discussion:** *International Financial Reporting Standards (IFRSs)*. The statement of cash flows is required under IFRSs and is similar to that required by GAAP. While there are differences, they are minor in nature. For more information, consult page 623 of the text.

ADM OBJECTIVE

Describe and illustrate the use of free cash flow in evaluating a company’s cash flow.

SYNOPSIS

Free cash flow measures the operating cash flow available to a company to use after purchasing the property, plant, and equipment necessary to maintain current productive capacity. It is also used to measure the financial strength of a company. Calculate free cash flow as: cash flow from operating activities – investments in PP&E needed to maintain current production = free cash flow. Positive free cash flow is considered favorable. The company will be able to fund growth, retire debt, pay dividends, and have financial flexibility.

*Key Term and Definition*

* **Free Cash Flow** - The amount of operating cash flow remaining after replacing current productive capacity and maintain current dividends.

# SUGGESTED APPROACH

After explaining the concept of free cash flow, use the Make a Decision activity to demonstrate the free cash flow calculation.

APPENDIX 1: spreadsheet (Work Sheet) for Statement of Cash Flows—the indirect method

SYNOPSIS

The appendix explains how to use a worksheet to create a statement of cash flows using the indirect method. Using Exhibit 8, follow the seven steps to create the worksheet that will display all the information needed to make a cash flow statement.

*Relevant Exhibit*

* Exhibit 8 – End-of-Period Spreadsheet (Work Sheet) for Statement of Cash Flows—Indirect Method

SUGGESTED APPROACH

A spreadsheet (work sheet) is a tool that can be used to gather data for preparing a statement of cash flows.

The spreadsheet also lends itself to an in-class demonstration. Choose one of the cash flow problems at the end of the text (such as Problem 13-1A or 13-1B), and ask your students to bring the working papers for that problem to class. The working papers include a cash flow spreadsheet. Demonstrate completion of that spreadsheet using the steps outlined in the chapter appendix.

Emphasize that entries recorded on a cash flow spreadsheet are not recorded as journal entries or posted to the ledger. These entries are made to analyze past transactions and provide data for preparing a statement of cash flows.

Appendix 2: PREPARING THE STATEMENT OF CASH FLOWS—tHE DIRECT METHOD

SYNOPSIS

Because the two methods are the same for the Investing and Financing sections, only the Operating Activities section is calculated differently. The direct operating section starts with cash received from customers. To determine this number, add the decrease in accounts receivable or subtract the increase in accounts receivable from sales. These steps are shown in Exhibit 9. Next, determine the cash paid for merchandise by subtracting or adding the differences in inventories and accounts payable from the cost of goods sold reported on the income statement; these steps are found in Exhibit 11. Determine the cash paid for operating expenses by subtracting or adding the differences in expenses payable from the operating expenses (other than depreciation) reported on the income statement; these steps are found in Exhibit 12. The format for the cash flows statement in the direct method is shown in its entirety in Exhibit 15.

*Relevant Exhibits*

* Exhibit 9 – Converting Income Statement to Cash Flows from Operating Activities Using the Direct Method
* Exhibit 10 – Determining the Cash Received from Customers
* Exhibit 11 – Determining the Cash Payments for Merchandise
* Exhibit 12 – Determining the Cash Payments for Operating Expenses
* Exhibit 13 – Determining the Cash Payments for Interest
* Exhibit 14 – Determining the Cash Payments for Income Taxes
* Exhibit 15 – Statement of Cash Flows—Direct Method

SUGGESTED APPROACH

The direct method of preparing a statement of cash flows is another topic that can be presented effectively through a Demonstration Problem. If you have already covered the indirect method, you need only to illustrate the Operating Activities section.

Prior to beginning the Demonstration Problem, stress that the Operating Activities section is the only portion of the statement of cash flows that varies between the direct and indirect methods. The direct and indirect methods will report the same amount of net cash flows from operating activities, but the information is presented in a different format.

When a company chooses to prepare the direct statement of cash flows, it must present the reconciliation of net income to net cash flows from operating activities (the heart of the indirect method) in a supporting schedule. Thus, preparing a direct statement of cash flows obligates a company to prepare the Operating Activities section under both methods. So, most companies use the indirect method.

DEMONSTRATION PROBLEM—Preparation of a Statement of Cash Flows: Direct Method

The direct method presents the major classes of cash receipts and payments from operating activities. To prepare a direct statement of cash flows, an income statement is needed in addition to comparative balance sheets. Problems 13-5A and 13-5B repeat the information presented in Problems 13-1A and 13-1B, plus give an income statement.

When completing a direct statement of cash flows, ask your students to complete the same preparatory steps discussed in Objective 2—computing changes in account balances and coding accounts with an O, I, or F (for operating, investing, or financing). The check-off method described previously is also appropriate when preparing a direct statement of cash flows.

TM 13-8 presents the major classes of cash receipts and payments that are typically identified in a direct statement. The TM also presents formulas for computing each cash flow item. In reality, the formulas on TM 13-8 are a shortcut approach. Students usually need a complete explanation of the calculations for cash received from customers and cash paid for purchases in order to understand these shortcuts.

Under the direct method, you must determine the cash collected from customers. The sales reported on the income statement do not represent cash collections for two reasons: (1) The sales figure includes credit sales that have not been collected and (2) the sales figure does not include collections on last year’s credit sales made during the current year. Therefore, sales must be adjusted. Again, discourage your students from trying to memorize rules on whether to add or subtract changes in accounts receivable. Give them a methodology to think through the changes.

The methodology presented under Objective 2 will also work in the direct method. The calculation could be explained as follows:

Accounts receivable increased, so the company is selling more on credit and selling less for cash. Therefore, the effect on cash receipts is negative.

Or:

Accounts receivable increased, indicating that credit sales on account were more than cash collections. Therefore, the increase must be subtracted from sales to get cash receipts.

Under the direct method, you must also determine the cash paid for purchases. Before you can determine cash paid for purchases, you must know the cost of merchandise purchased. The income statement in Problem 13-5A does not show the detailed calculation of cost of goods sold; therefore, the cost of merchandise purchased cannot be determined just by looking at the income statement. However, it can be determined as follows:

 Beginning Inventory

 + Cost of Merchandise Purchased

 – Ending Inventory

 Cost of Goods Sold

Therefore,

 Cost of Goods Sold

 – Beginning Inventory

 + Ending Inventory

 Cost of Merchandise Purchased

The cost of merchandise purchased must be adjusted to determine cash payments for purchase:

 Cost of merchandise purchased $ XXX

 – Credit purchases not yet paid for (ending balance of

 accounts payable) (XXX)

 + Payments on last year’s credit purchases (beginning balance

 of accounts payable) XXX

 $ XXX

Or (combining both of these calculations into one formula):

 Cost of goods sold $ XXX

 + Change in inventories XXX

 – Change in accounts payable (XXX)

 Cash payments for purchases $ XXX

Explain that the increase in inventories can be interpreted as increasing cash payments because more inventory was purchased. The increase in accounts payable can be interpreted as decreasing cash payments because the company made more purchases on account.

Continue with the problem, demonstrating the calculations of cash paid for operating expenses and cash paid for income taxes. When you have completed the Operating Activities section, remind students that the net cash flow is the same number as computed under the indirect method.



