Chapter 4

Statement of Cash Flows—Operating, Investing, and Financing Activities

Purpose of Cash Flow Statement

The purpose of a cash flow statement is to convert the income statement from an accrual basis to a cash basis. This conversion may be done using either of two methods:

- Indirect Method
- Direct method

We will focus only on the Indirect Method.

Why Focus on Cash?

Because investors, creditors, and other interested parties want to now what is happening to a company's most liquid asset, CASH.

Statement of Cash Flows

The Statement of Cash Flow helps to evaluate:

1. The entity's ability to generate future cash flows.
2. The entity's ability to pay dividends and meet obligations
3. The reasons for the difference between net income and net cash provided (used) by operating activities
4. The investing and financing transactions during the period.

Statement of Cash Flows

The Statement of Cash Flow can help answer the following questions:

- How did cash increase when there was a net loss for the period?
- Is cash flow greater or less than net income?
- How was the expansion in the plant and equipment financed?
- How was the the debt retired?
- How much money was borrowed during the year?
- What amount was paid in dividends?

The Statement of Cash Flows

The cash flow statement provides information about the company's

- cash receipts and cash payments
- the net change in cash resulting from:
  - operating,
  - investing, and
  - financing activities of a company during a period.

Sources of Information for the Statement of Cash Flows

Recall (see next slide) that the cash flow statement is a created statement that relies on information from the income statement and balance sheet. Notice wealth, financial value, and economic income don't affect the cash flow statement. Therefore, to prepare the cash flow statement, you need:

- Current income statement (only current year)
- Comparative balance sheet (2 years)
- Additional information

Framework for Understanding Accounting Information

Economic Concepts

Financial Values
Attach to individual assets, liabilities, revenues and expense items by the accounting process

Wealth
Measured by equity at a point in time

Economic Income
Change in wealth measured by net income

Financial Statements

Balance Sheet
Assets
Liabilities
Equity

Income Statement
Revenue
Expenses
Net Income

Cash Flow Statement
Operating cash flow
Investing cash flow
Financing cash flow
Significant non-cash

Format of the Statement of Cash Flows

Cash Flow Statement has Four Sections:

- operating
- investing
- financing
- significant non-cash investing and financing activities

Operating Activities

Operating activities – captures the effects operating transactions (i.e., normal revenues and expenses transactions) have on the company's cash flow.

Operating Activities

Income Statement Information Needed:

- Net income
- Depreciation and amortization (non-cash expenditures)
- Gain(loss) on sale of assets or investments

Balance Sheet Information Needed:

- Change in Current Assets
- Change in Current Liabilities

Examples of Cash Flows - Operating Activities

Cash inflows:

- From sale of goods or services
- From interest received and dividends received

Cash outflows:

- To suppliers for inventory
- To employees for services
- To government for taxes
- To lenders for interest
- To others for expenses

Investing Activities

Investing activities - captures a company's purchase and sale of assets and its use of cash to acquire a long-term investment position in another company and the sale of these investments.

Investing Activities

Income Statement Information Needed :

- Gain(Loss) of Assets

Balance Sheet Information Needed :

- Change in Long-Term Assets
  - Property Plant and Equipment
  - Long-Term Investments

Examples of Transactions That Affect Investing Activities

Cash inflows:

- From sale of property, plant, and equipment
- From sale of debt or equity securities of other entities
- From collection of principal on loans to other entities

Cash outflows:

- To purchase property, plant, and equipment
- To purchase debt or equity securities of other entities
- To make loans to other entities

Financing Activities

Financing activities - captures a company borrowing and repaying long-term loans and selling or buying back shares of its own stock. In addition, it reflects any dividends paid by the company.

Financing Activities

Income Statement Information Needed:

- None

Balance Sheet Information Needed:

- Change in Long-Term Liabilities
- Change in Stockholders' Equity

Retained Earnings Stmt Information:

- Dividends Paid

Examples of Transactions That Affect Financing Activities

Cash inflows:

- From issuance of equity securities (company's own stock)
- From issuance of debt (bonds and notes)

Cash outflows:

- To stockholders as dividends
- To redeem long-term debt or reacquire company's stock

Significant Non-Cash Activities

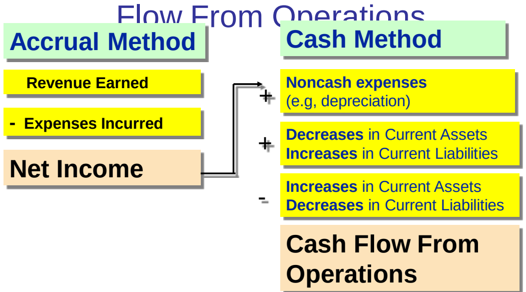
Transactions that do not affect cash are NOT reported in the body of the statement of cash flows. However, these items are reported:

- In a separate schedule at the bottom of the statement of cash flows or
- In a separate note or supplementary schedule to the financial statements.

Examples of Significant Non-Cash Activities

1. Issuance of common stock to purchase assets.
2. Conversion of bonds into common stock.
3. Issuance of debt to purchase assets.
4. Exchanges of plant assets.

Converting Net Income to Cash Flow From Operations



Steps in Preparing Cash Flow Statement

1. Determine the net Increase (decrease) in cash. **Note:** This will serve as the check figure.
2. Determine the cash provided (used) by operations.
3. Determine the cash provided (used) by investing.
4. Determine the cash provided (used) by financing.
5. Determine any significant noncash transactions that should be disclosed.

Determine Net Cash Provided (Used) By Operating Activities

1. Get net income from the income statement.
2. Add to net income for items that did not affect cash (i.e. depreciation and amortization).
3. Add (subtract) the changes in the current asset and current liability accounts. An increase (decrease) in current assets is a decrease (increase) in cash flow. Whereas, an increase (decrease) in current liabilities is an increase (decrease) in cash flow.

Cash Flow Statement

Let's Do An Example

Cash Flow Example

Assume that Rhody has a beginning cash balance of $20,000 and an ending cash balance of $244,000. In addition, for the year Rhody has net income of $200,000 and depreciation and amortization of $15,000. What impact does this information have on the cash flow statement?

Change in Cash Account

The $224,000 increase between the beginning cash balance of $20,000 and an ending cash balance of $244,000 indicates that Rhody's total cash flow for the year will increase by $224,000. The cash flow statement will show how this $224,000 increase was achieved. In essence, this will serve as a "check figure" to make sure the sum of cash flow from operations, investing, and financing reflects an increase of $224,000.

Depreciation and Amortization

The $15,000 of depreciation is a non-cash expense, so that amount must be added to net income. Remember, the goal is to go from net income (accrual basis) to "net income" on the cash basis. Therefore, we need to increase net income by $15,000, since we have "overstated" our cash expenses by the amount of depreciation.

Rhody Company
Statement of Cash Flows--Indirect Method
For the Year Ended December 31, 2004

Cash flows from operating activities	
Net income	$200,000
Depreciation & amortization	15,000
Net cash flow from operations	$215,000

Impact of Change in Accounts Receivable (Current Asset)

Assume that Rhody had sales of $385,000 and all of its sales are on credit. The beginning balance in accounts receivable was $42,000 and the ending balance is $55,000. What impact does this have on the cash flow statement?

Remember, the goal is to go from net income (accrual basis) to "net income" on the cash basis.

Analysis Via T–Account

ACCOUNTS RECEIVABLE		
1/1	42,000	
Sales	385,000	
Cash Collections		372,000
12/31	55,000	

Notice that the income statement reports $385,000 as sales. However, we only collected $372,000 of it in cash. Thus, we need to reduce net income by the increase in the accounts receivable.

Rhody Company
Statement of Cash Flows--Indirect Method
For the Year Ended December 31, 2004

Cash flows from operating activities	
Net income	$200,000
Depreciation & amortization	15,000
Increase in accounts receivable	(13,000)
Net cash flow from operations	$202,000

Impact of Change in Accounts Payable (Current Liability)

Assume that Rhody's operating expenses reported in the income statement were $185,000, of which $170,000 were expenditures requiring the future outlay of cash (i.e., other than depreciation). The beginning balance in accounts payable was $25,000 and the ending balance is $35,000. What impact does this have on the cash flow statement?

Remember, the goal is to go from net income (accrual basis) to "net income" on the cash basis.

Analysis Via T–Account

	ACCOUNTS PAYABLE	
1/1		25,000
Expenses Incurred		170,000
Cash Payments	160,000	
12/31		35,000

See explanation on next slide!

Impact of Change in Accounts Payable (Current Liability)

The income statement reports $185,000 of expenses. However, $15,000 of these expenses are for depreciation, which is a non-cash expense and would not be recorded as a payable (i.e., recall the credit is to accumulated depreciation). This leaves $170,000 of potential expenses to be paid for with cash. Since the payable account increased by $10,000, only $160,000 of these expenses were actually paid in cash. Thus, we need to increase net income by the increase in the accounts payable.

Rhody Company
Statement of Cash Flows--Indirect Method
For the Year Ended December 31, 2004

Cash flows from operating activities	
Net income	$200,000
Depreciation & amortization	15,000
Increase in Accounts receivable	(13,000)
Increase in Accounts payable	10,000
Net cash flow from operations	$212,000

Determine Net Cash Provided (Used) By Investing Activities

Add (subtract) the changes in the non-current asset accounts (i.e., property, plant, and equipment) . An increase (decrease) in property, plant, and equipment is a decrease (increase) in cash flow.

Impact of Change in PP&E (Non Current Asset)

Assume that Rhody acquired $40,000 of equipment and sold equipment with a book value (original cost minus accumulated depreciation) of $20,000 for $25,000. What impact does this have on the cash flow statement?

Remember, the goal is to go from net income (accrual basis) to “net income” on the cash basis.

Analysis of Impact

The purchase of equipment is a cash outflow and the sale of the equipment is a cash inflow. However, the sale of equipment also affects the accrual basis income statement, since the $5,000 gain ($25,000 sales price - $20,000 book value) on the sale is included in net income. Since we are creating a cash flow statement, the gain must be removed from net income (see operating activities section) and the cash flow from this transaction (e.g., $20,000) is reported in the investing activities section.

Rhody Company
Statement of Cash Flows--Indirect Method
For the Year Ended December 31, 2004

Cash flows from operating activities:	
Net income	$200,000
Depreciation & amortization	15,000
Increase in Accounts receivable	(13,000)
Increase in Accounts payable	10,000
Gain on sale of equipment	(5,000)
Net cash flow from operations	$207,000
Cash flows from investing activities:	
Sale of equipment	$ 25,000
Purchase of equipment	(40,000)
Net cash flow from investing	(15,000)

Determine Net Cash Provided (Used) By Financing Activities

Add (subtract) the changes in the non-current liabilities accounts (i.e.,long-term debt) and add (subtract) the changes the stockholders’ equity accounts. An increase (decrease) in long-term debt is an increase (decrease) in cash flow.

Impact of Change in Long-Term Debt (Non-Current Liability)

Assume that Rhody borrowed $40,000 from Explorer bank and paid $8,000 in dividends to its shareholders. What impact does this have on the cash flow statement?

Remember, the goal is to go from net income (accrual basis) to “net income” on the cash basis.

Analysis of Impact

The borrowing of money from the bank is a financing transaction that increases the amount of cash Rhody has available. Thus, this is a $40,000 increase in Rhody’s cash flow from financing. The payment of $8,000 in dividends is a financing transaction that reduces Rhody’s cash flow.

Rhody Company
Statement of Cash Flows--Indirect Method
For the Year Ended December 31, 2004

Net cash flow from operations		$207,000
Net cash flow from investing		(15,000)
Cash flows from financing activities:		
Cash from long-term borrowings	40,000	
Payment of dividends	(8,000)	
Net cash flow from financing		32,000
Net Increase (Decrease) in Cash		$224,000
Cash at beginning of period		20,000
Cash at end of period		$244,000

Let’s Do Another Cash Flow Example--Comparative Basis

Rhody Company
Comparative Balance Sheet With Change in Accounts
December 31, 2004

Assets	2004	2003	Change Increase/Decrease
Cash	$56,000	$34,000	$22,000 increase
Accounts Receivable	20,000	30,000	10,000 decrease
Prepaid Expenses	4,000	0	4,000 increase
Land	130,000	0	130000 increase
Building	160,000	0	160,000 increase
Accumulated depreciation-building	(11,000)	0	11,000 increase
Equipment	27,000	10,000	17,000 increase
Accumulated depreciation-equipment	(3,000)	0	3,000 increase
Total	$383,000	$74,000	

Rhody Company
Comparative Balance Sheet With Change in Accounts
December 31, 2004

Liabilities and Stockholders’ Equity	2004	2003	Change
Accounts payable	$59,000	$4,000	$55,000 increase
Bonds payable	130,000	0	130,000 increase
Common stock	50,000	50,000	No Change
Retained earnings	144,000	20,000	124,000 increase
Total	$383,000	$74,000	

Rhody Company
Income Statement
For the Year 1/1/04 through 12/31/04

Revenues		$507,000
Operating expenses		261,000
Depreciation expenses	15,000	
Loss on sale of equipment	3,000	279,000
Income from operations		228,000
Income tax expense		89,000
Net income		**$139,000**

Additional Information

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

Determine Net Cash Provided (Used) By Operating Activities

1. Get net income from the income statement.
2. Add to net income for items that did not affect cash (i.e. depreciation and amortization).
3. Add (subtract) any loss (gain) on sale of assets or investments.
4. Add (subtract) the changes in the current asset and current liability accounts. An increase (decrease) in current assets is a decrease (increase) in cash flow. Whereas, an increase (decrease) in current liabilities is an increase (decrease) in cash flow.

Rhody Company
Statement of Cash Flows--Indirect Method
For the Year Ended December 31, 2004

Cash flows from operating activities		
Net income		$139,000
Depreciation & amortization	15,000	
Loss on sale of equipment	3,000	
Decrease in Accounts receivable	10,000	
Increase in Prepaid expenses	(4,000)	
Increase in Accounts payable	55,000	79,000
Net cash flow from operations		$218,000

Analysis of Impact of Equipment Sale

The sale of the equipment is a cash inflow (shown later in the investing section). However, the $3,000 loss ($4,000 sales price - $7,000 book value) on the sale of equipment is shown in net income. Since we are creating a cash flow statement, the loss must be added back to net income.

Determine Net Cash Provided (Used) By Investing Activities

Study the balance sheet to determine changes in non-current assets.

Changes in each non-current account are analyzed using selected transaction data to determine the effect, if any, the changes had on cash.

Determine Net Cash Provided (Used) By Investing Activities

The land of $130,000 was purchased through the issuance of long-term bonds. Although the exchange of bonds payable for land has no effect on cash, it is a significant noncash investing and financing activity that must be disclosed.

Determine Net Cash Provided (Used) By Investing Activities

The increase in the building of $160,000 is a use of cash.

The equipment account increased by $17,000. The additional information provided reveals that this net increase resulted from two transactions:

- sale of equipment costing $8,000 for $4,000.
- a purchase of equipment for $25,000

The purchase of equipment should be shown as a $25,000 outflow of cash and the sale of equipment should be shown as a cash inflow of $4,000.

Analysis Via T–Account

	EQUIPMENT	
1/1	10,000	
Sale		$8,000
Purchase	25,000	
12/31	27,000	

Rhody Company
Statement of Cash Flows--Indirect Method
For the Year Ended December 31, 2004

Cash flows from operating activities:		
Net income		$139,000
Depreciation & amortization	15,000	
Loss on sale of equipment	3,000	
Decrease in Accounts receivable	10,000	
Increase in Prepaid expenses	(4,000)	
Increase in Accounts payable	55,000	79,000
Net cash flow from operations		$218,000
Cash flows from investing activities:		
Purchase of building	(160,000)	
Purchase of equipment	(25,000)	
Sale of equipment	4,000	
Net cash flow from investing		(181,000)

Determine Net Cash Provided (Used) By Financing Activities

Study the balance sheet to determine changes in non-current liabilities and stockholders' equity.

Changes in each non-current liability and stockholders' equity are analyzed using selected transaction data to determine the effect, if any, the changes had on cash.

Determine Net Cash Provided (Used) By Financing Activities

The net increase in Retained Earnings of $124,000 is a result of net income of $139,000 and the $15,000 payment of dividends that decreased Retained Earnings.

- Net income is the starting point of the cash flow statement and is presented in net cash provided by operations.
- Payment of the dividend is a cash outflow that is reported as a financing activity.

Rhody Company
Statement of Cash Flows--Indirect Method
For the Year Ended December 31, 2004

Net cash flow from operations		$218,000
Net cash flow from investing		(181,000)
Cash flows from Financing investing activities:		
Payment of dividends	$15,000	
Net cash flow from financing		(15,000)
Net Increase (Decrease) in Cash		$22,000
Cash at beginning of period		34,000
Cash at end of period		$56,000
Noncash investing and financing activities:		
Issuance of bonds payable to buy land		$130,000

A Company Life Cycle

A series of phases all companies experience. The phases are often referred to as the:

- – introductory phase
- – growth phase
- – maturity phase
- – decline phase.

The phase a company is in affects its cash flows.

Cash Flow

All companies go through business phases. The whole business might not go through each phase, but a segment of the business or a product line of the business will experience these phases.The phases are often referred to as the:

– introductory phase
– growth phase
– maturity phase
– decline phase.

The phase a company is in will affect its cash flows.

Introductory Phase

To support asset purchases, the company needs to issue stock or debt. Since the operations are just starting,

Expect:

– cash from operations to be negative
– cash from investing to be negative.
– cash from financing to be positive.

Growth Phase

The company is striving to expand its production and sales.

Expect:

– cash from operations to generate a small amount of cash
– cash from investing to be negative.
– cash from financing to be positive.

Growth Phase

The company's sales and production begin to level off. Thus, investing will consist of replacing some long-term assets and selling others.

Expect:

– cash from operations to be moderately positive.
– cash from investing to be neutral.
– cash from financing to be negative (paying back loans).

Decline Phase

The company's sales and production begin to decline. **Note:** This phase is not true of all companies, but will certainly affect a segment of a company.

Expect:

– cash from operations to be minimally positive.
– cash from investing to be neutral or negative.
– cash from financing to be negative (paying back loans).

Cash-Based Ratio Measures

☞Accrual-based measures allow too much management discretion.

☞One disadvantage to the cash-based measures is that no published industry averages are readily available for comparison.

Liquidity

Recall that liquidity is the ability of a business to meet its immediate obligations and that one measure of liquidity is the current ratio.

A disadvantage of the current ratio is that it uses year-end balances of current assets and current liabilities (may not be representative of a company's position during most of the year.)

Current Cash Debt Coverage Ratio

A ratio that partially corrects this is the current cash debt coverage ratio.

$$\frac{\text{Cash provided by operations}}{\text{Average current liabilities}}$$

Since cash from operations involves the entire year rather than a balance at one point in time, it is often considered a better representation of liquidity on the average day.

Solvency

Recall that solvency is the ability of a firm to survive over the long term. One measure of solvency is the debt to total assets ratio.

Solvency

A measure of solvency that uses cash figures Is the cash debt coverage ratio.

$$\frac{\text{Cash Provided By Operations}}{\text{Average Total Liabilities}}$$

This ratio measures a company's ability to repay its liabilities from cash generated from operations.