Statement of Cash Flows

Why is this topic important?

- Illustrates the difference between cash and accrual based accounting

- Separates the different aspects of managing a business

- Illustrates the link between the income statement and the balance sheet

Primary Elements:

- Cash Flows from Operating Activities
- Cash Flows from Investing Activities
- Cash Flows from Financing Activities
- Reconciliation of the net increase/decrease in cash
- Noncash investing and financing activities

Cash flows from operating activities can be shown using either the *Direct* or the *Indirect* method.

- The direct method lists how much cash is received from customers and how much is paid to suppliers, etc.
- The indirect method begins with net income and derives cash flow from operations by making adjustments to net income.

We will cover the direct method first and then cover the indirect method.

Example Illustration 22-1A

Income Statement

Revenues:	
Sales revenue	100
Investment revenue	3
Gain on Sale of land	8
Expenses:	
Cost of goods sold	60
Salaries expense	13
Depreciation expense	3
Bond interest expense	5
Insurance expense	7
Loss on sale of equipment	2
Income tax expense	9
Net income	12

Balance Sheet

Assets:	12/31/99	12/31/00
Cash	20	29
Accounts receivable	30	32
Short-term investments	0	12
Inventory	50	46
Prepaid insurance	6	3
Land	60	80
Buildings & Equip	75	81
Accum deprec.	(20)	(16)
Total Assets	221	267
Liabilities:		
Accounts payable	20	26
Salaries payable	1	3
Income tax payable	8	6
Notes payable	0	20
Bonds payable	50	35
Bond discount	(3)	(1)
Shareholders equity:		
Common Stock	100	130
Paid-in-capital	20	29
Retained earnings	25	19
Total	221	267

Direct Method:

Approach: Start with an income statement line item and find the balance sheet account most closely associated with that income statement item. We then combine them to infer the cash inflow/outflow.

For example, sales Revenue is $100. But, how much of that $100 was received in cash?

Notice that the ending sales revenue consists of a number of entries:

Dr. Cash	Dr. Accounts Receivable
Cr. Sales revenue	Cr. Sales revenue

Of course, we are not interested in the amount of credit sales. Instead, we need the amount of cash collected. This suggests that we need to examine the accounts receivable account.

Dr. Accts. Rec.	Dr. Cash	Dr. Allowance
Cr. Sales Rev.	Cr. Accts. Rec.	Cr. Accts Rec.

These entries correspond to credit sales, collections on credit sales and write-offs. If we assume that all sales are on credit and there were no write-offs, then we can compute the amount of cash collected.

More generally, if you start with sales revenue, you need to subtract the increase in accounts receivable (add the decrease in accounts receivable) to get to the cash received from customers.

The interpretation is that an increase in accounts receivable means that more amounts are due in the future, whereby a decrease in accounts receivable means that more cash has been collected.

We can do a similar exercise for Cost of Goods Sold. The entry to the account is:

Dr. Cost of Goods Sold
    Cr. Inventory

Therefore, the inventory account is a balance sheet account that we need to consider.

Dr. Inventory	Dr. Inventory	Dr. Cost of Goods sold
Cr. Cash	Cr. Accts. Payable	Cr. Inventory

We also need to consider accounts payable

Dr. Inventory	Dr. Accts payable
Cr. Accts. Payable	Cr. Cash

Therefore, we need to subtract an increase in inventory and add an increase in accounts payable.

You can continue to follow this procedure to systematically build a Statement of Cash Flows. Note that as a check, you want to make sure that you have accounted for all of the changes in the balance sheet accounts. Because the balance sheet must balance, the sum of the changes in the noncash accounts must be equal to the change in the cash account.

You also need to be sure to separately examine investing and financing activities.

We will finish this example by using a spreadsheet approach.

Operating Revenues and Expenses	
Sales revenue	(100)
Investment revenue	(3)
Cost of goods sold	60
Salaries expense	13
Bond interest expense	5
Insurance expense	7
Income tax expense	9
Operating Activities	
Cash from customers	100
Investment revenue	3
Pmts to suppliers	-60
Pmts to employees	-13
Interest payments	-5
Insurance pmts	-7
Tax payments	-9

	12/31/99		12/31/00
Cash	20		29
Accounts receivable	30	2	32
Short-term investments	0		12
Inventory	50	-4	46
Prepaid insurance	6	-3	3
Land	60		80
Buildings & Equip	75		81
Accum deprec.	-20		-16
Accounts payable	-20	-6	-26
Salaries payable	-1	-2	-3
Income tax payable	-8	2	-6
Notes payable	0		-20
Bonds payable	-50		-35
Bond discount	3	-2	1
Common Stock	-100		-130
Paid-in-capital	-20		-29
Retained earnings	-25		-19
Cash from customers	100	-2	98
Investment revenue	3	0	3
Pmts to suppliers	-60	4	-50
		6	
Pmts to employees	-13	2	-11
Interest payments	-5	2	-3
Insurance payments	-7	3	-4
Tax payments	-9	-2	-11
Cash flow from operations			22

Once we have completed the cash flows from operations, we can begin to analyze the company's investing and financing activities.

The investing transactions include:

Purchase of land	-30
Purchase of short-term investments	-12
Proceeds from the sale of land	18
Proceeds from the sale of equipment	5

The financing transactions include:

Proceeds from the sale of common shares	26
Retirement of bonds payable	-15
Payment of cash dividends	-5

If the firm had engaged in noncash investing and financing activities, they would be listed in a supplemental schedule. For example, if the company had issued a note payable in exchange for the land, only the cash payment would be shown in the body of the statement of cash flows. A separate reconciliation schedule would have to be show.

The company also needs to reconcile the net change in cash.

Example: E22-21

Assets	2000	1999
Cash	24	110
Accounts receivable	178	132
Prepaid insurance	7	3
Inventory	285	175
Buildings & Equip	400	350
Accum deprec.	-119	-240
	775	530
Liabilities		
Accounts payable	87	100
Accrued expenses	6	11
Notes payable	50	0
Bonds payable	160	0
Stockholders Equity		
Common Stock	400	400
Retained earnings	72	19
	775	530

Sales revenue	$2,000
Cost of goods sold	1,400
Depreciation expense	50
Operating expenses	447
Net Income	$103

- During 2000, $230 million of equipment was purchased to replace $180 million of equipment (95% depreciated) sold at book value
- In order to maintain the usual policy of paying cash dividends of $50 million, it was necessary to borrow $50 million.

Suggested Problems for Chapter 22

P22-2, P22-4, P22-5