CASH FLOW ANALYSIS

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Cash Flow Analysis

Cash flow statements can help a lender predict whether and why a business would seek a loan, and whether it has the capacity to repay debt.

- **The cash flow statement shows all of the cash resources available to a business and the flow of cash that results from the company's use of its cash resources during a given period, typically one year.**
- **Similar to the way the income statement identifies the flow of revenues and expenses, the cash flow statement shows the total cash resources employed from the balance sheet and the income statement, how these resources became available, and how efficiently they were used.**
- **To create a cash flow statement, information is drawn from income statement and balance sheet.**
- **When all of the transactions over the course of a year are totaled, the result will equal the change in cash and cash equivalents from the beginning to the end of the year.**

Profit vs. Cash Flow

Cash and only cash (not even the profit) can repay a loan.

- The cash flow statement uses cash basis accounting instead of accrual basis accounting. This is important because a company may accrue accounting revenues but may not actually receive the cash.
- Unlike reported earnings, cash flow allows little room for manipulation. Simply put, the cash flow statement records the company's cash transactions (the inflows and outflows) during the given period. It shows whether all those 'lovely ' revenues booked on the income statement have actually been collected.
- However, the cash flow does not necessarily show all the company's expenses: not all expenses the company accruals have to be paid right away. So even though the company may have incurred liabilities it must eventually pay, expenses are not recorded as a cash outflow until they are paid.

Why bankers focus on cash flow?

- Business bankers focus on cash flow statements for the following reasons:
  - To assess management decisions made over time
  - To evaluate the sources and uses of cash—where from and how used
  - To explain the disposition or use of profits
  - To evaluate the size, composition, and stability of operating cash flows
  - To determine how wisely and prudently the business manages its cash

Lenders, who know that cash (and only cash) repays loans, focus more on a company's ability to produce cash that is used to repay debt, invest in fixed assets, and support sales growth.

Concepts to remember

- Accrual accounting recognizes a sale when products or services are provided in exchange for cash or increases in accounts receivable, rather than as cash received only.
- Accrual accounting recognizes cash outlays for services with benefits anticipated in future periods as assets (prepaid expenses) on the balance sheet, rather than as expenses on the income statement.
- The income statement contains charges for expenses that do not incur any outlay of cash; these include depreciation, amortization, and provision for taxes.

Sources and Uses of Cash

- Example of transactions that supply and use cash
  - Buying inventory on credit is use of supplier's funds
  - Borrowing funds from bank
  - Selling new shares for cash
  - Increasing in retained earnings
  - Paying salary or wages reduces accrued salary or wages payable
  - Loan payment reduces account balance
  - Trade creditors are settled.
  - Share repurchased decreases equity

An increase in any liability or equity account represents a source of cash, and a decrease in any liability or equity account represents a use of cash.

Sources and Uses of Cash

- Example of transactions that supply and use cash
  - Selling on credit is allowing buyer to use seller's funds
  - Selling of unused furniture generates cash but reduces balance in the assets account.

An increase in assets, therefore, corresponds to a use of cash. A decrease in assets corresponds to a source of funds.

In summary, changes in asset, liability, and equity accounts have the following effects on cash:

Accounts	Sources of cash	Uses of cash
Assets	Decrease	Increase
Liabilities	Increase	Decrease
Equity	Increase	Decrease

Statement of Cash Flow

Cash From Operating Activities

Indirect Method, or

Direct Method

+ Cash from Investing Activities

+ Cash from Financing Activities

Cash from Operating Activities

Indirect Method

<u>Cash from operating activities</u>

Net Profit

Adjustment to reconcile net income to net cash

+Depreciation

Adjustment of changes in current assets and current liabilities

+ Accounts Receivable (Increase), Decrease

+ Inventory (Increase), Decrease

+ Accounts Payable Increase, (Decrease)

+ Accrued Expenses Increase, (Decrease)

+ Accrued Bonuses Increase, (Decrease)

Net Cash from Operating Activities

Cash from Operating Activities

Indirect Method- Example

<u>Cash from operating activities of Dry Supply in 2017</u>

Net Profit	23
Adjustment to reconcile net income to net cash	
+Depreciation	13
Adjustment of changes in current assets and current liabilities	
+Accounts Receivable (Increase), Decrease	1
+ Inventory (Increase), Decrease	5
+ Accounts Payable Increase, (Decrease)	(15)
+ Accrued Expenses Increase, (Decrease)	1
+ Accrued Bonuses Increase, (Decrease)	1
Net Cash from Operating Activities	29

Cash from Operating Activities

Direct Method

Items to consider

- **Cash received from customers**—The collection of accounts receivable and short- and long-term notes receivable from customers
- **Cash paid to suppliers**—Cash expenditures for acquiring materials and making payments to vendors, including net payments to accounts payable
- **Cash paid for operating expenses**—Cash expenditures for selling, general and administrative expenses, including net payments to prepaid assets and accrued expenses
- **Interest received**—Interest income earned on excess funds or other sources of investment
- **Interest paid**—Interest expense, shown on the income statement presentation
- **Income taxes paid**—Amounts expensed on the income statement as paid taxes and changes on the balance sheet in accrued and deferred taxes
- **Extraordinary items**—Items such as lawsuit settlements and insurance claims, which usually are one—time events and are not related to the operation of the business

Cash from Operating Activities

Direct Method

- **Cash received from customers—** This line is calculated as net sales plus or minus the change in accounts receivable.

Current year Net Sales

+ Previous year accounts receivable

− Current year accounts receivable

+ Accounts receivable (increase)

Decrease

= Cash received from customers

Cash from Operating Activities

Direct Method

Dry Supply 2017- cash received from customer

2017 net sales		918
+ 2016 accounts receivable	113	
− 2017 accounts receivable	112	
+ Accounts receivable (increase) decrease		1
= Cash received from customers		919

- A decrease in accounts receivable is a source of cash. The change from 2016 to 2017, therefore, is a positive number. If the accounts receivable had grown in 2017, the change would have been a use of cash and, therefore, a negative number. Total cash received from customers is calculated as net sales plus or minus the change in accounts receivable (Rs.918 + Rs.1= Rs.919).

Cash from Operating Activities

Direct Method

- **Cash paid to suppliers—**This line is calculated as cost of goods sold, plus or minus changes in inventory and accounts payable

Current year cost of goods sold

+ Previous year inventory

− Current year inventory

+ Inventory (increase) decrease

+ Current year accounts payable

− previous year accounts payable

+ Accounts payable increase (decrease)

= Cash paid to suppliers

Cash from Operating Activities

Direct Method

Dry Supply 2017- cash paid to suppliers

2017 cost of goods sold		**(631)**
+ 2016 inventory	72	
− 2017 inventory	67	
+ Inventory (increase) decrease		**5**
+ 2017 accounts payable	31	
− 2016 year accounts payable	46	
+ Accounts payable increase (decrease)		**(15)**
= Cash paid to suppliers		**(641)**

Because they are expenses from the income statement, cost of goods sold is always a negative number.The Rs.5,000 decrease in inventory is a source of cash and therefore a positive number. The Rs.15,000 decrease in accounts payable is a use of cash and a negative number.

Cash from Operating Activities

Direct Method

- **Cash paid for operating expenses—**This line is calculated as selling, general, and administrative expenses, plus or minus changes in prepaid expenses (asset account for items paid in advance, such as rent and insurance) and accrued expenses (liability account for items paid in arrears)

Current year selling, general and administrative expenses

+ Previous year prepaid expenses

− Current year prepaid expenses

+ Prepaid expenses (increase) decrease

+ Current year accrued expenses

− Previous year accrued expenses

+ Accrued expenses increase (decrease)

= Cash paid for operating expenses

Cash from Operating Activities

Direct Method

Dry Supply 2017- Cash paid for operating expenses

2017 selling, general and administrative expenses		(228)
+ 2016 prepaid expenses	0	
− 2017 prepaid expenses	0	
+ Prepaid expenses (increase) decrease		0
+ 2017 accrued expenses	12	
− 2016 accrued expenses	11	
+ Accrued expenses increase (decrease)		1
= Cash paid for operating expenses		(227)

Because they are expenses from the income statement selling, general and administrative expenses are always a negative number. The Rs.5,000 decrease in inventory is a source of cash and therefore a positive number. The Rs.15,000 decrease in accounts payable is a use of cash and a negative number. The Rs.1,000 increase in accrued expenses is a source of cash and positive number.

Cash from Operating Activities

Direct Method

- **Cash paid for interest, income taxes and extraordinary items**—This line is calculated using various income and expenses that have not already been used in our previous calculations

Current year interest received

Current year interest paid

– Current year income tax expense

+ Current year income taxes payable

− previous year income taxes payable

+ Income taxes payable increase (decrease)

+ Cash paid for income taxes

Extraordinary/Miscellaneous items

+ Current year rental income

= Cash paid for interest, income taxes and extraordinary items

Cash from Operating Activities

Direct Method

- **Dry Supply's Cash paid for interest, income taxes and extraordinary items in 2017**

Current year interest received		**2**	
Current year interest paid			**(11)**
– Current year income tax expense		**(17)**	
+ Current year income taxes payable	**7**		
− previous year income taxes payable	**6**		
+ Income taxes payable increase (decrease)		**1**	
+ Cash paid for income taxes			**(16)**
Extraordinary/Miscellaneous items			
+ Current year rental income			**3**
= Cash paid for interest, income taxes and extraordinary items			**(22)**

The Rs.2,000 in interest received, a positive number, represents interest income on excess or temporary cash during the year. The Rs.11,000 in interest expense, a negative number, is the interest paid during the year for loans. The Rs.16,000 cash paid for income taxes starts with the current year income tax expense of Rs.17,000 on the income statement (a use of cash) plus the change in the income taxes payable liability account of Rs.1,000 from 2016 to 2017. Because the account increased, the change is a source of cash, for taxes paid of Rs.16,000 as a use of cash. The rental income of Rs.3,000, a positive number, is from the income statement and is the only extraordinary or miscellaneous item.

Cash from Operating Activities

Direct Method

Dry Supply's cash flow from operating activities:

Cash received from customers	919
Cash paid to suppliers	(641)
Cash paid for operating expenses	(227)
Cash paid for interest, income taxes and extraordinary items	(22)
Net cash provided by operating activities	29

Cash from Operating Activities- Compared

Indirect method		Direct Method	
Cash Flow from Operating Activities		*Cash Flow from Operating Activities*	
Net income	23	Cash received from customers	919
Depreciation	13	Cash paid to suppliers	(641)
Accts receivable. (incr.) decr.	1	Cash paid for op. expenses	(227)
Inventory (increase) decrease	5	Cash paid for interest, income tax and extraordinary items	(22)
Accts payable incr. (decr.)	(15)	Net cash provided by operating activities	29
Income tax payable incr. (decr.)	1		
Accrued bonuses incr. (decr.)	1		
Net cash from by operating activities	29		

Cash from Investing Activities

Most of the cash flows from investing activities are related to the following capital expenditures:

- **Proceeds from sale of equipment—The amount of cash received from selling equipment the business no longer needs, for example, vehicles and other equipment used in the operation of the business**
- **Payment received on note for sale of plant—The amount of cash received from selling land and buildings**
- **Capital expenditures—The amount of cash used to purchase equipment, vehicles, fixtures, land, buildings, and leasehold improvements**

Cash from Investing Activities

Dry Supply's cash flows from investing activities -2017

+Proceeds from Sale of Equipment	**0**
+Proceeds Received from Sale of Plant	**0**
-Cash value Life Insurance decrease (increase)	**(2)**
-Capital Expenditure	**(17)**
Net Cash from investing Activities	**(19)**

Calculation of Capital Expenditure:

2016 net fixed assets	49
2017 net fixed assets	53
Net fixed assets (increase) decrease	(4)
Depreciation expense	(13)
Capital expenditure	**(17)**

Dry Supply had no sales of equipment in 2017. Payment received on note for sale of plant would be indicated as reductions on notes receivable. Dry Supply had no payments on note from sale of plant during 2017. The investing section of the SCF also captures changes in other non-current assets, such as cash value life insurance, which increased by Rs. 2,000 in 2017. The capital expenditure purchases are calculated using the change in net fixed assets plus depreciation expense.

Cash from Investing Activities

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Cash from Financing Activities

The **cash flows from financing activities** includes debt or equity activities directly related to the external financing activities of the business. For example, an increase in a company's common stock and paid-in capital accounts is a positive sign because it generally lowers the company's financial leverage, which may reduce the risk to the lender. Retaining profits is the primary source of equity growth and cash flow to repay debt. Cash flows from financing activities relate to the following instances of bank debt, leases, and equity:

- **Proceeds from sale of stock—Proceeds received from the sale of common or preferred stock**
- **Proceeds from notes payable short-term debt—The amount of new or repaid short-term bank debt**
- **Proceeds from long-term debt—The net amount of new long-term debt**
- **Repayment of debt—The current maturities of long-term debt from the previous year plus any other payments on long-term debt**
- **Payments under capital lease obligations—Payments on capitalized leases and usually disclosed in the footnotes in reviewed and audited financial statements**
- **Dividends paid—The amount of distributions to owners and dividends**

Cash from Financing Activities

Dry Supply's cash from Financing Activities

Proceeds from sale of stock	0
Proceeds from short-term debt	(9)
Proceeds from subordinated debt	9
Repayment of debt	0
Payment under capital lease obligation	0
Dividend paid	0
Net cash from Financing activities	**0**

Because the debt was reduced in 2017, the amount of change in short-term bank debt is a negative number. Dry Supply, which has no long-term debt, does have subordinated long-term debt. Because the owners loaned the company more money, the net change of Rs.9,000 is a positive number.

Calculations:

2017 short term debt	59
-2016 short term debt	68
Short term debt increase (decrease)	**(9)**
2017 subordinated debt	67
-2016 subordinated debt	58
Subordinated debt increase (decrease)	**9**
2016 retained earnings	69
+2017 net profit (loss)	23
-2017 retained earnings	92
- **Dividend paid**	**0**

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[Case Study 1 on Cash Flow.docx]

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