

Class: BSc

Subject : Financial Modelling

Chapter Name: Balance sheet and cash flow statement

Today's Agenda

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 1. Why is it important?
 2. Components of a Balance sheet
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 2. Non current liabilities
 3. Equity
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2. Cash flow statement
 1. Components of Cash flow statement
 2. Non cash, investing and financing
 3. Cash flow statement and balance sheet
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1 What is a Balance sheet forecast?

- A balance sheet forecast is a projection of assets, liabilities, and equity at a future point in time. It is used to approximate what a business anticipates on owning in the future and also what it expects to owe.
- The balance sheet forecast is an attempt to predict what the financial position of a business will be in the future under a given set of circumstances.
- A balance sheet forecast is one component in a three-statement financial model. The other two components are income statement forecast and cash flow forecast.

1.1 Why is a Balance sheet forecast important?

- The primary reason for creating forecasts is to understand how decisions made in the present will impact the organization in the future.
- Financial forecasts are used as a sort of roadmap that helps leaders navigate the uncertainty of their particular environments. These forecasts are used to develop strategies that are deployed in an attempt to respond to expected market conditions and business drivers.
- The balance sheet forecast is an important accounting tool that can be used to estimate the impact of income statement line items and cash flow expectations on the future financial position of the business.
- Balance sheet forecasting is also used to estimate the impact of merging and acquiring new businesses.

1.2 Components of Balance sheet

A balance sheet typically includes the following items:

1. Assets

- Current assets : Current assets include cash, cash equivalents, accounts receivable, stock inventory, marketable securities, pre-paid liabilities, and other liquid assets.
- Non-current assets :Non-current assets are assets and property owned by a business that are not easily converted to cash within a year.

1. Liabilities

- Current liabilities : Current liabilities include accounts payable, short term borrowings, short term proportion of long term borrowing and other short term liabilities
- Non-current liabilities :Noncurrent liabilities include debentures, long-term loans, bonds payable, deferred tax liabilities, long-term lease obligations, and pension benefit obligations.

1. Equity

- Common stock
- Preferred stock
- Retained earnings

1.2.1 Current liabilities (less than 12 months)

Under current liabilities are categorized all obligations that the firm has coming due in the next year. These generally include:

- **Accounts payable**, representing credit received from suppliers and other vendors to the firm. The value of accounts payable represents the amounts due to these creditors.
- **Short-term borrowing**, representing short-term loans (due in less than a year) taken to finance the operations or current asset needs of the business.
- **Short-term portion of long-term borrowing**, representing the portion of the long-term debt or bonds that is coming due in the next year.
- **Other current liabilities**, any other short-term liabilities that the firm might have, including wages due to its employees and taxes due to the government, etc.

1.2.2 Non - Current liabilities (more than 12 months)

Long term debt

Long-term debt for firms can take one of two forms. It can be a long-term loan from a bank or other financial institution, or it can be a long-term bond issued to financial markets, in which case the creditors are the investors in the bond. Such debt is taken generally to fund capital expenditure in the coming years.

Other Long-Term Liabilities

Firms often have long-term obligations that are not captured in the long-term debt item. These include obligations to lessors on assets that firms have leased, to employees in the form of pension fund and health care benefits yet to be paid, and to the government in the form of taxes deferred.

1.2.3 Equity

Preferred stock

When a company issues preferred stock, it generally creates an obligation to pay a fixed dividend on the stock. Accounting rules have conventionally not viewed preferred stock as debt because the failure to meet preferred dividends does not result in bankruptcy. At the same time, the fact the preferred dividends are cumulative makes them more onerous than common equity. Thus, preferred stock is a hybrid security, sharing some characteristics with equity and some with debt.

Preferred stock is valued on the balance sheet at its original issue price, with any cumulated unpaid dividends added on. Convertible preferred stock is treated similarly, but it is treated as equity on conversion.

Equity

The value of equity shown on the balance sheet reflects the original proceeds received by the firm when it issued the equity, augmented by any earnings made since (or reduced by losses, if any) and reduced by any dividends paid out during the period.

1.2.4 **Current Assets (less than 12 months)**

Accounts Receivable

Accounts receivable represent money owed by entities to the firm on the sale of products on credit. When the Home Depot sells products to building contractors and gives them a few weeks to make their payments, it is creating accounts receivable. The only major valuation and accounting issue is when the firm has to recognize accounts receivable that are not collectible. Firms can set aside a portion of their income to cover expected bad debts from credit sales, and accounts receivable will be reduced by this reserve.

Cash

The value of a cash balance should not be open to estimation error. Having said this, we note that fewer and fewer companies actually hold cash in the conventional sense (as currency or as demand deposits in banks). Firms often invest the cash in interest-bearing accounts, commercial paper or in Treasuries so as to earn a return on their investments.

Other Current Assets

Other assets that don't fall in the above category, like prepaid expenses, advance tax expenses, advances to customers, etc.

1.2.4 Current Assets (less than 12 months)

Inventory

The term inventory refers to the raw materials used in production as well as the goods produced that are available for sale. There are three types of inventory, including raw materials, work-in-progress, and finished goods.

1. First in, first out (FIFO).

Under FIFO, the cost of goods sold is based on the cost of material bought earliest in the period, while the cost of inventory is based on the cost of material bought, later in the year. This results in inventory being valued close to current replacement cost.

2. Last in, first out (LIFO).

Under LIFO, the cost of goods sold is based on the cost of material bought toward the end of the period, resulting in costs that closely approximate current costs. The inventory, however, is valued on the basis of the cost of materials bought earlier in the year.

3. Weighted average.

Under the weighted average approach, both inventory and the cost of goods sold are based on the average cost of all material bought during the period.

1.2.5 Non Current Assets (more than 12 months)

Investments (Financial) and Marketable Securities

In the category of investments and marketable securities, accountants consider investments made by firms in the securities or assets of other firms, as well as other marketable securities, including Treasury bills or bonds. The way in which these assets are valued depends on the way the investment is categorized and the motive behind the investment. In general, an investment in the securities of another firm can be categorized as a minority passive investment (<20% stake), a minority active investment (20–50% stake), or a majority active investment (>50%), and the accounting rules vary depending on the categorization.

Intangible Assets

Intangible assets include a wide array of assets, ranging from patents and trademarks to goodwill. The accounting standards vary across intangible assets. Patents and trademarks are valued differently depending on whether they are generated internally or are acquired.

Goodwill

Goodwill is the by-product of acquisitions. When a firm acquires another firm, the purchase price is first allocated to tangible assets, and the excess price is then allocated to any intangible assets such as patents or trade names. Any residual becomes goodwill.

1.2.5 Non Current Assets

Fixed Assets

Fixed assets include land and building, plant and machinery, vehicles, computers, furniture and fixtures, etc. Companies add more to their fixed assets for future growth.

The valuation of fixed assets at historical cost, adjusted for any estimated loss in value from the aging of these assets. While in theory the adjustments for aging should reflect the loss of earning power of the asset as it ages, in practice they are much more a product of accounting rules and convention, and these adjustments are called depreciation. Depreciation methods can very broadly be categorized into straight line method (where the loss in asset value is assumed to be the same every year over its lifetime) and accelerated depreciation (where the asset loses more value in the earlier years and less in the later years). While tax rules and companies act command different depreciation methods, the depreciation that is reported in the annual reports may not be, and generally is not, the same depreciation that is used in the tax statements. Since fixed assets are valued at book value and are adjusted for depreciation provisions, the value of a fixed asset is strongly influenced by both its depreciable life and the depreciation method used.

2 Cash flow statement

The cash flow statement provides information beyond that available from the income statement, which is based on accrual, rather than cash accounting.

The cash flow statement provides the following:

- Information about a company's cash receipts and cash payments during an accounting period.
- Information about a company's operating, investing, and financing activities.
- An understanding of the impact of accrual accounting events on cash flows.

The cash flow statement provides information to assess the firm's liquidity, solvency, and financial flexibility. An analyst can use the statement of cash flows to determine whether:

- Regular operations generate enough cash to sustain the business.
- Enough cash is generated to pay off existing debts as they mature.
- The firm is likely to need additional financing.
- Unexpected obligations can be met.
- The firm can take advantage of new business opportunities as they arise.

2.1 Components of Cash flow statement

Items on the cash flow statement come from two sources:

- (1) income statement items and
- (2) changes in balance sheet accounts.

A firm's cash receipts and payments are classified on the cash flow statement as either operating, investing, or financing activities.

Cash flow from operating activities (CFO), sometimes referred to as “cash flow from operations” or “operating cash flow,” consists of the inflows and outflows of cash resulting from transactions that affect a firm's net income.

Cash flow from investing activities (CFI) consists of the inflows and outflows of cash resulting from the acquisition or disposal of long-term assets and certain investments.

Cash flow from financing activities (CFF) consists of the inflows and outflows of cash resulting from transactions affecting a firm's capital structure.

2.2 Non-cash, Investing and Financing activities

Non-cash investing and financing activities are not reported in the cash flow statement since they do not result in inflows or outflows of cash.

For example, depreciation and amortizations are non-cash transactions that appear in P/L and impact Net Income, but has no cash outflow. Similarly, bad debt provisions.

Another example of a non-cash transaction is an exchange of debt for equity. Such an exchange results in a reduction of debt and an increase in equity. However, since no cash is involved in the transaction, it is not reported as a financing activity in the cash flow statement.

2.3 Cash flow statement and Balance sheet

The cash flow statement reconciles the beginning and ending balances of cash over an accounting period. The change in cash is a result of the firm's operating, investing, and financing activities as follows:

$$\begin{aligned} & \text{Operating cash flow} \\ & + \text{Investing cash flow} \\ & + \text{Financing cash flow} \\ & = \text{Change in cash balance} \end{aligned}$$

$$\begin{aligned} & + \text{Beginning cash balance} \\ & = \text{Ending cash balance} \end{aligned}$$

With a few exceptions, operating activities relate to the firm's current assets and current liabilities. Investing activities typically relate to the firm's non-current assets, and financing activities typically relate to the firm's non-current liabilities and equity.

Transactions for which the timing of revenue or expense recognition differs from the receipt or payment of cash are reflected in changes in balance sheet accounts. For example, when revenues (sales) exceed cash collections, the firm has sold items on credit and accounts receivable (an asset) increase.

2.3 Cash flow statement and Balance sheet

The opposite occurs when customers repay more on their outstanding accounts than the firm extends in new credit: cash collections exceed revenues and accounts receivable decrease. When purchases from suppliers exceed cash payments, accounts payable (a liability) increase. When cash payments exceed purchases, payables decrease.

It is helpful to understand how transactions affect each balance sheet account. For example, accounts receivable are increased by sales and decreased by cash collections. We can summarize this relationship as follows:

$$\begin{aligned} & \textit{Beginning accounts receivable} \\ & \quad + \textit{Sales} \\ & \quad - \textit{Cash collections} \\ & = \textit{Ending accounts receivable} \end{aligned}$$

Understanding these interrelationships is not only useful in preparing the cash flow statement, but is also helpful in uncovering accounting shenanigans.

2.4 Major sources and uses of cash

Cash flow analysis begins with an evaluation of the firm's sources and uses of cash from operating, investing, and financing activities as the firm moves through its life cycle. For example, when a firm is in the early stages of growth, it may experience negative operating cash flow as it uses cash to finance increases in inventory and receivables. This negative operating cash flow is usually financed externally by issuing debt or equity securities. Eventually, the firm must begin generating positive operating cash flow or the sources of external capital may no longer be available. Over the long term, successful firms must be able to generate operating cash flows that exceed capital expenditures and provide a return to debt and equity holders.

1. Operating cash flow

An analyst should identify the major determinants of operating cash flow. Positive operating cash flow can be generated by the firm's earnings-related activities. However, positive operating cash flow can also be generated by decreasing working capital. Decreasing working capital is not sustainable, since inventories and receivables cannot fall below zero and creditors will not extend credit indefinitely unless payments are made when due. Operating cash flow also provides a check of the quality of a firm's earnings. A stable relationship of operating cash flow and net income is an indication of quality earnings.

2.4 Major sources and uses of cash

2. Investing Cash Flow

The sources and uses of cash from investing activities should be examined. Increasing capital expenditures, a use of cash, is usually an indication of growth. Conversely, a firm may reduce capital expenditures or even sell capital assets in order to save or generate cash. This may result in higher cash outflows in the future as older assets are replaced or growth resumes. Companies might also undertake buying or selling of long-term investments.

3. Financing Cash Flow

The financing activities section of the cash flow statement reveals information about whether the firm is generating cash flow by issuing debt or equity. It also provides information about whether the firm is using cash to repay debt, reacquire stock, or pay dividends.

2.4 Major sources and uses of cash

Like the income statement and balance sheet, common-size analysis can be used to analyze the cash flow statement. The cash flow statement can be converted to common-size format by expressing each line item as a percentage of revenue.

Alternatively, each inflow of cash can be expressed as a percentage of total cash inflows, and each outflow of cash can be expressed as a percentage of total cash outflows. A revenue based common-size cash flow statement is useful in identifying trends and forecasting future cash flow. Since each line item of the cash flow statement is stated in terms of revenue, once future revenue is forecast, cash flows can be estimated for those items that are tied to revenue.

3

Statement of Profit or Loss

Gross Profit = Revenue from operations – COGS
(where COGS is Opening Stock + Purchases – Closing Stock + Labor costs + manufacturing costs)

Ebitda (Earnings before Interest, Tax, Depreciation, and Amortization) = Gross Profit – Employee costs – other expenses)

PAT (Profit after tax) – Ebitda – Interest Cost – Depreciation – Tax

Statement of Profit and Loss for the year ended 31st March, 2023

(₹ in Lakhs)

Particulars	Note No.	Year ended 31st March, 2023	Year ended 31st March, 2022
Income			
I. Revenue from operations	25	48,675.52	35,495.67
II. Other income	26	348.09	287.86
III. Total Income (I + II)		49,023.61	35,783.53
IV. Expenses			
Cost of materials consumed	27	13,314.22	12,041.88
Purchases of Stock-in-Trade	28	17,630.98	11,796.08
Change in inventories of Finished goods, Work-in-Progress and Stock-in-Trade	29	(1,485.69)	(89.69)
Employee benefits expense	30	6,072.94	3,924.77
Finance costs	31	63.58	73.29
Depreciation and amortization expense	32 (a)	1,411.44	1,282.11
Other expenses	32 (b)	7,007.22	5,669.82
Total expenses		44,014.69	34,698.26
V. Profit /(Loss) before exceptional items and tax (III - IV)		5,008.92	1,085.27
VI. Exceptional items		-	-
VII. Profit/ (Loss) before tax (V - VI)		5,008.92	1,085.27
VIII. Tax expense:	39		
a) Current tax		1,308.00	311.00
b) Income tax for earlier years		-	0.60
c) Deferred tax		(38.76)	(39.64)
Total Tax expenses:		1,269.24	271.96
IX. Profit /(Loss) for the year (VII-VIII)		3,739.68	813.31
X. Other Comprehensive Income			
A) Items that will not be reclassified to profit or loss			
(i) Re-Measurement gains/(losses) on defined benefit plans		(46.95)	1.91
(ii) Income Tax on above		11.82	(0.48)
		(35.13)	1.43
B) Items that will be reclassified to profit or loss		-	-
Total Other Comprehensive Income of the year		(35.13)	1.43
XI. Total Comprehensive Income of the year (IX + X)		3,704.55	814.74
XII. Earnings per equity share - Basic and diluted (₹)	43	25.15	5.47
(Face value ₹10/- per equity share)			
Significant Accounting Policies and Key Estimates and Judgements	1		

3 Balance sheet

Balance Sheet as at 31st March, 2023

(₹ in Lakhs)

Particulars	Note No.	As at 31st March, 2023	As at 31st March, 2022
1. Non-Current Assets			
a) Property, plant and equipment	2	8,709.39	8,052.70
b) Capital Work - in - progress	3	98.13	23.98
c) Right-of-Use Assets	4	91.28	35.61
d) Intangible Assets	5	138.80	3.46
e) Intangible Assets Under Development	6	-	98.80
f) Financial Assets			
i) Other Financial Assets	7	115.09	121.09
g) Income Tax Assets (Net)	8 (a)	138.37	121.90
h) Other Non - Current Assets	9	499.62	333.67
Total Non-Current Assets		9,790.68	8,791.21
2. Current Assets			
a) Inventories	10	7,894.75	6,460.64
b) Financial Assets			
i) Trade Receivables	11	3,864.17	3,413.48
ii) Cash & Cash Equivalents	12	759.96	9.17
iii) Bank Balances other than (ii) above	13	480.53	10.45
iv) Other Financial Assets	14	37.97	11.92
c) Other Current Assets	15	917.71	1,464.81
Total Current Assets		13,955.09	11,370.47
Total Assets (1+2)		23,745.77	20,161.68
Equity			
a) Equity Share Capital	16	1,487.23	1,487.23
Total Equity		1,487.23	1,487.23
Liabilities			
1. Non-Current Liabilities			
a) Financial Liabilities			
i) Lease Liabilities	44	25.63	12.99
b) Provisions	18	248.06	193.16
Total Non-Current Liabilities		273.69	206.15
2. Current Liabilities			
a) Financial Liabilities			
i) Borrowings	20	-	299.03
ii) Lease Liabilities	44	71.41	33.98
iii) Trade Payables	21		
Total outstanding dues of micro enterprises and small enterprises		215.28	274.18
Total outstanding dues of creditors other than micro enterprises and small enterprises		3,720.46	3,749.76
iv) Other Financial Liabilities	22	527.32	394.87
b) Other Current Liabilities	23	879.84	560.80
c) Provisions	24	5.49	4.53
d) Income Tax Liabilities (Net)	8 (b)	27.64	-
Total Current Liabilities		5,447.44	5,317.15
Total Liabilities (1+2)		8,023.49	5,876.25
TOTAL EQUITY AND LIABILITIES		23,745.77	20,161.68
Significant Accounting Policies and Key Estimates and Judgements	1		

3

Statement of Cash flows

Statement of Cash Flows for the year ended 31st March, 2023

(₹ in Lakhs)

Particulars	For the year ended 31st March, 2023		For the year ended 31st March, 2022	
A. Cash flow from operating activities :				
Net profit/(Loss) before tax as per Statement of Profit and Loss		5,008.92		1,085.27
Adjustments for:				
Depreciation and amortization expense	1,411.44		1,282.11	
Bad Debts Written off	41.66		-	
(Profit) / Loss on sale of Property, Plant and Equipment	31.48		25.47	
Interest Income	(58.82)		(2.95)	
Unrealised loss/(gain) on foreign exchange fluctuation (Net)	(57.44)		(69.26)	
Liability no longer required, written back	-		(41.75)	
Provision for expected credit loss	7.41		61.32	
Finance cost	63.58		73.29	
Gain on Modification of Right of use assets	(11.36)	1,427.95	-	1,328.23
Operating profit before working capital changes		6,436.87		2,413.50
(Increase) / Decrease in Trade Receivables	(348.80)		141.63	
(Increase) / Decrease in Inventories	(1,434.11)		(199.36)	
(Increase) / Decrease in Other Non Current Assets	(28.21)		(2.63)	
(Increase) / Decrease in Other Financial Assets	(20.11)		(6.74)	
(Increase) / Decrease in Other Current Assets	574.59		(19.40)	
Increase / (Decrease) in Long Term Provisions	90.03		(49.54)	
Increase / (Decrease) in Trade Payables	(77.80)		260.41	
Increase / (Decrease) in Other Current Liabilities	319.05		(62.84)	
Increase / (Decrease) in Other Financial Liabilities	134.37		(145.55)	
Increase / (Decrease) in Short Term Provisions	0.96	(790.03)	(4.97)	(88.99)
Cash generated from operations		5,646.84		2,324.51
Less: Direct taxes paid/ (Refund)		1,309.20		280.26
Net Cash Generated From Operating Activities		4,337.64		2,044.25
B. Cash flow from investing activities :				
Purchase of Property, Plant and Equipment & Intangible Assets	(2,502.60)		(1,424.11)	
Sale of Property, Plant and Equipment	22.83		14.85	
Redemption of/Investment in Fixed Deposit (Net)	(472.00)		-	
Interest Received	48.49	(2,903.28)	2.23	(1,407.03)
Net Cash Used in Investing Activities		(2,903.28)		(1,407.03)
C. Cash flow from financing activities :				
Proceeds /(Repayment) of Long term borrowings (Net)	-		-	
Proceeds /(Repayment) of Short term borrowings (Net)	(299.03)		(513.72)	
Payment of Lease Liabilities	(85.84)		(62.54)	
Interest Paid	(31.00)		(66.17)	
Dividend Paid	(267.70)	(683.57)	-	(642.43)
Net Cash Used in Financing Activities		(683.57)		(642.43)
Net increase in cash and cash equivalents (A+B+C)		750.79		(5.21)
Cash and cash equivalents - Opening balance		9.17		14.38
Total Cash and cash equivalents - Opening balance		9.17		14.38
		759.96		9.17
Cash and cash equivalents - Closing balance		759.96		9.17