

## **Foundations of Accounting & Finance**

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**Lecture – 18**

### **Preparation of cash flow statement: An example (Indirect Method)**

#### **Introduction**

In the indirect method of cash flow analysis, we take a different approach by starting with the company's profit and loss (P&L) statement and balance sheet. Instead of directly tracking cash flows, we work backward from the net income to derive the operating cash flow. This method helps us understand how the company's net income affects its cash position, taking into account non-cash items and changes in balance sheet accounts.

Now, let us prepare the cash flow statements of the previous problems using indirect method.

#### **I. Cash flow from operating activities**

##### **Net profit or loss**

In the indirect method, we begin with net profit or loss for the year (3,390). This figure represents the company's earnings before tax and extraordinary items. By focusing on net profit before tax and extraordinary items, we obtain a clearer picture of the company's financial performance without the influence of tax expenses or exceptional events.

##### **Non-cash expenditures**

###### **1) Depreciation**

In the indirect method, we make adjustments to account for non-cash expenditures. One significant adjustment involves adding back depreciation expenses, which amount to \$450 in this case. By adding back depreciation, we ensure that our analysis focuses on the cash flows generated from core operations, excluding non-cash factors such as reduction in asset value over time.

###### **2) Interest expenditure**

In the indirect method, interest expenditure is considered a financing activity and is therefore added back to the net profit. This adjustment is made because interest expenditure does not directly relate to the core operating activities of the business. Here, the interest expenditure amounts to \$400, and

by adding it back, we ensure that our analysis focuses on the cash flows generated from operations, excluding financing-related expenses.

#### **4) Investment income**

Investment income, totaling \$300, is typically generated by cash flow from investing activities and is not directly related to core operating activities. Therefore, in the indirect method, this income is deducted from the net profit to ensure an accurate representation of the operating cash flows. By reducing the profit by the investment income amount, we account for the non-operating nature of this income source.

#### **5) Dividend income**

Dividend income, amounting to \$200, contributes to the profit but does not directly relate to core operational activities. Therefore, in the indirect method, this income is deducted from the net profit to isolate the operating cash flows. By excluding dividend income, we focus solely on the operational performance of the company, resulting in a more accurate representation of operating profit before any working capital changes.

### **Changes in working capital**

#### **1) Increase in Sundry debtors**

Working capital refers to changes in current assets and current liabilities. In the indirect method, we have to adjust these changes. An increase of \$500 in the current liability, particularly in sundry debtors suggests that \$500 has not been received as expected. In our case, the profit figure of \$3,390, which includes the total sales amount. However, \$500 of this amount is yet to be received. Hence, we need to adjust for this discrepancy.

To rectify this, we deduct the increase in sundry debtors. If debtors have increased by \$500, the total sales amount of \$30,650 would have generated a profit of \$3,390. However, not all of this amount is in cash; some are credit. Last year's sales were \$1,200, and this year they've risen to \$1,700—a net increase of \$500. Therefore, the uncollected \$500 should only be attributed to this year's transactions. Thus, we adjust the profit by subtracting this \$500 discrepancy.

#### **2) Decrease in Inventory**

Last year, the inventory stood at \$1,950, but this year it's reduced to \$900. This decline indicates that out of the \$26,000 considered as the cost of sale, only \$1,050 worth of inventory was utilized from the store. This means that the entire inventory was not purchased; rather, it represents what was utilized from existing stock. The decrease in inventory amounts to \$1,050. Now, why do we add this to the profit? Because the \$26,000 is not entirely a cash outflow. The actual cash outflow is \$26,000 minus \$1,050, which equals the cash outflow. Consequently, the cash flow increases by \$1,050.

### 3) Decrease in Sundry Creditors

Last year, the amount owed to creditors was \$1,890, but this year it's decreased to \$150. This reduction indicates that payments have been made; otherwise, the figure would not decrease. Thus, there is been a cash outflow resulting from the decrease in creditors. How much is this decrease? It's the difference between last year's figure of \$1,890 and this year's \$150, which amounts to \$1,740.

Now, what is crucial to note is that cash outflow is considered negative. Therefore, the net cash flow generated from operations comprises the changes in working capital, including the changes in debtors, inventories, and creditors.

#### Income taxes paid

Now, let us consider the income taxes paid. Throughout the year, taxes amounting to \$300 were incurred. This figure includes a tax deducted at source of \$40. Initially, we deducted the tax deducted at source to net tax payable for the year. The net tax payable for the year, after accounting for the source deduction, is at \$260. However, at the beginning of the year, there was a tax payable of \$1,000, bringing the total to \$1,260. Yet, by year-end, only \$400 remains outstanding. Therefore, the actual tax paid during the year amounts to \$860.

|   |                   |
|---|-------------------|
| <b>1. Income taxes</b>                    |                   |
| taxes for the year                        | 300               |
| LESS: tax deducted at source              | 40                |
| net tax payable for the year              | 260               |
| ADD: Tax payable at beginning of the year | 1000              |
| total tax payable for the year            | 1260              |
| LESS: Due at the end of theyear           | 400               |
| <b><i>cash outflow due to taxes</i></b>   | <b><i>860</i></b> |

#### Proceeds from Disaster

In addition, there's an extraordinary item to consider: proceeds from a disaster, constituting a cash inflow (140). Calculating the net cash flow involves adding this to the previous total. Consequently, the net cash flow from operations stands at \$1,830. Upon reviewing the direct method's results, it is evident that the net cash flow from operations aligns with our findings using the indirect method.

## II. Cash flow from investing activities

### Investment income

In the investing activities, we find investment income totals to \$300. However, it's important to note that the firm is still yet to receive \$100, as mentioned earlier. Therefore, the actual amount received is only \$200.

### Dividend income

Examining dividend income, it is \$200. However, it's essential to consider the deduction of \$40 for tax purposes. Consequently, the actual amount received totals \$160.

### Purchase and Sale of PPE

Regarding the purchase of property, plant, and equipment, there is a cash outflow of \$350. This expense is attributed to the acquisition of plant and machinery, as previously discussed. Further, there was a cash inflow of \$20 due to the sale of some PPE. Calculating the net cash flow from investing activities, it amounts to \$30. This figure remains consistent with what was obtained previously, indicating no disparity between the direct and indirect methods.

## III. Cash flow from financing activities

### Issue of new shares

For equity share capital, there is a cash inflow of \$250 due to the issuance of shares. This represents the funds raised through the issuance of equity shares, contributing to the cash flow from financing activities.

### Issue and repayment of long-term debt

Regarding long-term debt, there is a cash inflow of \$250 due to the issuance of new debt. However, we need to consider the overall impact on the debt position. With an opening balance of \$1040 and an additional \$250 raised through new borrowing, the total debt should ideally be higher. However, the closing balance of debt is only \$1110. This suggests that a portion of the debt has been repaid. To calculate the repayment of debt, we compare the ideal debt balance with the actual debt balance at the end of the year. The difference indicates the amount of debt repaid. In this case, the repayment of debt amounts to \$150, resulting in a cash outflow due to debt repayment of \$180.

|  |                   |
|--|-------------------|
| <b>2 debt</b>                            |                   |
| Debt as per opening balance sheet        | 1040              |
| Add: New debt                            | 250               |
| Ideal total debt at the end of the year  | 1290              |
| Less: debt at the end of the year        | 1110              |
| <b><i>debt repaid - cash outflow</i></b> | <b><i>180</i></b> |

### Interest expenditure

Interest expenditure represents the cash outflow due to interest payment on financing activities. In this case, the interest expense for the year amounts to \$400 as per the profit and loss statement. To calculate the actual cash outflow for interest payment, we consider the interest payable from the previous year, which was \$100. Adding this to the interest payable during the year 400, we arrive at a total interest payable of \$500. However, at the end of the year, there is still an amount of \$230 remaining to be paid. Subtracting this remaining interest payable from the total interest payable gives us the actual amount paid, which is \$270. Therefore, the cash outflow due to interest payment is \$270.

|  |     |
|--|-----|
| <b>3 interest</b>                              |     |
| Interest expenses for the year                 | 400 |
| ADD: Interest payable at the beginning of year | 100 |
| Total interest payable during the year         | 500 |
| LESS: interest payable at the end of the year  | 230 |
| Cash outflow for interest payment              | 270 |

### Payment of dividend

The payment of dividends represents a cash outflow of \$1200. When we sum up all the cash outflows from financing activities, including dividends paid, the total cash flow from financing amounts to \$1150. Upon reviewing our previous calculations of direct method, we find that the total cash flow from financing remains unchanged at \$1150.

### IV. Total net cash flows

To calculate the total net cash flow, we sum up the cash flows from operating activities, investing activities, and financing activities amounting to 710. Further, we add the cash and cash equivalents at the beginning of the year. Cash and cash equivalents at the beginning of the year consist of \$25 in cash and \$135 in cash equivalents. At the end of the year, the cash and cash equivalents total \$870, comprising \$200 in cash and \$670 in cash equivalents. By adding up all the cash flows and considering the changes in cash and cash equivalents, we arrive at the total net cash flow for the year (Figure 1)

This completes our analysis of cash flows using both the direct and indirect methods. Presume that there is a comprehensive understanding of all three financial statements.

Figure 1: Cash flow statement for the period ended 20X2 using indirect method

| <b>Cash flow statement for the period ended 20X2</b>    |              |
|---|--------------|
| <b>NET PROFIT BEFORE TAX AND EXTRAORDINARY ITEMS</b>    | <b>3390</b>  |
| DEPRECIATION  | 450          |
| interest expenses                                       | 400          |
| investment income                                       | -300         |
| dividend income   | -200         |
| <i>operating profit before working capital changes</i>  | 3740         |
| increase in sundry debtors                              | -500         |
| decrease in inventory                                   | 1050         |
| decrease in creditors                                   | -1740        |
| <i>cash flow generated from operations</i>              | 2550         |
| income tax paid - 1                                     | -860         |
| proceeds from disaster                                  | 140          |
| <b><i>net cash flow from operations</i></b>             | <b>1830</b>  |
| <b><i>cash flow from investing</i></b>                  |              |
| investment income                                       | 200          |
| dividend income   | 160          |
| cash outflow because of P PE purchase                   | -350         |
| cash inflow because of PPE sale                         | 20           |
| <b><i>cash flow from investing</i></b>                  | <b>30</b>    |
| <b><i>cash flow from financing</i></b>                  |              |
| cash inflow due to issue of shares                      | 250          |
| cash inflow due to new debt                             | 250          |
| cash outflow due to repayment of debt -2                | -180         |
| cash outflow due to interest payment -3                 | -270         |
| dividends paid  | -1200        |
| <b><i>cash flow from financing</i></b>                  | <b>-1150</b> |
| <b>net total cash flow</b>                              | <b>710</b>   |
| ADD Cash & cash equivalents at the beginning            | 160          |
| <b>cash and cash equivalents at the end of the year</b> | <b>870</b>   |