

Foundations of Accounting & Finance

Prof. Arun Kumar Gopaldaswamy

Department of Management Studies - IIT Madras

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Lecture – 16

Preparation of Cash Flow Statement: Lori Crump (Indirect Method)

Lori Crump: Indirect method of cash flow statement

Lori Crump owns a small trucking operation. The bookkeeper presented Crump with the following income statements and balance sheets for 2010 and 2009.

INCOME STATEMENTS				
	2010		2009	
Revenues		\$ 191,400		\$ 182,600
Operating expenses:				
Depreciation	\$ 26,400		\$ 26,400	
Fuel	77,000		46,200	
Drivers salaries	44,000		35,200	
Tax and licenses	22,000		17,600	
Repairs	30,800		19,800	
Miscellaneous	2,200	202,400	1,100	146,300
Income(Loss)		\$ (11,000)		\$ 36,000

BALANCE SHEETS		
	12/31/2010	12/31/2009
Cash	\$ 22,000	\$ 4,400
Accounts receivable	8,800	26,400
Net fixed assets	198,000	224,400
Total Assets	\$ 228,000	\$ 255,200
Accounts payable	\$ 30,800	\$ 22,000
Accrued salaries	8,800	5,500
Other accruals	3,300	1,100
Long term debt	100,100	129,800
Crump, capital	85,800	96,800
Total Liabilities and Capital	\$ 228,800	\$ 255,200

But Crump does not understand how the company can have \$17,600 more cash than last year. Last year, they had \$4,400, but this year it's \$22,000, which means \$17,600 extra, even though they lost \$11,000. He is asking for an indirect method of a cash flow statement to figure it out.

I. Cash flow from operating activities

1) Net loss of the year

Upon reviewing the income statement for Lori Cump in 2010, it is evident that there was a net loss of \$11,000 for the year.

2) Depreciation

In analysing the cash flow from operations, it is evident from the given problem that a loss of \$11,000 was determined after deducting depreciation expense of \$26,400. Depreciation, being a non-cash outflow, is considered a non-cash expenditure. Therefore, the depreciation of \$26,400 was subtracted to arrive at a loss of \$11,000. Now, let us add back that depreciation amount to understand the resulting cash balance.

3) Difference in accounts payable

When examining the balance sheet, it is noticeable that the accounts payable for the previous year amounted to \$22,000, whereas this year it is \$30,800. In a trucking company like this, payables are typically associated with fuel expenses, as fuel constitutes a core operating aspect.

Observing the financials, fuel expenses charged to the profit and loss (P&L) statement total \$77,000, and I am yet to pay \$30,800, compared to the \$22,000 payable from the previous year. Let us calculate the actual cash outflow to determine the year's expenditure.

Adding the current year's fuel purchase to last year's payable, we find the total payable amounting to \$99,000. Subtracting the current year's due amount, indicated in the balance sheet as \$30,800, reveals that \$68,200 has been paid.

Now, considering the fuel expenditure charged to the P&L at \$77,000, but only \$68,200 paid, it's apparent that the cash balance will be higher by \$8,800 as compared to the profit. As cash has not been disbursed to this extent, I will add back the difference in accounts payable, amounting to \$8,800, as cash outflow has not happened to that extent.

1) Difference in accounts payable	
fuel expenditure charged to P & L	77,000
ADD payable of the last year	22,000
total amount liable to pay	99,000
Less: Due at the end of the current year	30,800
Amount actually paid	68,200
Difference between charged and paid	8,800

4) **Difference in driver's salary**

There is something called accrued salary, representing salaries that are pending but accounted for in the financial records. For this year, the total salaries recorded in the profit and loss (P&L) statement sum up to \$44,000.

To determine the actual cash outflow, we start with the salaries due at the beginning of the year, which was \$5,500 as per the balance sheet. Adding this to the total salaries recorded for the year gives us a total due amount of \$49,500.

By comparing this with the salaries due at the end of the year, which amounts to \$8,800, we ascertain that there's still an outstanding payment. The actual cash disbursed for salaries amounts to \$40,700. This reveals that cash outflow to the extent of \$3,300, has not occurred. Considering that \$44,000 was charged in the P&L statement while only \$40,700 was paid in cash.

This discrepancy of \$3,300 between the charged amount and the actual cash outflow needs to be addressed. Therefore, this amount is added back as the difference in driver salary due, reflecting the overcharge in the financial records.

2) Difference in driver's salary due	
salaries as per the P & L	44,000
ADD salaries due at the beginning of the year	5,500
total salaries due	49,500
salaries due at the end of the year	8,800
actual cash paid for salaries	40,700
Difference between charged and paid	3300

5) **Difference in miscellaneous expenditure**

There is a category known as other accruals, which represents a liability on the company's balance sheet. These accruals encompass various miscellaneous expenditures. In our analysis, we will consider miscellaneous expenditures as a component of other accruals.

According to the profit and loss (P&L) statement, the miscellaneous expenditure charge amounts to \$2,200. To determine the total miscellaneous expenditure due, we add the miscellaneous expenditure that was pending at the beginning of the year, which was \$1,100 as per the balance sheet.

This gives us a total miscellaneous expenditure due of \$3,300. Comparing this with the miscellaneous expenditure due at the end of the year, which remains at \$3,300, we find that there's been no change in this liability.

However, upon assessing the actual cash disbursed for miscellaneous expenditures, we find that no funds were spent in this category during the year. Despite this, a charge of \$2,200 was recorded in the P&L statement, resulting in a net loss of \$11,000.

Given that no cash outflow occurred for miscellaneous expenditures, there exists a discrepancy of \$2,200 between the charged amount and the actual expenditure. This amount should add back to the net income to arrive at the actual cash flow.

3) Difference in other accruals	
Mis exp as per the P & L	2200
Add: mis exp due at the beginning of the year	1,100
Total mis exp due	3,300
Less: due at the end of the year	3,300
Actual mis exp paid	-
Difference between charged and paid	2200

6) Difference in accounts receivable

Let us now shift our attention from liabilities to assets and specifically focus on receivables. In the previous year, the receivables amounted to \$26,400, whereas this year, they are only \$8,800. However, if we examine the revenue, it totals \$191,4300 for this particular period.

Considering the revenue as per the profit and loss (P&L) statement to be \$191,400, we add the receivables at the beginning of the year, which were \$26,400. This gives us a total receivable amount of \$217,800.

Now, subtracting the receivables at the end of the year, which is \$8,800, from the total eligible amount, we find the actual amount received during the year, which is \$209,000. Despite recording a revenue of \$191,400 and incurring a loss of \$11,000, the company received \$209,000 in actual funds.

This indicates a difference between the actual receipts and the revenue charged, resulting in an excess receipt of \$17,600. In other words, the company received \$17,600 more than the revenue recorded. This amount should add back to the net income to arrive at the actual cash flow.

4) Difference in accounts receivable	
Revenue at per P & L	191400
Add: receivable at the begning of the year	26400
Total amount elegible to receive	217800
Less: amount receivable at the end of the year	8800
Actual amount received during the year	209000
Difference between actual receipt and charged	17600

II. Cash flow from investing activities

We begin by examining the net fixed assets. Last year, this figure stood at \$224,400, whereas this year, it amounts to \$198,000. This indicates a reduction of \$26,400.

Now, the reduction in net fixed assets could occur due to two primary reasons. Firstly, it could be because the company sold some of its assets, resulting in a cash inflow from investing activities. However, upon closer examination, we find that this reduction aligns perfectly with the depreciation amount of \$26,400.

This suggests that the decrease in asset value is not due to asset sale but rather due to depreciation, which is a non-cash expenditure. Therefore, from the perspective of the cash flow statement, the cash flow from investing activities is essentially zero in this scenario.

III. Cash flow from financing activities

1) Repayment of long-term debt

Let us shift our focus to financing activities, particularly the long-term debt. Upon examining the capital and long-term debt, we find that in last year, the long-term debt stood at \$129,800, whereas this year, it has decreased to \$100,100.

The difference between these amounts is \$29,700. This reduction indicates that the company has likely made repayments towards its long-term debt. Such reductions typically occur when payments are made to reduce outstanding debts. Consequently, this reduction represents a cash outflow, specifically a repayment of long-term debt, amounting to \$29,700.

2) Reduction in Crumps capital

Returning to the balance sheet, we observe a reduction in Crump's capital, indicating changes in equity. Last year, Crump's capital stood at \$96,800, while this year, it has decreased to \$85,800. The difference between these amounts is \$11,000.

Upon closer examination, we realize that this reduction in capital aligns with the incurred loss of \$11,000. Essentially, last year's capital of \$96,800 minus the \$11,000 loss results in the current capital of \$85,800. Therefore, it becomes evident that this reduction is attributed to the loss incurred rather than any repayment of capital.

IV. Total net cash flow

Returning to the cash flow statement, we calculate the total net cash flow for the year. Combining the cash flow from operations and investing activities, we arrive at a total cash flow of \$17,600. Next, we add this amount to the opening balance of cash, which is \$4,400. Thus, the closing cash balance for the year 2010 is \$22,000, matching precisely with the recorded figure (Figure 1).

In summary, by utilizing the data from the profit and loss statement (P&L) and the balance sheets, we have successfully constructed the cash flow statement using the indirect method. Despite incurring a loss, the cash balance increased by \$17,600. This increase can be attributed to factors such as non-cash expenditure, receipt of overdue payments from the previous year, and repayment of long-term debts. This comprehensive explanation clarifies how the cash balance experienced an upturn despite the incurred loss.

With the completion of the indirect method analysis, we conclude this section and move on to the next problem. In Exercise 11.5 of the same textbook, a cash flow problem is presented, focusing on the direct method. All relevant balances are provided, allowing us to prepare a cash flow statement using the direct method.

Figure 1: Cash Flow statement of Lori Crump for the year 2010 using indirect method

Cash Flow statement of Lori Crump for the year 2010		
Net Loss	-11,000	
<i>Cash flow from operations</i>		
ADD: Depreciation	26,400	
Add: difference in accounts payable	8,800	
add: difference in driver's salary	3,300	
add difference in mis expenditure	2,200	
add difference in accounts receivable	17,600	
<i>Net cash flow from operations</i>		47,300
<i>Cash flow from investing</i>		
<i>Cash flow from financing</i>		
long term debt repaid		-29,700
Total cash flow for the year 2010		17,600
add opening balance of cash		4400
Closing cash balance (2010)		22,000

Another example (Direct Method)

The owner of a small business has asked you to prepare a statement that will show him where his firm's cash came from and how it was used this year. He gives you the following information based on the Cash account in his general ledger:

Balance at beginning of year		\$ 3,450
Collection of accounts receivable		34,500
Interest on savings account		345
Sale of old machine		3,105
Cash sales		27,600
Total		69,000
Payment on vendor accounts	\$ 17,250	
Cash purchase of supplies	345	
Cash purchase of inventory	17,250	
Down payment on new truck	3,450	
Rent payments	8,625	
Utilities	2,070	
Interest payment	1,035	
Other miscellaneous expenses	1,725	
Payment on debt	3,450	
Part-time help	6,900	62,100
Balance at end of year		\$ 6,900

In addition, the following is available from company records:

1. Sales were \$61,410 for the year.
2. The Accounts Receivable balance decreased by \$690.
3. Cash operating expenses totaled \$54,165 (including cost of sales, supplies, rent, utilities, part-time help, and other miscellaneous expenses).
4. Accounts Payable decreased by a net of \$2,760 during the year.
5. The Inventory balance remained constant throughout the year.
6. Depreciation of \$1,725 was taken this year.

I. Cash flow from operating activities

1) Cash received from customers

Firstly, let us determine the cash received from customers. Looking back at the problem, we have a collection of \$34,500 and credit sales of \$27,600. Therefore, the total cash received from customers is \$34,500 plus \$27,600, which equals \$62,100.

2) Operating cash payments

Now, let us calculate the operating cash payments. The total cash operating expenditure is given as \$54,165. Let's break it down further:

- Cash purchase of supplies: \$345
- Cash purchase of inventory: \$17,250
- Rent payment: \$8,625
- Utilities: \$2,070
- Other miscellaneous expenditures: \$1,725
- Part-time help: \$6,900
- Payment to vendor accounts: \$17,250

We have also considered the collection from accounts receivable and accounted for the decrease in accounts receivable by \$690. Accounts payable decreased by \$2,760, which we have accounted for in the payment to vendor accounts. Inventory balance remained constant. Depreciation is not relevant for this cash flow statement.

The operating cash flow is the cash received minus the cash payments. Thus, the operating cash flow is \$62,100 minus \$54,165, which equals \$7,935.

II. Cash flow from investing activities

Now, let us focus on the other investing activities. Upon reviewing the investing activity section, I notice a sale of an old machine totaling \$3,105, indicating a cash inflow. Additionally, there's a payment for a new truck amounting to \$3,440, representing a cash outflow. Further, interest on savings account is received, contributing to another cash inflow. Calculating the net cash flow for this activity yields the final figure as zero.

III. Cash flow from financing activities

Moving on to the financing activity, we have the repayment of debt amounting to \$3,450, and interest paid totaling \$1,035. Deducting the interest paid from the repayment of debt gives us the net cash flow from financing activities.

IV. Total net cash flow from all activities

To calculate the net cash flow from all activities, we sum up the cash flows from operations, investing activities, and financing activities. Net cash flow from all activities for the year is \$3,450. Cash at the beginning of the year is detailed as \$3,450. At the end of the year, the balance will be \$6,900 (Figure 2)

Figure 2: Cash flow statement using direct method

CF from Operating activities	
Cash recived from customers	62,100
LESS Operating cash payments	-54,165
Net CF from operations	7,935
CF from Investing activities	
Sale of old machine	3,105
Down payment on new truck	-3,450
Interest received (On savings account)	345
Net CF from Investing	-
CF from Financing activities	
payment on debt	-3,450
Interest paid	-1,035
Net CF from Financing	-4,485
Net CF from all activities (Increase in cash)	3,450
Add: Beginning cash	3,450
Ending cash balance	6,900