CN-233-E
Rev. 9/2023

The Statement of Cash Flows[1]

Direct and Indirect Method

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Cash is extremely important and maintaining liquidity is essential to guaranteeing the survival of any firm. The vast majority of business failures occur because firms run out of cash. Sometimes the business model is sound, but the initial financing is not sufficient to keep the firm alive during the early years—in which cash outflows tend to be larger than cash inflows—until the firm establishes itself and sales pick up. For these reasons, users of financial information want to know how cash is generated and how cash is used every period. The information in the income statement (I/S) is not enough since revenues and expenses do not coincide with cash inflows and outflows because of the accrual basis of accounting. Therefore, net profit does not coincide with the cash flow from operations. In addition, the firm may be investing in plant and equipment or repaying loans, items that do not generate expenses equal to the amounts paid.

To satisfy this informational need on the part of investors, firms prepare the Statement of Cash Flows, which shows how cash is generated and used during every period and classifies the different cash flows into three categories: cash from operations, cash from investments and cash from financing. This classification is based on the nature of the business cycle. Financing cash flows include capital contributions or withdrawals by owners, new borrowings, repayment of existing borrowings and payment of dividends. Investment cash flows include purchases or disposals of property, plant and equipment (PPE), purchases or sales of financial assets (i.e., shares of other firms, treasury bills, etc.) and purchases or disposals of other firms (i.e., mergers and acquisitions). The remaining cash flows are operating cash flows, which include collections from customers, payments to suppliers and employees, payments to tax authorities and payments for operating expenses (i.e., rent, insurance, utilities, etc.). Interest paid or received, and dividends received from financial investments are usually classified as operating cash flows.

[1] It is highly advisable to read first note CN-230-E to further understand this note: Peñalva, F. and Marc Badia, "Introduction to Financial Accounting," IESE.

This technical note was prepared by professors Fernando Peñalva and Marc Badia. March 2016. Revised in September 2023.

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Last edited: 8/2/2024

To understand the preparation of the statement of cash flows, we are going to use a real-life example. Below you are given a summary of the movements in the cash account of ABC Company, a merchandising firm based in Europe, during year 2 (amounts in € million). We just need to group the different cash flows into the three categories. Next to each cash flow, we have written its nature using the letters O, I, or F to indicate operations, investing or financing, respectively.

	Cash		
BB	72		
(O) Collections from customers	1,191	782	Payments to suppliers (O)
(I) Sale of Land	10	280	Salaries paid (O)
(F) New share capital	15	14	Interest paid (O)
		22	Taxes paid (O)
		72	PPE purchase (I)
		31	Loan repayment (F)
		10	Dividends paid (F)
EB	77		

* PPE stands for property, plant and equipment.

With the above information, we can prepare the statement of cash flows as follows:

ABC Company Statement of Cash Flows for Year 2 (in € million) (Direct method)	
Operating activities	
Collections from customers	1,191
Payments to suppliers	–782
Payments to employees	–280
Payments for interest	–14
Payments for taxes	–22
Cash flow from operating activities (CFO)	**93**
Investment activities	
Purchase of PPE	–72
Land sale	10
Cash flow from (used in) investing activities (CFI)	**–62**
Financing activities	
Loan payment	–31
New share capital	15
Dividends paid	–10
Cash flow from (used in) financing activities (CFF)	**–26**
Change in cash (CFO+CFI+CFF)	**5**
Cash, beginning balance	72
Change in cash during year 2	5
Cash, ending balance	77

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This presentation of the statement of cash flows is fairly straightforward and intuitive. It is a simple list of cash collections and payments classified by their nature: operations, investing or financing. The sign convention is such that negative numbers indicate payments. This form of deriving the cash flow from operations is known as the *direct method*. It just requires access to the movements in the cash account. Exhibit 1 contains the direct method statement of cash flows for KONE, a Finnish company.

Unfortunately, this simple method is not the one used by most firms when they report the cash flow from operations. There is an alternative way of deriving the cash from operations, when access to the cash account is not available. This method starts off with net profit and adjusts it to obtain the cash flow from operations. It is called the *indirect method* of deriving the cash flow from operations. It is more complicated, and it is the subject of the next section. Obviously, both methods produce the same results.

Spreadsheet Approach for Preparing the Cash Flow Statement Using the Indirect Method

All companies report investing and financing cash flows as the difference between cash inflows and cash outflows (like in the direct method). However, the vast majority of companies report the operating cash flow as the sum of reported net income plus/minus accrual adjustments. These accrual adjustments are operating revenues and expenses that have not yet had any cash impact in the period: revenues not yet collected, or expenses not yet paid. The idea is to reconcile net income to cash from operations. This indirect way of deriving the cash flow from operations is the reason for its name: the indirect method. To satisfy your curiosity, you can see an example on page 8 of this note. Unfortunately, this method is usually a source of confusion for most novices to accounting. In the following paragraphs, we describe a simple framework to prepare the cash flow statement using the indirect method. This framework is extremely powerful and pedagogical because it forces you to understand the behavior of the balance sheet accounts; used systematically, it avoids practically all mistakes. Cash is always defined in broad terms: it includes cash and cash equivalents. The latter is cash invested in short-term highly liquid investments.

We start off with the basic accounting identity. Decomposing it, we observe the following:

$$\underbrace{A}_{\text{Cash} + A^*} = L + OE$$

(A* stands for *Assets other than cash*)

Taking changes (Δ) and rearranging terms to isolate cash, we obtain:

$$\Delta\text{Cash} = -\Delta A^* + \Delta L + \Delta OE$$

The above equation indicates that if we explain the change in liabilities, owners' equity and assets other than cash, we will explain the change in cash. This means that we can apply this idea to construct the cash flow statement. To do so, we will need two consecutive balance sheets and an income statement. Note that the change (Δ) in each account is defined as ending balance minus beginning balance (EB–BB).

Continuing with our example, the balance sheets, income statement and additional information for ABC Company are provided below. All sales are made on account.

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