

The Cash Flow Statement: Tracing the Sources and Uses of Cash

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Article Highlights

- The cash flow statement is a link between the balance sheet and the income statement.
- Though a positive change in cash is good, what really matters is how the cash was increased and spent.
- Free cash flow measures how much cash was generated that can be spent at management's discretion.

Earnings, dividends and growth rates are useful figures in investment analysis. However, like water to humans, there is an underlying element essential to the survival and success of any firm—cash flow.

In this installment of the financial statement analysis series, I discuss the corporate cash flow statement, providing an in-depth look at its sections and explaining what the line items mean.



The Linking Statement

Under accrual accounting (the methodology followed by publicly traded corporations), earnings and cash flow are two very different figures. The earnings figure, the income statement's "bottom line," is based on the principles of accrual accounting. Accrual accounting attempts to match expenses with revenues regardless of when the cash transactions that deal with the creation of the goods being sold and the receipt from the sale occurred. In essence, accrual accounting is not entirely concerned with when "cash trades hands." This method of accounting introduces many interpretations and estimates from management that can vary from firm to firm.

For example, higher sales may not translate into higher cash flow if accounts receivable are allowed to rise. (Customers may not pay when goods are delivered, but rather

may be invoiced.) Furthermore, cash may be used to build up inventories, which may depreciate in value or even become obsolete if products are not sold in a timely manner. The expenses to build up these inventories are not recorded until products are actually sold. Even

inventory recognition may vary from firm to firm if one company uses first-in-first-out (FIFO) accounting and another uses last-in-first-out (LIFO) accounting.

The cash flow statement helps alleviate many of these issues by providing a link between the income statement and the balance sheet. Think of the cash flow statement like your checking account. Once a transaction occurs and the cash is used, the cash is gone. There is no waiting to expense the spending throughout the life of your purchased product. The cash flow statement works in the same way: It allows you to see whether a company was able to generate more cash than it used during the stated period. If the company spent more cash than it was able to bring in, its cash balance is reduced. If the cash balance is depleted significantly (or if there is a threat of a significant depletion), the company must either take on additional debt or sell more stock—both of which may have negative financial implications.

Cash flow statements are separated into three segments: cash flow from operating activities, cash flow from investing activities and cash flow from financing activities. Table 1 shows an example of a sample cash flow statement.

Cash Flow From Operating Activities

Cash flow from operating activities has a very simple objective—to show whether a firm's day-to-day operations generated or depleted cash. If net cash flow from operations is negative, it means that the company is spending more cash than it is generating in producing and selling its goods and services. If it is positive, the company is generating more cash than it is spending on its day-to-day operations.

Needless to say, cash flow from operations is vital. Negative cash flow from operating activities will eventually lead companies to seek funding from outside sources, either through increased debt load—which increases interest payments, hinders growth and makes the company more vulnerable to business downturns—or by issuing stock, which dilutes ownership. Although a rapidly growing company may have negative operating cash flows as it expands its inventory and pays its increasing bills, the cash flow from operating activities must eventually turn positive for the firm to survive. Conversely, a contracting company may exhibit positive cash flows for a period of time, as spending falls at a faster rate than sales and earnings. If the sales and profits fall far enough, however, the firm will have to liquidate portions of its business or declare bankruptcy.

There are two ways firms determine cash from operating activities: direct and indirect. The direct method of cash flow statement reconciliation reports major sources of cash receipts and payments, starting with cash receipts from customers. Cash payments for inventory purchases and operating expenses are deducted from this initial balance to arrive at cash flow from operating activities. The premise of the indirect method is to start with net income and then adjust for non-cash expenditures to arrive at cash flow from operating activities. The vast majority of firms use the indirect method of cash flow reconciliation, which is the method outlined here and in Table 1.

The net income figure at the top of the cash flow statement is pulled directly from the income statement.

Typically, depreciation is the first line item that is reconciled. It is a non-cash expense, meaning that depreciation does not require the expenditure of cash. Rather, it is used to reduce the value of an asset throughout its useful life in an effort to properly match revenues with expenses. Amortization, like depreciation, is also a non-cash expense. Unlike depreciation, however, this figure measures the decline in value of an intangible asset. Both these figures lower net income and shareholder's equity, but since they do not affect a company's cash balance, they are added back to net income.

In most cases, companies will break down changes in working capital accounts such as accounts receivable, inventory and accounts payable. Firms may also provide this balance as one single item; however, a breakdown offers a clearer picture. Changes in working capital must be adjusted in order to identify the flow of cash. For example, an increase in accounts receivable increases net income and shareholder's equity since a sale has been made and the company can reasonably expect payment in the future. However, cash has yet to be received for accounts receivable. In order to adjust net income to cash flow, the increase in accounts receivable for the period must be subtracted from net income. Conversely, accounts payable measures payment owed to suppliers. An increase in accounts payable decreases net income, but increases the cash balance when adjusting net income in the cash flow statement. An easy way to see this increase is to recognize that a company taking longer to pay its bills will see a rise in its cash balance as well as its accounts payable.

Several other non-cash items appear often on the cash flow statement, including prepaid expenses and unearned revenues. Prepaid expenses are assets on the balance sheet that do not reduce net income or shareholder's equity. However, prepaid expenses do reduce cash. Adjusting for an increase

in prepaid expense is similar to adjusting for an increase in accounts receivable: they both decrease cash flow. Unearned revenues is a liability, so it works in the same way as accounts payable. An increase in unearned revenues does not affect net income or shareholder's equity, but it does increase cash since payment has been received for future delivery of products or services. Again, the key is when cash was actually received or spent.

As I mentioned in previous articles in this series, firms often maintain two sets of accounting books—one for reporting to tax authorities and one for reporting to shareholders. It may be advantageous for a firm to pay a large tax bill up front and slowly deduct the expense from earnings over the next several years. As the tax expense is realized in subsequent periods, earnings and shareholder's equity will decrease, but cash is not expended. A deferred tax expense on the cash flow statement is used to adjust net income to the cash balance.

Net operating cash flow is the sum of the previous line items. Expanding firms may have negative operating cash flows as they build up inventory and provide more credit to customers, but eventually this figure needs to turn positive. For most firms, positive operating cash flow is crucial.

Cash From Investing Activities

Cash flow from investing activities measures a company's investment in itself. Long-term expenditures and investments in other firms are recorded here. These expenditures are intended to produce profits in the future.

Capital expenditures (also referred to simply as "capex") represent purchases in fixed assets, mainly in the form of plant, property and equipment. This figure is usually negative as the firm spends money on fixed assets, but can also be positive if a firm is selling more of its assets than it is buying. Capital expenditures can be very large and are long term in nature. As previously mentioned, in an effort to properly match

expenses with revenues on the income statement, companies typically expense a capital expenditure over the course of its useful life. However, the effect of capital expenditures on cash flow works differently. In the initial purchase year, cash is used immediately, resulting in a large negative outflow for a single year as opposed to being expensed over a period of several years. A negative number for capital expenditures can be a good sign for a company: It means the company is spending money to expand its business by purchasing additional fixed assets. However, be sure to ascertain whether the company is making wise investments and has good growth prospects.

When analyzing capital expenditures, it is important to make sure the figure is growing at a clip relatively similar to revenues. A firm that is growing at a rapid pace will not be able to maintain its pace without making capital expenditures for expansion. Conversely, spending cash on capital expenditures while revenues are stalling can be problematic if the sales decline is due to competitive threats and poor management decisions, instead of simply economic and industry cycles.

Furthermore, capital expenditures vary by industry. Manufacturing firms that require large plants typically have higher capital expenditures than firms with a high amount of intangible assets or intellectual property, such as investment firms.

Other cash flow from investing activities arises from investments in other firms, acquisitions and divestitures of subsidiaries. This section also includes commodity hedges (for firms that depend heavily on commodities) or currency hedges (for international firms). In addition, financial companies make significant investments in marketable securities. You'll need to keep the company's industry in mind when examining cash flow from investing activities.

Net cash from investing activities is the sum of these line items. The figure for most healthy firms will be negative, as they drive cash from operations back into the firm for expansion to generate future profits.

Table 1. Sample Cash Flow Statement

(millions)	
Cash flow from operations	
Net income	\$ 82.75
Adjustments to reconcile net income to operating net cash	
Depreciation and amortization	90.00
Decrease (increase) in accounts receivable	(23.00)
Decrease (increase) in inventory	(20.00)
Decrease (increase) in prepaid expenses	5.00
Decrease (increase) in other current assets	(10.00)
Increase (decrease) in accounts payable	20.00
Increase (decrease) in accrued expenses	20.00
Increase (decrease) in unearned revenue	10.00
Increase (decrease) in deferred taxes	10.00
Net cash provided by operating activities	\$ 184.75
Cash flows from investing activities	
Capital expenditures	(40.00)
Long-term investments	(40.00)
Other cash flows from investing activities	(50.00)
Net cash provided by investing activities	\$ (130.00)
Cash flows from financing activities	
Long-term debt issued (retired)	(0.50)
Increase (decrease) in common stock	(10.00)
Dividends paid	(24.25)
Net cash provided by financing activities	\$ (34.75)
Net change in cash	\$ 20.00
Cash balance at beginning of year	80.00
Cash balance at end of year	\$ 100.00

Cash From Financing Activities

Cash flow from financing activities includes three main transactions: stock transactions, debt transactions and dividends.

Cash is received and ownership is diluted when a company issues stock. Raising capital by issuing additional shares is not necessarily a bad sign, as long as the firm is expanding at an acceptable rate. Keep in mind, though, that selling additional shares means that less income is attributable to each shareholder. The repurchase of shares increases the ownership of shareholders and decreases cash.

Cash flows from financing activities also include issuing debt and the repayment of debt. When debt is issued, the firm receives cash that needs to be paid back at a later date. In between the repayment date and the issuance date, interest is paid. The repayment of debt issued represents a cash outflow. [Note that interest payments are not a financing activity. Rather, they are included in operating activities since these expenses are considered a part of normal business operations. However, interest expense is not broken out in the operating activities section of the cash flow statement since it is already calculated into net income.]

Dividends are outflows of cash since cash is paid out to shareholders. Furthermore, the money spent on dividends should increase (become more negative on the cash flow statement) in subsequent periods. A decrease in dividends is often a sign that a company is experiencing difficulties, especially if the decrease is greater than the corresponding reduction in the number of shares outstanding. A firm offering no dividends is not uncommon. Preferably, a firm with no dividends should be experiencing significant growth.

The net cash from financing activities figure is helpful when gauging its overall effect on the cash flows of the firm. However, it is more important to study the individual line items to see how the firm is raising cash or repaying cash.

Currency Translation

The cash flow statement can also include a section that reconciles currency translation (not shown in Table 1). Multinational firms with operations in several different countries will generate revenues in several different currencies.

There are accounting rules written to supervise how currency is translated. A separate line item, often called “cumulative effect of exchange rate changes,” details the effect of the currency exchange rate changes on the company’s cash flow.

Net Change in Cash

Net change in cash is the aggregate of cash flows from operating, investing and financing activities. This figure should equal the difference between cash the firm holds at the beginning of the reported period (e.g., one year) and the amount that it holds at the period’s end. Positive net cash flow means the firm has more cash, and negative cash flow means the firm has less, compared to the beginning of the period.

It is easy to say that a positive change in cash is good while a negative change is bad, yet what matters is how cash is increased and spent. Generally, you want cash to come from business

operations: Increasingly positive cash flow from operating activities is a good sign. A few periods of decreasing total cash is not worrisome if a firm is spending on worthwhile projects, paying high dividends, paying down debt, or repurchasing shares. Also, keep in mind that excess cash does not provide a return for shareholders. Firms run the risk of management making risky decisions with a stockpile of cash, such as investing in questionable acquisitions or pet projects.

Analysis of Cash Flows

Since the cash flow statement was first required to be provided in 1987, analysts have increasingly compared net income and cash from operating activities. Each figure has its strengths and weaknesses for analysis. Net income is derived using the principles of accrual accounting, ignoring the effect of non-cash items. Increasingly lax credit standards and aggressive revenue recognition can all be missed by looking simply at net income. Additionally, non-cash items are dependent on management estimates and discretion, and treatment may vary slightly from firm to firm.

On the other hand, cash flow from operations fails to account for earned revenues that will be collected in the future, or accrued liabilities that will need to be paid. In addition, the figure is difficult to evaluate for young, rapidly growing firms. These firms are increasing inventory, increasing current assets, and extending credit to new customers to drive revenue growth. Typically, this leads to negative operating cash flows that are supported by debt and issuance of stock.

Free Cash Flow

Free cash flow represents cash that management is able to use at its discretion. Free cash flow is cash flow from operating activities less capital expenditures and dividends paid. The importance of free cash flow should not be underestimated. Positive cash flow

from operations is great, but cash must be driven back into the firm to upgrade obsolete machinery or buy newer buildings or for expansion purposes. Without these capital expenditures, a firm cannot remain a going concern that is able to generate future revenues.

Some sources simply list free cash flow as cash from operating activities less capital expenditures, since dividends are paid at management’s discretion and can be cancelled if need be. It can be argued, however, that once a company starts paying a regular dividend, investors expect the payments to continue. Very rarely does a firm decrease or cancel dividends, unless they are forced to do so.

Free cash flow can be put to several uses: retire debt, repurchase shares, pay additional dividends and create new products or expand current offerings. Depending on the type of company, free cash flows may show significant trends. For financial firms, most investments come in the form of loans, but loans are considered part of normal business operations. On the flip side, there are companies with extremely long and expensive product cycles, such as Boeing Co. (BA) and Airbus SAS. As new planes are conceptualized, developed, manufactured and delivered, cash flows devoted to those to projects may be negative for years before profits are realized and net cash flows become positive.

Conclusion

The cash flow statement provides a crucial link between the income statement and the balance sheet. The cash flow statement helps you ascertain whether cash is coming from normal operations, whether a firm is reinvesting in itself, and if a firm is raising additional cash.

It is important to analyze a firm’s cash flow statement in relation to industry norms. Different industries will have different trends in cash flows. Separately, rapidly expanding firms will have significantly different breakdowns for each section of the cash flow statement than slower-growth companies.

Typically, rapidly expanding firms have negative cash flows from operating and investing activities and positive cash flow from financing activities.

The cash flow statement should be used as a tool to help you tie the income statement and balance sheet together.

Our next financial statement analy-

sis article will cover financial ratios and will appear in the September *AII Journal*. This series can be accessed at AAII.com in the AII Journal area.

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Feature: Financial Planning

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survive throughout retirement.

Keep in mind that this doesn't mean you can select a realistic withdrawal rate and then put your portfolio on "autopilot." You still need the other elements of portfolio management: a proper asset allocation that includes commitments to all three major asset classes, and a portfolio monitoring system that includes spending adjustments—midcourse corrections—to ensure that you stay on track.

But setting a realistic withdrawal rate is the first step toward reaching your ultimate goal of striking the fine line between spending the maximum amount of your retirement savings each year and being assured you will have enough savings to support you for the rest of your life.

The Withdrawal Rate Approach

These are the major points to keep in mind:

- The advantage of a withdrawal rate approach is that it allows you to separate your asset allocation decision from your immediate withdrawal needs so that they do not drive your asset allocation decision.
- This encourages you to invest for the long term, since the withdrawal rate does not depend on any income component.
- Annuity tables assume unvarying return rates each year, but your return rates will vary significantly year-to-year.
- For that reason, base your withdrawal rate on studies of portfolio success rates. You can use the tables

here to help you determine an appropriate initial withdrawal rate. This withdrawal rate only applies to your first-year withdrawal; after that, you can withdraw the same dollar amount as the prior year adjusted for inflation. This is a pre-tax amount that does not take into consideration what type of account your withdrawals are made from (taxable or tax-deferred).

- Make sure you use a realistic spending rate—not more than 4% of the initial portfolio value.
- This approach is not an "autopilot" approach. You still need to develop an appropriate asset allocation strategy and a portfolio monitoring system that allows for midcourse adjustments to ensure that your portfolio remains on track.

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