

## Working Capital

In the context of financial statements and accounting analysis, the term "working capital" refers to the difference between current assets and current liabilities. For accounting purposes, net working capital is calculated by taking the current assets shown on the left side of a firm's balance sheet (gross working capital) and subtracting the current liabilities shown on the right side of the balance sheet. The remainder is firm's net working capital. Basically speaking, the calculation of working capital shows the net amount of capital employed in the firm which is not invested in long-term assets, like plant and equipment, but in various short-term items, like cash and inventories, required for the day-to-day operations of the firm. Aside from cash and inventories, the major items which appear in the calculations of working capital are generally accounts receivable and accounts payable.

Accounts receivable are included with current assets; they represent the dollar amount of sales billed to customers, or payment which has not been received. Accounts receivable are a measure of the firm's capital which is invested in goods and services that have been sold to customers on credit. As the firm's customers pay their bills the items in accounts receivable are converted into another form of current asset, cash. In an ongoing business, new amounts which are billed for sales during the current period are constantly replacing the old amounts which are paid. In most firms, accounts receivable are ever present, even though the amounts will fluctuate over time.

In contrast, accounts payable are included on the right side of the balance sheet under current liabilities; they represent the dollar amount of purchases of goods and services which have been obtained by the firm, but not yet settled. In a sense, accounts payable occur when the firm buys on credit; while accounts receivable arise when the firms sells on credit.

Accounts receivable can also be considered as a use of the firm's capital. The firm invests capital in goods and services which it then sells on credit. Since the actual goods and services are no longer owned or held by the firm which sells them, they do not appear on the balance sheet as assets. But since the firm is owed money for the sold goods and services, it still has capital invested in an asset. Naturally, this asset should be represented on the balance sheet, even though it is not tangible, like plant and equipment or inventory.

In a similar vein, accounts payable can be regarded as a source of capital to finance the business. If a firm is investing in a piece of equipment, it can obtain money from various sources to support this investment. For instance, the firm might borrow the necessary cash from a bank to pay for the equipment when it arrives. The balance sheet will show two entries: an increase in the amount of equipment shown on the asset side, and an increase in bank loans payable shown on the liabilities side. As another possibility, the firm might purchase the equipment on credit, perhaps paying for it 90 days after receipt. The balance sheet will show the same increase in the amount of equipment, but the offsetting entry on the liabilities side will be an increase in accounts payable, rather than bank loans payable. In both instances, the entry on the left side of the balance sheet indicates the use of the firm's capital; while the entry on the right side shows the source of the capital, either a bank loan or a supplier credit.

Although this discussion has concentrated on accounts receivable and accounts payable

up to this point, the same principles apply to other assets and liabilities in working capital calculations. For example, accrued taxes payable are directly analogous to accounts payable, except that they indicate the firm has not yet paid its taxes, rather than goods and services. Accrued taxes payable also represent a source of capital; until the taxes are actually paid, the firm has the use of the money owed to the taxing authorities, and it can employ these funds to support its investment in the various items on the asset side of the balance sheet.

The firm might accrue property taxes throughout the year and include them as an expense in the calculation of each month's income. However, it will not disperse the cash until the taxes are actually due at the end of the year. In effect, the firm has obtained capital by borrowing from the taxing authorities.

#### The relevance of working capital from a ratemaking viewpoint

In most rate cases, the utility seeks to earn a return on its investment in working capital, along with its investment in the physical plant and equipment used to provide utility services. The utility generally accomplishes this feat by including specific portions of its working capital in the proposed rate base - particularly materials and supplies inventories, but also general catchall items labeled working capital or cash working capital.

Up to a point, the request to include working capital in the rate base is logical. In general, the rate base is an index of the capital which the firm has invested in providing utility services. This capital investment is measured in the rate base from the viewpoint of the specific uses of the capital; for example, plant and equipment. The non-working capital portions of the rate base are derived from the left (asset) side of the utility's balance sheet, which reflects the uses of the firm's capital. As long as the rate base contains net plant in service (which it invariably does) , most of the utility's assets will be included in the rate base. Nevertheless, unless there is some type of working capital in the rate base, not all of the firm's assets will be included; thus, the company will not receive a return on these excluded assets.

At first glance, the rate base should include far more than just net plant in service; it should contain all of the items on the asset side of the balance sheet which should receive a return in the rate case. In most cases, however, a portion of the liability side of the balance sheet contains certain non-investor sources of capital, which generally have a zero cost associated with them. It would be reasonable to permit the utility to earn a return on the assets which are supported by these cost-free capital sources.

#### Non-investor Capital Sources which Help to Support the Utility's Investment

Frequently, these non-investor capital sources fall into two categories. First, customers may contribute capital in the form of deferred taxes: the utility charges them for income tax expenses which have not actually been paid and may never be paid. The capital from this discrepancy between the taxes reimbursed by the customers and the actual taxes paid collects on the utility's balance sheet in the form of accumulated deferred taxes and investment tax credits. These accumulated deferred taxes and investment tax credits appear on the right side of the balance sheet, along with the investor--supplied equity and debt capital.

Since its customers supply the deferred taxes and tax credits without cost, the utility should not logically be allowed to earn a return on the portion of its investment which is

supported by this cost-free capital. Generally speaking, the proper adjustment can be achieved either by subtracting the deferred taxes and tax credits from the rate base, or by keeping them in the rate base and making an appropriate downward adjustment in the allowed rate of return.

The second major non-investor source of capital also appears on the right side of the utility's balance sheet. Usually called "miscellaneous current and accrued liabilities," this category includes items like accounts payable and accrued taxes payable.

#### Why Accrued Taxes Payable are Considered Capital sources

Accounts payable represent the dollar amount of goods and services which the firm has obtained but not yet paid for. Accrued taxes payable are directly analogous to accounts payable, except that they indicate the firm has not yet paid its taxes, rather than goods and services. Until the taxes are actually paid, the firm has the use of the money owed to the taxing authorities, and it can employ these funds to support its investment in the various items on the asset side of the balance sheet.

For ratemaking purposes, these capital sources should be considered cost-free, because the utility is not required to pay a return for their use. To the extent that there is any minor incidental cost associated with these capital sources, the cost is already included in the ratemaking formula. For instance, the cost of using trade credit (accounts payable) is built into the price of the goods and services purchased. Similarly, some taxing authorities have established discounts or penalties to encourage early payment of taxes. If a firm delays tax payments and benefits from the accrued taxes' capital source for a longer period, the cost of foregone discounts is already included in the test-year tax expense. Accordingly, the firm is not entitled to additional compensation for the cost of this capital: it should be considered cost-free.

#### The Consideration of Cost-Free Capital Sources in the Determination of the Utility's Revenue requirement

Since the rate base is used in conjunction with the rate of return in calculating the utility's income requirements, the rate base and the rate of return must be calculated consistently. Typically, the rate of return is based only upon certain specific sources of capital, like debt and equity. All cost-free sources of capital, such as accounts payable and accrued taxes, are excluded. Consequently, the rate base should not be derived solely from the left side of the balance sheet, with no consideration of the relevant portions of the right side of the balance sheet. Unless the cost-free capital items not included in the allowed rate of return are subtracted from the rate base, illogical or inaccurate results will inevitably occur.

In other words, the benefits of the various cost-free capital sources must be recognized in the ratemaking process. Otherwise, the utility's stockholders will be allowed to earn an excessive return.

#### A More Appropriate Method of Recognizing this Cost-Free Capital in the Determination of the Revenue Requirement

There are three suitable approaches which produce the same revenue requirement, assuming that the methods are correctly applied. First, the rate base can be reduced by the

amount of cost-free capital, either by lowering the amount of gross working capital in the rate base, or by including a separate negative component of the rate base for these cost-free items. This method is perhaps the most common solution.

Second, the rate-base can be calculated from the right (liability) side of the balance sheet rather than the left side. Only the capital sources requiring a return (equity and debt) are included in the calculations. Of course, it is necessary to subtract the portion of these capital amounts which supports non-utility or nonjurisdictional investments.

Finally, the allowed rate of return can be adjusted slightly downward to recognize the benefits of the cost-free capital which is not subtracted from the rate base.

Obviously, any of these three methods can produce incorrect results, if the calculations are not correct. In the first method, it is crucial that the amount of working capital in the rate base be calculated accurately. In the second method, it is essential to exclude the capital which supports those investments not properly included in the rate case. In the third method, it is necessary to reduce the fair rate of return in accordance with the full amount of cost-free capital, not just a portion.