Capital Employed

Investors, analysts, investment bankers, CAs, and financial journalists use different ways to calculate capital employed in the business and it is not a surprise that these different value measures sometimes lead to confusion. What are these different measures of capital employed? Why do they differ and what do they measure? Which one is the best measure of value?

The center to the confusion is definition of capital employed. Normally people consider sum of debt and equity as capital employed in the business and use the sum of the two for calculation of return on capital employed. However, addition of equity and debt may or may not represent the capital employed in the business. Equity (common equity and preference equity) and debt are two major components of capital employed, but they are not the only two components. Debt and equity represent what you *directly* raised from banks or shareholders to invest in business. Then there is non-controlling interest that needs to be added in capital employed calculation. Non-controlling interest represents the capital in the subsidiary companies that was invested by someone other than the parent company. In other words it represents the shareholders fund of the subsidiary company, which was invested by a third party. The definition of capital employed states the total capital invested in the business. Hence non-controlling interest will form part of capital employed.

Debt Equivalents: And in a business, there are always some indirect ways of raising money. Lets call these indirect ways collectively as 'Debt Equivalents' / 'Non-Common Equity Claims'. *Non-common equity claims primarily represent those accounts, which need to be adjusted as they are in nature of debt. Such accounts include a few liabilities in balance sheet and a few off balance-sheet items.* The two most common items include shortfall of pension/retirement obligations and operating leases.

Pension/Retirement Obligations: Companies normally promise retirement benefits to their employees and report such obligations with respect to the pension and other post retirement benefits in the statement of financial position (balance sheet) and in notes to accounts or MD&A section. These obligations represent money belonging the employees but used in the business. Companies normally deposit the money to be paid to the employees in future in form of retirement obligations in certain legally defined assets. Any such shortfall appears in balance sheet in liabilities section. Such obligations must be considered as debt equivalent as they represent the amount that was required in business and was sourced from employees' share of pensions/gratuity/retirement obligations rather than sourcing the money from shareholders in form of issuing more equity or from bank as a loan. Hence it must be added in calculation of capital employed.

Implicit Capital Lease: Another example of debt equivalents is Implicit capital leases i.e. converting operating leases into capital leases. These represent the most common form of off-balance sheet debt. When a company borrows money to purchase an asset, that asset and debt are recorded on the company's statement of financial position, and interest and depreciation are charged in income statement to determine the profits. If however, a company takes an asset on lease and treat it as operating lease, it need not record either an asset or a liability in statement of financial position. Instead, it records the asset's rental charge as an expense in the income statement and reports future commitments in the notes. *(Such clever use of existing accounting rules has allowed companies to keep many assets and their corresponding debts "off balance sheet.")* Therefore, a company that chooses to lease its assets (operating lease) will have artificially low operating profits (because of rental expenses) and artificially high capital productivity (because the assets do not appear on the lessee's statement of financial position). This results in an increase in return on invested capital, because the reduction in operating profit by rental expense is typically smaller than the reduction in invested capital caused by omitting assets. The result is especially dramatic for profitable companies that lease a substantial portion of their fixed assets, as is typical of retailers, hospitals and airlines.

For an apple-to-apple comparison, the implicit value of operating lease is treated as an operating asset, with a corresponding debt recorded as a financing item (debt equivalent).

Otherwise, companies taking assets on operating lease will have lower assets in its statement of financial position.

Normally the value of implicit capital lease is not given in the company reports. One can calculate it using the standard approach of Moody's Corporation:

= Rental Expense of the year x Capitalization Factor

Rental expense figure is sourced from the notes to accounts or MD&A section from the company report, while capitalization factor is taken as 8x (eight times) based on the research done by Credit Rating Company Moody's Corporation considering the cost of debt and the useful life of assets.

The capitalization factor of 8x is based on 6% interest rate and 15 years of asset life. However, rate of interest and life of asset can vary from country to country and from asset to asset respectively. So, we need to calculate implicit lease value based on asset life and rate of interest for that company.

Implicit Capital Lease Value

Equation A

$$\text{Implicit Capital Lease Value} = \frac{\text{Operating Annual Rental Expense}}{K_d + \frac{1}{\text{Asset Life}}}$$

The Above equation is based on the following equation.

Equation B

$$\text{Rental Expense} = (\text{Asset Value} \times K_d) + \frac{\text{Asset Value}}{\text{Asset Life}}$$

Now if we add all above components, it will still not give us capital employed. The figure derived from the additions will represent total investor funds that are either employed in the business activities/operations or in non-business activities like mutual funds, stock markets etc.

Investor Funds

Common Equity *(Shareholders Fund)*

Add: Preferred Stock

Add: Non-Controlling Interest

Add: Total Debt

Add: Non-Common Equity Claims (Debt Equivalents)

: Underfunded Pension Obligations

: Operating Leases converted to Capital Leases

= Total Investor Funds

Operating invested capital (capital employed) differs from investors fund, as it does not include capital invested in non-operating assets. For example lets say a company raised $100 as equity and $75 as debt, and invested $150 in core operations of business and $25 in marketable securities. In such a case $175 (equity + debt) will be investors funds and $150 ($175 - $25) will be capital invested in business.

Operating Invested Capital

Total Investor Funds *(As calculated above)*

Less: Non-Operating Assets

= Operating Invested Capital

Non-Operating Assets represent the assets which are not contributing any value to the core operations of business, hence should be deducted from investor funds while calculating operating invested capital in business.

Non-Operating Assets

Add: Marketable Securities

Add: Non-Consolidated Investments

Add: Loans to Other Companies

Add: Assets Held for Sale

= Total Non-Operating Assets

If a company has invested some dollars in marketable securities, such securities do not make part of the invested capital, as it represents the cash the company does not need for running its operations and that is invested outside the business operations. Non-consolidated investments represent the investments made by the target company in some other companies in which it held a stake equal to or less than 50% and where proportionate consolidation is not applicable. Such non-consolidated investments should not form part of invested capital, as they don't add any value to the core operations of business. If considered as part of invested capital, it will paint the wrong picture. Therefore, such investments should be separated from invested capital to analyse the core operations of the business. Loans by the target company to other companies are considered as non-operating as they don't contribute in operations of the company. Book value of such loans is used for invested capital calculation purposes. Assets held for sale or disposals are often on account of discontinued operations or restructuring activities in the business. Such assets are reported separately in the Balance Sheet. As they represent the assets no longer required in business, they should not form part of capital invested in the business. Hence, deducted in calculation of invested capital.

Hence, capital employed is not just the sum of shareholders' fund and debt. When it comes to which value estimate is the best, I am an agnostic and I think each one carries some important information to investors. Addition of common equity, preference equity, non-controlling interest and debt represents the money directly raised from outside sources by the company. Adding indirect capital invested (pension obligations, converted capital leases etc.) represent the total investor funds. And if we take out the non-operating assets out of investors' funds it represents the capital invested/employed in the operations of business.

Capital Employed / Invested in Business Operations

Common Equity *(Shareholders Fund)*

Add: Preferred Stock

Add: Non-Controlling Interest

Add: Total Debt

Add: Non-Common Equity Claims (Debt Equivalents)

: Underfunded Pension Obligations

: Operating Leases converted to Capital Leases

= Total Investor Funds

Less: Non-Operating Assets

: Marketable Securities

: Non-Consolidated Investments

: Loans to Other Companies

: Assets Held for Sale

= Capital Employed / Invested in Business Operations