



Benchmarking: Financial Indicators

A Simpson

Cost Allocation for Services



Some utilities provide other services beside electricity supply. To determine the true state of financial performance with regard to electricity supply, revenues and costs must be allocated between the services.



Others services may include water, sewerage and fuel.



It is best that a consultant be engaged to recommend a formula for allocating costs between the services.

Nauru Example:

• Corporate Expenses

- Admin, CEO, HR, Finance, Corporate Services, Procurement, etc.

Direct Electricity Expenses

Direct Water Expenses

Allocation Factor

$$= \frac{1}{3} \left(\frac{\text{Total Income Electricity}}{\text{Total Income Electricity} + \text{Total Income Water}} + \frac{\text{Total Direct Staff Cost for electricity}}{\text{Total Direct Staff Cost for electricity} + \text{Total Direct Staff Cost for Water}} + \frac{\text{Total Electricity Asset value}}{\text{Total Electricity Asset value} + \text{Total Water asset value}} \right)$$

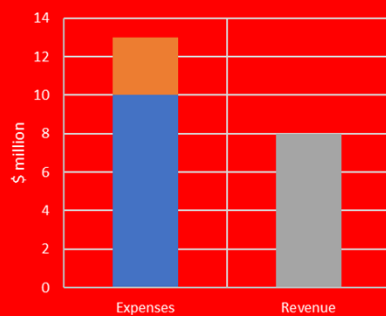
Electricity/ Water

85% / 15%

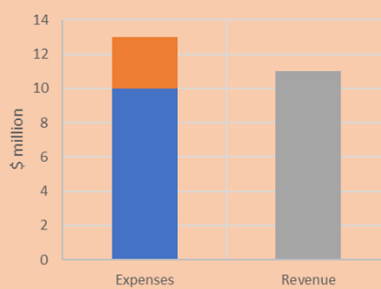
112. Operating Ratio

$$\text{OR \%} = \frac{(\text{Operating Expenses} + \text{depreciation Expenses})}{\text{Revenue}} \times 100$$

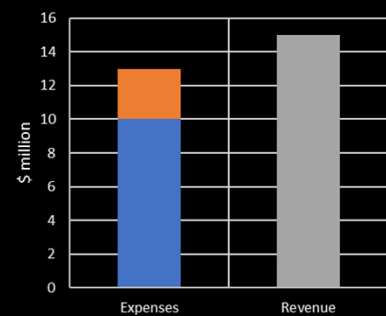
Operating Ratio: Financial Loss



Operating Ratio: Operational Expenses Fully Covered



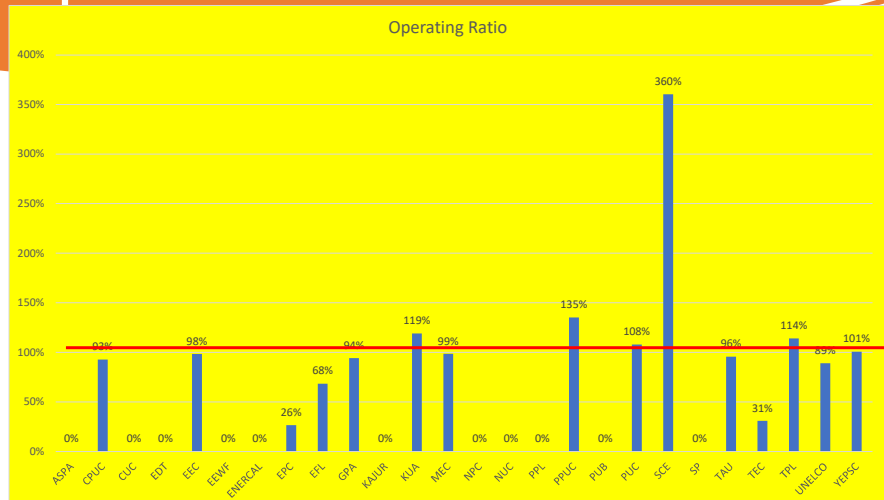
Operating Ratio: Financial Profit



Operating Ratio

$$OR \% = \frac{(Operating\ Expenses + depreciation\ Expenses)}{Revenue} \times 100$$

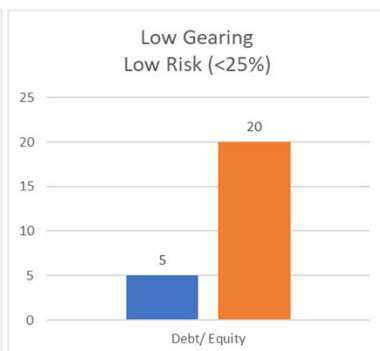
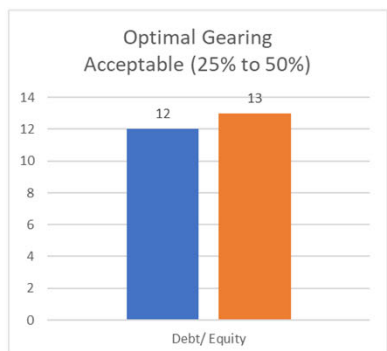
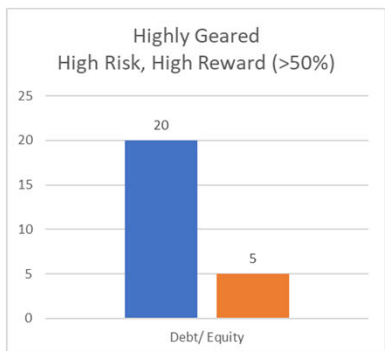
1. EPC did not provide operating expenses
2. Above the Breakeven line is PPUC, KUA, TPL, PUC, YEPSC



113. Debt to Equity (Gearing) Ratio

$$D/E = \frac{(Non-current\ Liability + Current\ Liability + Bank\ Overdraft\ [Total\ Debt])}{Total\ Debt + Equity}$$

$$D/E = \frac{Total\ Debt}{Total\ Debt + Equity} \times 100\%$$

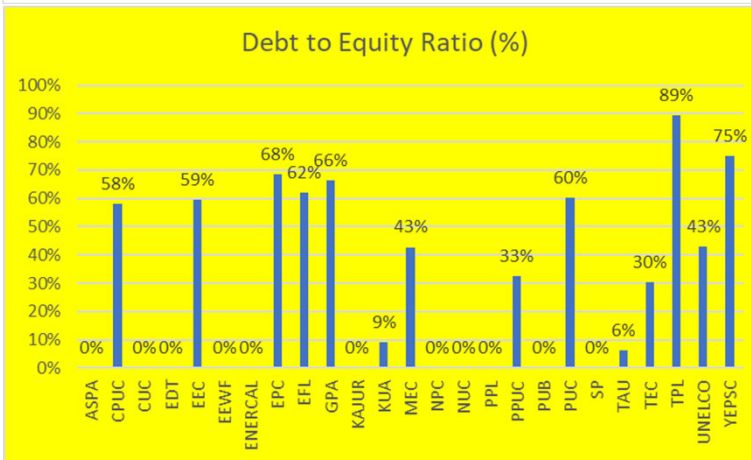


Debt to Equity (Gearing) Ratio

$$D/E = \frac{(Non-current Liability + Current Liability + Bank Overdraft (Total Debt))}{Total Debt + Equity}$$

=

$$D/E = \frac{Total Debt}{Total Debt + Equity} \times 100 \%$$



114. Rate of Return on Assets

$$ROA = \frac{EBIT \times 100}{Non Current Assets}$$

Returns subject to the industry. For power utilities a very high return or low return is not recommended



Over 10% is great
but may be excessive



5% to 10% is good

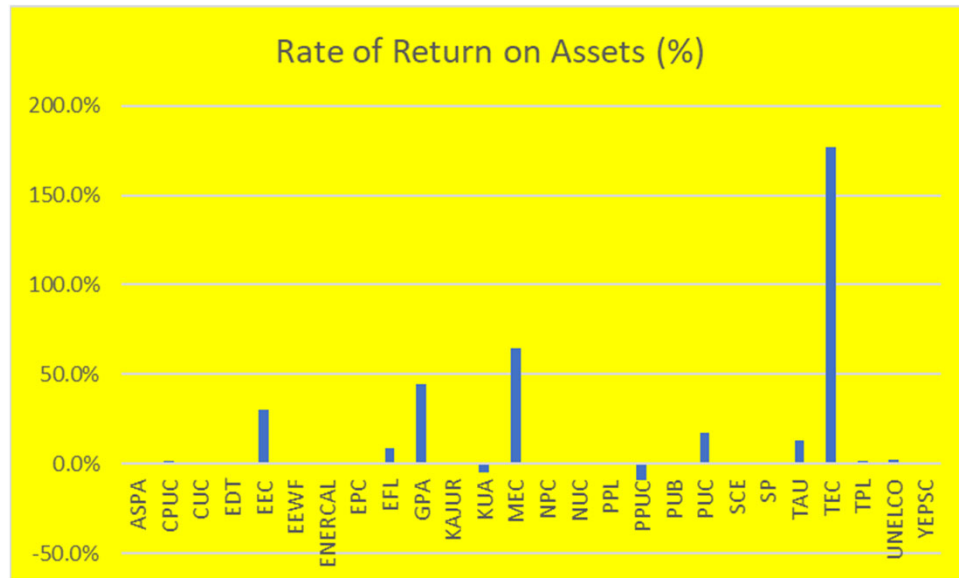


Below 5%
concerning



Below 0%
undesirable.

Rate of Return on Assets



Return on Equity

$$ROE = \frac{PAT \times 100}{Equity (Net Assets)}$$

The greater ROE the more shareholders benefit at the expense of customers.

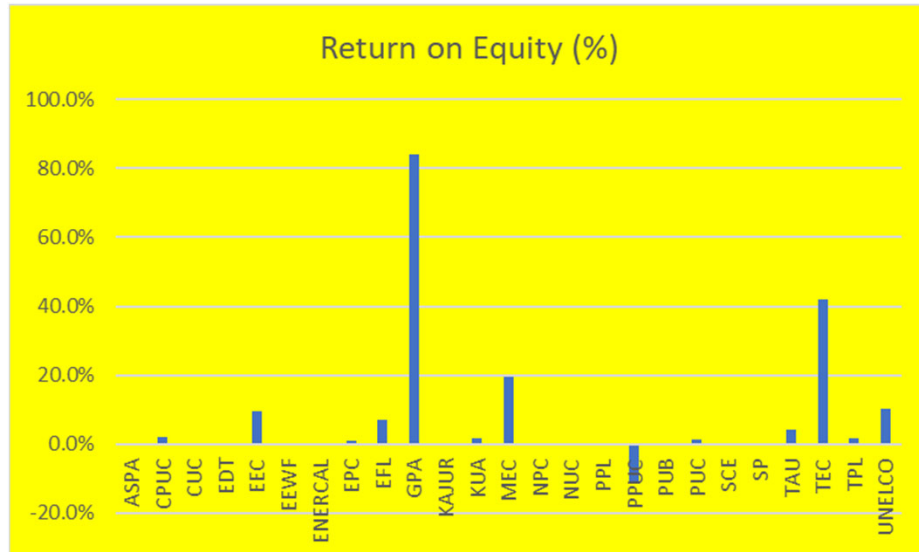
Again an accepted level to all stakeholders is required

Government owned utilities may consider ROE less important than service performance and economic impact.

5% to 10% acceptable.

Below 5% would be worrying

Return on Equity



Current Ratio

$$CR \% = \frac{\text{Current Assets} \times 100}{\text{Current Liability}}$$



Measures the ability of the utility to pay its short-term liabilities

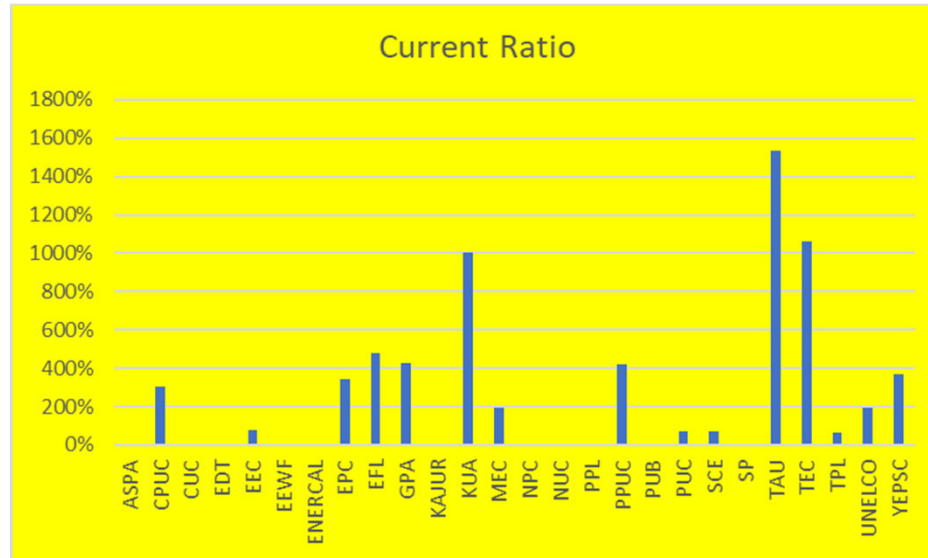


To understand the indicator needs to look at the industry



Good current ratio would generally be between 1.5 to 3.

Current Ratio



Debtors Days

$$DD = \frac{\text{Receivables} \times 365}{\text{Operating Revenue}}$$



Receivables are debts owed to a company by its customers.

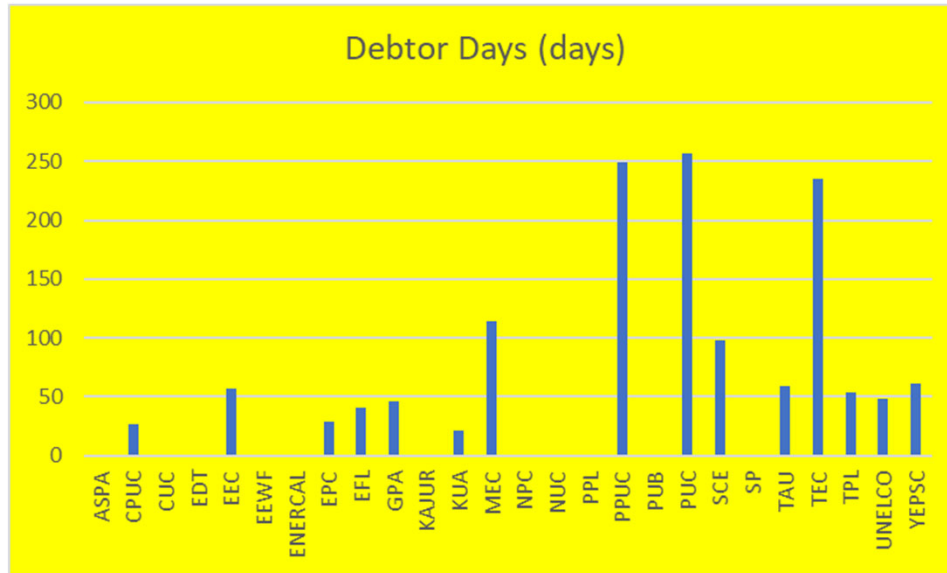


Measure of how quickly customers are paying their bills.



The lower the better.

Debtors Days



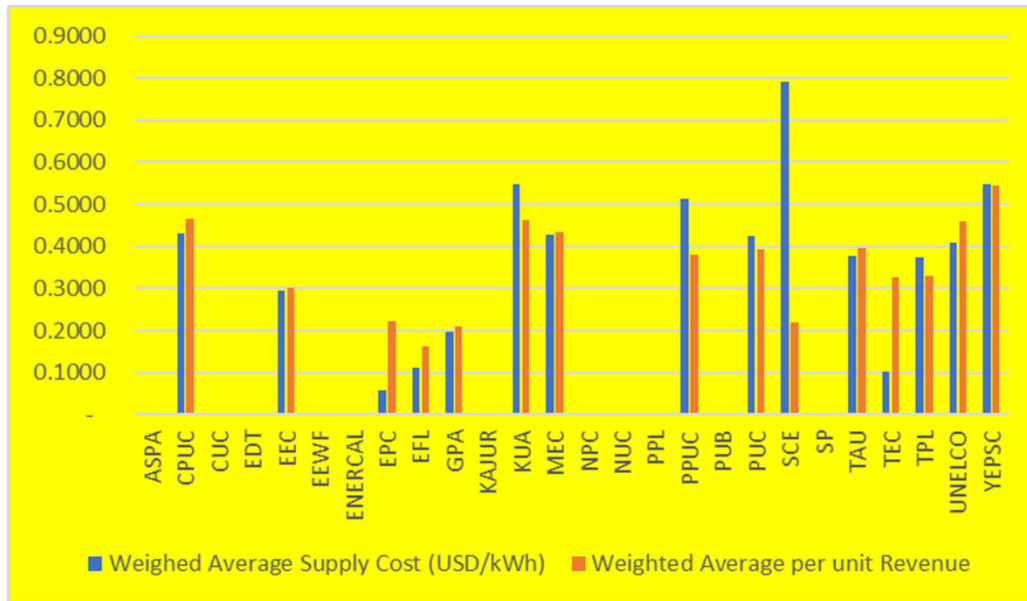
Weighted Average Supply Costs

$$WASC = \frac{\text{Total Electricity Expenditure (\$)}}{\text{Total Energy Sales (kWh)}} \text{ \$/kwh}$$

$$WAR = \frac{\text{Total Electricity Revenue (\$)}}{\text{Total Energy Sales (kWh)}} \text{ \$/kwh}$$

- The weighted average cost of producing a unit of energy for sale
- The weighted average revenue derived from the sales of electricity

Weighted Average Supply Costs & Revenue



Fuel & Lubricating Oil Expenditure

$$\text{F\&LOE} = \frac{\text{Expenditure for fuel \& lubricating oil}}{\text{Total Expenditure}} \times 100 \%$$

Generation Operations & Maintenance Expenditure

$$\text{Gen. O\&M} = \frac{\text{Expenditure for O\&M Gen.}}{\text{Total Expenditure}} \times 100 \%$$

- Includes expenditure for the operation and maintenance of a generating unit such as parts, equipment & consumables excluding fuel and lubricating oil.

Generation Labour Expenditure

$$\text{Gen Lab.} = \frac{\text{Expenditure for Gen. Labour}}{\text{Total Expenditure}} \times 100 \%$$

- Includes all labour expenses including salaries, overtime, training, leaves, staff benefits, etc.

Generation Depreciation Expenditure

$$\text{Gen Dep.} = \frac{\text{Depreciation of Generating Assets}}{\text{Total Expenditure}} \times 100 \%$$

- Annual Depreciation expenses for all generating assets.

Transmission and Distribution Operations & Maintenance Expenditure

$$\text{T\&D O\&M} = \frac{\text{Expenditure for O\&M T\&D}}{\text{Total Expenditure}} \times 100 \%$$

- Includes expenditure for the operation and maintenance of a Transmission & Distribution lines and equipments.

Transmission & Distribution Labour Expenditure

$$\text{T\&D Lab.} = \frac{\text{Expenditure for T\&D Labour}}{\text{Total Expenditure}} \times 100 \%$$

- Includes all labour expenses including salaries, overtime, training, leaves, staff benefits, etc.

Transmission & Distribution Depreciation Expenditure

$$\text{Gen Dep.} = \frac{\text{Depreciation of T\&D Assets}}{\text{Total Expenditure}} \times 100 \%$$

- Annual Depreciation expenses for all transmission and distribution assets.

Corporate (Others) Expenditure

$$\text{Corp. Exp.} = \frac{\text{Corporate Expenses}}{\text{Total Expenditure}} \times 100 \%$$

- Include all CEO office, HR, Finance, ICT and other expenses.

