BWR's Approach to Financial Ratios

Executive Summary:

A credit rating assigned by Brickwork Ratings (BWR) is an opinion on the relative credit profile of the rated entity or its debt instruments. Financial ratio analysis is one of the most powerful indicators of an entity's financial position. Financial ratio analysis is undertaken not only based on the past and latest financials to understand the point-in-time analysis but also use the projected financial wherever applicable to understand the potential risk.

Risk assessment is broadly classified within BWR's rating criteria into -Business risk, Industry risk, Regulatory risk and Financial risk.

BWR uses a range of sector-specific ratios, as available in various sector-specific rating criteria and the BWR analytical approach. These sector- specific ratios also help spot emerging risks and trends in the business or industry.

Scope :

The financial ratio covered in the criteria is for non-financial sectors and is primarily used in case of the manufacturing companies, infrastructure, services, real estate, construction sector etc. with sector specific ratios added as per the sector specific criteria. This document gives an overview of some of the critical ratios that BWR generally employs to understand the overall financial risk profile and evaluation of the credit quality of a company. Some of the ratios may play a critical role under some circumstances. As such, the importance of ratio analysis may vary on a case- to-case basis.

The various financial ratios considered in this document have been divided into four categories viz., solvency, profitability, liquidity and activity.
The ratio analysis broadly helps understand the following:

1. Solvency ratios: Ability to meet its debt obligations
2. Profitability ratios: Ability to manage expenses to produce profits from sales
3. Liquidity ratios: Ability to meet short-term immediate obligations and liquidity
4. Activity ratios: Measures the efficiency of operations (activity ratios)

Solvency Ratio

Significance:

Solvency ratios helps to understand entity's capital structure of (in terms of debt and equity mix). These ratios measure an entity's ability to meet its debt obligations and the dependency on borrowings. The lower the debt or dependency on borrowings, the better the leverage position.

Although higher borrowings may result in higher returns on a shareholder's fund or capital, it may be seen as negative from a credit perspective; it increases the additional burden of the interest cost and leads to an increase in default risk. An entity with a lower debt or leverage position is better equipped to withstand the market during a downturn economy or competitive challenges. By assessing the solvency of an entity, its future cash flow is ascertained, to assess its capacity to stay afloat.

The various ratios which are used to analyse the solvency of an entity (refer to table 1)

1. **Capital structure - Gearing or Debt to Equity Ratio**

   Gearing simply refers to financial leverage It is a ratio of the total borrowings of the company to shareholders' funds. The company's capital structure provides an insight into the capital employed, including equity invested by the promoters and accumulated profits over the years, as against the company's overall debt profile. The higher the debt is, the higher will be the financial risk faced by the entity in the case of an economic downturn. Typically, an entity employing a higher level of debt as part of the capital structure will have higher cash outflows to service interest on the borrowed capital.

   BWR ascertains debt-equity or gearing as a ratio of the total debt to tangible net worth. In total debt, BWR includes secured loans, unsecured loans (both long- and short-term), subordinated debt, redeemable preference shares, optionally convertible debentures. Appropriate adjustments in case required are made to the contingent liabilities, off-balance-sheet items, factored receivables, guarantees, derivatives and pension liabilities while calculating the gearing.

   A company's tangible net worth (TNW) is assessed by analysing the reported net worth figure, which includes the paid-up equity capital and reserves and surplus. The revaluation reserves and miscellaneous expenditures not written-off are deducted from the reported net worth to calculate tangible net worth. Hybrid instruments are assessed to form an opinion as to whether they exhibit equity-like or debt-like characteristics.

   A consistent increase in the net worth indicates good financial health; conversely, net worth may be depleted by annual operating losses or a substantial decrease in asset values relative to liabilities. The higher the net worth, the higher is the company's ability to withstand changes in the economic and competitive environment.

2. **Interest Service Coverage Ratio**

Interest coverage is used to assess the number of times a company can meet its finance charges from the surpluses generated from its operations. It is a ratio of operating profits to gross interest expense. This ratio is a basic indicator of the entity's ability to service interest on borrowings through its operations. A higher value of the ratio is considered positive since higher ISCR provides a financial cushion and relatively better interest serviceability.

3. **Debt Service Coverage Ratio (DSCR)**

The debt service coverage ratio takes into account the scheduled repayments of debt by the company. It is the ability of the company to service its debt obligations, both principal and interest, through operating earnings.

A ratio of more than 1.0x refers to the company's ability to meet its debt obligation from its internal cash accrual or cash generation, but less than 1.0x implies stress on its financials and debt repayment capabilities. However, BWR considers that sometimes, low DSCRs may not necessarily mean financial distress since that could be offset by the company's ability to replace its existing debt with fresh funds.

4. **Debt to EBITDA (Leverage Ratio)**

Debt to EBITDA is also one of the measures of a company's ability to meet debt obligations. This ratio is useful in determining how many years of EBITDA would be required to pay-back all of the company's borrowing. The ratio varies from industry to industry; typically a ratio of over 3.0x would be considered high for a company. Moderately higher leverage is acceptable for a company that has a high degree of certainty in its cash flows.

Table 1

Ratio	Method of Computation
Gearing Ratio	$\frac{Total\ Debt}{Tangible\ Net-worth}$
Interest Service Coverage Ratio	$\frac{EBITDA}{Interest\ \&\ Finance\ Charges}$
Debt Service Coverage Ratio	$\frac{\text{Net Operating Income}}{Int.+Principal\ Repayment}$
Debt to EBIDTA Ratio (Calculated both for Total and Net Debt)	$\frac{Total\ Debt/Net\ Debt}{EBIDTA}$

Profitability **Ratios:**

Significance:

Profit margins are good indicators of a company's fundamental health, competitive position and ability to sustain its cash accruals. A company that has been consistently making losses or witnessing decline in its margins and returns, coupled with bleak industry prospects, cannot be expected to maintain the same level creditworthy for long. A consistent track record of higher profitability reflects the company's strong competitive and market position, higher cost efficiencies, and pricing power based on the brand value/integrated nature of operations. Thus, in the overall analysis, profitability analysis is coupled with industry and business analysis to form an opinion on the sustainability of the business.

The various ratios which are used to analyse an entity's profitability are discussed below (refer to table 2)

1. **Net Profit Margin**

   This ratio is a measure of the company's ability to generate earnings that can be ploughed back into the business. It is a function of the company's competitive positioning within the industry, its brand positioning, value addition and the industry's overall profitability. However, since the Net Profit Margin also includes income from non-operating income or expenditure sources, the real operational efficiency of the entity cannot be determined. Hence, BWR also considers Operating Profit Margins (OPM) as a measure of the company's operating efficiency and pricing power for its products. Needless to say, the entities having both Net Profit and Operating Margins high show an ability to improve revenues while being able to keep the costs under control and hence have a positive impact on the rating view.

2. **Return on Capital Employed**

   The return on capital employed indicates the ability of a company's management to generate returns for both debt holders and equity holders. It is a measure of efficiency as against the total capital employed. The higher the ratio is, the more efficiently the capital is being utilised by the company to generate returns. The RoCE, like the PAT margin, is a function of the industry that the company operates in and its competitive positioning. Even if operating margins are low, the RoCE is an important metric for understanding how well the capital are used towards profit generation

3. **Net Cash Accruals (NCA) to Total Debt**

   The company's current year debt obligation is to be paid out of the cash that the company generates. This ratio indicates the amount of cash being generated as a proportion of the total debt that the company currently has on its books. This ratio clearly indicates the burden of debt on the cash flows of the entity. Higher rated entities tend to have a higher numerical value of this ratio since highly profitable entities are likely to generate sufficient cash accruals.

Table 2

Ratio	Method of Computation
Net Profit Margin	$\frac{Profit\ after\ Tax}{Total\ OPerating\ Income}$
Return on Capital Employed	$\frac{EBIT}{Average\ Capital\ Employed}$
Net Cash Accruals/ Total Debt	$\frac{PAT + Dep. - Dividend}{Total\ Debt}$

Liquidity Ratios:

Significance:

The leverage and profitability indicators give an insight into the long-term growth fundamentals of an organisation. However, in order to take care of the short-term cash/Debt obligations from various internal or external resources, it is imperative for an organisation to have a healthy liquidity ratio. Internal resources include cash generated from operations, unencumbered cash and cash equivalents, external resources include various funds available, such as unutilised bank limits, short-term debt, corporate loans etc.

The following ratios (refer to Table 3) are used by BWR to assess the liquidity position of an entity:

1. **Current Ratio**
   Current ratio indicates an entity's liquidity position and working capital situation. A current ratio greater than 1.0x (one) indicates that the company's liquid assets are enough to cover its short-term liabilities. A company's current ratio is seen in line with the industry average. If the current ratio is lower than the industry average, it is an indicator of a higher risk of default. On the other hand, if the current ratio is higher than the industry average, it means the organisation is not using its assets efficiently.

2. **Quick Ratio**
   It indicates the ability of an organisation to meet its short-term obligations with its most liquid assets, and therefore excludes inventories from its current assets. The higher the ratio, the better is its ability to take care of its current liabilities.

3. **Working Capital Cycle**
   It is an indicator of the amount of time taken for a company to convert its net current assets, such as receivable and inventory, into cash. The longer it takes to convert into cash, the greater the working capital funding requirements will be, and vice-versa. Companies with a lower working capital cycle will have a strong liquidity profile as they are able to convert cash at a much faster pace. A higher working capital requirement would result in additional borrowing for the company and result in higher inventories/days receivables. It is also reflective of stressed liquidity. While some businesses may have an intrinsically high working capital cycle due to its nature of operations, a sudden and sharp increase in the working capital cycle could be a sign of stress building up within the company liquidity issues in the company.

Table 3

Ratio	Method of Computation
Current Ratio	$\frac{Current\ Assets}{Current\ Liabilities}$
Quick Ratio	$\frac{Total\ Current\ Assets - Total\ Inventories}{Total\ Current\ Liabilities}$
Working Capital Cycle	Debtor days + Inventory Days – Payable Days

Activity Ratio:

Significance:

The activity ratio indicates how efficiently a company is generating revenues and cash by leveraging its assets on the balance sheet. These ratios could be used to differentiate companies from the same sector and compared with the industry average. Additionally, the activity ratio can be used to track a company's performance over time and compare the efficiency of operation against its peers.

The following ratios (refer to Table 4) are used by BWR to assess the efficiency of operations of an entity:

1. **Receivable Days**

   The receivable days measure how efficiently / quickly a company can manage its credit sales and convert its account receivables into cash. Low receivables days signals that a company is able to convert its receivables into cash very quickly. Thus the entity is able to churn its working capital effectively.

2. **Payable Days**

   Payables turnover measures how quickly a company is paying off its accounts payable to creditors. A low payables days can indicate that a company is paying creditors fast or it is able to take advantage of early payment discounts. This also indicates that there are no apparent liquidity issues and hence looked at positively.

Table 4

Ratio	Method of Computation
Receivables Days	$\frac{\textit{Trade Receivables}*365}{\textit{Net Sales}}$
Payable Days	$\frac{\textit{Trade Payable} * 365}{\textit{Cost of Goods Sold}}$

Conclusion:

The document covers the broad financial ratios used by BWR to assess the financial risks to which an entity is exposed to meet its debt obligation in a timely manner. Each of the financial ratios captures the various aspects of financial risk, and therefore, an individual ratio cannot be reflective of an entity's financial position. In addition to the above ratios, even for determining financial risk, BWR takes into account subjective factors such as Financial Flexibility, Debt Service Track record and Accounting Quality to better appreciate the actual financial risk beyond the numbers. It is to be noted that BWR analyses other financial indicators also, which give more insight into the financial performance of the entity to be rated. However, only the major indicators have been mentioned in the document.

Furthermore, financial risk is an important factor to identify an entity's credit worthiness, but it alone cannot be a driver for the rating of the entity. The document, however, does not take into account the industry-specific factors along with the impact of various business, industry and management risks on the firm's credit quality.

The previous version of this document can be found in https://www.brickworkratings.com/download/Criteria-FinancialRatios_Prev

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