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. In general, risk assessment is broadly classified within BWR's rating criteria into business risks, industry risks, regulatory risks, financial risks, liquidity position, financial flexibility and management risks. Financial ratios are used to understand the entity's financial risk profile. Financial ratio analysis is one of the most powerful indicators of an entity's financial position. This document provides a detailed explanation and the definition of key financial ratios that are commonly used in the rating process. Financial risk is undertaken not only based on the past and latest financials to understand the point-in-time analysis, but also factors through the cycle approach, wherein it uses projected financials. BWR considers the company's present and past financial track record and also uses projected or future financials to assess the entity's financial risk profile. In addition, 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 trends in the business or industry. This sector-specific analysis also helps compare an entity's financial performance with its competitors in the same industry.

Financial ratios are one of the key parameters that BWR uses to assess a company's financial risk profile. Financial risk, along with an assessment of business risk, management risk, industry risk, project risk, operating efficiency and financial flexibility, is used to assess a company's overall creditworthiness. The ratio analysis broadly helps understand the following:

1. Ability to meet its debt obligations (solvency ratios)
2. Ability to manage expenses to produce profits from sales (profitability ratios),
3. Ability to meet short-term immediate obligations and liquidity profile (liquidity ratios),
4. Effectiveness in putting its asset investment to use (activity ratios)

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.

Solvency Ratio:

An entity's capital structure consists of a mix of debt and equity. Solvency ratios give a measure of 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. It is also an indicator of an entity's dependence

on borrowings. 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. Following ratios are used to analyse the solvency of an entity:

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

   Gearing 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. An optimum mix of debt and equity in the funding mix is important to add maximum value to the company by keeping the cost of capital low. Since the credit rating assesses the probability of the servicing of a company's debt obligation, a high debt-equity ratio would translate into higher financial risk.

   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 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 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. They are then appropriately classified as equity or debt. Hybrid instruments (carrying equity features) would include convertible preference shares, optionally convertible debt, compulsorily convertible debt and Foreign Currency Convertible Bonds (FCCBs), besides any other instrument with both debt- and equity-like features.

   Deferred tax liabilities are excluded from the calculations of tangible net worth. These represent the timing difference in tax on book profits and on profits computed under the Income Tax Act, which is expected to reverse eventually. Therefore, it is considered an outside liability.

2. **Tangible Net worth**

   Net worth is the amount by which assets exceed liabilities. It represents the shareholders' fund, which does not have servicing obligations or repayments. The net worth is a key measure of an entity's worth. 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. Net worth is also known as book value or shareholders' equity.

   Tangible net worth (TNW) is most commonly a calculation of a company's net worth that excludes any value derived from intangible assets such as copyrights, patents, intellectual property and goodwill. Tangible net worth is a simple calculation of a company's total tangible assets minus the company's total liabilities.

BWR believes the net worth is a true reflection of a company's size and is hence, considered an important parameter in the analysis. The higher the net worth, the higher is the company's ability to withstand changes in the economic and competitive environment. Hence, an entity with a large size (high net worth) is less likely to default as compared to a small entity. BWR calculates the adjusted TNW on consolidated basis, after adjusting investments in group companies and affiliates.

3. 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. A higher ISCR is considered positive, although it may vary from one industry to another. The ISCR is an important indicator, especially for creditors, as it gives them assurance that the company will be able to pay its interest on time. Finance charges include the total interest payable by the company, bank guarantee commission and any other finance charges. An entity with an interest cover of less than 1.0x would not be able to meet its borrowing cost on time and will be exposed to a high probability of default. Furthermore, a higher ISCR provides a financial cushion against a temporary shortfall in expected revenues.

4. Debt Service Coverage Ratio (DSCR)

While interest coverage focuses on a company's capability of paying interest and other finance charges, the debt service coverage ratio also 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. While calculating the DSCR, BWR takes into account the fact that a part of the operating earnings will be ploughed back into the company's operations prior to the payment of finance charges. This part funding of the company's operations is assumed to be at 25% of the incremental net working capital. The debt payable within one year includes the current portion of long-term debt, i.e., the repayment of debt maturing in the current year and short-term debt obligations excluding debt that is automatically rolled over, such as commercial papers and working capital bank borrowings. 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.

5. 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.

Ratio	Method of Computation
Gearing Ratio	$\frac{Total\ Debt}{Tangible\ Net-worth}$
Tangible Net Worth	Net worth – Intangible Assets
Interest Service Coverage Ratio	$\frac{EBITDA}{Interest\ \&\ Finance\ Charges}$

Debt Service Coverage Ratio	$\frac{PAT + Dep. + Int. - 25\%\ incremental\ NWC}{Int. + Principal\ Repayment}$
Debt To EBITDA Ratio	$\frac{Total\ Debt}{EBITDA}$

Profitability Ratios:

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 remain creditworthy for long. A consistent track record of higher profitability reflects the company's strong competitive and market position, product recognition, pricing power, 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.

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. The Operating Profit Margins (OPM) are also a measure of the company's operating efficiency and pricing power for its products. Furthermore, a high Profit After Tax (PAT) margin shows the company's ability to control its costs. PAT margins can also be used to compare various industries and their profit potential.

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 employed 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 assets 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.

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 Ratio:

While leverage and profitability indicators give an insight into the long-term growth fundamentals of an organisation, they are of no use if the organisation is not equipped to deal with a short-term crisis. To take care of the short-term cash obligations from various internal or external resources, it is imperative for an organisation to have a healthy liquidity ratio. Liquidity measures an entity's ability to meet its short-term obligation from its internal cash generations and external resources, without raising capital. Internal resources include cash generated from operations, unencumbered cash and cash equivalents, and the expected inflow from asset monetisation. External resources include various funds available, such as unutilised bank limits, short-term debt, corporate loans and equity committed. The ratios used by BWR to assess the liquidity position of an entity are as follows:

1. **Current Ratio**

   Current ratio indicates a company's liquidity position. 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 near or most liquid assets, and therefore excludes inventories from its current assets. The higher the ratio is, the better will its ability to take care of its current liabilities be.

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 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 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 liquidity issues in the company.

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:

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 industry's average. Additionally, the activity ratio can be used to track a company's

fiscal progress and business growth over the years.

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. 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 affecting an entity, and an attempt has been made to analyse the creditworthiness of a firm through a general framework. The analysis does not explain 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
www.brickworkratings.com/download/Criteria-FinancialRatios.pdf

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