Development in Financial Ratios in Corporate Borrowing Documentation

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Introduction

Financial ratios are a common method by which financiers gain an insight into and monitor the results and performance of a company and are often used as predictors of deteriorating financial circumstances.

To effectively use ratio analysis for this purpose it is important to look at the trends rather than the specific ratio as it is difficult to identify what is a good figure and what is a bad figure in any particular ratio, as it will depend on at least two factors:

1. What is normal for a particular industry and
2. What are the economic conditions at the time

In the case of certain corporate or project loans, ratios are incorporated by the financier into the loan facility documentation. The use of ratios in these circumstances enables the financier to clearly define the financial parameters within which the company or project is to operate.

When incorporating financial ratios as a condition of the loan arrangements with a borrower the financier must determine and clearly define:

1. The ratios to be applied and the specific items to be combined to form the applicable ratios
2. The numeric parameters that are not to be breached when the ratio is calculated
3. The implications or effect of breaching the parameters set within the loan documentation

The determination and clear definition of relevant ratios for particular customers circumstances is of course the expertise required by the financier and the task of appropriately documenting these requirements, the role of the solicitor.

What types of ratios should be used in loan documentation?

There are many types of ratios and the previous papers in this session will have addressed the most commonly used by corporate lenders.

It is important to note however that the ratios selected for a particular loan must be relevant to the circumstances of the borrower and the particular financing arrangements.

Fundamentally ratios are used to measure an entity's significant financial relationships and fall within the following main categories:

1. **Liquidity and Operational Management Ratios**: which measure the adequacy of an entity's cash resources to meet its short-term cash obligations, as well as the adequacy of management of short-term assets and liabilities.

2. **Long Term debt and solvency ratios:** which examine an entity's capital structure in terms of the mix of its financing sources and the entity's ability to satisfy its longer term debt and investment obligations.

3. **Profitability ratios:** which measure the profitability of the entity relative to its revenues and capital.

Though these categories are often discussed separately, they form part of an interrelated matrix. For example, the degree to which an entity is successful in efficiently employing its assets will have an impact on profitability. This in turn has an impact on liquidity and solvency.
Ratios can also be expressed in a number of different ways. The most common include:

1. Expression as a ratio, for example 3:1
2. Expression as a percentage, for example 25%
3. Expression as a number, for example 2 times, or 24 days

It should be noted that there are often several alternative definitions or suggested methods for calculation of ratios described by the same name. This is usually the result of a particular preference by an author or analyst. It is therefore important for the financier to define the manner in which a particular ratio is to be calculated and not merely rely upon a generic term to describe the relationship intended to be measured.

What are the limitations of ratio analysis?

Size of a business can affect ratio comparisons

Although ratios for one entity may appear directly comparable against ratio data for another entity, such a comparison relies on an important, though often ignored assumption being that the relationship between a ratio's denominator and numerator should be the same irrespective of the size of the entity.

This assumption can cause problems if a financier is setting parameters using ratio data from another customer to apply to a much smaller business. For example, where a business has a high proportion of fixed costs, changes in profits will not be directly proportional to changes in sales. This is because at least part of the entity's cost base should not increase as a result of increased sales volumes. In the presence of fixed costs, profits should grow at a greater rate than sales or vice versa. Often, however, the presence and effect of fixed costs is ignored or not appropriately adjusted for within the context of ratio analysis.

Even where fixed costs are not a significant part of an entity's cost structure, the proportionality assumption can present problems. There is no reason to expect for example, that inventories should grow in direct proportion to growth in sales. This is because as organisations grow they are often able to optimise their inventory holdings, making a lower investment in inventory relative to sales than smaller organisations are forced to.

Thus, when comparing the ratios of dissimilar sized entities, caution should be exercised in interpretation of the ratios. It is often not appropriate to conclude that both entities are performing equally well on the basis that their ratios are the same or very similar to each other. The size of both entities should be considered carefully prior to the formation of conclusions.

Timing issues

The data with which ratios are calculated may not be representative of the underlying economic position and performance of the borrower under review, either because of timing problems, period end "window dressing", or both.

The timing issue has a more profound effect on the statement of financial position than on the statement of financial performance, because the statement of financial performance captures revenues earned and expenses incurred over an entire period, whereas the statement of financial position represents the financial position at one point in time only.

To the extent that the business cycle of a reporting entity is approximately equal to a year, the statement of financial performance should accurately capture the effect of the entire period. However, in industries where the standard operating cycle is longer or in some cases shorter than a year, one year's statement of financial performance may not capture the features of the entire cycle, raising questions about the quality and reliability of ratios calculated using the data.

Furthermore, where ratios are calculated using a combination of data from the statement of financial position and statement of financial performance, additional distortions may arise as data is not being compared with like data as one is a measure at a point in time while the other is a cumulative measure for a period of time.

Period end "window dressing"

Window dressing involves constructing or displaying a more favourable position, usually at the balance sheet date, which is not representative of an entity's usual position. Normally this arises as a result of discretionary choices made by those preparing the entity's financial statements. For example, off balance sheet transactions, particularly temporary off balance sheet transactions entered into at or around each balance date, can have a material and potentially misleading effect on analysis performed on the resulting financial statements.

The purpose of window dressing is to deceive users of financial information when conducting financial analysis.

It is particularly useful to compare comparative financial information disclosed in the current year's financial report with the same information disclosed in the prior year's financial report. Investigating the reasons why entities change the disclosure or groupings of comparative information sometimes provides evidence of window dressing or other issues impacting the current year.

Related party transactions can often reveal window dressing through, for example, special purpose entities (SPEs). Enron's use of SPEs has been the subject of considerable investigation since its collapse. The existence of SPEs was disclosed in the related party notes to the Enron accounts.

Creative Accounting and Potential Accounting Warning Signals

As indicated above, financial ratio analysis is only as good as the information upon which it is based.

To the extent the financier intends to place reliance on data sourced from the borrowers financial statements it is important to understand the potential for creative accounting techniques to be contained within those statements.

The existence of regulatory structures such as the Corporations Act 2001 and applicable Accounting Standards, or mandatory audit, does not preclude the application of creative accounting techniques in all situations. At best, these devices limit the degree to which creative accounting techniques may introduce distortions into the data contained in financial statements.

In certain circumstances you may find Accounting Standards legitimise practices which may have a distorting effect on the quality of information contained in financial statements. For example, there has been significant debate about the degree to which lease Accounting Standards in Australia facilitate an appropriate view of the asset liability structure of reporting entities, given the capacity to structure leasing arrangements so that most lease liabilities remain off balance sheet. Where Accounting Standards remain relatively permissive, or provide a wide range of choice, it may be that comparability and quality suffers as a result.

In addition, there are areas not covered by existing Accounting Standards. The treatment of expenses and liabilities relating to employee options schemes, entitlements of employees in the event of redundancy and reservation of title by suppliers over stock currently falls into this category.

Although there has been an accounting standard governing the treatment of goodwill for an extended period of time, the accounting regulation of other intangible assets is not as comprehensive. There are questions as to the degree to which it is necessary to amortise the value of identifiable intangible assets such as licenses, trademarks, brand names and mastheads. In some other jurisdictions, and according to international Accounting Standards, some form of amortisation (with a consequential negative effect on earnings) is required. It is not general practice in Australia to adopt similar treatment.

When endeavoring to define the application of financial ratios to a particular borrower it is worth considering the following issues, which go to the quality of financial data contained in a set of financial statements. These are several well-known warning signs, which indicate that there may be data quality or manipulation issues for the financier to contend with when reaching conclusions.

1. ***Changes in accounting policy:*** for example, an entity may change some assumptions on which it bases its depreciation calculation. One simple example of this would be a situation where an entity lengthens its estimate of the useful life of depreciable assets. This will normally have the impact of reducing depreciation expense in the short term, and commensurately increasing reported profits and thus earnings per share. This type of change should be disclosed in the notes to the financial statements, normally in a note labeled "statement of significant accounting policies". Particularly when performance has been poor or under threat of downturn, this type of change in policy should be scrutinised carefully.

2. ***Transactions unusual in either their magnitude or nature:*** for example, entities which have had difficulty maintaining earnings from operating activities may engage in asset sales, or asset sale and leaseback agreements, with the effect of boosting apparent profits. This type of transaction does not give rise to a sustainable earnings stream, and should be treated as such. In particular, it may be appropriate to adjust assessed profits to remove the impact of these large or unusual items.

3. ***Unusual variations in the relationship between changes in accounts receivable and changes in sales revenue:*** it is possible that this indicates an artificial ramping up of sales during the final part of the financial period under question. This may simply represent shifting revenues from a future period to the current reporting period. Alternatively, a higher rate of increase in receivables than sales may increase a loosening of credit policy. This may have the effect of increased bad debts charges in future, and may not have been accompanied in the present period by the application of more conservative provisioning.

4. ***Unusual variations in the relationship between inventories and sales:*** where inventories as a proportion of sales build up materially as at the end of one financial year when compared to the relative level of inventory holdings by the entity in previous periods, questions are raised as to changes in levels of demand for the products produced by the entity. There are two possible and conflicting explanations for such a phenomenon. First, the buildup in inventories may be as the result of an optimistic outlook on the part of the entity's management. If so, an unusual buildup of inventory as at the end of a particular financial period may be a signal that management expects to be able to grow sales commensurately in the next financial period. However, where such unusual inventory increases are unplanned, or not accompanied by business conditions favourable to the entity, the buildup is generally a sign of weakness and may indicate potential future liquidity and turnover problems. If too much inventory is held, charges against profit in relation to obsolescence and decline in market value may need to be made. These may materially lower future period earnings.

5. ***Divergence between cash flow from operating activities and operating profit:*** the factor which separates cash flow from operating activities from operating profit is time. Therefore, if not in the short term, certainly over the medium to long term, the magnitude and direction of cash flow from operations should reflect the magnitude and direction of operating profit. Where this is not so, and particularly where cash flow from operations consistently shows the opposite sign to operating profit, the quality and sustainability of the profit number must be closely questioned.

6. ***Participation in significant off balance sheet activities:*** it is possible that significant proportions of an entity's assets and liabilities are not shown on the balance sheet because they are financed and controlled through off balance sheet mechanisms. In Australia, the most common and straightforward of these is to make use of operating lease structures, which result in neither the leased asset nor the lease liability being recognised in the entity's statement of financial position. This will often not reflect the underlying economic substance of the transactions involved, and can lead to significant distortions of the financial statements as a whole. For example, since assets

controlled under operating lease arrangements are not recognised on the entity's balance sheet, no depreciation charge is recorded in relation to them. This has an effect on the apparent profitability of the enterprise, since the revenue and cash flow streams derived from the asset are included in the calculation of profit and loss, though with no matching depreciation expense. (There is however a lease rental expense). In turn, a range of performance and solvency ratios are also affected – for example return on assets and the debt to equity ratio.

7. ***Capitalisation of items normally treated as expenses:*** it is possible under certain conditions to treat expenditures which would normally give rise to expenses in the calculation of profit and loss, as assets. This has the effect of delaying the recognition of expenses to future periods, and boosting current period profitability. In some settings, capitalisation of items, which would normally be treated as expenses, is relatively common. For example, in the case of the construction of major assets, it is common to treat interest costs associated with the financing of the construction as part of the cost base of the asset, rather than as an expense of the period when the interest was incurred. This inflates the asset cost base, resulting in lower subsequent relative profits on resale or higher future depreciation charges. A more conservative accounting technique is to treat the interest cost incurred as an expense of the period with a commensurate reduction in profit for the period. Analysts should pay close attention to the capitalisation versus expense policies adopted by the entities they study.

8. ***Unusual provision account balances and changes in balances***: provisioning for items such as bad and doubtful debts, warranty claims and employee related entitlements could have a significant impact on the profit and loss calculation and the appearance of an entity's statement of financial position. There is a significant discretionary element in the level of provisioning, and hence the level of expense, selected for a particular period. Entities may attempt to shift profits between periods by over or under-provisioning for certain of these items in a given period. In particular, the level of provisioning against bad and doubtful debts as a percentage of both sales and outstanding accounts receivables should be carefully monitored.

9. ***Adoption of unusual asset valuation procedures:*** for example, clinging to historical cost approaches when other industry competitors have adopted market or current value based valuation methodologies. Particularly where the industry in question has undergone a period of adjustment, and impairment of asset values has been a factor implicit in that adjustment, this will be a matter of significance.

10. ***Qualification of accounts:*** where the entity's audit report is qualified, for any reason, a potent warning signal exists. Note however that while not all audit qualifications are malignant in character. They are a potential warning sign indicating that further investigation is appropriate.

Why bother with financial ratio analysis and monitoring when you could just rely on an external rating agency?

The rating agencies provide an in-depth look at a number of aspects of the business including operations, ratio analysis, and economic factors.

Of course, rating agencies must be engaged by the company to undertake this review and if such an approach was to be adopted the requirement for the rating agency's engagement and production of an appropriate report to the financier would need to be documented in the loan.

The limitations of merely building a financiers covenants around a rating agency report relate to the timeliness of receiving the information and the flexibility to define the key ratios and components that are relevant to the financiers particular circumstances.

How should the financier respond to a breach of financial covenants?

The parameters set by the financial ratios are to provide warning signs to trigger a response by the financier.

Such a response may vary from looking more closely at the account, increasing the interest rate or at the other extreme requiring acceleration or repayment of the debt.

When determining the financial ratios and setting the applicable measurements to incorporate into a loan facility the financier should endeavour to set the trigger points at a level which provides every opportunity for the borrower to address the adverse trends before the need arises for the financier to more formally intervene in the borrowers affairs.

The fortunes of corporations will however always be in the hands of its management. As we have seen in a number of recent corporate collapses management will determine the ongoing viability and future of most organisations despite concerns expressed by observers during the process.

A financier therefore needs to be vigilant in relation to identifying adverse trends with borrowers at an early stage and thus enhance the opportunities to manage the risks associated with its facilities. Carefully defined and relevant financial ratios are an effective tool to assist in this process.