

**MGT 419**

**Corporate Risk Evaluation Checklist**

This checklist will assist you in the evaluation of the credit risk embedded in the securities, borrowings or financial contracts issued by a particular corporation.

The checklist provides a structured approach to the analysis of the risk. It outlines a methodology for prioritizing the key risks on which the overall risk assessment will rest.

**1) Review Procedure:**

This section outlines the types of information you should review in analyzing the credit risk of a corporation.

As you go through the steps in this procedure, you should take notes on any risks of significance that you notice. Avoid excessive note-taking – focus only on material issues.

The order in which you do your analysis is important to ensure you read the most reliable information first.

- i) Annual Report:** Look at the Company's description of what it does and the markets it serves. Once you have done this, read no further. You will turn to management's views at a later stage. You first want to examine the financial statements with a clear mind, uncluttered with the elements of 'spin' management so often includes in its analysis of the company's financial results.
  
- ii) Audited Statements:** Take the latest audited statements. The auditors provide the sole independently verified source of data on the company's financial affairs. While audited statements sometimes fall short of full disclosure, they are the least biased source of financial information you will get.

First, check the auditors' certificate to see what the auditors say about their tests, the accounting principles applied, and their opinion. Then read the notes

to the statements – these will tell you how the numbers were put together and hence their significance.

Watch for changes to accounting principles. Examine why any such changes have been made. Have they tended to enhance the apparent quality of the company's results? Do the changes in accounting principles make sense, or do they tend to obscure a potential risk?

Then perform an analysis of the financial results using the approach included in Section 2 below. Your analysis should look at the results of the past two years in detail and the highlights over at least three or four years to get a sense of underlying trends. The object of the analysis is to identify the key risks that the company faces.

**iii) Annual and other Reports submitted to Securities Commissions:** Take the annual reports and other annual information (such as 10K's in the US) submitted to the securities commissions. The company and its management are legally liable for the completeness and reliability of the information provided to investors and filed with securities commissions. Read what the management has to say about its operations, its markets, its competitors, its results and its plans. Remember, management is striving to put as good a gloss on its results as possible, and to downplay risks. You should therefore treat management's commentary with deliberate skepticism.

At the same time, you should attempt to identify the two or three key 'drivers' of the company's profitability. What are the two or three areas in which the company must be successful in order to achieve profitability.

Review your notes taken when reading the financial statements and see to what extent your questions may have been answered, and whether other questions are opened up.

Refine your list of the material risks that the company faces.

**iv) Industry and Competitor Information:** look for industry studies (try S&P, Moody's, or similar source, and any investment analysis you can find, as well as any known source of expertise on the particular industry.) Form a view on the risk dynamics of the industry. This industry review can be concluded once you have identified the two or three key characteristics of the industry, and the two or three key risks that each player must face. Each of these characteristics should be summarized in a single phrase or sentence.

For the company you are analyzing, take the key figures and financial ratios you have identified under 2(iv) below. Look at its key competitors and calculate the same ratios for these competitors. (These figures are sometimes referred to as “Comps”.) Review how the figures for the company you are analyzing differ from those of its competitors.

Some companies serve a variety of disparate markets and produce financials that make comparisons within particular industries difficult. This obscurity itself is a source of risk for the investor since the true competitive position of the company in its major markets is obscure.

What conclusions can be drawn? Is the company a low cost producer? Has it been investing in new products and facilities at the same rate as competitors? Is it more highly leveraged and are its net margins thus susceptible to problems in a downturn?

You may also wish to look farther afield. The internet provides a rich source of potential information.

In the light of this analysis, refine your list of the key drivers of the company’s profitability, and the key risks that the company faces.

- v) **Return to your analysis of the Company’s financials and Annual Reports:** In the light of the industry analysis, review to what extent your earlier questions have been answered, and what further questions have been opened up.

Based on your analysis, prepare a rough forecast of the likely performance of the company over the next three years. Then prepare an estimate of a reasonable ‘down case’ which reflects the risks you have identified. These might include a recession, competitive pressures on output prices, interest rate increases, and other hazards of the market place.

Section 3 outlines how such rough projections can be made reasonably quickly. The projections should be structured to reflect the potential impact of the risks that the company faces.

Assess the stability of income and free cash flows. Relate these to capital expenditures and debt repayment obligations over the next two or three years. Estimate ‘free cash flow’, and consider how vulnerable this figure is to the risks you have identified so far.

- vi) **Liquidity Analysis:** Take the figures you have prepared for the ‘down case’. If there is a net cash drain during a downturn, is there sufficient cash on the

balance sheet plus access to undrawn committed bank lines to cover the shortfall over the next two to three years? In the downcase scenario, will the company still have continued access to capital markets at a reasonable price (don't forget that in a recession access to capital markets generally becomes more difficult and more expensive.)

How saleable are non-core activities or other assets on the balance sheet in a downturn; can the company turn to asset sales to help in a downturn? Remember that in a downturn asset prices will be much weaker.

In a downturn, how likely is it that the company will violate the covenants in its bond indentures and its bank lines, leading to a default and filing for bankruptcy protection?

If there is a risk that cash may run out, or that the company may default, then a 'gone concern' analysis should be done. (See below.)

**vii) Assessment of Management:** Assess how competent management appears to be:

- How do you assess management's track record?
- how well has the company performed relative to its peers?
- how consistent have the results been?
- has the company performed according to announced earnings expectations?
- have there ever been any questions about the integrity of management and company operations? Significant lawsuits
- how long has the senior management been in place? Are changes expected in the near term? Experience of new executives?

**viii) Key Risk Identification:**

Now, review your notes.

Review your identification of the key drivers of the profitability of the company. The key risks are likely to be linked in some significant measure to these drivers.

List on a separate page the various risks you have identified, each risk being described in a word or a phrase. Estimate the importance of each risk by assessing its potential impact on cash flows and on asset values. Risks that are not material should be removed from the list. If a particular risk is largely offset or mitigated directly by some identifiable strength, it should be dropped from the list of key risks. You may find that two or three of the risks you have identified are in fact part of one larger, generic risk. If so, group them into a

single risk description. Winnow down your risk listing until you have narrowed the list down to three – or at maximum four – key risks.

If you have modeled the company's future financials, wherever possible, these key risks should be explicitly reflected in the downside projections. Items such as reduced revenue levels, compressed margins, and increased interests rates can all be modeled.

- ix) Assessment of the Credit Risk in the Senior Debt:** Is the senior debt secured on any of the assets of the company. How much are such assets likely to be worth in an insolvency, and will this worth cover the amount of the debt? Does the debt have reasonable financial covenants to ensure that the Company can be brought back to the table to renegotiate tighter terms if its performance deteriorates? To what extent do the terms of the senior debt mitigate the key risks?
- x) Gone Concern Analysis:** If there is a chance that the company might default on its debt, then a 'gone concern' analysis – an estimate of the likely results of a bankruptcy – should be made. 'Gone concern' analysis should forecast the effects of a prolonged period of uncertainty on customer retention, on revenues, and on the retention of key staff. It should take into account the costs of the insolvency, including the costs of all the lawyers and accountants. It might look at possible asset sales and resulting debt pay-downs, although all too frequently management of an insolvent company is very reluctant to downsize its operations. Remember, management of the insolvent company is probably more interested in preserving its option on the upside than reducing the risks of the downside to its senior lenders.

How much debt does the company have to cancel for it to become viable? Look at your estimate of future EBDIT under the downside scenario. On exiting bankruptcy, the company's ratio of EBDIT to debt should be at or slightly below the industry norm. What proportion of its long term debt has to be rejected to achieve this ratio? That proportion is one measure of the probable loss to debt holders as a group.

Debt holders will get in return some portion of the equity of the company. Some value may be ascribed to this ownership position (valued through a multiple of the probable future net income stream) – but such valuation should be done on a very conservative basis.

If some of the debt is secured on the assets of the company, that debt will suffer a lower percentage loss. The junior debt will bear a proportionately higher loss.

- xi) Summary of Key Risks.** In the light of the analysis of paragraphs (ix) and (x), are changes required to the key risks that have been identified?

Once the analysis has been completed, summarize the three or four key risks. Each risk should be identified in a sentence or two. Its likelihood should be briefly assessed, and the potential effect on cash flows or asset values evaluated. This summary should be no longer than one page.

**2) Note Taking – Suggested Categories and questions:**

Notes should only be made of material issues – otherwise the analysis will become bogged down and key issues concealed. If you have nothing material to say in a particular area – don't make any notes.

A review of an investment grade company (rated BBB- or better) should probably generate no more than two or three pages of notes at most. Higher risk companies will generate a longer list of notes. Remember – you should be taking notes only on material issues. Don't sweat the small stuff.

**i) Auditor's Opinion and Notes to the Statements**

- any qualifications to the statement? Changes to accounting principles?

**ii) Income Statement**

How stable and reliable is the income stream? If revenues have been growing rapidly, are you satisfied the growth rate will continue? Is the growth real? Have other companies in the industry had similar expansions? Is this growth sustainable? Competitive threats? If one or more of the key products are commodities, how do the commodity prices behave over the business cycle? Is there product cycle risk present? Is there a foreign exchange component to the revenue, and hence foreign exchange risk? Even if revenues are in local currency, are the products sold into commodity markets where the price is set internationally and hence set in US\$ terms? If so, there is foreign exchange risk present. Is the company dependent on one or two large customers? And if so, what is the impact if they leave or exercise downward price pressure on the company?

What are the cost components? How stable are they? Labour agreements and risk of labour disruptions? Are some inputs priced in commodity markets, and

if so, how do their prices behave through the business cycle? Do suppliers have pricing power?

Beware the company that tells you it is spending a large amount on capital projects reduce its costs, beef up its margins and generate lots of cash to pay you off. The chances are that the company's competitors are doing the same thing; and when all this money is spent in the industry, everyone's costs could be down and so will pricing, leaving your customer with perhaps little or no more profit for all his capital expenditure.

If there are several major business segments and the data is available, look at the results of each segment in the light of the questions posed above.

If there has been a material acquisition or sale of an ongoing major operation, the impact of this transaction should be considered in your analysis. For example, if the company has sold the one division that has been a consistent revenue generator, then net margins will be more unstable in the future. Similarly, if it has acquired a major operation, it will probably face integration risks and its future revenue stream, while higher, is subject to higher risk.

How stable are the net margins? How will the company fare in a downturn? In view of the identified risks to gross margins, how might these margins fare in a business downturn if several things go against the company at once?

Does the company export a material amount of its product, or consume a material amount of input priced in a foreign currency? Does it have material off-shore operations whose profit is denominated in another currency? If so, is the foreign exchange risk material?

Are administrative costs well contained?

Is there a risk that interest costs could rise by a material amount should interest rates rise significantly?

### **iii) Balance Sheet**

What is the quality of the working capital? Do the receivables turn over rapidly? Have there been any significant losses? Do inventory levels turn over rapidly, or could there be hidden losses? Is there any evidence that the trades are becoming restive – are the days' sales in payables reasonably long, with no evidence of shortening? Is the overall level of working capital reasonable?

Can you form a view as to whether the fixed assets are reasonably valued? Have there been unexpected write-off's in the past? If there has been a history of repeated "one-time" write-offs, it is likely that the company has a pattern of

persistently over-reported its profit from continuing operations. It also calls into question the caliber of management.

Does goodwill appear to be high – do the operating cash flows from the company suggest that there is a reasonable economic return to levels of goodwill that are high.

Does the company have material off-shore subsidiaries? If so, what is the foreign exchange risk?

Does the company own the key trademarks, patents, software and other intellectual property rights that are key to its survival? If any of these rights are leased, can the lease be cancelled in default?

Are there any off-balance sheet or leased assets that are key to the company's survival, access to which might be denied in a default.

Examine capitalized costs, and the year to year growth in capitalized costs. Should the company have capitalized these costs (ie. were they really operating rather than capital expenses?)

What off-balance sheet liabilities are there? Unfunded pension plans – and if so, what are the likely funding requirements over the next two or three years? Securitizations – and if so, what are the risks posed by these entities?

#### **iv) Ratios**

Calculate the following ratios, and look at their trends over the past three or four years:

- working capital
- debt to equity
- EBDIT to debt and free cash flow to debt
- capital expenditures to gross revenue and to fixed assets net of depreciation.

Look at leasing costs, and the value of the underlying leases. Leases can be very significant for companies such as hotel chains and airlines that lease many of the assets they use.

If these items are significant, there should be an adjustment made before calculating the debt to equity ratio. Lease costs are normally expensed above the EBDIT line. If the statements give you the annual cost of these leases, the amount should be added back to EBDIT, and the capital value of the leases added to the amount of outstanding debt before the EBDIT to Debt ratio is calculated. The result of these adjustments is to treat leases as though the

underlying equipment had been financed by debt, and yield a better estimate of the 'true' EBDIT to debt ratio.

#### v) **Cash Flow**

You want to estimate 'free cash flow'. This is the amount of cash that is available from operations after paying all expenses needed to maintain the business.

There are two measures that are available from the statements – EBDIT from the Income Statement, and Cash Provided by Operating Activities from the Cash Flow Statement. Usually, these are very different numbers. The major differences arise from taxes and from changes to the balance sheet that are not reflected in the income statement but that are included in the calculation of cash from operating activities.

Two key items should be looked at.

If you are using EBDIT as your starting point, you must deduct some estimate of the capital expenditure required to maintain the corporation's plant and equipment up to industry standards so that it can continue to earn its cash flow.

Look at past statements and try to estimate how much the company spends in capital expenditure in an average year. Exclude spending on acquisitions and try to exclude spending on new projects designed to increase the company's production capacity. The result should approximate the amount of capital expenditures required for 'maintenance' – ie for maintaining the revenue producing capacity of the firm to industry standards.

Some Annual Reports will give you this number. Where this isn't the case, you may be able to find some industry rule of thumb that can be useful. The hotel industry, for example, estimates that profitable hotels need to spend roughly 4% to 5% of gross revenues to maintain their buildings and furnishings up to standard.

Integrated steel manufacturers regularly put aside a form of 'sinking fund' to allow for blast furnace relining, and this provides a significant element of the 'maintenance capex required by such firms. These sinking funds are usually broken out in the financials.

Some cable or satellite TV companies which experience significant churn (ie subscribers leaving) categorize expenses for acquiring all new subscribers as 'capex'. In fact, the expenses for replacing the churn should be considered as maintenance capex.

These rough estimates of 'maintenance capex' should then be deducted from EBDIT to obtain a measure of 'free cash flow'.

Your estimates of free cash flow, of necessity, will be rough. Accountants will object that your estimates do not follow GAAP and are therefore 'incorrect' and imprecise. However, when trying to estimate the cash available to repay debt over time, it is far better to be roughly right than precisely wrong.

If you use the "Cash provided from Operations" as your starting point, you may have to adjust or remove the effect of changes in working capital. Often cash-short companies will deliberately reduce the levels of receivables and inventory to free up needed cash. You cannot count on a similar contribution in future years. Indeed, if the company's revenues grow, the buildup of working capital will require a cash contribution. If payables have been stretching, you cannot count on this trend continuing. And changes to bank and other short term debt outstanding should not be considered to be 'contributions' from operations, so adjustments will have to be made to remove these from your estimate of ongoing cash from operations. Adjustments will have to be made to reflect each of these factors to properly estimate the cash provided on an ongoing basis from operations.

Taxes on corporate income should also be added back to this figure.

Compare the resulting estimates of free cash flow and reach a judgement on the level of cash flow that you believe the company could be able to generate on an on-going basis, investing enough to maintain its competitive position.

The resulting estimate of ongoing free cash flow can then be related to debt levels and the required annual amortization of debt.

#### **vi) Key Industry Characteristics and Risks:**

Different industries have quite different characteristics. Some examples can be given:

- a) resource based industries where primary product prices suffer from well known and pronounced cyclical swings (eg. Base metals, oil and gas, paper, etc.)
- b) capital intensive industries where the marginal cost of production is low and there is overcapacity, companies will tend to produce to marginal cost and suffer ongoing margin pressures (eg. Airlines, steel, auto, petroleum refineries, hotels etc.).

c) high technological change and new product cycle risk – (eg much of the high tech industry.)

d) growing off-shore competition from low-cost foreign producers such as the South-East Asian ‘tigers’, Mexico, and now increasingly India and China. (eg. High tech, increasingly automotive parts, and now some service industries such as programming data entry, call centres and base level financial analysis for major investment banks.)

e) ‘fad’ type industries, typically in consumer goods, where product cycles may be short and extremely difficult to predict.

f) regulated industries where government regulations and regulators can have a major impact on the success of the industry and on individual firms within the industry. Such industries exhibit the ‘stroke of a pen’ risk where governments can change profitability very significantly, and where the risk of changed regulation is difficult to predict.

**vii) Key Competitor Threats**

- new products?
- pricing?
- acquisition of key customers from the company being analyzed?
- cost reductions?

**viii) Company Strategies:**

- key elements?
- what risks are they mitigating?
- risks introduced by the strategy?
- potential competitor reactions?

**ix) Strength of Management**

**3) Suggested Format for Projections:**

Use spread-sheets to construct both a ‘base-case’ and a ‘downside case’ projection. At each step, note down the assumptions being used, and their rationale.

The approach used below provides rough projections that can be made quite rapidly. Experience shows that this approach can be used to quickly highlight and ‘size’ the major risks facing a company. They allow the external risks to be modeled, and inherent risks such as potential liquidity shortages to be identified.

In constructing these projections, you will construct four linked spreadsheets – an income statement, a sheet for financial ratios, a balance sheet and a cash flow statement sheet. You will move back and forth between the different sheets as the projections are developed. Many entries will be generated using data or estimates entered in different sheets.

Once the model has been developed for the “base case”, it will be copied onto another four sheets, and appropriate changes made to the assumptions to produce the downside case. Should this downside case point to a potential default and bankruptcy filing by the company, further ‘gone concern’ assumptions may be input to reflect the costs and likely outcome of an insolvency.

**i) Income Statement:**

Take the income statements for the last three or four years from the company’s audited financials. Put the key figures on the spread sheet, with years along the top, and income statement categories along the side. Columns for three or four years of projections should be shown.

The income statement categories should include revenue, cost of goods sold, SG&A, depreciation, interest, taxes and net income. Other categories should be added only if they are material. If the company splits its revenue and EBDIT figures among two or three key segments, you could show the revenue, cost of goods sold and the net margin from these operations on the spread-sheet. Similarly, if there has been a major acquisition, or if a major divestiture is expected, the revenues and the net margin from these operations should probably be isolated.

Where a purchase or sale of a significant division is projected, you will want to isolate the revenues gross margins and EBDIT associated with this operation so that the purchase or sale is reflected directly in the projections.

**ii) Financial Ratios:**

Turn then to the ‘Financial Ratio’ sheet and insert the formulas to calculate the ratios expressing the rate of gross revenue growth from year to year and the gross margin for the historical figures, and the tax rate. Leave space for the depreciation rate.

Projections should then be made for the next three or four years. The ‘base case’ should be based on the company’s stated outlook. You may wish to base the projections on historical growth rates and margins, in which case you can do the projections by inputting the forecasts into the appropriate

cells in the Financial Ratios panel, and inserting the appropriate formulas into the Income Statement to generate the forecast revenue figures. If the historical trends have been toward declining margins, these trends should be projected into the future, unless there is a strong rationale for changing the assumptions.

Keep a note on each of the assumptions.

A ratio of SG&A to revenue should be calculated. You may forecast SG&A by projecting this ratio into the future on the Financial Ratios sheet and then entering the formulas on the Income Statement to calculate the forecast SG&A from this ratio projection and the projection of revenues.

Alternatively, if this projection seems unrealistic – ie if the company has reasonable plans to cut costs, the appropriate forecast may be made directly in the Income Statement sheet. In this case, the formula to calculate the SG&A ratio should be entered into the Financial Ratios sheet so that you may keep track of the projected level of this ratio. If the projections show the ratio declining at an unrealistic rate, the company's cost reduction forecast is probably too aggressive and you should adjust your forecast on the Income Statement.

This Financial Ratios sheet should include lines that calculate the ratios identified under 2(iv) above, including EBDIT to debt, as well as any bank covenants that you have identified.

### **iii) Balance Sheet:**

Input the key balance sheet figures from the historical audited statements for the same years covered in the Income Statement. At most, there should be perhaps 10 – 12 categories each for assets and liabilities & equity.

Where a significant acquisition, divestiture or capital restructuring is being undertaken in the current year, it is sometimes useful to provide a column or two to reflect these changes inserted between the last fiscal year and the end of the current fiscal year.

When this is done, return to the Financial Ratio sheet. Using the historical figures for fixed assets and for depreciation, input formulas to calculate the depreciation rate for each year. Similarly input formulas to calculate the interest rate and the tax rate. Absent a persuasive reason to do otherwise, these rates for the current year may be carried forward by formula as projections for the comparable rates over the forecast period.

Input formulas to calculate the number of day's sales for receivables, inventory and payables for the historical period. You have forecasted the

revenue figures in the Income Statement. On the Financial Ratio sheet you now have the historic days' sales. Input forecasts for future movements in these days' sales ratios; absent strong reasons for a different assumption, you should forecast these ratios to remain constant into the future. Then return to the Balance Sheet and input the formulas in the projection columns to calculate receivables, inventories and payables from the projected days' sales in the Financial Ratios panel and from the forecast revenues in the Income Statement sheet.

At this stage, on the Income Statement, you have forecast revenues, cost of goods sold, gross margins, and SG&A. EBDIT may be calculated. Depreciation and interest costs for the current year may be estimated taking the rates for depreciation and interest from the Financial Ratios sheet and multiplying them by the fixed assets and by interest bearing debt as of the end of the previous year. Then you can enter to formulas to calculate income before taxes. Taxes for the current year can be calculated using the tax rate from the Financial Ratios sheet. This will allow you to calculate the net income for the current year.

A forecast for dividends should be made, and the change to retained earnings can then be calculated. This change should be added to retained earnings as at last year end on the Balance Sheet to calculate retained earnings as at this year end.

**iv) Cash Flow:**

At this stage you can begin building the cash flow panel. It is probably wise to use the same format (perhaps with fewer categories) as the cash flow statement in the company's audited statements.

Enter the historical capex numbers. Make a projection of the likely pattern of capex each year in the forecast period. Then turn back to the Balance Sheet to forecast future fixed asset levels. This may be done by taking the last year's fixed assets, deducting the current year's estimated depreciation (using last year's fixed asset level and this year's forecast depreciation rate from the Financial Ratio's sheet), and adding the year's capital expenditures. Each successive year's estimates can be built in similar fashion. This will provide the projections of Fixed Assets on the Balance Sheet and of depreciation on the Income and Cash Flow Statements.

If the company has projected new borrowings or equity issuance the amounts should be entered into the Cash Flow panel. A line item for forecast new debt should be opened.

Now, enter a formula to pull forward the projected net income for the current year from the Income Statement onto the Cash Flow statement for the current year. Enter formulas that calculate the cash generated or used in changes to working capital items (other than cash or bank loans – these entries will be generated at a later stage from the cash flow statement.)

If the forecast indicates that the company is using up its cash position, return to the balance sheet and enter a forecast for the minimum amount of cash the company should hold on hand. The model should then show drawdowns to bank loans as being the balancing item.

Alternatively, if the company throws off cash, even in the downside, the balance sheet item for cash at the end of the current year should have a formula to pick up the change in cash from the cash flow statement. [A more complex model would have formulas to allow excess cash to pay down debt.]

The forecast for dividends should be pulled forward from the Income Statement by formula in the Cash Flow panel. The change to the end of year bank loan balance can then be calculated and pulled forward onto the Balance Sheet by formula. This should complete the Cash Flow panel.

From the bank debt level at the end of the year, the interest cost for the next year can be calculated using the interest rate forecast in the Financial Ratios sheet. This then will let the net income for that year to be calculated, and in turn drive the cash flow statement figures. Where the company is consuming cash, the cash flow statement will show cash outstanding at the end of the year as being the minimum amount set by your assumption. Drawdowns on bank loans will then be the balancing item.

In this manner, the projections for the succeeding years can be completed.

Finally, return to the financial ratios sheet and look at the reasonability of the financial ratios. If these ratios continuously worsen over the forecast period, look to see whether it is likely that bond indenture or bank agreement financial covenants will be broken.

Note, that once all the formulas have been properly completed, you can change any of the assumptions, and the model will immediately calculate the forecasts based on the new assumption.

v) **'Down-side' projections :**

The 'downside case' should reflect what will happen in a plausible worst case environment. Consider the risks that have been identified and reflect what is likely to happen under an adverse macro-economic scenario and intense competition. For cyclical industries, you might wish to look back at commodity price levels and operating margins during the last severe downturn to provide guidance for what might happen in the future.

As a general rule, in a downside projections should show flat or drooping sales, and almost always margin erosion.

Where the company is projecting a reversal of certain trends, the downside projections, absent strong evidence to the contrary, should assume the company largely fails in its efforts. It is all too common to see companies undertake significant capital expenditures to reduce costs, and claim that the reduced costs will flow to the bottom line. Typically, however, competitors are undertaking similar expenditures, the net effect of all this spending being to lower both costs and industry prices. As a result, such expenditures frequently fail to produce increased profits.

The company would clearly react to such an environment by cutting various items such as capital expenditure; you may wish to reflect such reductions in your worst case projections.

If it looks as if the company might run out of cash or default on financial covenants, the assumptions from a 'gone concern' analysis should be input into the downside case.

Once the projections have been completed, you should return to the analysis of the key risks facing the company and evaluate how the results of the projections affect your overall risk analysis. Look at each of the risks, and estimate the impact that it might have on cash flows on both the base case and downside projections. This analysis will allow you to prioritize the risks that you have identified and to focus on the key risks. You may wish to revisit some of the assumptions in the projections as a result of this fresh analysis.

**4. Projections to be used for Equity Investments:**

The methodology outlined above is designed to assess credit risk in the senior debt of a company. The point of view is that of an investor in bonds, bank loans or derivative contracts where the sole upside of the investor is the fees and interest income to be generated from the investment.

The point of view of the equity investor is substantially different – that investor participates in the up-side of the company and therefore must pay close attention to the potential returns on the upside.

Nonetheless, the basic methodology can be easily extended to build the focus that captures the up-side. The analysis of the drivers of the business would be expanded to produce a set of forecasts explicitly estimating an optimistic scenario.

Projections for equity investors will include a sheet that shows greater detail on the capital structure and on the likely movements in per share net profits and firm valuation. They will also prepare greater detail in areas such as capital expenditures, depreciation and tax issues, all of which are key issues for the returns to equity holders.

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