

Chapter6 Contingent Liabilities, Contingent Assets & Contingent Margins

The Statement of Financial Accounting Standards (SFAS) No.5, titled “Accounting for Contingencies” of the US Financial Accounting Standards Board (FASB) defines a contingency as an existing condition, situation or set of circumstances involving uncertainty as to possible gain (“gain contingency”) or loss (“loss contingency”) to an enterprise that will ultimately be resolved when one or more future events occur or fail to occur. Resolution of the uncertainty may confirm the acquisition of an asset, the reduction of a liability, the loss or impairment of an asset or the incurrence of a liability. The standard goes on to give examples of contingencies such as collectability of receivables, obligations linked to product warranties and product liabilities, losses insurable with a P&C insurer and guarantees (see Accounting Box: What the Accounting Standards say about Contingencies” for more details).

Contingent liability is an area that credit analysts practically pay no attention to when analyzing a company. Yet contingent liabilities can cause companies to suddenly self-destruct. The understanding of the likelihood of a contingent liability crystallizing into an actual liability flows from an understanding of the underlying credit story. If an analyst had understood the credit story of the bond insurers, he, unlike the rating agencies, would not have been surprised when they blew up within a year of sporting triple-A credit ratings.

Changing business models are introducing a lot of contingencies in the operating margins of several companies. Earlier, technology hardware companies would just sell their devices with a basic warranty. Then it was possible to estimate the losses that would accrue from the warranty and factor it in while calculating operating margins and return on capital employed. Now companies are adding extended warranty contracts with the basic warranty. Of course, the companies charge the customer upfront for providing the extended warranty. How sure is the

analyst that these future liabilities are being priced correctly? Can the analyst vehemently assert that the company is not generating cash flow and “apparent profitability” by underpricing these liabilities, thus attracting a lot of customers to the extended warranty service? It is an issue that credit and even equity analysts must pay attention to as the percentage of revenue from services linked to manufactured goods constitutes a bigger and bigger proportion of revenues.

Product liabilities for pharmaceutical products, contrary to their reputation, are not as big a threat to a creditor unless the creditor took on venture risk by investing in the 30 year bond of a company. Product liabilities usually provide the creditor some advance warning that it is time to exit. The moment people start talking about possible damages on account of the product liability, the bell has tolled and the creditor should be looking at where the exits are for water landing. If a big lawsuit emanates from a product liability, it would definitely go through several rounds of appeal at the courts providing priceless time and operational cash flows that cannot be sequestered for meeting potential liabilities. And when the liabilities do crystallize, a substantial chunk of the money required would come from the liability insurers. It will be a while before it puts the insurer out of business as the asbestos liability cases demonstrated. But such severe liabilities are not every day occurrences. The companies exposed to asbestos liabilities serviced their debt for a considerable period after the liabilities became known.

Product recalls are slightly different animals. They can crystallize into actual cash outgo in the immediate future and can put stress on the short term finances of a company. Product recalls have to be kept in mind when calculating the past operating margins of manufacturing companies such as the auto companies.

Accounting Box: What the Accounting Standards say about Contingencies

SFAS 5 is the relevant accounting standard in the United States for reporting contingencies. For IFRS countries, the relevant equivalent is International Accounting Standard (IAS) 37, “Provisions, Contingent Liabilities and Contingent Assets”. The former document is more lucid, with clearer examples to facilitate understanding.

The gist of SFAS 5 is that some liabilities have to be accrued in the income statement, while others have to be disclosed. A loss contingency has to be accrued if it meets both of the following conditions- it is probable the loss would occur and the amount of the loss can be reasonably estimated. If both these conditions are not met, the disclosure of the contingency has to be made but it should not be accrued. There are several technical points such as a loss arising after the date of financial statements, but the key issue for a contingent loss is whether it should be accrued or only disclosed. The standard also talks about gain contingencies, but by its very nature, gain contingencies cannot enter the realm of thought of a credit analyst. They are the province of the shareholder who reaps such benefits. Contingent gains do sometimes change a credit story. Witness the \$ 2 billion paid by General Motors to Fiat of Italy to get out of a put option on Fiat shares in 2005. The money changed Fiat from a basket case to a potentially viable company, while hastening General Motors’ inexorable march to extinction. But a creditor should not be lending based on such unexpected showers of blessings until the mercy drops have fallen.

SFAS 5 highlights an important issue which must be kept in mind by credit analysts, particularly those who just look at a company’s financials in the spreadsheet format and quickly pass judgment on whether the company is worthy of credit investment or not. The issue is whether a company insures its property against risk of damage as well as whether the company has

insurance policies against product liability from injury to consumers from using its products.

Two companies are alike in their financials and business prospects- one insures against property damage and product liability- the other does not. Obviously the credit analyst cannot treat the companies on par as the uninsured company is exposing itself to sudden cash flow shocks.

For a given lawsuit, you could have a mixture of accrual as well as disclosures about potential losses. For instance, if a company is almost certain (probable is the word SFAS 5 uses) that the damages from a certain claim would be at least \$ 2 million, but does not know with certainty how much more than \$ 2 million, the company needs to accrue the loss of \$ 2 million in its income statement and disclose the rest. From the principle of conservatism of financial statements, SFAS 5 requires accrual the moment the loss is probable and not wait until it is certain even though the probable loss can be more reasonably estimated in the second case.

IAS 37 requires that contingent liabilities get converted to provisions the moment the liabilities become probable and a reliable estimate of the obligations can be made.

IAS 37 talks about an “onerous contract” in which the unavoidable costs of meeting the obligations under a contract exceeds the economic benefits expected to be received under it.

An onerous contract causes the operating margins to be lower than what was initially projected.

In the case of construction contracts, the performance guarantees supplied by a contractor could cause a contract to become an onerous one if the guarantee is invoked by the project owner for performance shortfalls. Similarly, extended service contracts attached to manufactured goods can become onerous if they had not been priced correctly upfront.

One issue on which a credit analyst must part company with accountants is that accountants create provisions or disclose contingent liabilities only for past events. What if a company is likely to continue to enter into onerous contracts in the near future? Should not the credit

analyst consider the present value of losses than emanate from such contracts? Of course, such mispricings cannot carry on forever in the future. So an analyst must use his judgment in deciding for how long a company could carry on entering into contracts that create upfront cash flows and illusion of profitability but cause losses in the long term. The analyst should deduct the present value of such estimated losses from the shareholders' equity.

Contingent Liabilities turning into actual Liabilities of Governments

Governments in developed countries took on obligations in the post second world war period that were based on two broad assumptions- the longevity of human life would not increase and the tax and demographic structure of society would remain unchanged. The obligations are broadly of two types- social security or a pension payment to every citizen after a certain age and health care benefits, which in some countries are for all citizens.

In a true sense, these liabilities were not contingent liabilities but actual liabilities that the governments had taken on. Because in each year the actual payout was lower than current inflow of cash into the schemes, the assumption was that such a clement state of affairs would last, though the schemes were technically insolvent because the present value of future obligations were higher than fund assets. Like all Ponzi schemes, the schemes of the governments were liquid while being insolvent. People make absurd statements like "Social Security will be bankrupt in 2019". If you know that it would be bankrupt in 2019, it means the scheme is bankrupt today. What they perhaps mean is that the Ponzi scheme will collapse in 2019 with cash required for meeting payouts being less than cash inflows.

Credit rating agencies were not bothered by the widening hole. Perhaps they thought that because these were obligations to natives and not foreigners, a government defaulting on those obligations would not constitute a sovereign default. Default on such obligations would be

difficult since in most developed countries, older voters who would immediately be affected, outnumber younger voters. How this intergenerational battle will play out is uncertain. Would the default happen through subtle cutting of corners as happens in developing countries where government hospitals would not be stocked fully with medicines and replacement of broken down equipment does not take place? The number of hours for which doctors would provide services would fall. Would there be cut backs on public schools, fire services etc? Would there be a subtle brow beating of service providers? The number of days that public schools would work in a week would fall from 5 days to 4 days (there might even be a report stating why this is good for students).

While Medicare and social security schemes are actual obligations that are underfunded, the real contingent liability emanates from two sources- first from the fall in the value of pension assets of government schemes and second from private sector pension liabilities that could be dumped on government agencies during bankruptcies. If the societal debt ratio stays high, the chance of bankruptcies rises and with that increases the probability of contingent liabilities getting converted into actual liabilities for governments. Bankruptcies could be a double whammy for government pension schemes. Besides the dumping of pension liabilities on to the government schemes, they reduce the value of pension assets if the government scheme holds securities of the bankrupt company. Investment banks in the US were not content with wrecking havoc on the banking system and the economy. They also shoved a lot of junk "assets" into the pension funds of municipalities and states. A classical historian had remarked that "Rome under Sulla was like a bus with half the passengers trying to drive and the rest trying to collect the fare". Half the investment banks were extracting a toll on the "here and now" by requiring bailouts. The other half was creating future liabilities for governments by flooding the pension system with junk "assets".

Government contingent liabilities also come from guaranteeing the banking system after a bust. By mid 2009, the IMF estimated that the various government guarantees of Ireland amounted to 200% of GDP. Because of a string of bank failures in the US during 2008 and 2009, the FDIC's reserves at its deposit insurance fund were below statutory minimum, increasing the likelihood that the institution's reserves would need to be strengthened by the government. The guarantees of the obligations of giant mortgage finance institutions, Fannie Mae, Freddie Mac and Federal Housing Administration, could amount to almost 50% of the US' GDP. Obviously, only a small fraction of these contingent liabilities are likely to crystallize into actual liabilities. Nonetheless, when considered in conjunction with other contingent liabilities, the numbers involved are not small.

Contingent Liabilities of Credit Insurers and their Credit Stories

The problems that the financial guaranty business experienced from 2007 can directly be traced to the easy money policy of the US central bank. Historically, financial guaranty companies used their then triple A credit rating to guaranty bonds with a stand alone rating of around single A. When the central bank follows an easy monetary policy, the easy liquidity narrowed the spread between single A borrowers and AAA borrowers. That reduced the incentive to pay a guaranty fee for guaranteeing the single A bonds. Only when the spreads are reasonable would business come the way of the guarantors. Additionally, due to the easy money policy, property rates and property speculation went up, improving the property tax collection of municipalities. The financial guaranty business' original *raison d'être* was to guaranty municipal bonds. A combination of lower municipal debt issuance due to increase in property tax collection and the narrow spreads between guaranteed and unguaranteed bonds put a big question mark on the municipal guaranty business. Hence the guarantors started looking elsewhere for revenue and

found in the structured finance and asset backed business the answer to their prayers for replacing lost revenue from municipalities.

The way the financial guarantors were booking income, even in their traditional public finance guarantee business, left a lot to be desired. Credit insurance is quite different from property and casualty (P&C) insurance, and the way that revenue is booked needs to reflect this reality. If a P&C insurer wrote a three year home insurance policy, the chance of an unfortunate event happening in the first year is the same as in the third year. So, if for such a policy, the insurance premium is received upfront, it made sense to book one-third of the received premium as earned premium in each of the three years. In the first year, the two third of the received premium (“the written premium”) needs to be kept as unearned premium reserves in the balance sheet.

In the case of credit insurance, it is hard to argue that the risk is evenly spread out. To make matters worse, the average tenure of the liabilities insured can be as long as 10 years. The visibility on the likely credit quality five years down the line is far hazier than the credit quality one year down the line (this is not true of a pool of retail loans, where the principal amortizes monthly and the borrower has a lot to loose if he defaults late in the life of a loan). Hence, the risk five years down the line is higher than the risk in the current year. A credit insurer is unlikely to cover an issuer who he thinks is going to default in the next year. Hence the current method of booking of revenue is definitely incorrect.

What then is the correct method of booking revenue for a credit insurer? We are not sure, but, a variation of the Sum-of-the-Years'-Digits Method (SOYD) of [accelerated depreciation](#) that results in higher [depreciation](#) charges in the earlier years of a [fixed asset](#)'s useful life than the [straight-line depreciation](#) method, could be a rational method. What we suggest is an inverted

SOYD. Under this method, for a 4 year credit insurance, you would book $1/10^{\text{th}}$ (the sum of 1,2,3 and 4 is 10) of the written premium in the first year, $2/10^{\text{th}}$ the written premium in the second year, $3/10^{\text{th}}$ the written premium in the third year and $4/10^{\text{th}}$ the written premium in the final year. Since, the risk in the fourth year is higher than in the third year (there is more uncertainty as to how the credit story will pan out), which in turn is higher than the second year, which in turn is higher than the first year, this method better matches revenue with risk than the way revenue is currently booked in the industry. So, at the very least, the inverted SOYD method of booking revenues is logical. What this also implied was that the unearned premium reserves of bond insurers for their public finance business, at the end of 2008, was woefully inadequate. This will continue to be inadequate as long as earnings are booked as they are currently done. Lower unearned premium reserves mean lower claim paying resources for paying losses.

Using the straight line method of booking revenues horribly understates the contingent liabilities from a credit insurance contract. This is becoming evident now as several US municipalities are verging on bankruptcy. This includes not just small municipalities but municipalities of big cities such as San Diego. Over booking of revenues led to lower pricing of real risk and undercapitalization. Rating agencies have been assessing the industry for the last three decades, when public finances in the developed world were fairly strong and the economy grew at a brisk pace. The rating methodologies for credit insurers which pay attention to such absurd criteria like "franchise value" needs to be junked. Franchise values matter for many companies- but not for a credit insurer. The only things relevant for assessing a credit insurer are correct estimation of profitability and hence correct estimate of pricing and loss reserving as well as adequacy of capital vis-à-vis the portfolio that is protected against credit losses.

This is the aspect of the credit story of the financial guarantee business which commentators have ignored while laying all the blame at the door step of the structured finance business. The

public finance guarantee business perhaps made sense only in the initial decade of the business model's birth in the 1970s. After that, the viability of the business rested on the hope that finances of US municipalities would not deteriorate. Otherwise the risk pricing was definitely not correct. The only way a guarantor could show profits was by over stating revenue, understating required loss reserves and praying there would be no defaults. The long bull run of the following two decades ensured those prayers were answered. But the fundamental model was getting more and more unviable as credit spreads between the best and the worst credits continued to narrow, killing the pricing power of the credit insurers. In the bond guarantee business, the value provided by the guarantor to the guaranteed entity is the savings in interest cost emanating from the lower interest expense on the guaranteed debt. From this one must subtract the premium paid for the insurance. So, if it costs \$ 5 million to an entity to borrow if it issued bonds without the guaranty, \$ 3 million of interest expense with the guaranty and the guaranty fee is \$1 million, the net benefit to the issuer is \$ 1 million (5-3-1). Basically, the credit insurer is pricing a risk which the market thinks is worth \$ 2 million at \$ 1 million. Now, there are extended periods of time during which the markets can misprice risk, but considering the easy liquidity environment since the day Alan Greenspan bailed out the US stock markets in 1987, the markets were more likely to have underpriced risk rather than overpriced risk on account of the Greenspan put. So, the fundamental reason for existence of this business was questionable.

This is what forced a change in the business model, causing the credit insurers to assume higher and higher risk per unit of premium by getting deeper into structured finance and exotic products such as the Ambac deal in 2006, in which the credit insurer guaranteed the securitizing of Dunkin' Brands' franchise loyalty fee for a leveraged buyout by three private equity shops.

By 2008, after managements had run the credit insurance companies to the ground, we had the pursuit of separating the viable part of a company from the unviable bit- for example, the so called “good GM- bad GM”, “good Citi- bad Citi” model. MBIA did the same in early 2009 by moving the public finance business to the National Public Finance Corporation (“the good MBIA”) from the bad MBIA which housed the structured finance business. We predict, that the “good MBIA” would turn bad within a few years on account of the unviable prices at which the long dated municipality guarantee contracts were priced in the past. Though pricing power has returned, the risks have increased manifold. And revenues are still overstated, leaving higher shareholder returns but lower reserves for claim payment in the future. Perhaps in a few years, we will have another amoeba like bifurcation between good MBIA and bad MBIA when the financial weakness of the municipalities on account of high SDR will come home to roost. Bond investors would do well to look at stand alone credit strength of municipalities and not rely on payouts from the bond insurers. The growth of the exchange traded CDS market would be the last nail on the viability of credit insurers.

Adequacy of Loss Reserves: The key Contingent Liability at MBIA at the end of 2007

There were many of aspects to the MBIA tragedy which could have been predicted only with the benefit of hindsight. However, there were even more facets to the saga which could have been predicted- in fact some analysts did just that and benefited enormously when their predictions turned right and the share price of the company plunged. As usual, the rating agencies were not among those who displayed perspicuity of thought. And to heighten the irony, MBIA’s management did not think it fit to remove its slogan “wisdom in action” from its website long after disaster struck.

MBIA, the largest bond insurer in the world at the end of 2007, was incorporated in 1986 to provide financial guarantee to municipalities for their bond issues and structured finance issues. The company's financial guarantee provided an unconditional and irrevocable guarantee of principal and interest payment on the insured obligation. The company is a successor to the business of the Municipal Bond Insurance Association, which began writing financial guarantees for municipal bonds in 1974.

Here are a few problems that a thinking analyst should have spotted. Firstly, as mentioned earlier, all bond insurers were overstating their revenue. In the public finance guarantee business, this is not yet evident- but it will become evident in a few years as long term guarantees come back to haunt the company. The management stated that loss reserves were created based on an internal formula –not by the traditional approach as in P&C insurance companies. The adequacy of those reserves is the key contingent liability. Credit rating agencies were big drivers of bond insurance capital and reserves. Rating agencies, based on their formulas, which gave more weight age to their own credit rating assigned to the insured municipalities and less to common sense, made it known to bond insurers the capital they needed to have to get a triple-A credit rating. MBIA, just like other bond insurers, religiously observed this rating agency injunction as their core business requirement.

MBIA's reinsurance strategy obviously was not captured by the rating agency models. MBIA held a 17.4% stake in Bermuda based financial reinsurance company Channel Re, which it bought for \$63.7 million. 54% of its risks were ceded to Channel Re. The reinsurance recoverable at the end of 2007 was \$ 13.1 billion. Does it make sense to have an equity stake in a company with whom you reinsure? If the reinsurance claims are made, the value of the equity holding in the reinsurer falls. At the end of 2007, Channel Re had a negative shareholders' equity on a GAAP basis and MBIA wrote down to zero the value of its Channel Re holdings. The

lesson is one should look at the gross and net of reinsurance exposures of insurance companies separately so that one can assess the impact of reinsurers going belly up. In addition, the analyst should look at the percent exposure to each reinsurer, and the type of cover- proportional or excess of loss.

Secondly, to compound the woes at MBIA, there was a strong correlation between the performance of its liabilities (reserves for underwriting losses) and the investment book held against unearned premiums and loss reserves. The unforgivable lapse of MBIA's risk management was having a chunk of its investments in debt paper guaranteed by it as well as other credit insurers. See the absurdity of the situation- MBIA gets premium revenues for guaranteeing some bonds. Because of the guarantee the bonds have a AAA credit rating. Against the unearned premium reserve of writing the bond insurance policy, the company invests in the very same paper. What will happen if the underlying credit defaults? It will have to make the payouts to the investor- that is to itself. Let us say, the company spent \$ 100 to buy the bond, on which it collected a premium of \$2 for guaranteeing. The moment the default occurs, the assets come down by \$ 100, but the liabilities are reduced only by \$ 2. The folly was magnified when MBIA also invested in the bonds guaranteed by other insurers. All credit insurers were governed by the same credit story, so investing in paper guaranteed by other insurers would also be somewhat correlated to MBIA. Even if the underlying bond did not default, downgrade of a bond insurer would cause a reduction in value of assets and value of shareholders' equity. At the end of 2007, \$2.58 billion in own portfolio and \$ 5.5 billion of managed investment portfolio, i.e. 16% of the investment portfolio was guaranteed by MBIA itself and 14% by other insurers.

Obviously the insurance portfolio also had deteriorated over a period of time. In 1998, public finance guaranteed portfolio was \$ 50.3 billion while the structured finance portfolio was \$ 95.3

billion. By 2007, the public finance portfolio grew to only 59.9 billion, while the structured finance portfolio jumped to \$ 148 billion. CDOs guaranteed went to \$ 58 billion in 2007 from \$31 billion in 2006 and \$16 billion in 2005.

The claims paying resources of MBIA, which is defined as the sum of capital, contingency reserves, unearned premium reserves, present value of installment premiums, loss reserves and stop loss reinsurance was \$ 10 billion in 2001, which by 2007 just could not be valued correctly on account of the junk sitting on the asset side of MBIA's balance sheet. Between 2001 and 2007, the credit default swap portfolio jumped from \$ 17.5 billion to \$ 200 billion. The claims paying resources, thanks to severe under reserving, did not keep pace. Clearly this was another crucial risk that was not captured by rating models.

How the Ambac story unfolded for S&P

Credit insurer Ambac had on its website (as of early 2009), the details of the pronouncement of rating agencies on the company since August 2007. One is unclear about the motive of Ambac for doing that- whether it was in the interest of greater disclosure or whether it was to expose the fickleness and the lack of intellectual robustness of the different pronouncements by rating agencies within a short period of time . That can best be answered by Ambac management. We cannot help sympathizing with management, but the management itself had a lot to answer for regarding its loss reserving policies. Truth be told, Ambac, like the other credit insurers, considering its capital adequacy and earnings robustness, was never a triple-A credit after the halcyon 1970s.

In early August of 2007, S&P opined that the sub-prime mortgages sector did not pose a threat to the US bond insurers. No doubt, their motives for professing thus were honest- at that time, the only understanding that S&P had of subprime mortgages was that they generated high fees.

So, they could plead insanity and not enter the “guilty” plea. After some tentative back of the envelope calculations (which S&P christened as “stress tests”), the agency concluded that Ambac’s total subprime related theoretical losses as a percent of capital cushions was 16.6%. We were surprised that the second and third decimal places were not shown! Within two months, on October 2nd 2007, S&P declared a turnaround in an article titled “Conditions improve for bond insurers in US asset backed market”. Clearly, the time between the two reports was not fruitfully spent in trying to understand the dynamics of the subprime market and its baleful implications. Within 9 days, a frown appeared on S&P’s thoughtful face and it declared “Economic woes continue for triple-A bond insurers’ US Public Finance business”. Then in a mood turnaround on the 31st of October, the agency pronounced in a report filled with fuzzy platitudes “Significant mark to market losses on credit derivatives not expected to affect bond insurer ratings”.

One might argue that it is easy to poke fun when one had the benefit of hindsight. And yes, far superior minds than the average minds that inhabit the three leading rating agencies did not foresee the true impact of the subprime crisis. But those analysts did not have the data to inform them that the subprime mortgage market with negative amortization loans, and liar loans was vastly different from the subprime market of the past. Added to that, these frequent commentaries revealed a certain restlessness, which might flatter a technical analyst but does no credit to a financial analyst. No attempt seems to have been made to take a deep breath, revisit the whole credit story and debate the implications.

On the 19th of December 2007, S&P did a third stress test on the bond insurers. Obviously, the results were pointless because it did not see the big picture of subprime mortgages in the context of unmanageable household debt (the non understanding of the consolidated financials of society). However, this time, S&P did not sound very sanguine. Though it did not downgrade

the insurers, it revised their outlook to negative. It still thought that the capital of the insurers was sufficient for survival in the medium term. In less than a month, on the 17th of January, Ambac was placed on rating watch with negative implications. On the 25th of February, while sparing Ambac, the rating agency, admitting utter cluelessness, downgraded an Ambac competitor, and Bermuda based bond insurer XL Capital Assurance by a massive 6 notches from AAA to A-. Surprisingly, on that day, S&P removed MBIA from rating watch merely because the company managed to raise a meager \$ 2.6 billion in additional capital. Incidentally, on that day, S&P conducted yet another stress test on the bond insurers' financials. Good bye analysis, hello cluelessness.

On the 5th of March, in response to Ambac's plan to raise \$ 1.5 billion in additional capital, S&P opined that if the fund raising plan was successful, the credit watch on Ambac would be dropped. In response to Ambac's successful raising of \$1.5 billion in additional capital, S&P announced on the 12th of March that the ratings were now off credit watch. In less than 3 months, on June 5, both Ambac and MBIA were downgraded by two notches to AA, and placed on credit watch again. It was like a weak-minded surgeon, clueless of what was happening, kept wheeling a patient in and out of the ICU at rapid intervals whenever the whim possessed him. The Ambac rating rationale published 6 days later revealed an utterly confused state of mind. The rating agency was like a deer stuck in a headlight- it surrendered itself to reacting to every new data on the mortgage market and haphazard forays into disjointed thought. It had absolutely lost the will to do any analytical forecast on what was likely to happen based on the underlying story of subprime mortgages in a recessionary environment coupled with a high household debt and weakening employment data. While no one expected S&P to forecast what the ultimate losses would be, it was easy to forecast that the capital levels vis-à-vis conservative estimate of losses implied a junk credit, not a double-A one.

On August 14th, Ambac's credit rating was again taken off credit watch. In their rating rationale published two weeks later, the agency said that its stress test had revealed Ambac's capital to be adequate for the double-A rating. After the Lehman bankruptcy, on the 23rd of September, S&P came out with another muddled report on bond insurers. After failing the test at short term forecasting, S&P tried its hand at long range forecasting. On the 15th of October, it stated "market disruption provides pricing opportunity for some bond insurers". On the 6th of November, S&P opined that projected loss for bond insurers from their structured finance portfolio would be much higher than its initial estimate. On November 19, Ambac was downgraded by a further 3 notches to single-A.

After a short hiatus, the agency on the 25th of Feb 2009 proclaimed oracle like "for bond insurers, the future depends on investor confidence". What a pearl of wisdom! On the 24th of June, Ambac was downgraded by a further 3 notches to BBB. In slightly over a year, Ambac's rating had fallen 8 notches. This non-stop freak show cannot be explained by anything else other than utter cluelessness.

Accounting Text Box: Is SFAS 163 locking the Stable too late?

In May 2008 the FASB issued SFAS 163 to clarify how SFAS 60, "Accounting and Reporting by Insurance Enterprises" needed to be applied to financial guarantee insurance contracts and how to account for premium revenue and claim liabilities. The purpose of the standard was to increase consistency of income recognition and measurement of claim liabilities among different bond insurers. The premium revenue recognition is linked to the amount of insurance protection and the period for which it is provided. Insurance protection provided is assumed to be a function of the principal outstanding. Note, that a principal outstanding in the second year is considered equal to the principal outstanding in the first year. However, unlike in the case of

a P&C insurer where the probability of an ill wind striking in the first year is independent of it striking in the second year and hence the risk falls every day that has expired of the contract, the probability of a credit default occurring in the second year is not independent of the happenings in the first year. And because managements of the insured companies can change the credit risk profile of an insured, the visibility is less and credit risk more in the second year.

On the claims side, the bond insurer is required to measure the claim liability equal to the present value of expected net cash outflows. It is clearly mentioned that the insurer must take into account relevant market information (presumably CDS premiums and credit spreads) and not rely solely on management discretion. That would, to some extent, prevent under reserving. But market signals can be late in coming (though they would be far ahead of the bond insurer management). The credit spreads were far too low in 2005 and 2006, and the market signals would have implied lower reserving. The only way around this is slower booking of revenue and larger unearned premium reserves to compensate for lower claim reserves. While the standard requires an enterprise to recognize a claim liability when the enterprise expects that a claim loss will exceed the unearned premium revenue for a contract based on present value of expected net cash flows to be paid under the contract, the sunny disposition of the bond insurer management is likely to ensure that this stipulation would not be too useful.

Contingent Margins from Product Warranties

Product warranties are no big deal if a company has a product that has been in the market for a few years (at least longer than a full life cycle of a warranty). An analyst can then evaluate if the reserves created for product warranties are adequate vis-à-vis actual payouts for rectifying defects. For instance, for the three financial years 2006, 2007 and 2008, for technology company Hewlett Packard, the annual provisions for warranties was 3.3% of annual net product

revenue, while the actual costs for warranties was 3.1%. This provides comfort to the credit analyst as long as new products and services do not constitute a high proportion of sales. Only when the warranty costs are fairly certain can the full cost of a product, the actual profit margins and return on capital employed be estimated accurately. Typically, as product improvement takes place, the payouts necessary for warranty fulfilment will come down.

Problems arise from new products where the likely payouts from product warranties are uncertain. Then, the cost of sales shown in the income statement is a contingent one, and hence the operating margin calculated is also a contingent one. Likewise, for an existing product, if the terms of the warranties are changed, such as if the length of the warranty period is extended, the profit margin becomes a contingent one.

This is not a big deal for strong companies such as Cisco Systems, a creature of the internet age, which sells the gear required for sustaining the internet. The company offers product warranties ranging from 90 days to five years, and even limited life time guarantee on certain products. There are several sources of comfort for the creditor. Firstly, as a “post defined benefit pension era” company, the company has very little unfunded liabilities (the bit it has is from the acquisition of Scientific Atlanta). Secondly, the company has a very high quality investment portfolio, which provides a good cushion against adverse developments. Finally, and most importantly, the high operating margins of its businesses permit room for error, should the demands from warranties exceed what has been projected. The record from the past years provides comfort to the creditor because the payouts are broadly in line with what has been provisioned for.

Correct Pricing of Extended Warranty Contracts is crucial for Dell's Credit Quality

Computer maker Dell offers extended warranty and services to customers that extend the technical support and labor coverage offered as a part of the base warranty included with the product. Since this warranty is an optional extra, it requires extra payment by the customer. How correct this charge is for covering the expected losses that accrue from providing the extra warranty will determine if the company has to book a loss on such services. Obviously, the cost of servicing the extended warranty contract would be higher than the cost of servicing the equipment during the base warranty period for the same duration (say one year), because the product would have gotten older and hence more likely to fail.

Extended warranty is recorded as deferred service revenue in the balance sheet. If the extended warranty is for two years, the revenue and the costs are booked over the two years. The revenue needs to be actuarially split between the first and second year depending on the likelihood and severity of losses over the two years. Since the probability of the extended warranty being exercised over the second year is higher than the first year as the equipment would be more worn out, a higher proportion of the revenue should be booked in the second year to better match the revenue with the expected losses. If the extended warranties are not correctly valued, there could be losses that need to be booked by the company.

For Dell, the warranty liabilities from the extended service contracts far outstrip the basic warranty. For the fiscal year ended January 30, 2009, Dell reported deferred service revenue of \$5.6 billion. The base warranty liability was less than a fifth of that at \$1.04 billion. Between fiscal years 2006 and 2009, Dell's sales increased, somewhat tepidly, from \$55.8 billion to \$ 61.1 billion. The operating income actually came down during this period. However, deferred service revenue outstanding climbed from \$ 3.7 billion to \$5.6 billion (a jump of more than

41%). Was this jump due to expected inflation of servicing the warranty contracts? Was it due to offering to cover more risks than what was covered by the extended service contracts of earlier periods? If the jump was due to expected inflation, and if instead a deflationary environment prevails, when the time for servicing the contract comes, Dell would book higher profits than expected from the service contracts. Likewise, if inflation turns out higher than priced in, losses might have to be booked. Because the reserves for basic warranty climbed very moderately from \$951 million in 2006 to \$1.03 billion in 2009, one is inclined to believe that the jump in extended warranty was not due to expectation of inflation but due to offering more services/increasing the coverage. Whether these future liabilities have been correctly valued will have a profound impact on the profitability of the company in the future.

In fact, in 2007, there were allegations that the company was using its warranty reserves for managing earnings. The effect was not much but it highlighted the fact that credit analysts should be aware of this very important head. As companies move more and more towards treating initial sales as merely establishing contact with the customer, with a chunk of the revenue coming later from providing services (“the integrated goods and services model”), this head will acquire more and more significance. Even equity analysts would do well to focus on this long term driver or destroyer of value instead of fretting if the company’s quarterly earnings beat expectations by a penny.

Contingent Liabilities would be unfamiliar Territory for China’s Lenovo

Hong Kong listed computer manufacturer Lenovo celebrated 25 years of existence recently. For most of its existence, the company did not have much debt on its balance sheet and relied on the Greater China market for its sustenance. The most interesting event in the company’s life was its acquisition of the PC business of IBM. At the time of the acquisition, IBM’s PC business

had negative shareholders' equity. Clearly the hope was that by shifting its manufacturing base to China, it could succeed where IBM failed. Post paying cash for a company with negative equity, the company's goodwill on its balance sheet stood at \$ 1.85 billion. The original promoter of the company, Legend Holdings, held about 45% of the shares of the company post the IBM acquisition.

China's rating agency Xinhua Far East China Ratings expressed deep concern over the takeover, particularly since it loaded debt onto Lenovo's previously ungeared balance sheet. The agency considered it a poor gambit because of the very poor operating margins of IBM's PC business. The IBM business introduced two contingent liabilities into the Lenovo story- one on its capital structure and the other on its operations. To finance its acquisition, Lenovo issued convertible preference shares, \$ 227 million of which was outstanding as on 31st March 2009. It is more and more likely that these preference shares will settle as debt instruments.

Secondly, liabilities from warranty provisions might be more serious in other countries than in the Chinese market where Lenovo traditionally operated. Warranty periods range from one to three years depending on country. The company makes a provision for basic limited warranties the moment a sale is consummated as well as for extended warranties for which a customer pays extra. The company also makes a provision for sales return, which at the end of March 31st 2009 stood at \$ 112 million was lower than the \$160 million at the end of the previous year. The fall is higher than the almost 9% fall in sales- in fact one might encounter a higher proportion of product returns during tough times. Warranty provision fell from \$209 million to \$ 170 million. It is possible the company's American and European operations, unable to deliver on the earnings front were resorting to aggressive estimates of warranty costs- if so it will be clear in a year or two. Warranty cultures are different in different countries- one wonders if Lenovo has adequately appreciated that. Else it is in for unpleasant surprises in the near future.

For the financial year ending 31st March 2009, the company had a net loss of \$ 226 million, as opposed to a profit of \$484 million in the previous year. A positive feature of the company's operations is its negative cash conversion cycle of 23 days. We wonder if suppliers would be so forbearing if the losses do not stop.

Rolls Royce's Manufacturing & Services Model- exciting Business but opaque Margins

As an aerospace engineer by training, this author is fascinated is no small measure by the amazing aero engines developed by Rolls Royce plc of the UK. As a credit analyst one worries that it is not possible to have a clear idea of the company's operating margins.

Rolls Royce, the global leader in the manufacture of engines for power generation and aerospace and marine propulsion, was founded in 1884. In 1904, the company started making the famed Rolls Royce cars. The car business was beefed up with the acquisition of Bentley Motors in 1931. The company faced an acute financial crisis in 1971 and had to be nationalised by the UK government. The automotive division was spun off and sold to Vickers plc. The fabled cars finally found a resting place in the balance sheet of German automaker BMW. In 1987, Rolls Royce was privatised again.

The fascinating aspect of Rolls Royce's business model is that services contributed an ever increasing proportion of revenues. By 2008, services contributed more than 50% of the total revenues. By the end of 2008, the company's installed base of over 54,000 engines provided a solid foundation for the services business. The services business involves providing operating and maintenance services to its customers and could involve supplying spare parts such as turbine blades of the gas turbine engines. When the company sells a gas turbine engine, either for aerospace, marine or power generation applications, the company does not have a separate sales contract for the engine and a services contract for maintenance of the engine, but an

integrated goods and services contract. Hence no one, including the customer, has any idea what Rolls Royce is charging for the engine and what it is charging for the services contract. To generate recurring revenue from rendering services, the company sometimes sells engines below cost and recovers the loss from the services contract. The company acknowledged this in an annual report and stated that Rolls Royce may sell original equipment to customers at a price below cost on the basis that this deficit will be recovered from future after sale services. This deficit is recognised by the company as an intangible asset, and it is amortised on a straight line basis over the expected period of engine utilisation by the customer. The recoverable engine costs shown as a part of intangible assets amounted to £ 213 million at the end of 2008.

The amount of money to be recovered from the customers for services based on contractual terms is shown as receivables. The length of these service agreements can be gauged from the fact that of the £1.45 billion of amounts recoverable shown in the balance sheet at the end of 2008, £1.22 billion would be expected to be recovered in more than 1 year. The customer advances for the integrated equipment and services contracts amounted to more than £ 2 billion.

Because the services business has been growing at a rapid clip and has not reached a steady state in terms of revenue contribution as a percent of total revenues, it is difficult to tell whether the pricing of the services will ultimately turn out correct and what the ultimate margin from a sale is going to be. In this business model, it is vital that the company disclose service expenses from a sale for each sale year. For example, from the total engine sales made in the year 2000, the analyst would like to know how much was spent in 2001, 2002 and all subsequent years to date on the service contracts. Likewise, one needs to know the amount spent on sales consummated in 2001 during the subsequent years. This helps the analyst to assess how much costs will be incurred on service contracts for the recent sale years for which

the service costs would not have been fully accumulated. Of course, each sale year must be normalised by the sales made during that year. Once the analyst estimates how much expenses would be incurred and over what period, he can calculate the present value of those expected expenditures. This amount has to be compared with the receivables from the service contracts as shown in the annual report. If the receivables are higher than the present value of service expenses to be incurred, the analyst can rest easy and can have a good idea of the business margin.

Another reason why the operating margins cannot be exactly calculated is because the company provides financing support in the form of guarantees. The guarantees could be asset value guarantees (guaranteeing the residual value of the engine after a certain number of years) and credit guarantees. The former constitutes 55% of the total guarantees while the latter contributes 45%. The company disclosed gross contingent liabilities on account of such financing support to the tune of £755 million at the end of financial year 2009. For this, the company had created a provision of only £73 million. That makes it even more difficult to estimate what the ultimate margin from the business would be based on disclosed data.

Rolls Royce is a fascinating company, employing eminently competent engineers. On account of its technological superiority, it is very difficult for a competitor to break in. However, one wishes the company had a higher level of disclosure to enable a financial analyst to estimate the correct operating margins. The margin revealed in the income statement is contingent on too many factors- better disclosure would enable better estimation of the operating margins and the return on capital employed.

Contingent Margins of Construction Companies and Third Party Indemnities

Whenever a construction contractor takes a fixed price multi year contract, his booking revenues linked to costs is contingent on the project being completed on schedule and to costs. Else, the profits booked earlier are not correct. In addition, a contractor might provide a number of post completion performance guarantees, guaranteeing that the project, say a refinery, will operate as per the conditions specified in the contract document. The margins reported by a contractor remain contingent till the point the contractor can truly wash his hands of a project post the expiry of the performance guarantee period.

Take the example of Canadian contractor SNC Lavalin. It had entered into a fixed price contract to build at Ontario, Canada an 880 MW combined cycle thermal power project for Sthe Global Power Goreway. The scope of the contract included designing and building the power project. Initially SNC Lavalin booked revenue as per the percentage completion method accounting. Unfortunately, a key supplier to the project went bankrupt, which caused considerable delays and increased costs to SNC Lavalin. On account of this the company had to book an operating loss of Canadian \$267 million in its power segment.

Project owners are also exposed to contingencies if they give out contracts based exclusively on capital costs while ignoring operating costs and life cycle costs. The Indian government awarded mega power projects to companies based on which company would sell power at the lowest tariff to the state utilities. This caused a rush of Indian power companies to Chinese power equipment suppliers. The companies were focused on the “here and now” ignoring the damages they would have to pay to the utilities in future when those equipment break down. The experience with Chinese power equipment in India has not been a happy one- yet the companies, in order to get capital costs to the bone have handed over projects to the Chinese

suppliers. The contingent costs of the Indian power companies will become apparent in the next few years.

Contractors' margins also become contingent on account of third party indemnities. A contractor might have to indemnify a project owner against damages caused to third parties due to failure of equipment etc. The owner has to establish the link between a financial loss he suffered as a result of flawed design or manufacture. Lost production revenue on account of rework at the project might have to be paid by the contractor. Typically, the contractor has to indemnify a project owner against loss of or damage to the project owner's property and claims on account of personal injury or death as a consequence of flawed designing or commissioning.

Contingent Liabilities from Product Liability Lawsuits

Companies to an extent can protect themselves against damages from lawsuits on account of harm caused by their products to customers by buying product liability insurance. However, as discussed earlier, merely the fact that a company has insurance policies in place should not lull the creditor into a false sense of security. Since product liability lawsuits are very long tailed, it is essential that the insurance policies be with very strong insurers (unlike the insurance of property against damage) so as to ensure that the insurers are around to provide cover against damages. One of the lessons of the credit crisis is to avoid insurance companies who pursue non insurance hobbies like AIG.

Both the dimensions of contingent liability come into play for product liabilities. For a long time you are not sure whether you are exposed to the risk of loss. Even when the risk of loss is confirmed, the amount of the loss would be uncertain- so the best thing a company facing such a lawsuit can do is it to disclose the possible liabilities, their nature, if possible the range where the management thinks ultimate losses would be, the details of product liability insurance

policies in place with disclosures on deductibles of the policies, the upper limit if any of the coverage and name of the insurer. The management of the company as well as the credit analyst should not go by the external credit rating of the insurer, but more than one knowledgeable opinion must be taken for the assessing the creditworthiness- current and future of the insurer. Product liability insurance is too vital to be left to the whims of the assessments of credit rating agencies.

Pharmaceutical Company Behavior: Cost of doing Business versus Solvency Threat

Product liabilities of pharmaceutical companies are of two types. The first one is caused by willful fraudulent behavior of the companies which seek to promote uses of drugs for purposes not approved by regulatory agencies such as the FDA in the US in order to secure additional revenue streams. The second is caused by a harmful side effect of an approved drug for an approved use. Product liability insurance covers losses on account of the second cause but not that from the first cause. Many insurance companies have gone bankrupt on account of product liability insurance- so if a major event really occurs, there is very little that creditors can get by way of recoveries. But such occurrences are rare and creditors can protect themselves by not taking big exposures to a single pharmaceutical company, besides restricting their overall exposure to the sector to a fairly low level as percentage of debt assets under management.

More worrisome is the patently illegal behavior of big pharmaceutical companies in promoting drugs for unapproved uses. Not only does product liability insurance not cover this behavior, but it sorely tests the patience of juries who after seeing repeated bad behavior by a company might choose to put it into bankruptcy through an unaffordable fine. The pharma companies seem to treat the fines as a cost of doing business. This might turn out to be a serious miscalculation. Leading pharmaceutical company Pfizer paid a fine of \$ 430 million in 2004 for

peddling epilepsy drug Neurontin for purposes unapproved by the FDA. In 2009 the company paid a fine of \$1.19 billion (the largest in US history) for promoting its arthritis relief drug Bextra for other than approved uses. It also paid \$1 billion to close civil cases linked to the same drug. Other pharmaceutical companies such as Eli Lilly, Schering-Plough have also paid penalties for illegal prescription of drugs. The behavior seems to test fate and creditors should avoid companies which have been fined even once for this behavior unless there are clear indications of cleaning up. Once a jury forces one company into bankruptcy, everyone will be forced to clean up- then creditors can take a fresh look at the companies.

A complicating aspect of pharma company credit analysis is the risk brought in by companies acquired in M&A transactions. Pharma companies, unable to come up with blockbuster discoveries to compensate for revenue losses from drugs going off patent, have been busy acquiring companies that own drugs that still have long patent lives. We wonder if this behavior makes sense for shareholders either- companies are paying cash upfront for revenue streams of drugs acquired in M&A transactions while taking huge risks. Patents are being successfully challenged by aggressive generic companies such as Israel's Teva. One successful challenge and poof goes a revenue stream. Secondly these M&A transactions bring in contingent liabilities on account of past illegal behavior of prescribing drugs for unapproved purposes. Pfizer's product misuse suits originated in products that came with two M&A transactions- the acquisitions of Pharmacia & Upjohn and Warner Lambert. We don't know if the company had the misfortune to unknowingly venture into companies with cowboy sales cultures but thanks to incompetence has not been able to put an end to illegal behavior or whether it is actively encouraging such behavior after having overpaid for those acquisitions. We don't think in future juries would care what the underlying reason for the bad behavior was. All M&A transactions come with contingent liabilities not spotted during due diligence exercises and when those overwhelm the

expected revenue streams from the acquisition, bang goes any hope of a creditor getting his money back.

Product liabilities from side effects, even if covered by insurance, does inflict some damage on the company on account of deductibles on contracts and the requirement of having to pay higher insurance premium in future. S&P, perhaps rightly, stripped pharma company Merck of its triple-A rating by 3 notches post its recall of Vioxx (the arthritis treatment drug caused heart problems)- something the agency should have done a few years earlier as juries started awarding big damages.

Asbestos & Tobacco Product Liabilities: Abundant Time for Creditors to react

Product liability lawsuits from asbestos use caused the maximum number of bankruptcy filings (of companies, their insurers and reinsurers). The lesson for creditors from the asbestos episode is that the intellectually curious creditors had ample time to get out. For instance, building materials maker Owens Corning filed for bankruptcy in 2000 to cap its payouts from asbestos liability lawsuits emanating from its high-temperature insulation product manufactured between 1952 to 1972. The first lawsuits were filed in the early 1980s. Those creditors who dismissed the early stages of the problem, when the companies had enough cash flow and the liabilities had not crystallized into a single number, paid heavily later.

Even after a settlement is reached with regulators and governments, isolated suits might still crop up- but they cannot do much harm. When the seven biggest tobacco companies agreed to pay \$ 206 billion in a master settlement agreement with 46 US states in 1998, the credit worthiness of Altria, the parent company of legendary cigarette maker Philip Morris, drastically improved. Much as one might find the company's behavior repugnant, Philip Morris did have a stubborn doggedness about it which always served its investors well. Its chutzpah can be seen

in the way the company created an illusion with women's cigarette Marlboro in 1955. It rebranded the cigarette as a macho man's cigarette with a cowboy ad campaign- sales jumped 3000% in 1956.

We do not know where the issue of transfats is going to lead to. But creditors to the fast food restaurant chains should have their fingers on the parachute button if the issue evolves beyond the current low level of activity. Perhaps, unlike the tobacco companies, the restaurant chains were not aware of the harmful affects of transfats much before the paying public.

Disputes with Tax Authorities and changes in Tax Laws

A company could be faced with increased tax bill on account of two reasons. It could be on account of change in corporate tax rate or change in tax laws that tax new items or remove tax shields on items such as overseas profits. Or it could be on account of tax authorities slapping a claim from a transaction such as an M&A transaction, which the company had not bargained for when the transaction was consummated. It might not be possible to back out of the transaction at the late date on account of penalties that need to be paid. It might be argued, from the creditor standpoint, that the latter cause might be more pernicious because it is charged, not necessarily from income after payment of interest. That is not necessarily so. Higher tax rates might induce companies to get more leveraged to take advantage of the protective cover available for interest servicing. The aim of any company is primarily to protect return on equity post the tax increase. Of course, covenants can to some extent prevent the company from getting too leveraged. The company might also go for higher dividend payouts to compensate for the higher tax rate.

Vodafone's India Tax Misadventure

UK's telecom services company Vodafone grew by acquiring telecom assets around the world. During the dot com boom the company made use of its overpriced equity as a currency for many acquisitions. After the bubble ended sometime in 2001, the company's balance sheet was stretched. It started divesting stakes in companies. It got out of Japan altogether. After the dust settled, when growth in its core markets had all but lost steam, the company took over an Indian telecom services provider, drawn in by the high growth prospects of the Indian telecom market. It bought out the 67% stake of Hong Kong port operator Hutchison in a telecom company. The other 33% was held by an Indian entity with a reputation for sharp practice. Vodafone paid \$11.2 billion for its stake in 2007.

The Indian tax authorities contended that they had the right to tax the profits that accrued from the transfer of Indian assets, even though the seller, Hutchison controlled its Indian subsidiary through a maze of companies that ultimately led to the Cayman Islands. Since the transfer involved an Indian asset, the authorities contended that Vodafone should have deducted tax at source when it paid Hutchison. The authorities slapped a tax claim of almost \$ 2 billion on Vodafone. The case has not yet been settled. Considering that the company had net earnings of £3.08 billion in the year ended March 31st 2009, the amount involved is not a trifling one.

It is impossible for a creditor to have foreseen this sudden demand for cash which reduced debt protection metrics by several notches. The only broad lesson is to be wary of companies that are too aggressive in their tax dealings. And of course, Vodafone's history of reckless acquisitions (followed by writedowns) was also a pointer to the fact that this was a company best avoided.

US Overseas Tax and the UK Government Tax on Foreign Residents

When government debt to GDP gets to high levels, creditors need to factor in increased tax rates for the corporate sector. Though interest payments are made on pre-tax income, tax payouts would weaken a company in the longer run as there would be less retained earnings. This increases the credit risk of the principal repayment. The time to think about this is not after the higher tax rates are slapped but before, as government debt starts piling up. These tax increases can push companies, which are operating at the edge between profitability and the lack of it, to the other side.

In the next few years, the governments of the UK and the US will be looking to inflict higher taxes on the corporate sector to keep deficits from spinning out of control. Initially, the tax increase will be on soft targets such as companies that outsource some jobs to foreign countries, banks, foreign residents etc. But those tax increases will be merely pointers to worse things to come. Tax increases might not be the making and unmaking of companies, but credit analysts would need to keep a sharp watch for populist moves.

Contingent Assets

In the interests of conservatism, the accounting standards do not permit the recognition of contingent assets. But the contingent assets referred to in the standards are potential gains such as from a lawsuit etc. What we are referring to in this section is the case where the asset valuation of an enterprise is contingent on many external factors and subject to huge variations. Obviously, such companies cannot support too much debt on their balance sheet. The classic industry where the asset valuations are mind bogglingly volatile is the oil and gas exploration industry.

Spreadsheet Credit Analysis does not work in the Oil and Gas Exploration Industry

The oil and gas exploration industry (not the refining and marketing bit), more than any other industry, is full of perils for the analyst who enters the financials of a company in a spreadsheet, calculates some ratios and jumps to conclusions. This works for a while when oil prices trend up but reveals itself to be inadequate once the price cycle turns.

Before going into the details of analyzing the creditworthiness of oil and gas exploration companies, let us look at the salient issues of oil and gas industry accounting. The biggest item on the asset side of the balance sheet of an exploration company, among companies who file as per US standards is Properties, Plant and Equipment (PPE). Oil industry accounting standards permit the reporting of PPE using one of the two following methods- full cost method and successful effort method. In the case of the full cost method, all exploration costs are capitalized whether the exploration projects are successful or unsuccessful. This capitalized cost is amortised as over a period of time. In the successful effort accounting, expenditures for successful projects are capitalized and amortised as the reserves are produced. Unsuccessful efforts are immediately expensed. The rationale for full cost accounting is that success and failure in locating reserves is part and parcel of the business. That is, to locate X amount of reserves Y amount of resources must be expended and hence Y must be capitalized and written down as the X, over many years, is produced. There are two fatal flaws with this assertion. Firstly, this ignores differences between two companies, one of which has a superior seismic technology and detects dry wells at a higher rate before expending resources and another company, which does not have that technology and hence must expend resources before finding out that the prospect was a dud. Secondly, as one prospects in tougher and tougher areas such as deep seas or in places without strong property rights (making the chances of expropriation higher), the old calculation from historical data of deploying X amount of

resources to obtain Y amount of proven reserves might not apply. So, if an analyst used the historical data, he might overstate future return on capital employed. Most of the big integrated oil companies use the successful effort method and hence the full cost method might soon find its way to the museum of accounting standards.

However, while the successful effort method becomes more and more commonplace, the weaknesses of the method cannot be ignored by a credit analyst. The biggest weakness was pointed out by dissenting board members while SFAS 19- "Financial Accounting and Reporting by Oil and Gas Producing Companies" was prepared. The point raised by the dissenting board members was there was no necessary correlation between finding costs and value of reserves found. So, they suggested that conceptually it makes sense to account for mineral reserves at fair value in the financial statements. Theoretically, it is possible for company A to spend X dollars to procure a unit of reserve while company B spends Y dollars to procure a unit of reserve. If those reserves are of identical quality, both companies A and B should state the same amount of assets on their balance sheet. However, if company A was less productive and spent more to acquire its successful finds, it would have a higher amount of assets. So, theoretically, once a company finds reserves, if it keeps spending higher and higher amounts, it will have higher amounts of assets and shareholders' equity. If the equity is overstated, so is the cover available for creditors. We find it paradoxical to value the assets based on costs of successful efforts. Of course, the higher asset valuation would make its effect felt through higher depreciation and depletion costs and lower profitability- but that happens over a period of time and does not assist the credit analyst from taking a call on asset valuation under multiple crude price scenarios.

If a company's earnings from its assets are likely to fall, the assets are said to be impaired and the company is supposed to take a write down of assets so that their values are stated at levels

where returns from their usage is equal to the cost of capital. The successful effort accounting papers over this issue. Most of the companies seemed to take a discretionary view on what amount of impairment charges to take- many stated that the impairment charges on PP&E is linked to the management view on low oil prices persisting for extended periods. Companies were more forthcoming in taking impairment charges if the proven reserves were expected to be less than originally thought. On the 2nd of January 2008, the West Texas Intermediate crude prices were quoting at \$ 99.63 a barrel. By the end of the year the crude prices were a third of that. Yet, the big companies took differing amounts of impairment charges for their exploration assets. Exxon Mobil mentioned in its 2008 annual report “in general, the corporation does not view temporarily low oil and gas prices as a trigger event for conducting impairment tests”. Chevron did not take impairment charges in 2008 on its PP&E account. Shell had negligible impairments costs on its exploration assets. BP took an impairment charge of \$ 1 billion on its exploration assets. ConocoPhillips took an impairment charge of \$ 34.1 billion in 2008. Of this, \$ 7.4 billion was linked to the fall in value of its investment in 2004 in Russian oil company Lukoil and about \$ 25 billion was related to writedown of goodwill in the merger between Conoco and Phillips. That brings to mind another contradiction. If one held oil investments in the form of quoted equity, the value of the assets would fall with market conditions. If the oil investments are held as PP&E under the successful effort method, one had wide discretionary rights. What then is the correct value of assets on an oil explorer’s balance sheet?

Chesapeake’s Full Cost Method of Accounting leads to an outsized Balance Sheet

Chesapeake Energy is one of the largest producers of natural gas in the US. For its gas exploration activities, Chesapeake uses the full cost method under which all costs associated with acquiring a property for drilling, exploration and development activities are fully capitalized. This capitalized item is depreciated at the rate at which gas is drilled out from a

find. Because of the use of the full cost method, an analyst cannot estimate what is the likely cash generation ability of the properties. Full cost method is no different from a bank showing its performing and non performing assets together, without writing down the non performing ones. So, merely because the 2008 annual report stated that the company's capitalized gas properties were for \$28.3 billion and its debt was \$14.2 billion, one cannot say that the debt equity ratio was around 1:1. Actual debt equity ratio was larger on account of the lower real equity due to the lower real value of assets. Chesapeake's leveraged balance sheet means the company is very vulnerable if gas prices fall precipitously.

Back of the Envelope calculation of Asset Values of an Oil Exploring Company

Obviously, we don't have a full fledged answer for such a complex topic. However, we have some rough thoughts which build on the fair value concept which the dissenters in the board creating SFAS 19 thought necessary. So, our back of the envelope calculation of the net asset value (not including current assets) of an oil exploring company would be

PP&E assets= value of proven reserves + value of unproven reserves + value of drilling rights -
- adjustments for potential trouble such as expropriation/security problems in troubled regions
- Clean up costs for matters such as environmental issues

Value of Proven reserves = Quantity of proven reserves * (different unit price scenarios post extraction costs and other costs such as royalties etc)

Value of unproven reserves = same method as above except one would try out various quantities of reserves (how low can it be is a question that needs to be answered)

Drilling rights can be valued at fair value if it can be sold. Else considering the high risk nature of the business, from a creditor's viewpoint, zero.

Adjustments for potential trouble depend on where the exploration resources are located.

On the current asset side, the use of the concept of “replacement cost profit” removes the potential reduction in value from carrying stocks. Most oil companies disclose replacement cost. This is particularly relevant in an environment of sharply falling crude prices, when the inventory can sharply lose value. Also the quantity stocked can vary significantly unlike in other businesses.

Contingencies from the Capital Structure

When a company issues a liability instrument whose maturity date is uncertain or whose cash flow pattern is uncertain, the instrument induces contingencies into the capital structure of the firm. Examples of instruments that induce contingencies on the liability side of a company’s balance sheet include callable and puttable bonds as well as convertible bonds. Contingencies include potential management action such as share buybacks which lever up a balance sheet, rights issues which delever it and M&A transactions which usually worsen the capital structure. The change of CEO at French pharmaceutical company Sanofi-Aventis resulted in the company going on an acquisition spree with sharp changes in the company’s capital structure. Only strict covenants could have protected the creditor from such actions with unsymmetrical risk-reward profile between shareholders and creditors.

Bank Capital Contingent Capital Instruments

In the banking sector, post the bank bailouts of 2008-09, new hybrid instruments have been talked about which would convert into equity in times of crisis. That is good for senior creditors and depositors, but not so for the investors in the hybrid instruments- which incorporates the worst features of debt and equity- no upside if the bank performs well, but only downside risk of getting converted into equity at the worst possible moment for a shareholder. Of course, they

would benefit if after wiping out a portion of the original equity, the bank recovers from that point and the booty can be shared by fewer shareholders. In November 2009, the Lloyds Banking Group of the UK proposed to convert its existing debt into £7.5 billion of contingent core Tier-1 capital. This would convert to equity if the bank's cushion of equity capital falls below 5%.

In reality, all these silly solutions would not be necessary if a bank's senior lenders are told by the regulators that there would be no bailouts for them if a bank runs into trouble. That would ensure that these senior creditors would put in covenants in their loan agreements that prohibit banks from investing in Level 3 assets or leveraging themselves beyond a point.

Convertible Debt and Puttable Bonds

The accounting standards require valuing all liabilities, including those that are convertible into equity at fair value. So, when the market price is far higher than the conversion price, the valuation of the liability would be close to the equity valuation, while if the market price is below conversion price, the value of the conversion privilege will come only from the time value of the embedded option and not from the intrinsic value. However, from a creditor standpoint, until conversion, the instrument must be treated like debt as market price of the stocks can fall sharply and the debt might not get converted into equity. Optionally convertible bonds get converted to equity if the stock is performing well but do not get converted otherwise. So precisely when a creditor requires a cushion, the cushion is unavailable as the holders of the convertible do not convert. Hence, for all analysis, optionally convertible bonds need to be treated as debt.

In the case of puttable bonds, they could be put onto the issuer for two reasons. It could be because, in an environment of rising rates, the value of the bonds would have fallen. Or it could

be because the credit quality of the issuer has deteriorated and the credit spreads have widened. Under these circumstances, the credit analyst needs to consider the put date as the maturity date of the bond. Otherwise, the analyst could take the scheduled maturity date as the date of repayment. The creditor needs to worry when a financing institution such as a bank issues a lot of puttable bonds. It can drastically alter the asset-liability profile of the institution.

Callable Capital

Callable capital is common for multilateral financial institutions such as the IBRD, MIGA etc. In those cases, individual sovereign states who are the suppliers of capital funds for the institutions are unlikely to back out of their commitment to supply capital when the need arises as that would cause erosion of national prestige. In any private sector environment it would be too liberal to rely on such capital getting paid in, unless one knows the financial strength of all the parties who have committed capital and contractual agreements are there in place to ensure that capital would be supplied the moment it is needed.

Tier I hybrid capital instruments can be viewed as callable capital as not only can a bank regulator prevent the servicing of such instruments if the bank encounters financial stress, but unlike in the case of Tier II capital instruments, the interest is non cumulative- i.e.- the foregone interests will never have to be paid. So, senior creditors to a bank, for their stress scenarios, do not have to worry about interest payouts to the holders of such capital instruments. An added advantage, from the senior creditor's perspective is that the Upper Tier II and Tier I instruments (as discussed in detail in the chapter 4), do not have to be called- effectively making those perpetual instruments like hard equity. However long term senior creditors should not be too thrilled at this prospect as this effectively would shut the bank out of future issuances of such instruments, impinging long term credit quality. Also the instruments have coupon step-up if

not called as scheduled, causing interest payouts to jump up. But in the short run it is a cushion for senior creditors.

Share buybacks

Share buybacks are contingent events which can suddenly change the protection available to creditors if the debt equity ratios post the buybacks do not violate covenants in loan agreements. The likelihood of this event occurring is linked to management risk appetite. Hence we discuss this in greater detail in chapter 9.

Rights Issues

A rights issue by a company is a contingent event with positive implications for the creditor. However companies seldom come up with rights issues with the benign intention of providing succor to creditors. Chances are management has planned a nasty surprise ahead such as an M&A transaction, which might skew the capital structure further towards debt.

Key Takeaways from this Chapter

If from a source of liability it is probable that a loss would occur and the amount of the loss can reasonably be estimated, a company would have to book the loss in its financial statements. If either of the conditions is not met, the company does not have to accrue the loss in its income statement but make a disclosure of its potential to inflict harm. Contingent liability is one aspect of credit analysis that analysts pay insufficient attention to. Yet, as many companies are increasingly trying to get business and revenues today and push the bad news into the future, the importance of contingent liabilities in credit analysis is only likely to go up. The shape of future contingent liabilities is also likely to be very different from those in the past.

In the past, contingent liabilities crept up and shocked the management as well as investors equally. They usually occurred due to product liability lawsuits such as those from damages caused by asbestos. Even when managements were complicit and fully aware such as in the case of the tobacco liability issue, managements were shocked when they were hit by multi billion dollar damages. Because damages from product liabilities take some time to crystallize, it provides creditors with adequate notice of trouble ahead -so that they can quietly take the exit door.

The contingent damages of the future are likely to emanate from mispriced extended product warranties and extended service contracts. Pure manufacturing companies are moving away from their practice of providing a limited period product warranty towards providing extended warranty and service contracts that are priced upfront. This move to an integrated manufacturing and services model is great news for creditors if each of the legs of cost (most of which are priced upfront)- cost of goods produced, simple warranty and extended warranty are priced correctly. When priced correctly, these service contracts provide an annuity like income from each sale. Priced incorrectly, this is no different from the horrible assets on an investment bank's balance sheet which initially generate profits and bonuses through marking up of value of assets but come back to haunt the banks once the liquidity music stops and when even the biggest patsy in the room cannot be convinced that the assets have value.

Mispriced contingent liabilities were the cause of demise of credit insurers. We are not talking about the mispriced junk sub prime assets guaranteed or the CDOs linked to what can be called assets only by abusing the meaning of that word. We are talking about the insurers' traditional municipal finance business, where the insurers were guaranteeing long term bond issues of municipalities. The guarantee fees were fixed upfront and booked as those revenues accrued evenly each year. While this is the correct way to accruing income in the case of property &

casualty insurance, in the case of credit insurance, it does not fly because even without getting into any debate you know credit risk in year 2 is more than in year 1 as visibility of earnings of the guaranteed entity becomes more and more fuzzy. Credit insurers were able to get away with it because the intensive debt financed growth in the US from the early 1980s ensured that municipalities had no issues in collecting property tax and other revenues. Municipalities did not have to worry about pension liabilities which looked fully funded on account of asset price inflation. Not only are municipality revenues going to be lower in future, but Wall Street has securitized the municipality pension assets into current fees for the investment banks and future dud assets for the pension funds.

Mispriced contingent liabilities can occur when a construction company promises excessive performance guarantees and third party indemnities. It might seem smart to get a contract today- but the consequences will be borne by a future CEO and the creditors. Construction contracts are getting more and more competitive and project owners are farming out fixed price contracts in which contract conditions specify excessive performance guarantees for long periods post project commissioning. If such contracts are given to the lowest bidder, winner's curse can afflict the contractor awarded the contract.

The accounting standards require that contingent assets should not be recognized. But the way resources companies such as oil and gas companies carry exploration assets on their balance sheets, it involves an implicit recognition of contingent assets- the assumption that future success ratios in prospecting would be the same as in the past. The frailty of carrying value of oil and gas exploration assets is due to the fact that it is linked to costs incurred for creating assets and not linked to their revenue producing ability.

In some industries, disputes with tax authorities are a frequent occurrence and it might be regarded as a cost of doing business. But a big jump in tax liability from an M&A transaction or other management action can also cause unpleasant surprises for creditors. Such transactions also result in toying with a company's capital structure, if the M&A deals were debt financed or if they result in share buy backs. The creditors need to be convinced about a management's credibility and how likely is it that they would set out on a debt financed adventure.