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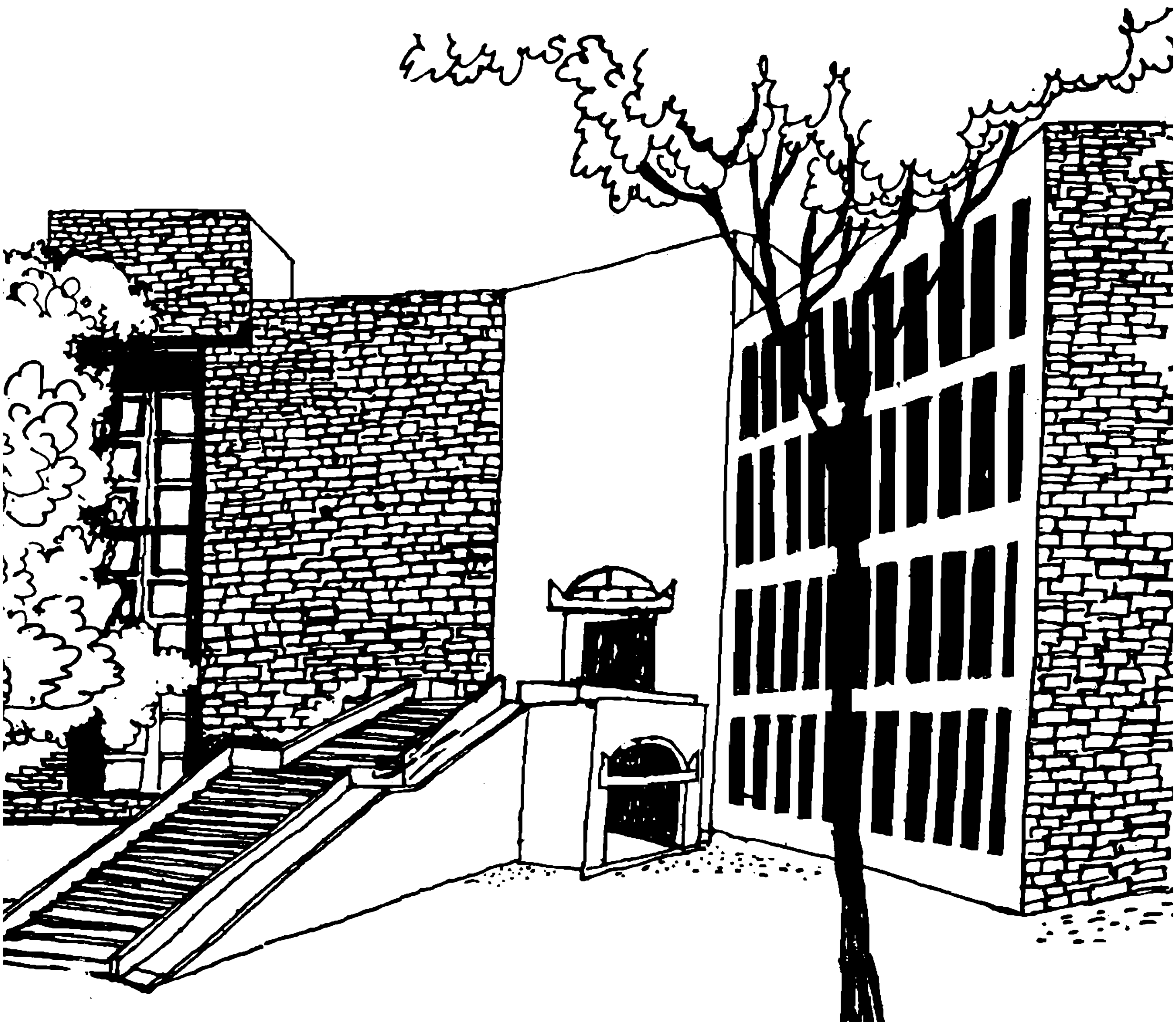

CRISIL Rating: When Does AAA Mean B?

By

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CRISIL Rating: When Does AAA Mean B?

By

V. Raghunathan and Jayanth R. Varma*

Abstract

In this paper an attempt has been made to assess the quality of credit rating function being performed by CRISIL, hitherto the sole credit rating agency in India. With this objective, the paper attempts to answer two important questions, namely : a) Are CRISIL's standards of rating comparable to international standards? and b) Are CRISIL's ratings internally consistent? The questions are answered by assessing the companies rated AAA by CRISIL on the Standard and Poor's (S & P) standards. It turns out that the CRISIL's AAA companies rate variously from B to A on the S & P standards! This indicates that CRISIL's credit rating standards are not only much below international standards, they are also internally inconsistent. CRISIL's rating reports on its AAA companies are carefully analyzed to see if the ratios employed by it are significantly different from those of S & P's, so that their AAA ratings may be consistent vis-a-vis their own ratios rather than by S & P's ratios. Even this does not turn out to be so. CRISIL's rating reports are also analyzed for any qualitative reasons for the award of AAA ratings. No strong reasons are found. Thus it is concluded that the discriminating ability of CRISIL's ratings vis-a-vis risk and hence their meaningfulness and usability are in general questionable. This conclusion assumes all the more significance in the light of interest rates being allowed to be determined by market forces, and the interest rates in turn being linked to credit-worthiness of the borrowers more than ever before. Thus, the paper strengthens the case for more credit rating agencies both in the private as well public sector for making the rating business competitive. It also provides a more objective framework for assessing the performance of credit rating agencies in general.

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Four years in operation, perhaps it is time to take stock of CRISIL's operations. All ostensible indications are that the country's first credit rating agency has done well and is continuing to do so. In fact such has been the sense of satisfaction over its performance all around, that the government took quite some time clearing the second (IFCI sponsored) agency for operations. Even today, nobody, either in the government or in the private sector, seems to appreciate the need for any more credit rating agencies.

The financial press reports have been quite complimentary as to the performance of CRISIL over its brief history. How has its performance been measured? What criteria have been applied in the press giving an AAA rating to the performance of CRISIL? Was this assessment based on the number of securities rated by the agency? Or on the growth in its offices and staff? Or on the strength of the agency becoming financially self-sustaining in the brief period of its operations? Perhaps. But we must realize that such indicators are inadequate, especially in the context of a monopolistic agency.

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The fact is that no serious attempt has been made to-date to assess the credit rating ability of CRISIL, the only substantive objective for which the agency exists. And if we agree that a credit rating agency's track record may be considered good or bad only on the strength of how good or bad its ratings are, perhaps we shall be bringing in some objectivity into the assessment of the agency's operations. But then, how does one set about the task?

Criteria for Assessing CRISIL's Performance

One could reasonably assess the quality of CRISIL's ratings by asking two questions: a) Are CRISIL's standards of rating comparable to international standards? and b) Are CRISIL's ratings internally consistent?

Methodology

With the above twin questions in mind, we decided to investigate all the debentures (being the long term debt instrument) rated AAA by CRISIL. Unfortunately, there were only four of them, namely, the debentures of Ashok Leyland, Bajaj Auto, Indian Petro Chemicals Ltd (IPCL) and Tata Chemicals.

We chose the reputed US rating agency Standard & Poor (S & P) as the bench mark against which to compare CRISIL. For ten key ratios used by S & P, we obtained the median value of each ratio for companies rated in each category from AAA to CCC. This data is given in Table 1. For example, for companies rated AAA, the median pretax interest coverage was 10.46 while for CCC rated companies this ratio was only 0.09. Table 1 therefore gives us an idea of the standards that S & P applies for credit rating. For example, the typical pattern of ratios for a company which S & P rates AAA can be read off the first column of Table 1. S & P rating symbols differ only slightly from CRISIL's and the definitions of these symbols (AAA, AA, etc.) are by and large comparable.

We then examined the exact definition of each of these ten S & P ratios and tried to identify the nearest Indian ratios corresponding to them. It turned out that we were unable to identify corresponding Indian equivalents for ratios 2 and 9 (of Table 1). This was because the fixed charge in ratio 2 included rents on leases - a piece of information not available in the Indian context. Again no equivalent for ratio 9 could be found since the permanent capital in the denominator of the ratio included a component representing investments in leases - once again not available in the Indian context. Hence ratios 2 and 9 were dropped and corresponding Indian equivalents were identified for the remaining eight ratios (See Table 2). Table 2 provides the values of the Indian equivalent of S & P ratios for the four AAA rated debentures. The ratios have been arrived at using the Bombay Stock Exchange directory data for the year 1989-90.

Table 1

Three Year (1983-85) Medians of Key Ratios Industrial Long Term Debt

S&P Ratio	AAA	AA	A	BBB	BB	B	CCC
1 Pre-tax Interest coverage	10.46	8.21	5.33	3.05	2.47	1.87	0.09
2 Pre-tax Fixed Charge Coverage*							
3 Funds from Operations to Long-term Debt(%)	309.30%	118.44%	75.40%	45.74%	27.02%	18.95%	15.07%
4 Funds from Operations to Total Debt(%)	151.40%	84.3%	60.7%	39.4%	23.3%	16.9%	8.1%
5 Pre-tax Return on Permanent Capital(%)	25.60%	22.1%	18.0%	12.1%	13.8%	12.0%	2.7%
6 Operating Income to Sales (%)	18.67%	15.2%	11.7%	10.2%	10.9%	8.8%	10.5%
7 Capital to Long Term Debt	11.30	5.29	4.09	3.17	2.35	1.92	1.44
8 Capital+Short Term Debt to Total Debt	5.60	4.02	3.44	2.94	2.18	1.80	1.39
9 Pre-tax Return on Permanent Capital							
10 Equity to Total Liabilities	1.34	0.97	0.92	0.77	0.54	0.42	0.24

Source: Klapper, B (1990), "Rating Corporate Fixed Income Securities", in Kuhn, R.L. Ed. Corporate and Municipal Securities, Vol III of the Library of Investment Banking, Homewood, Illinois, Dow Jones-Irwin.

Note: Ratios 7, 8 and 10 are in fact reciprocals of the original S & P ratios. This has been done so that for all the ratios higher values indicate higher credit-worthiness.

Table 2

Indian Equivalent of Standard & Poor's Ratios for 1990 for Firms Whose Debentures Are Rated AAA by CRISIL

S&P Ratio	Indian Ratio	Ashok Leyland	Bajaj Auto	IPCL	Tata Chem
1 Pre-tax Interest coverage	EBIT/INT	2.37	5.01	1.69	2.17
2 Pre-tax Fixed Charge Coverage*	NONE				
3 Funds from Operations to Long-term Debt(%)	(PAT+DEP)/LTD	50.7%	196.4%	15.1%	43.5%
4 Funds from Operations to Total Debt(%)	(PAT+DEP)/TD	29.0%	77.6%	12.3%	18.0%
5 Pre-tax Return on Permanent Capital(%)	EBIT/(TD+NW)	14.1%	27.8%	12.8%	16.1%
6 Operating Income to Sales(%)	OP/SALES	3.3%	5.2%	6.1%	5.3%
7 Capital to Long Term Debt	(LTD+NW)/LTD	2.84	5.41	1.68	3.19
8 Capital+Short Term Debt to Total Debt	(TD+NW)/TD	5.48	4.63	2.81	1.86
9 Pre-tax Return on Permanent Capital**	NONE				
10 Equity to Total Liabilities	NW/TL	2.62	3.14	2.37	3.82

* The ratio involves information concerning lease income etc., which is not available from public sources.

**The denominator of the ratio involves information concerning the capitalized value of lease rentals, which again is not available from public sources.

PAT	Profit after tax
EBIT	Earnings before interest and taxes
INT	Interest expense
DEP	Depreciation
TD	Total Debt(including short term borrowings)
NW	Net Worth
OP	Sales less all costs other than interest and depreciation
LTD	Long term Debt
TL	Total Liabilities (including current liabilities)

CRISIL's Rating Versus S & P Rating

Given the ratios in Table 2 for the four Indian AAA debentures fare, how do these compare with the S & P standards? In other words, what will be the rating for the four debentures if we were to apply S & P's standards? In order to answer this question, we rate each debenture on each of the eight ratios with the help of Table 1. These ratings have been shown in Table 3. For example, Ashok Leyland's pretax interest coverage is 2.37 while the S & P medians are 3.05 for BBB, 2.47 for BB and 1.87 for B. Clearly, on this ratio, Ashok Leyland's debenture seems to rate BB by S & P standards. S & P does not have a formula or score to combine all the ratios into a single composite rating. The overall rating requires a subjective weightage of the individual ratios. But for all the four companies in our case, the pattern of ratios is such that there is little difficulty in imputing an overall rating as shown in the last row of Table 3.

It is seen from Table 3, that all the four Indian "AAA Debentures" fall short of S & P's AAA standards. In fact three out of the four debentures are not even in the A category. What is worse is that these three debentures, namely those of Ashok Leyland, Tata Chemicals and IPCL are in the lower rungs of

Table 3

The Rating of CRISIL AAA Debentures Based on S & P Norms

S&P Ratio	Indian Ratio	Ashok Leyland	Bajaj Auto	IPCL	Tata Chem	HLL
1 Pre-tax Interest coverage	EBIT/INT	BB	A	B	BB	AA
2 Pre-tax Fixed Charge Coverage*	NONE					
3 Funds from Operations to Long-term Debt	(PAT+DEP)/LTD	BBB	AAA	CCC	BBB	AAA
4 Funds from Operations to Total Debt	(PAT+DEP)/TD	BB	AA	B	B	A
5 Pre-tax Return on Permanent Capital	EBIT/(TD+NW)	BBB	AAA	BBB	A	AA
6 Operating Income to Sales	OP/SALES	B	B	B	B	AAA
7 Capital to Long Term Debt	(LTD+NW)/LTD	BBB	AA	B	BBB	AAA
8 Capital+Short Term Debt to Total Debt	(TD+NW)/TD	BB	BBB	CCC	B	A
9 Pre-tax Return on Permanent Capital**	NONE					
10 Equity to Total Liabilities	NW/TL	BB	BBB	B	BBB	BB
Aggregate Rating*		BB	A	B	BB	AA

category B - the former two rating BB and the last rating B! Even after allowing for the fact that the Indian and the American contexts may not be readily comparable, one is still uncomfortable with the fact that the difference in the two standards be up to five grades (from B to AAA)! Fig. 1 shows the discrepancy visually. The height of the box in the figure represents the S & P norm, and the individual bars represent the actual ratios expressed as percentage of this norm. The box being more than half empty indicates that most of the ratios are less than half what they should be.

What do we say now of CRISIL's standard of rating? Can we conclude that CRISIL's standards are rather lax? We shall turn to this question presently, but first let us look at another disturbing feature of the facts that we put together so far.

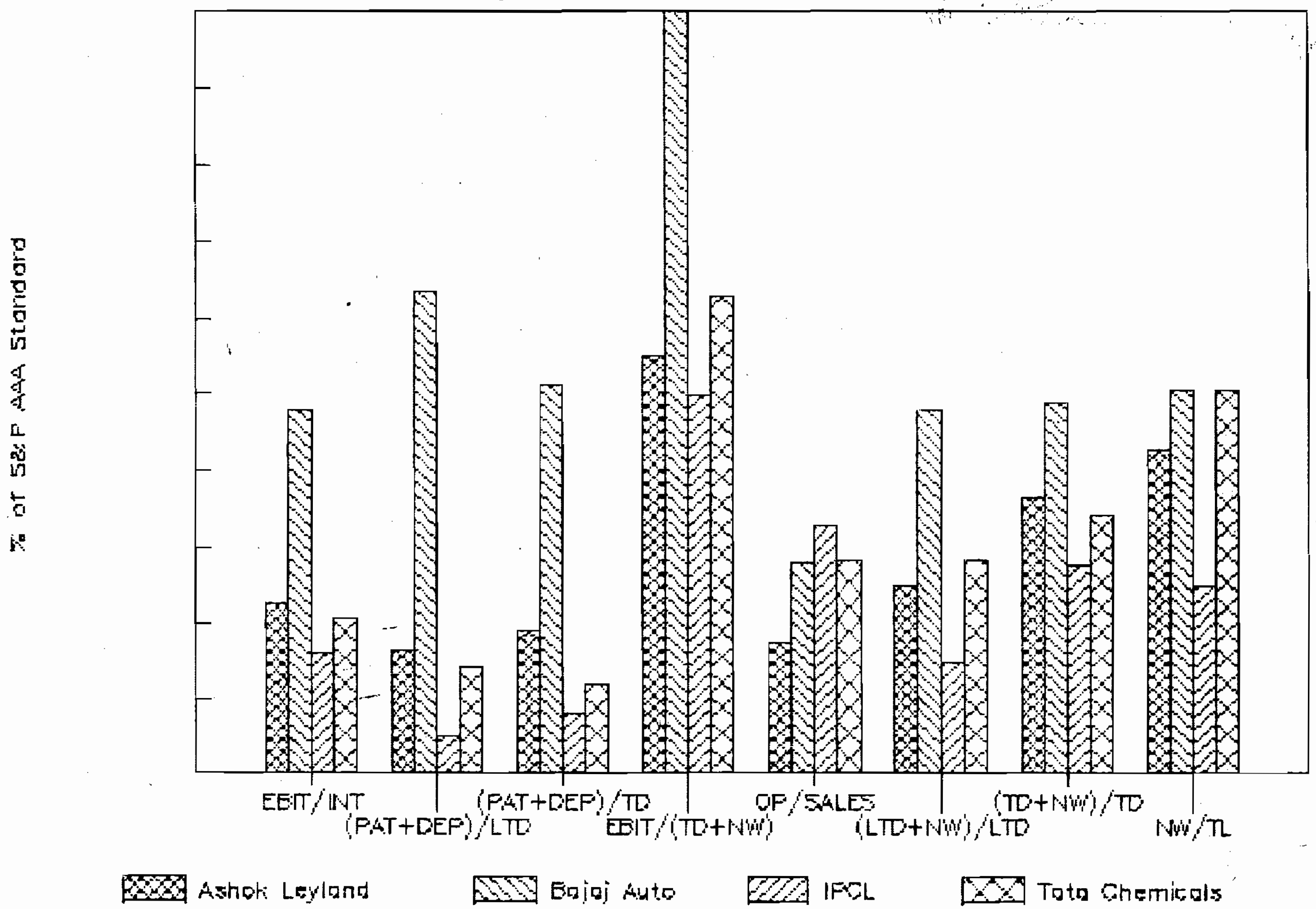
Internal Consistency

What can we say from Tables 2 and Fig.1 about CRISIL's consistency of rating? Would any reasonable person looking at this data agree that debentures of these four companies are equally safe? When CRISIL rates them all AAA, it is saying that there is nothing to choose between them in terms of risk. According to CRISIL's own definition:

"Debentures rated AAA are judged to offer highest safety of timely payment of interest and principal" and

Fig. 1 Comparative Ratios

(Height of Box is the S&P AAA Standard)



"Debentures rated AA are judged to offer high safety of timely payment of interest and principal. They differ in safety from AAA issues only marginally.

If its definitions are accepted, by rating them all AAA, CRISIL is therefore saying that they do not differ in risk even marginally, since even a marginally lower degree of safety would warrant a rating of AA!

In this context, Fig. 1 and Table 2 are really shocking. IPCL's pretax interest coverage (ratio 1) at 1.69 is about one third that of Bajaj Auto at 5.01. Its funds from operations is only 15% of long term total debt as against 196% for Bajaj Auto (ratio 3). Its pretax return on permanent capital (ratio 5) is less than half that of Bajaj Auto, while the ratio of capital to long term debt (ratio 7) is less than one third that of Bajaj. In fact in seven out of eight ratios, IPCL fares much worse than Bajaj. In terms of S & P standards, IPCL rates B while Bajaj rates an A. Does CRISIL seriously expect the investors to believe that IPCL is not even marginally less safe than Bajaj Auto? One is driven to ask whether CRISIL ratings convey much information if their discriminating ability is so poor.

All four Ratings Untenable?

Clearly, CRISIL seems to fail miserably on both counts of our investigation. According to S & P norms, not one of the four AAA ratings appear to be tenable. Even Bajaj Auto whose debenture is rated the best of the lot rates only an A on the S & P standard. We therefore considered the possibility that the ratios of Bajaj Auto are among the highest obtainable in the Indian Industry. If so, even if the other three CRISIL ratings (debentures of Ashok Leyland, IPCL and Tata Chemicals) are considered internally inconsistent, its rating of Bajaj Auto debenture may be accepted as being the best in the Indian scenario and hence meriting a AAA rating.

With the above reasoning in mind we searched among other firms in a bid to identify an Indian firm whose key ratios excel those of Bajaj Auto. We hit upon Hindustan lever Ltd (HLL), whose ratios (Table 4) and corresponding ratings clearly out-strip those of Bajaj Auto . If HLL came in for a debenture issue, it would rate AA on the S & P standard - clearly a notch above that of Bajaj Auto. In all probability , CRISIL will rate HLL debenture (hypothetically) too as being AAA (not an unreasonable conjecture considering that the fixed deposit and commercial paper of HLL are indeed rated AAA by CRISIL). Not only is our assumption of Bajaj Auto ratios being perhaps the best in the Industry shattered, we now have greater variance of rating ranging from B to AA! We have debentures of both IPCL and HLL rated AAA! Clearly, not all is well with the CRISIL ratings.

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Table 4

Indian Equivalent of Standard & Poor's Ratios for HLL for the Year Ending 1990

S&P Ratio	Indian Ratio	HLL
1 Pre-tax Interest coverage	EBIT/INT	7.05
2 Pre-tax Fixed Charge Coverage*	NONE	
3 Funds from Operations to Long-term Debt	(PAT+DEP)/LTD	2971.1%
4 Funds from Operations to Total Debt	(PAT+DEP)/TD	52.2%
5 Pre-tax Return on Permanent Capital	EBIT/(TD+NW)	22.4%
6 Operating Income to Sales	OP/SALES	24.5%
7 Capital to Long Term Debt	(LTD+NW)/LTD	9230.2%
8 Capital+Short Term Debt to Total Debt	(TD+NW)/TD	361.7%
9 Pre-tax Return on Permanent Capital**	NONE	
10 Equity to Total Liabilities	NW/TL	60.9%

Table 5

CRISIL Ratios for 1990

Description of Ratio	CRISIL Ratio	Ashok Leyland	Bajaj Auto	IPCL	Tata Chem	HLL
1 Operating profit before depreciation & Interest to Interest	PBDIT/INT.	3.40	7.56	2.16	2.59	7.99
2 Profit after tax to sales	PAT/Sales	3.53%	6.12%	6.89%	15.31%	15.41%
3 Total Debt to Networth	TD/NW	95.42%	57.39%	180.96%	110.65%	62.29%

CRISIL's Possible Defences

What line of defence could CRISIL take in the light of this evidence? One defence for the phenomenon observed above may be that CRISIL uses altogether different ratios in evaluating the financial parameters of the firms and not the S & P type ratios? In order to answer this question, we procured the CRISIL rating reports pertaining to the above five firms. The reports typically contained only four ratios, namely: Profit Before Depreciation, Interest and Taxes to Interest (PBDIT/I), Profit After Tax to Sales (PAT/S), Total Debt to Networth (TD/NW) and Current Assets to Current Liabilities (CA/CL). It is evident that the first three ratios are essentially minor variations of the Indian equivalent of S & P ratios, namely 1, 6 and 8 (Table 2). The last of the four ratios, namely the current ratio is of limited relevance in the context of long term debt security like debenture. Accordingly we compute these ratios for the year ending 1990 (while the rating reports did provide the four ratios for three different years, unfortunately the three year sets were all different) in Table 5.

A quick perusal of Table 5 indicates that the values of these ratios.are also spread over a wide range. PBDIT/I ranges from a low of 2.16 (for IPCL) to a high of 7.99 (HLL); PAT/S ranges from a low of 3.53% (Ashok Leyland) to a high of 15.41% (HLL); and

TD/NW ranges from a high of 180.96% (IPCL) to a low of 57.39% (Bajaj Auto). Once again, it is evident that even when CRISIL's own ratios are considered, the ratings appear to lack internal consistency. In a small sample of 5 firms, the variations observed are certainly disconcerting.

A second defence may be that American (that is, S & P) standards are irrelevant in Indian context. This does not get CRISIL very far because they still have to explain the lack of internal consistency of their ratings. However, we would strongly argue that international standards do have a broad relevance cutting across country boundaries. Differences in local environment may imply a difference of a grade or so (say, AAA to AA), but definitely cannot account for differences of five grades (from AAA to B), spanning a range from high investment grade to speculative grade! Moreover, in the context of our economy being liberalized and opened up to world markets, any justification which may have existed for ignoring international norms is rapidly diminishing.

A third line of defence for CRISIL could be that the rating is based on qualitative factors like competitive position, industry picture and management strengths. The rating reports of CRISIL do talk about such factors. However, after reading them carefully we find nothing in them which would seriously change the conclusions of the analysis based purely on ratios. If anything, the qualitative factors discussed in some of the rating reports seem to strengthen our conclusions. For example, in case of IPCL, the CRISIL report says:

"While the MGCC project will result in the company becoming increasingly leveraged, debt service coverage and cashflow protection will be sound given the high contribution of the proposed product mix. Critical issues in this context are the ability of the Baroda complex to generate the projected profits and cashflows as well as the timely commissioning of the MGCC project."

This statement must be viewed in the light of the trend in the coverage ratio (PBIT/INT), which has declined from 12.6 in 1986 to 4.1 in 1987 according to CRISIL's rating report. In the light of this, the AAA rating awarded to IPCL appears to be based more on optimism about the future than on reality. On the contrary, the AAA rating is supposed to reflect sound financial strength even on the most conservative assessment of the future. CRISIL's own definition claims that for AAA rating "... such changes as can be envisaged are most unlikely to affect adversely the fundamentally strong position of such issues." It is evident that the qualitative assessment of IPCL as stated in the CRISIL's rating report is inconsistent with this claim, so that a AAA rating for IPCL can hardly be justified. With hindsight, we see that the interest coverage ratio has dropped further to 1.69 in 1990 and the rating as of today stands unrevised!

Conclusion

The corporate debt market in India is now being liberalized and deregulated. Interest rates ceilings have been abolished and these rates will now be determined by market forces. This also means that interest rates will be linked to credit-worthiness of the borrower. In this changing situation, credit rating will play a much greater role than ever in the past.

In this context it is none too soon to take a hard and close look at the nascent credit rating practices in the country and ask whether they are adequate to deal with the demands being placed upon them. Also, such an exercise will enable the second credit rating agency to learn from CRISIL's experience. Our study shows that the credit rating being done by CRISIL is deficient on two important counts:

a. CRISIL ratings are far too liberal by international Standards. What CRISIL rates as AAA will usually rate in the BBB range or lower by international standards.

b. There is very little internal consistency in the CRISIL ratings. Companies rated AAA span wide range of credit-worthiness. AAA is a prestigious rating which is reserved for the bluest of blue chip securities, with even the slightest element of risk warranting downgrading to AA or lower. In this light the wide divergence in credit-worthiness among CRISIL's AAA companies is such as to make the rating almost

meaningless.

We need to look at the policy implications of this for the credit rating industry in India. After all, imagine IPCL attempting to mobilize off-shore funds through a debenture issue in the US capital market with a AAA rating! Will the Indian ratings have any international credibility?

Internationally, most good debt instruments are rated by two independent agencies and the market tends to follow the lower of the two ratings. Seldom do ratings by two reputed agencies vary by more than one grade. The rating agencies also have a well deserved reputation for independence and expertise. In this context, what India needs is more credit rating agencies including one or more in the private sector. Such competition would keep the raters on their toes and help make the ratings more meaningful and useful than they are today.