Credit Research and Analysis

Ticker: CARE:IN — Closing Price (6/20/2016): INR993.50
1 Year Avg. Daily Vol. (USD): 530,269 — Estimated Annualized Return: 8-9%

INVESTMENT THESIS

Credit Analysis and Research is the second largest Indian credit rating agency in an oligopolistic market. The three largest players in the credit rating industry have a significant brand advantage over smaller players and potential new entrants as credibility is crucial for ratings, a third party assessment to be valuable. The company is extremely profitable with personnel expense as a percentage of sales half of its peers and operating margins twice its peers in an industry with little to no capital requirements. Using conservative estimates, the company currently offers a base case expected return of 8.0-9.0% with potential downside of 28.0% over the next five years under the bear case and potential upside of 100% or more over the next five years under the bull case. We will take a 2.0% position as the company is very high quality with a competitive advantage but is slightly undervalued to fairly valued.

KEY STATISTICS

Key Statistics	TTM	5Yr Avg
Current price (INR)	**993.50**	
Price range		
Ave daily volume (USD mn, 6 mth)		
Shares outstanding (mn) basic	29	
Shares outstanding (mn) diluted	29	
Market cap (INR mn) diluted	**29,210**	
Net debt (INR mn)	(3,935)	
Other claims (INR mn)	-	
Enterprise value (INR mn)	**25,275**	
EV per share	859.65	
Net Debt/Equity	(0.96)	
Net Debt/EBIT	(2.32)	
Per Share Values	**TTM**	**5Yr Avg**
Net current asset value per shar	114.17	120.27
Invested capital per share	1.94	0.99
Tangible book value per share	138.99	142.16
Net financial assets per share	133.85	137.40
Sales per share	95.02	80.02
EBIT per share	57.72	49.88
NOPAT per share	37.72	32.10
Earnings per share	40.68	42.08
FCF per share	35.67	24.31
Residual income per share	37.30	31.72
Dividend per share	28.00	20.00
Insider ownership	0.4%	
Fiscal year end	March	

Valuation Metrics	TTM	5Yr Avg
P/NCAV	8.7	8.3
EV/IC	443.1	864.5
EV/EBIT	14.9	17.2
EV/NOPAT	22.8	26.8
EV/FCF	24.1	35.4
EBIT yield	6.7%	5.8%
NOPAT yield	4.4%	3.7%
FCF yield	4.1%	2.8%
Dividend yield	3.0%	2.1%
Profitability	**TTM**	**5Yr Avg**
ROIC	2975%	-21009%
FCF ROIC	-17157%	-17157%
Gross margin	NA	NA
Operating margin	60.7%	62.7%
NOPAT margin	39.7%	40.4%
FCF margin	65.4%	47.5%
Working capital turnover	(5.6)	(5.0)
Fixed capital turnover	5.0	4.4
Intangible capital turnover	34.1	29.9
IC turnover	49.0	(326.6)
Growth	**TTM**	**5Yr Avg**
Sales growth	7.2%	10.3%
Operating profit growth	9.9%	5.8%
NOPAT growth	16.2%	5.4%
FCF growth	90.4%	20.6%
Invested capital growth	- to +	- to +

Source: Company data, Reperio Capital estimates

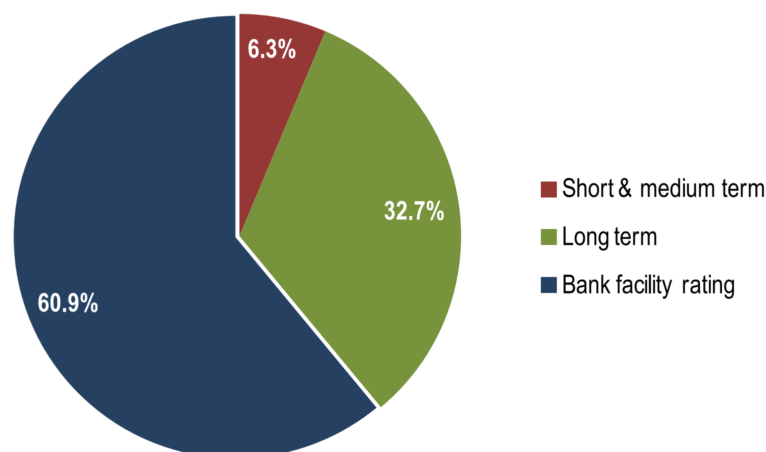
FACTOR RATINGS

Factor	Rating	Comment
Financial Health	5	Net cash/EBIT = 2.32x
Business Quality	4	Oligopolistic market structure w/ three dominant players. Very low capital requirements and strong profitability. Very strong brand advantage but no other competitive advantages making the advantage durable but less durable then if combined with economies of scale
Management Quality	4	
Operations	4	Best operators in the industry. Highest operating margin, lowest personnel expense per employee.
Capital Allocation	4	Net cash should be paid as dividend, but management's wisely chose to remain focused on the credit rating industry rather than moving to less advantaged research and consultancy
Corporate Governance	4	No issues but management are hired hands rather than owner operators
Valuation	3	fairly valued to slightly undervalued
Growth Prospects	4	India's banking and credit market remain underdeveloped and the company has a strong competitive position to generate value from growth

Scale 1 = worst 5 = best
Source: Reperio Capital Research

COMPANY DESCRIPTION

Credit Analysis and Research (CARE) incorporated in April 1993 as a credit rating information and advisory services company. It is promoted by the Industrial Development Bank of India (IDBI), other financial institutions, public/private sector banks, and private finance companies. It offers a wide range of products and services in the field of credit information and equity research including credit rating, IPO grading, SME rating, and REIT ratings. The company's ratings are recognized by the Government of India, the Reserve Bank of India, and the Stock Exchange Board of India. In FY2016 (March 2015-March 2016), ratings services account for 94.8% of CARE's revenue. Rating assignments generates two types of revenue: rating revenue and surveillance revenue. Rating revenue is generated at the time of the rating and surveillance revenue is generated as CARE continues to monitor the company over the life of the financial product being rated. Ratings revenue is dependent on the amount of credit outstanding and the company's share of the credit rated.



Source: Company data

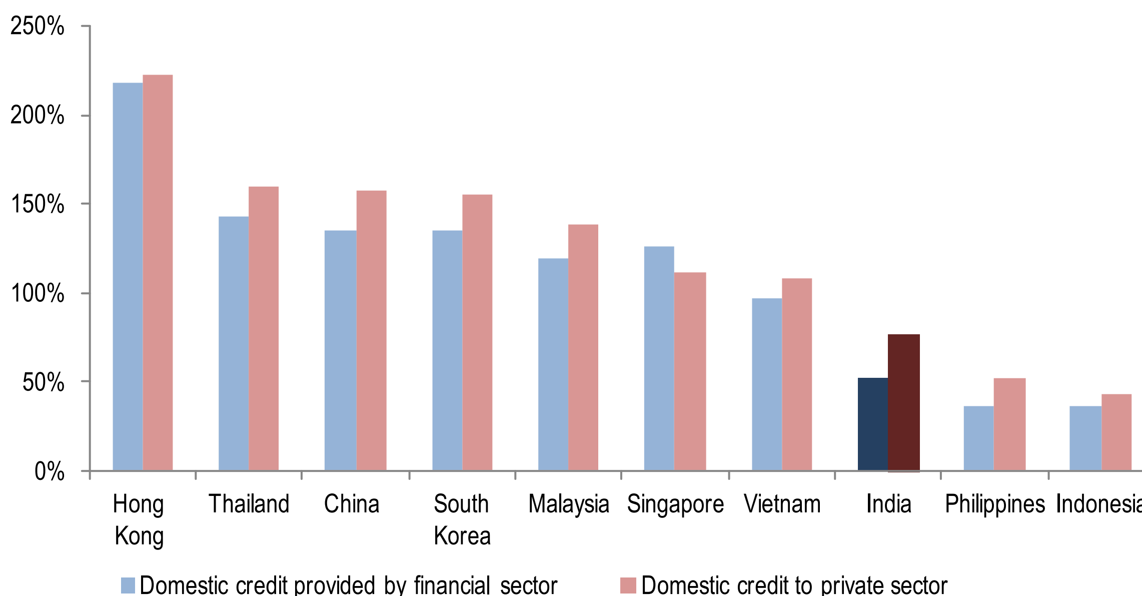
Over the past five years, 60.9% of debt rated was bank facilities, 32.7% long term debt, and the remainder was short term and medium term debt. Bank facilities are bank loans that are rated to determine the risk weights under the Reserve Bank of India's (RBI's)

Guidelines for Implementation of the New Capital Adequacy Framework under Basel II framework. CARE rates all types of fund-based and non-fund based facilities including cash credit, working capital demand loans, Letters of Credit, bank guarantees, bill discounting, project loans, and loans for general corporate purposes. Credit rating for bank loans is not mandatory under Basel II, but the higher rating on the loan ratings the lower the risk weight and the less capital required for the loan. If a loan it not rated, it retains a capital risk weight of 100%.

Capital-saving potential by banks on a loan of INR 1,000 Million				
Rating	Basel I Risk weight	Basel II Risk weight	Capital required (INR mn)	Capital saved
AAA	100%	20%	18	72
AA	100%	30%	27	63
A	100%	50%	45	45
BBB	100%	100%	90	0
BB and below	100%	150%	135	-45

Assumes a Basel I capital requirement is 9%
Source: CRISIL

The table above illustrates the capital savings by having bank loans rated under Basel II for an INR1,000 million bank loan. It assumes a 9% capital requirement under Basel I. Under Basel I, a INR1,000 million loan would require INR90 million in capital. Under Basel II, if the same INR1,000 million loan was AAA rated only INR18 million in capital leading to a capital savings of INR72 million. Some of CARE's larger bank loan ratings customers have significant volume allowing them to negotiate a rating fee cap making the bank loan segment much more price sensitive than other parts of the rating market.

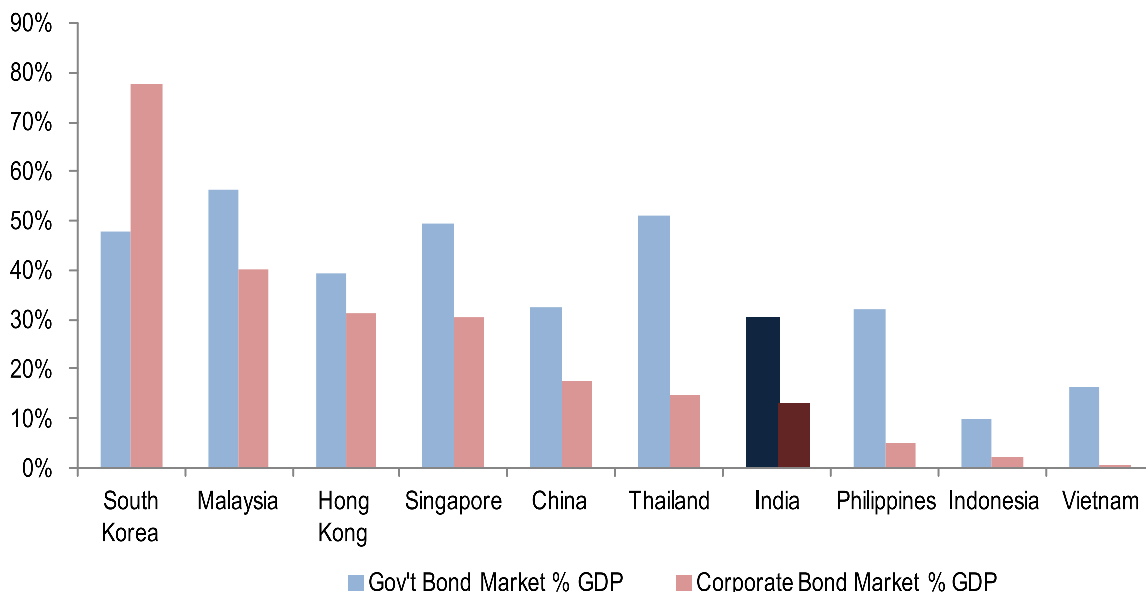


Source: CARE Ratings, Asian Bonds Online, SEBI, Ministry of Finance, World Bank

As illustrated above, India's population is under banked relative to Asian peers leading to growth potential in the bank lending market.

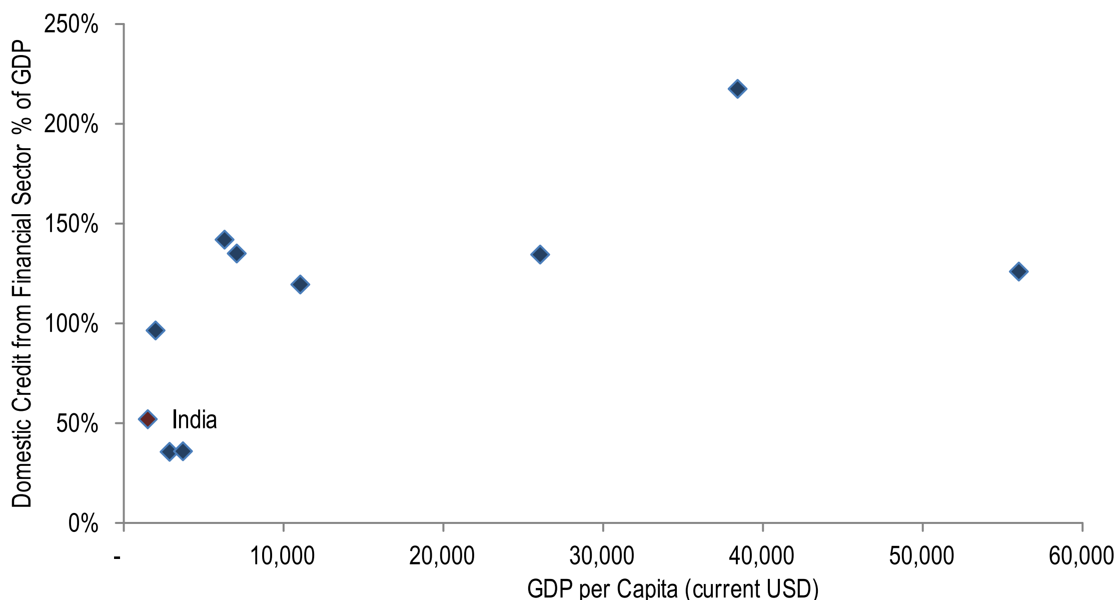
Roughly 39.0% of CARE's revenue comes from the non-bank loan ratings. These ratings include most kinds of short, medium and long term debt instruments, such as commercial paper, bonds, debentures, preference shares and structured debt instruments, and deposit

obligations, such as inter-corporate deposits, fixed deposits and certificates of deposits. Other rating products include IPO grading, mutual fund ratings, and corporate governance ratings.

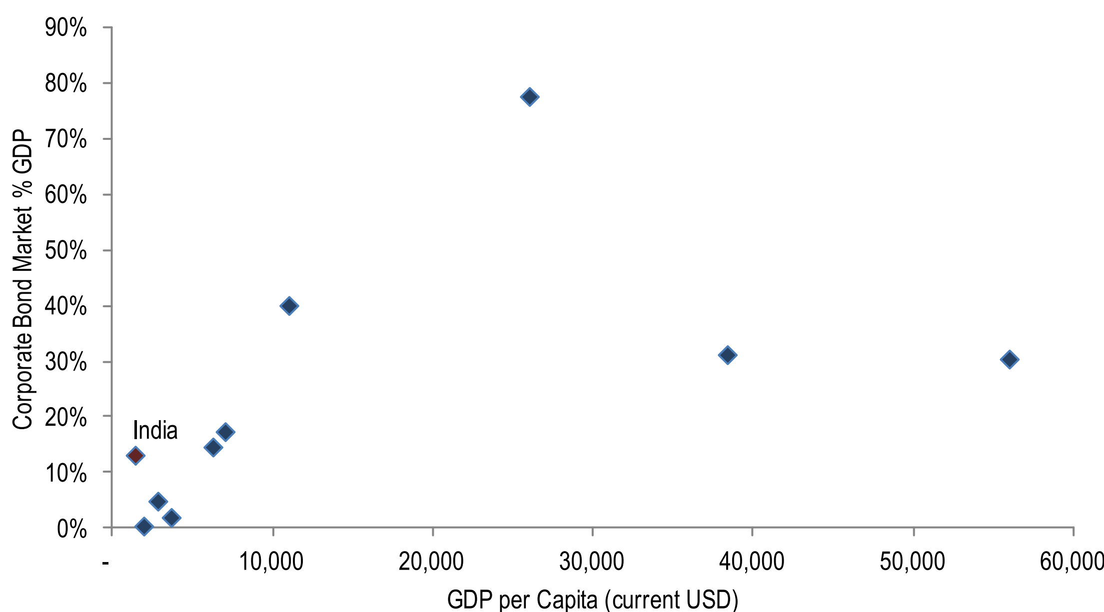


Source: CARE Ratings, Asian Bonds Online, SEBI, Ministry of Finance, World Bank

As illustrated above, India's corporate and government bond markets are still underdeveloped relative to Asian peers. It is not a given that bank lending and bond markets will develop to the potential of other markets due to idiosyncratic reasons, but there seems to be a relationship between GDP per capita and development of both bank lending markets and bond markets, as illustrated by the charts below.



Source: CARE Ratings, Asian Bonds Online, SEBI, Ministry of Finance, World



Source: CARE Ratings, Asian Bonds Online, SEBI, Ministry of Finance, World

Other than increased penetration of existing products other avenues for growth for CARE include increased market share, new products, and new geographical markets. New products for CARE include SME rating, the MSE rating, Edu-grade, Equi-grade, Real Estate Star Ratings, Green ratings, and valuation of market linked debentures. The company can also move into adjacent product market like research and advisory services. CARE intends to move into new geographical markets and has a 75.1% interest in a ratings business in Maldives.

CARE does not have any shareholders classified as promoters. The company's largest shareholders on March 31, 2016 are listed below.

FY2016 Largest Shareholders	FY2013	FY2014	FY2015	FY2016
Life Insurance Corporation of India	NA	NA	8.21%	9.80%
Canara Bank	15.21%	13.25%	9.90%	9.28%
Franklin Templeton	1.39%	3.62%	4.79%	5.97%
IDBI Bank	17.19%	16.62%	5.85%	5.07%
State Bank of India	6.41%	6.04%	4.69%	3.82%
Bajaj Holdings and Investments	5.98%	5.89%	3.46%	3.41%
Reliance Capital	NA	NA	1.54%	3.31%
Government Pension Fund Global	NA	NA	3.06%	3.17%
Other public shareholders	53.82%	54.58%	58.50%	56.17%

Source: Company data

IDBI Bank, Canara Bank, and IDBI Bank have all sold down their stake progressively and now own roughly 25% of the company.

INDUSTRY

CRISIL, the first India credit rating agency, was established in 1987. ICRA was the second rating agency opening in 1991. CARE was the third rating agency established in 1993. ONICRA was also established in 1993. India Ratings and Research Private Limited followed in 1996. Brickworks Ratings India Private Limited (Brickworks) and SME Rating Agency of India Limited (SMERA) began their ratings businesses in 2008.

In 1992, credit rating became mandatory for the issuance of debt instruments with maturity/convertibility of 18 months and above. Subsequently, the RBI guidelines made rating mandatory for issuance of commercial paper. RBI also made rating of public deposit schemes mandatory for Non Banking Financial Corporations. Since then credit ratings have continually increased the number and value of instruments that have been rated.

In 2003, SEBI along with stock exchanges made ratings mandatory for debt instruments placed under private placements with a maturity of one year or more, which are proposed to be listed. Also in 2003, the RBI issued prudential guidelines on the management of the non-statutory liquidity ratio (SLR) investment portfolio of all scheduled commercial banks except regional rural banks and local area banks. These guidelines require such institutions to make investments only in rated non-SLR securities.

Similarly, non-government provident funds, superannuation funds, gratuity funds can invest in bonds issued by public financial institutions, public sector companies/banks and private sector companies only when they are rated by at least two different credit rating agencies. Further, such provident funds, superannuation funds, gratuity funds can invest in shares of only those companies whose debt is rated investment grade by at least two credit rating agencies on the date of such investments. Investment by mutual funds and insurance companies in unrated paper/non-investment grade paper is also restricted.

Barriers to Entry

The industry structure points to barriers to entry. There are only seven competitors with the three largest competitors, CRISIL, CARE, and ICRA, dominating the market, accounting for an estimated 90% of the market. The market share among the top three players since FY2006 is illustrated below.

Market Share	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16
CRISIL	49.9%	58.7%	53.7%	50.4%	49.5%	48.6%	50.7%	53.2%	51.3%	50.3%	48.4%
CARE	20.1%	16.1%	21.5%	25.9%	28.6%	29.3%	27.7%	26.7%	28.4%	29.1%	29.5%
ICRA	30.0%	25.2%	24.9%	23.6%	22.0%	22.1%	21.7%	20.1%	20.4%	20.6%	22.0%

Source: Company data

CARE has steadily increased its market share to 29.5% in FY2016 from 20.1% in FY2006, at the expense of ICRA. Further illustrating the oligopoly is CARE's share among the Business Standard's top 1000 companies (45% share), the Economic Times top 500 companies (54% share), and the Financial Express' top 500 companies (52% share).

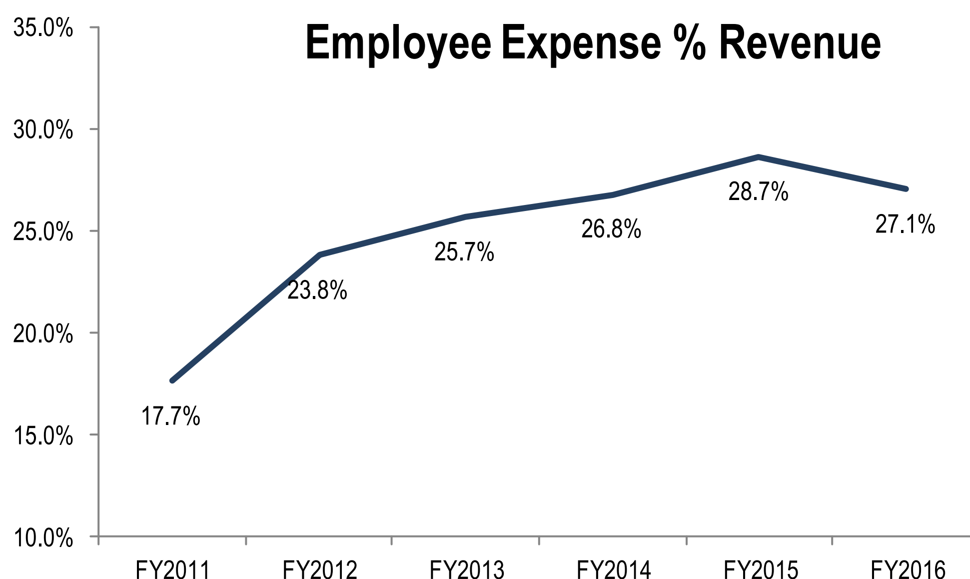
The oligopolistic industry structure of ratings agencies in the United States points to strong barriers to entry in the industry. Although the credit rating industry is more mature in the US and idiosyncratic factors exist in each market, companies in both markets have similar business models and competitive advantages allowing the US market to be a potential roadmap for the Indian credit rating industry.

CARE is very profitable. Since FY2011, the company's NOPAT margin averaged 45.3%, although the company's margin is on a declining trend. The company requires no capital with an average invested capital of negative INR123 million. The negative invested capital is driven by average working capital of negative INR632 million and INR509 million in fixed capital. The negative working capital and negative invested capital points to a barrier to entry and very strong bargaining power.

Profitability	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	Average
Revenue	1,709	1,796	2,030	2,356	2,605	2,794	2,215
Operating profit	1,283	1,213	1,314	1,448	1,545	1,697	1,417
Effective tax rate	-32.1%	-28.1%	-29.1%	-28.2%	-30.0%	-33.0%	(0)
NOPAT	871	873	932	1,040	1,081	1,138	989
Working capital	(1,301)	(253)	(514)	(643)	(584)	(496)	(632)
Fixed capital	422	485	513	516	565	553	509
Invested capital	(879)	232	(1)	(127)	(19)	57	(123)
NOPAT margin	51.0%	48.6%	45.9%	44.1%	41.5%	40.7%	45.3%
Invested capital turnover	(2)	8	(1,536)	(19)	(135)	49	-27253.0%
ROIC	-99%	377%	-70502%	-820%	-5619%	1995%	-12444.8%

Source: Company data

The rating agencies seem to lack pricing power pointing to no barriers to entry. The largest bank loan ratings customers have been able to put pressure on pricing but in the rest of the market the rating agencies say they have pricing power. The lack of pricing power among the large bank loan ratings customers is probably down to economic weakness rather than sustaining bargaining power as there is significant benefit for the customer from using rating agencies, often more than one is used, in the form of capital savings. Typically, cash gross margin is used to identify pricing power, but in the knowledge industry the key input is employees so employee expense/revenue is the key proxy for cost of goods sold.



Source: Company data

CARE's employee expense to revenue increased from 17.7% in FY2011 to 27.1% in FY2016 illustrating a lack of pricing power. Revenue per employee increased from INR3.6 million in FY2012 to INR4.9 million in FY2016 while personnel expense per employee increased from INR856,255 in FY2012 to INR1,336,628 in FY2016.

Brickworks and SMERA started in 2008. While these entrants point to the possibility of new entrants, it will take years for these new entrants to gain the reputation of the larger rating agencies. ONICRA entered the market in 1993 and Indian Ratings and Research was established in 1996. Despite both companies entering the market over 20 years ago, both have nowhere near the scale of the

three larger firms. The ability to enter but not scale illustrates the low minimum efficient scale or lack of economies of scale and the importance of a brand.

Ratings agencies require a brand as a rating is nothing more than assessment of a complex instrument or product by an independent third party, therefore trust must be placed in the third party and its assessment. If the third party lacks credibility the assessment is useless. Credibility is built up over many years and very difficult to replicate.

Economies of scale also exist in marketing, administration, legal, compliance, and software development costs. Economies of scale are nowhere near as important to as brand advantage as illustrated by the number of smaller players in the market.

Other Four Forces

The rivalry between competitors exists but is not a significant drag on profitability. Competition among the three largest rating agencies has increased recently due to weakness in the credit markets, lower government subsidies for Micro, Small, and Medium size enterprises (MSMEs), and weaker infrastructure spend leading to weaker margins over the past few years. Competitive rivalry is decreased as ratings account for a smaller portion of revenue at CRISIL and ICRA. In FY2016, rating revenue accounted for 31.5% of CRISIL's revenue and 57.9% of ICRA's revenue. Many times debt instruments are rated by multiple rating agencies further decreasing rivalry.

The credit rating agencies main supplier is employees. Employees are non-unionized and fragmented. As illustrated above under pricing power, personnel expense per employee increased from INR856,255 in FY2012 to INR1,336,628 in FY2016 or 11.8% per annum, while revenue has not been able to keep pace with the increases in personnel expense. The steady increase in personnel expense illustrates the bargaining power of employees. Given the fragmented nature, the steadily increasing personnel expense seems to be due to a shortage of qualified talent in the labor market. Since 2011, CRISIL's personnel expense per employee increased from INR1,100,699 to INR1,863,188 or 14.1% per annum, while ICRA's personnel expense per employee decreased from INR3,962,465 in FY2012 to INR3,436,615 in FY2016 representing a 4.6% decline. CRISIL's personnel expense per employee inflation confirms the trend at CARE, while ICRA's personnel expense per employee is much higher so the decline does not necessarily counter the trend seen at CARE and ICRA.

The credit rating customers include financial institutions, corporations, municipalities, and others. Banks are CARE's largest customers accounting for 60.9% of debt rated. A bank loan facility are not required to be rated by regulation, but under Basel II, if the loan facility is not rated it receives a risk weighting of 100%. As illustrated below the higher the rating on the bank facility the lower the risk weighting and the less capital required for the facility. This creates a strong incentive for banks to have loan facilities rated decreasing their bargaining power.

Capital-saving potential by banks on a loan of INR 1,000 Million

Rating	Basel I Risk weight	Basel II Risk weight	Capital required (INR mn)	Capital saved
AAA	100%	20%	18	72
AA	100%	30%	27	63
A	100%	50%	45	45
BBB	100%	100%	90	0
BB and below	100%	150%	135	-45

Assumes a Basel I capital requirement is 9%
Source: CRISIL

Given the volume of instruments rated, banks are an important source of revenue for CARE. Banks are much more price sensitive than other customers and have been able to negotiate a fee cap illustrating their bargaining power. The volume of bank loan facility points

to a much more sophisticated customer as banks have dealt with the process more often than non-banks. Other customers are less price sensitive given their fragmentation relative to the ratings agencies and the benefits associated with having debt rated.

The threat of substitutes is low. Banks can choose to not use ratings or use an internal ratings based system but the risk weight for an unrated loan is 100% so there are benefits in the form of capital savings. Corporations and other customers of rating agencies can decide not to have their debt rated but a debt rating increases transparency on the instrument and/or company leading to a decreased cost of debt and a better image of the firm. Additionally, as more and more investors use rating agencies, the value of having your debt rated goes up and the penalty of not having your debt rated also increases.

MANAGEMENT

Operational Performance

Operationally, management has performed very well. It is increased its market share among the top three rating agencies by almost 10% over the past ten years.

Market Share	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16
CRISIL	49.9%	58.7%	53.7%	50.4%	49.5%	48.6%	50.7%	53.2%	51.3%	50.3%	48.4%
CARE	20.1%	16.1%	21.5%	25.9%	28.6%	29.3%	27.7%	26.7%	28.4%	29.1%	29.5%
ICRA	30.0%	25.2%	24.9%	23.6%	22.0%	22.1%	21.7%	20.1%	20.4%	20.6%	22.0%

Source: Company data

The company is also the best performing credit rating agency in terms of operating profit per employee.

Per employee (INR), FY2015	CARE	CRISIL	ICRA
Revenue	3,977,860	3,628,836	7,521,259
Personnel expense	1,140,611	1,669,265	3,436,615
Other operating expenses	478,890	939,305	2,308,420
Operating profit	2,358,359	1,020,266	1,776,224
Personnel expense % Revenue	*28.7%*	*46.0%*	*45.7%*
Operating margin	*59.3%*	*28.1%*	*23.6%*

Source: Company data

ICRA generates the highest revenue per employee, while CARE has the lowest personnel expense per employee and the highest operating profit per employee leading to the highest operating margin. As mentioned earlier, the company is extremely profitable with very low investment requirements.

Capital Allocation

Management has done a good job on focusing on the ratings business. CRISIL and ICRA have allocated capital to research, advisory, and consultancy businesses. These businesses currently generate strong returns but have much lower barriers to entry making the businesses much more prone to competition. Both CRISILs and ICRA's and rating businesses have negative capital employed while research, advisory, consultancy and other businesses require capital. CRISIL's research business generates very strong pre-tax returns on capital employed averaging 98.3% over the past four years. ICRA's non-rating business pre-tax returns on capital employed averaged 17.9% over the past three years. CRISIL has done a good job of generating strong profitability on its non-rating business while ICRA is barely generating its cost of capital illustrating the potential pitfalls of allocating capital from a business with strong entry barriers to a business is much weaker entry barriers.

The only other capital allocation decision made by management is whether to hold cash or payout cash. Since its IPO in Dec 2012 (FY2013), CARE has paid out 87.4% of after tax net income in the form of cash dividends. The company has a net cash position equal to 3.29 times FY2016 net income. Given the negative invested capital in the business, no additional capital is needed to grow therefore management could pay out more cash in the form of dividends.

Return on Financial Assets	FY2012	FY2013	FY2014	FY2015	FY2016	Cumulative
Net cash (Cash+ST Inv+LT Inv)	3,404	4,149	4,874	3,495	3,935	
Financial income	283	289	358	437	87	
Return on net cash	8.3%	7.0%	7.3%	12.5%	2.2%	7.4%
1 year fixed term deposit rate (SBI)	9.25%	8.75%	9.00%	8.50%	7.25%	8.5%

Source: Company data, State Bank of India

Paying dividends make even more sense when CARE’s cumulative return on net cash since FY2012 is 1.1% lower than what can be received on a 1 year fixed term deposit (7.4% return on net cash vs. 8.5% return on 1 year fixed term deposit) over the same period illustrating the weak investing returns generated by the company.

Given the low investment requirements, the company did not need to IPO but it was owned by a number of financial institutions that wanted to gain liquidity on their investment.

Corporate Governance

There are no related party transactions other than management remuneration. Management’s salary averaged 2.4% of operating income over the last four years, below CRISIL’s management salaries average of 2.6% of operating income, over the same period, and well below ICRA’s outrageous average of 11.5% of operating income.

There are no other corporate governance issues. The board has two members of the CARE management team and the other five members are either independent or represent outside shareholders.

Managers at CARE are compensated primarily with a salary with their shareholding and performance related pay being less than a third of pay in FY2015.

VALUATION

Given the asset light nature of CARE’s business model and negative invested capital, any asset based approach to valuation does not make sense. The brand advantage in the industry makes earnings based valuation the most appropriate valuation. We use a blended average valuation of DCF/Residual Income/Earnings Power Valuation and an IRR approach.

Under the blended valuation, we use different scenarios to determine potential upsides and downsides. The key value driver assumptions changed are sales growth and operating margin, while, the discount rate, the effective tax rate, working capital turnover and fixed capital turnover remain the same at the figures in the table below.

Key Assumptions	Forecast Period	Terminal Year 10	Current	Average	Peak	Trough	St Dev
Discount rate	10.0%	10.0%					
Tax rate	-30.1%	-30.1%	-33.0%	-30.1%	-28.1%	-33.0%	2.0%
Working capital turnover	(4.4)	(4.4)	(5.6)	(4.4)	(1.3)	(7.1)	2.0
Fixed capital turnover	4.3	4.3	5.0	4.3	5.0	3.7	0.5

Source: Company data, Reperio Capital estimates

Sales growth and operating margin are changed to determine upside under different scenarios. The scenarios and assumptions for both value drivers are listed below.

Key Assumptions	Current	Average	Peak	Trough	St Dev
Sales growth	7.2%	10.3%	16.0%	5.1%	4.4%
Operating margin	60.7%	64.0%	75.1%	59.3%	5.8%

Source: Company data, Reperio Capital estimates

The estimated intrinsic value per share under each scenario and upside from June 17, 2016 closing price is listed below.

Earnings Based Valuations	FY2017	Upside	FY2021	Upside	FY2021 Ann. Return
0% growth, trough margins	616.26	-38%	722.82	-27%	-6%
0% growth, current margins	627.65	-37%	736.85	-26%	-6%
0% growth, average margins	652.70	-34%	767.68	-23%	-5%
0% growth, peak margins	739.62	-26%	874.70	-12%	-3%
Trough growth, trough margins, 0% terminal growth	708.28	-29%	896.84	-10%	-2%
Current growth, current margins, 0% terminal growth	769.03	-23%	1,004.65	1%	0%
Average growth, average margins, 0% terminal growth	882.54	-11%	1,203.80	21%	4%
5% growth, trough margins	1,084.44	9%	1,405.78	41%	8%
Trough growth, trough margins, 5% terminal growth	1,087.11	9%	1,410.90	42%	8%
5% growth, current margins	1,107.35	11%	1,436.62	45%	8%
5% growth, average margins	1,157.71	17%	1,504.38	51%	9%
Current growth, current margins, 5% terminal growth	1,193.73	20%	1,601.80	61%	11%
5% growth, peak margins	1,332.49	34%	1,739.55	75%	13%
Peak growth, peak margins, 0% terminal growth	1,224.02	23%	1,794.76	81%	13%
Average growth, average margins, 5% terminal growth	1,393.43	40%	1,955.08	97%	15%
Peak growth, peak margins, 5% terminal growth	1,996.39	101%	3,006.35	203%	26%
Average Earnings Valuations Upside	**1,035.80**	**4%**	**1,378.91**	**39%**	**7%**

Source: Reperio Capital Research estimates

The average FY2017 earnings valuation per share is INR1,035.80 representing 4% upside and the average FY2021 earnings valuation per share is INR1,378.91 representing 39% upside.

The bear case valuation assumes 0% perpetuity growth and trough margins leading to the FY2017 intrinsic value per share of INR616.26 or 38% downside and a FY2021 intrinsic value per share of INR722.82 or 27% downside to the FY2021 downside. The bear case assumes a no further development of credit markets and a slight decrease in margins from competition.

The base case valuation assumes 5% growth into perpetuity with current margins leading to a FY2017 intrinsic value per share of INR1,107.35 or 11% upside and 45% upside to the estimated FY2021 intrinsic value per share of INR1,436.62. The base case is conservative on the growth side as it assumes growth slows down but banking and credit markets continue to develop, while margins compress due to the bargaining power of employees is also conservative given margin weakness has followed economic weakness.

The bull case valuation of average growth, average margins, and 5% terminal growth leads to 40% upside to the FY2017 intrinsic value per share of INR1,393.43 and 97% upside to the FY2021 intrinsic value per share of INR1,955.08.

Using a conservative IRR valuation, the current FCF yield is roughly 4.0% with estimated growth of 5.0% leading to an estimated annual return is 9.0%, which is almost equivalent to the estimated annualized return from the base case under the blended valuation. The 9.0% is a conservative estimate given where in the life cycle, banking and credit markets are in India. Additionally, the last few

years saw margin compression due to economic weakness and slowing growth in the credit rating industry as growth returns margins should expand.

CARE seems to be slightly undervalued to fairly valued.

RISKS

The biggest risk to CARE's business is reputational. After the 2008 financial crisis, the ratings agencies in the United States had their credibility questioned from apparent conflicts of interest due to poor analysis and ratings that did not properly reflect the risks of instruments being rated. During the U.S. housing boom, the ratings agencies inflated mortgage bonds ratings to generate fees allowing rating sensitive investors to purchase the securities for their portfolios. The bonds later plummeted in value. S&P was frozen out of rating mortgage bonds after admitting a flaw in their CMBS models.

Many investors are restricted to purchasing higher rated debt instruments in the domestic bond market that are rated by multiple rating agencies. If investors are no longer required to purchase rated bonds or if the ratings from multiple rating agencies are no longer required there is a risk of loss of revenue.

Accessing the overseas debt market by Indian borrowers is regulated including restrictions on raising debt in overseas markets. If accessing overseas debt markets was permitted, many borrowers could search for lower borrowing costs leading to decreased reliance on Indian debt markets and lower rating revenue for ratings agencies.

There is a risk that banks will use an internal rating based approach for credit risk. In a circular dated July 7, 2009, RBI advised banks they may request approval for the using of an internal rating based approach to use their own internal estimates to determine capital requirements for a given credit exposure. Bank loan facilities accounted for 60.9% of CARE's revenue in FY2016.

Despite strong brand advantages that will take new entrants years to replicate. There is always risk of increased competition with rating agencies like Brickworks and SMERA recently entering the market with operations starting in 2008. Given the low fixed costs in the industry leading to a low minimum efficient scale, smaller players ONICRA and India Ratings and Research have survived over 20 years with minimal market share.

After the Amtek Auto default to JP Morgan some investors are calling for strong regulation of and increased accountability for ratings agencies as the rating agencies were late to change their ratings on Amtek Auto.

CARE is managed by external agents rather than owner operators. If the board is unable to keep management's incentives aligned with shareholders, management may make decisions in their interest over the interest of shareholders.

CARE investment thesis and price paid is based on the development of banking and credit markets. If banking and credit markets do not develop, there may be permanent loss of capital.

CARE is more expensive than our typical investment opportunities, but with little or no investment requirements and underdeveloped credit markets, any growth is essentially free. If investors are unwilling to pay the current multiples for Indian equities in the future, there may be a permanent loss of capital. To combat this risk, we are taking a small starting position.

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