INTERNATIONAL JOURNAL OF RESEARCH IN COMPUTER APPLICATION & MANAGEMENT

IJRCM

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STATEMENT OF THE PROBLEM
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APPLYING A COMPREHENSIVE CREDIT RATING FRAMEWORK TO THE TRANSPORTATION AND LOGISTICS INDUSTRY IN INDIA

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ABSTRACT

In India, credit risk management in the banking system has been continually developing. Advances in the Credit Rating Frameworks (CRFs) have helped the banks in avoiding non-credit worthy firms and improve the strength of their loan portfolios. Through meticulous credit evaluation, banks try to minimize credit specific risk to their ideal cost of capital. With this as the backdrop, this project tries to apply one such CRF, to select companies in one of the upcoming and burgeoning industries of India, i. e. Transportation & Logistics Industry. Transportation & Logistics Industry is one of the upcoming Industry (in terms of valuations as well as technology). It has huge scope in terms of adopting Information and Communications Technology. The players in the Industry are generally small and upcoming, thereby proving to be prospects eligible for bank credit. If invested in effectively, this industry may prove to be the economy's growth driver in the coming years, i.e. the shift from developing to developed might take place on the back of strong performance by the Logistics Industry.

KEYWORDS

credit rating, credit risk, financial ratios, risk.

INTRODUCTION

Credit risk has always been a primary concern for financial services institutions but has not always been very effectively managed. The financial crisis that started in 2007 exposed the weaknesses of existing risk management systems among financial services institutions. There were shortcomings in the way many different firms of all sizes and regions were managing their credit risk. This was especially highlighted by complex and innovative products like mortgage-backed securities and collateralized debt obligations. Many firms had considerable exposure to these products without understanding the inherent risk. This resulted in huge losses as the prices of their investments fell. It also had a ripple effect as some of their counterparties, including large firms like Lehman Brothers, filed for bankruptcy or came close to doing so.

In India, the post nationalization era, saw remarkable growth in Bank credit and that has been the primary driver for growth in the Industrial sector. During the post-independence and the pre-nationalization period, commercial banks were largely owned and controlled by large business houses. This resulted in commercial credit flowing to only select enterprises. Thus, the credit portfolios of the banks suffered from acutely high exposure. Due to this, many banks became functionally unviable. The nationalization of the commercial banks in 1969 and 1980 shifted the focus of commercial lending to a great extent. Certain sectors, which were crucial to the development of Indian economy, were identified and priority sector lending was done.

By the early nineties, the services sector had emerged as a significant contributor to the country's Gross Domestic Product. The services sector has, since then been an area of tremendous opportunity for the commercial banks in India.

The guidance note on Credit Risk Management (CRM) by RBI, in 2002, required banks to introduce a Credit Rating Framework (CRF). The CRF was prescribed as the basic module for developing a CRM system. Instead of just classifying credit exposure as good or bad, banks are required to assign rating by way of a number/alphabet/symbol as an indicator of the risk associated with the account. Such rating is expected to standardize the credit selection procedures. Of course, it has also been made clear by the RBI, that rating is not a substitute for vast lending experience acquired by the lending officials in the Bank. Hence, the eventual credit decision is to be taken using the rating assessment and the lending experience of bankers.

We have considered on such credit rating framework of a Bank and tried apply it to one of the company in the logistics industry in India.

THEORETICAL FRAMEWORK

We will now look at the credit rating framework that will be used in our analysis.

FIG. 1

The above figure depicts the categorization of risks as analysed in the framework. We look at each in detail now.

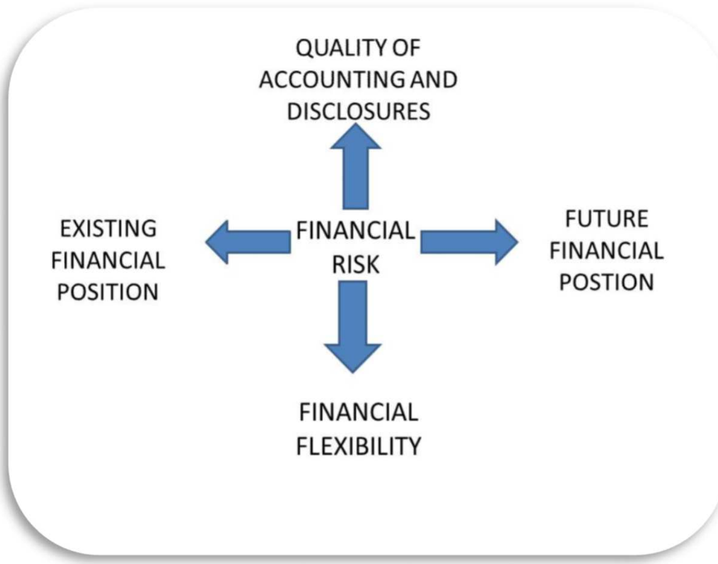
Industry Risk assessment in a standardized framework comprising of the following factors is carried out-

1. Demand-Supply Situation- This includes past and future demand-supply outlook of the industry, entry barriers, the nature of the market, availability of substitutes, number of players in the industry, criticality of the product, etc.
2. Impact of Government Policies - The Government regulations definitely have an impact on the way business is carried out in a particular Industry. The government plays a significant role in controlling both demand as well as prices.
3. Extent of Competition- This factor is the culmination of the effects of Porter's Five Forces.
4. Key Input Risks- The availability of the inputs such as raw materials, power, fuel and human resources has a significant impact on the overall price competition in the industry. Scarce availability might lead to uncertainties on the continuity of production.
5. Financial performance of the industry- Here we have incremental Capital Output Ratio- The financial performance of the industry is a true indicator of the historical performance. ICOR provides the overall attractiveness of the sector.

We now look at the Internal Risk factors

1. Business Risk**-** Business risk captures the sustainable ability of the company to achieve revenues and margins and also to register improvements over the years. Business prospects of a company are usually, largely impacted by the Industry, but business risk for any company is unique to the company itself. The company's business risk is characterized by aspects such as linkages to raw materials, the level of integration, scale of economies, technical expertise, human resources, market reputation, brand strength, distribution structure, cost efficiency and overall competitiveness vis-à-vis its peers.
2. Financial Risk- This assessment is taken up in the following framework.
3. With reference to Management Risk and Project Risk, we do not look at these factors in specific mainly on account of lack of qualitative data (as there was no interaction with the managements of the companies under consideration).

FIG. 2



INDUSTRY RISK

➢ ***THE DEMAND-SUPPLY SITUATION IN THE INDIAN INDUSTRY***

The purpose of the logistic industry is to enable an effective transportation or timely movement of goods from one place to another. Freight movement depends upon the overall economic development of the country. Over the past ten years, India's GDP has reached up to INR 113.502 lakh crores in 2015-16 (at 2011-12 prices, RBI).

High economic growth during the past decade has spurred increase in rail, road and port traffic in the country. Apart from economic growth, other factors such as increasing investments in development of country's infrastructure, favorable government policies such as liberalization of FDI norms in sector, growing private players participation and globalization have been providing the growth opportunities in all facets of the industry like freight transportation, warehousing, express cargo delivery and container services. With the growing integration of India's economy with the world, the country's total trade has grown at a CAGR of about 16 percent to USD 650 billion in 2015-16 from USD 190 billion in 2004-05 (RBI). With the focused growth and gradually growing domestic economy, Indian logistic sector has emerged as one of the most attractive sectors in the world attracting investments from large global and Indian private equity (PE) firms. Several global players view the Indian logistics market favorably and have entered India by the way of mergers or acquisitions (M&A) of Indian companies or with joint venture agreements. Some of the major M&A and Joint ventures in the industry include FedEx Express, which acquired Mumbai-based integrated logistics service provider AFL in 2013 and GATI signed joint venture in 2012 with Kintesu World Express a Japan-based air and ocean freight services provider.

The Emerging Market Survey, 2013, conducted by Transport Intelligence (TI) ranks India as the second most attractive logistics market in the future after China. According to TI's survey, India as a fast growing economy with one of the largest consumer markets, industries such as automobile, pharmaceuticals, FMCG and retail will provide impetus to the logistic industry in the future. Moreover, growing emphasis on increasing exports and manufacturing sector will also derive the demand for logistics in India.

Urbanization and fast industrialization also increase this consumption because of higher demand in freight and passenger transport. The Indian urban population grows at an average rate of 3% a year and has increased significantly in the last 60 years from 62 million in 1951 to 377 million in 2011 (Census Data). But despite the growth of the population of India and its economy in general the transport and logistics sector faces accompanying challenges with its infrastructure, environment pollution, increasing traffic density, policies and other inefficiencies in the system.

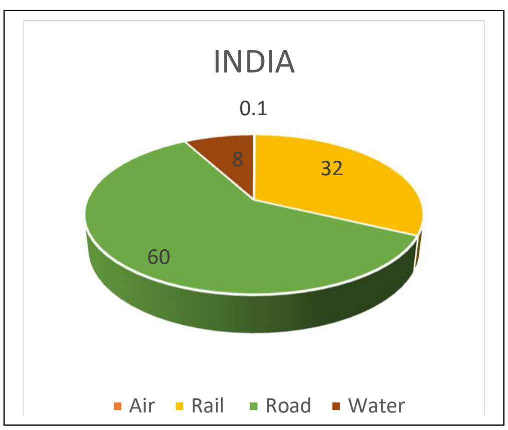
Presently, India's logistics infrastructure covering the road, rail, ports and air network remains woefully inadequate to meet the economy's demands, leading to the significant rise in the logistic cost. Clogging witnessed on domestic roads and ports, overloading of trucks leading to faster deterioration of road infrastructure, longer inhabit times on ports and longer overall transit times reflect inadequacy of logistics infrastructure. India spends around 14.5 percent of its GDP on logistics (ASSOCHAM), which is comparatively higher than other developed countries like the US, Europe and Japan. However, infrastructure development in the country has been impacted mainly on account of issues related to environmental clearances, land acquisitions, shortage of funds from lenders as well as sector specific challenges that impacted investors' interest for new projects.

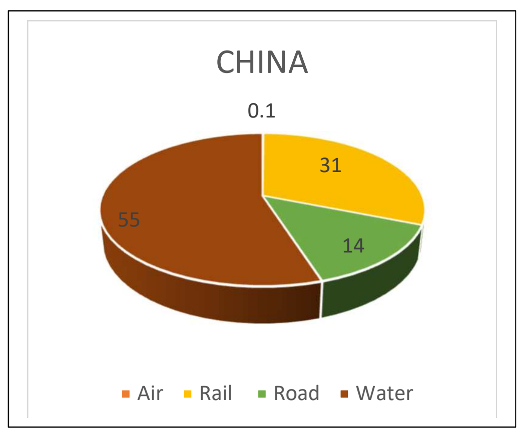
In India, high volumes and congestion at airports often results in the use of passenger aircraft for freight shipping. The longstanding practice of cross-subsidizing passenger fares has inflated Indian rail-freight costs making rail freight uncompetitive. Countries with well-established rail networks see freight rates as 9 low as 1/4th of India's (on PPP basis). The severe shortage of dedicated platforms for freight unloading and truck docking bays at Indian rail stations has compounded the issue. This poor infrastructure has led to the logistics model being heavily skewed toward transportation by roads. A nationwide reliance on trucking has resulted in a bifurcated distribution network. Most of our roads are un-metaled or single. The number of 2 lanes and long haul corridors (just 7 in number!!) together account for 0.5% of the total road network. The same corridors carry over 40% of national road freight. Driver efficiency on Indian routes is abysmally low, driven by the poor quality of infrastructure; congestion and high wait times on inter-state borders. India's road transport network contrasts a troubling reliance on inefficient means with severely lacking infrastructure. Thus, the freight and the line haul expenses of the Logistics companies in India form a high percentage of the total operating expenses and consequently they operate on very low margins. We now compare the Indian and the Global scenario.

FIG. 3

In India, nearly 61% of the cargo is moved by road, 30% by rail and rest by airway, pipelines and inland waterways. This is as compared to a 37% share of road in the USA and 14% in China (the below figures substantiate). Movement of long haul bulk traffic by road is less efficient than by rail. In India, road has become the predominant mode of transportation of freight cargo because poor rail freight infrastructure such as low quality loading and unloading stations and lack of container trains on the railway network and Government policy of subsidizing and prioritizing the passenger tariff and traffic by freight tariff and traffic creating uncertain transit times. This is further compounded by Railways having a preference for customers who can provide full train load and cannot efficiently run mixed trains which can carry different types of cargo. About 89% of its freight traffic is contributed by major commodities such as coal, fertilizers, cement, petroleum products, food grain, finished steel, iron ore and raw material to steel plants. The balance 11% is other commodities moving in bulk and containers.

FIG. 4 & 5





Further, high dependence on roads is adverse for the environment, as emissions from road transport are much higher than emissions from rail and waterways. Road transport emits 84g of CO_2 when compared to 28g for rail and 15g for waterways (McKinsey and Co.). In this context, we will look at the Indian Truck market in detail, later. Coming to warehousing, the second largest component of logistics costs, India again faces severe shortages. Primarily designed for storing agricultural produce, the size of the average warehouse in India is 1/10th of that of developed countries. Indian warehouses lack sophisticated management systems and therefore yield poor utilization rates. Cold storage facilities in India are geared toward a single-commodity: potatoes. 75% of India's cold chain capacity is used solely for potato storage (McKinsey and Co.). The remaining 25% cater to all other agricultural and manufactured goods. Yet potato storage contributes only 20% of total cold storage revenues while multi-modal storage represents more than half. Geographically, cold chain facilities are grossly concentrated. Seven states (of 29 total) account for about 87% of India's cold chain capacity (FCI).

In a well-aligned intermodal value chain; ports feed to inland waterways that supplement quality-connecting roads; airports have adequate cargo handling hubs and parking bays for freighter aircrafts; while road and rail networks serve ports and mines.

The third party logistics market is still in its nascent stages in India, facing issues such as lack of infrastructure (warehouses and cold storage), lack of economies of scale due to unorganized private truck operators, and lack of efficient processes and automated, technologically advanced monitoring systems.

This weak supply situation (with high demand prospects) actually increases the credit infusion prospects in the Transport & Logistics industry, because, credit, if channeled optimally has the potential to tap the untapped demand and thereby return sizeable benefits.

➢ ***FUTURE OF PROSPECTS (INCLUDING GOVERNMENT POLICIES)***

1. **Collaboration between E-Commerce industry and LSPs**- According to a report released by Merrill Lynch in 2015, it has been estimated that the e-commerce industry in India will be worth USD 220 billion by the year 2025. In the midst of fast growth, it is essential to leave the logistics to the experts by entering into

strategic partnerships with the logistics service providers (LSPs). Small and medium-sized enterprises can gain from this strategy as it helps to expand the business and provide better control over cost. The global partnerships between Alibaba Group and multiple LSPs, for instance, helped the group get better opportunities in Southeast Asia and other regions. In the same way, the e-commerce companies in India can gain a lot by collaborating with the LSPs. We will look at E-Commerce Logistics in detail later.

2. **Robust Retail Industry**- The retail sector of India is now among top five fastest-growing markets globally and is expected to touch USD 1 trillion from the present size of USD 700 billion (IBEF). Most of it is going to be through modern retail i.e. through shopping malls, which is expected to grow at 20 per cent in the next five years. This is reflected in the fact, that 500 malls were operational by the end of FY2015, in India. Thus, the logistics sector will definitely have pivotal role to play, for this growth to materialize.
3. **The impending GST implementation**- To talk about one example showing the positive impact of GST; currently, goods incur 2 per cent central sales tax (CST) when they are manufactured in one State and sold in another. To avoid this, industries transfer the manufactured goods to warehouses in the State from where the sale of goods takes place. This helps them avoid CST while simultaneously availing the input credit that can be obtained through value-added tax. But this makes them incur extra storage costs. Now however, with the implementation of GST, there will be a virtual melting of the state to state boundaries and a likely consolidation of small warehouses into bigger ones is going to take place. This will help in reaping the benefits of economies of scale.
4. **FDI regulations**- As part of its Make in India initiative, the Government of India has allowed 100 per cent FDI under the automatic route for all logistics services, including storage and warehousing. Also, FDI of up to 100 per cent is permitted for courier services.
5. **Establishment of free-trade warehousing zones**- As per the government's initiative of setting up Free-Trade Warehousing Zones (FTWZ), several free trade zones have been established across the country with the objective of facilitating trade of goods and services in free currency. FTWZs offer a single window solution for multiple logistics activities, with particular focus on trade flow. FTWZ are governed by the provisions and rules of the SEZ Act. E.g. - DHL's Free Trade Zones in Chennai and Mumbai offer a one stop solution for all the inventory management related issues.

Thus, with the above trends in the offing, the Transportation & Logistics Industry definitely, is a green pasture as far as credit infusion prospects are considered.

➢ ***COMPETITION IN THE LOGISTICS INDUSTRY***

The following are the defining features of the Transportation & Logistics Industry in India-

1. There are a large number of small players in the market. However, a few prominent players include GATI, TCI, CONCOR, DHL, Blue Dart, Aegis Logistics, VRL Logistics, etc.
2. As mentioned earlier as well, each player in the industry specializes and caters to one of the aspects of logistics. However, some of the bigger companies may provide services in multiple dimensions as well. Therefore, we see a considerable degree of product differentiation in the industry.
3. The market entry and exit situation is considerably easy as well. In order to enter the market, compliance with the provisions of the Companies Act, 2013 is vital. These provisions are easy to understand and apply. Also, there is all the more possibility for foreign competitors to enter, with 100% FDI allowed in the automatic route.
4. Non-price competition also is possible in the industry, mainly because, each of the players has the possibility of ensuring customer/client satisfaction in their own unique manner. It can be through, prompt delivery of freight, an innovative logistics solution, better inventory management service when compared to peers at a similar price range, etc.

Considering the above features for the Transportation & Logistics Industry, we come to the conclusion that it falls under Monopolistic Competition. Also, due to the existence of a large number of firms and a few prominent players, we also see the possibility of M&A activity in future course of time. One example is the acquisition of Drive India Enterprise Solutions Limited (DIESL, a TATA Group company in the past) by TVS Logistics Services Limited (TVSLSL) in 2015.

➢ ***ICOR OF THE INDUSTRY***

In order to first gauge the financial performance of the industry considered by us, we have calculated the Incremental Capital Output Ratio for the same. The incremental capital output ratio can be derived for sector or industry in an economy as follows-

$$\textbf{ICOR} = \frac{Iit}{Yit - Yit\text{-}1}$$

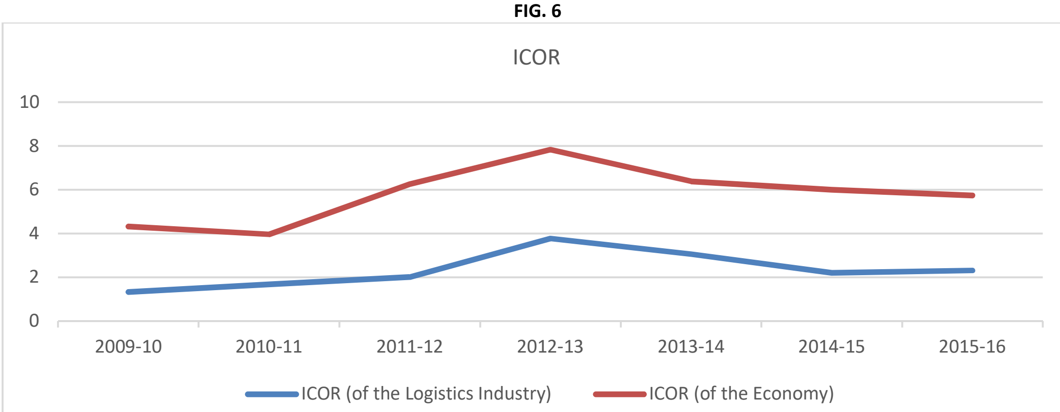
Where I_{it} is investment or gross capital formation in t period, Y_{it} is GDP in t period and $Y_{it-1}$is GDP in t-1 period for i^{th} sector in an economy. A high value of ICOR represents low investment productivity in the sector for which ICOR is measured.

ICOR was calculated using the above formula, and the data for the calculation has been obtained from the National Accounts Statistics of various years. (Refer to Annexure for Detailed Figures)

TABLE 1

Year	ICOR (of the Logistics Industry)	ICOR (of the Economy)
2009-10	1.329760712	4.325948552
2010-11	1.686422311	3.963006809
2011-12	2.013215269	6.2572918
2012-13	3.771748669	7.828911662
2013-14	3.060053874	6.385713936
2014-15	2.210022079	5.999797956
2015-16	2.317090909	5.738416836

FIG. 6



Comparing the ICOR of the economy and the sector of our consideration, we find that both of them follow a similar trend. Logistics is included in the Services Industry, and general experience has always shown that Services tend to have low ICOR values when compared to the sometimes double digit ICOR values of the Manufacturing Industry. The same is reflected in the findings above. Over the past seven years, the Logistics Industry has had an average ICOR of 2.5, which bodes well for the Industry. It basically means that the amount invested in this industry is generally recovered in a span of 2.5 years on an average. It can also be interpreted as- in order to generate Rs.1 worth of output, we need to invest Rs. 2.5, in the Logistics Industry. Thus, we can come to the conclusion of efficient utilization of capital in this Industry. It further implies that credit if given to a firm operating in the Logistics Industry, the probability of recovery will be on the higher side, as there is efficient utilization of capital employed. Thereby, indicating positive credit infusion prospects.
We will now look at the overall positives and negatives that emerge out of the above analysis-

THE POSITIVES

1. The demand-supply mismatch can be exploited to our advantage. As all the basic four verticals of the industry (Transport, Warehousing, Logistics and Value Added Services) are facing shortages on the supply side, a promising venture looking to invest capital optimally, can be supplied with credit.
2. The upcoming trends of GST implementation and growth in E-Commerce augur well for this Industry. Ballooning E-Commerce and the virtual melting of State borders (with GST) will definitely drive the Logistics Industry in the positive direction.
3. The presence of product (service here) differentiation, large number of small players and four different verticals will enable the lender to diversify the Credit Risk, by lending out to players with different set of characteristics.
4. The Incremental Capital Output Ratio (ICOR) data, speaks well about the industry. The computed values are in line with the ICOR of Services in general in India and also lower than India's overall ICOR values.
5. India's recent performance in the Logistics Performance Index (LPI) is a definite booster. However, LPI looks at trade on international gateways alone, so we cannot consider this as a decisive factor. But improvement in performance here, is definitely a positive for initiatives such as Make in India.
6. Logistics India Inc., given the present state of affairs, is ripe for tech disruption. Mainly because, India seems to be sandwiched between growing demand for logistics services on the one end and a fragmented, unorganized logistics services market on the other.
7. With regard to the above point, if the adoption of E-Logistics (seamless Supply Chain integration using ICT), is one of the objectives of credit, then it definitely presents a positive prospect for the lender.

THE NEGATIVES

1. One obvious drawback is the lack of proper infrastructure facilities. When we say Infrastructure we mean, lack of dedicated freight corridors (roads), lack of cargo consolidation centers at the Seaports and Airports and lack of effective Warehousing facilities (Cold Storages in particular).
2. This lack of infrastructure has done no good to the industry itself, as the companies operating in the market don't have the proper facilities which they can feed off, and do more business.
3. E-Commerce, although a booster, may actually, work its effect in the negative manner as well. This is mainly because, the existing e-commerce companies have not been doing well financially and still are a considerable distance from break even. In the light of such circumstances, outsourcing logistics services might be cut down even more. Thus, LSPs might not actually benefit much with the e-commerce boom.
4. The concept of Reverse Charge basis under GST, might put the logistics service aggregators at a disadvantage. However, the complete effect of the above, can only be comprehended once the law is in full force.
5. The over dependence on roads, certainly puts the industry at a disadvantage. Developed economies have minimum dependence on roads (as seen in case of China and U.S.A). However, additional infusion of capital might actually help mitigate the problem.
6. The present state of the Trucking industry is not up to the mark. Efforts towards automating the interactions between Shippers, Transporters and Fleet Owners need to be encouraged.
7. Also, in the short run, the proposed GST implementation may put pressure on the Working Capital cycle of the companies and result in higher short term working capital requirements for them (India Ratings). However, this is only a short term effect.

Overall, we would allot a positive outlook to the industry, on the back of a weak supply situation and a strong demand scenario. As traditional 3PLs strengthen their feet on street capabilities and search for a technological edge, the market will crystallize via strategic acquisitions or partnerships. So, the possibility of mergers and acquisitions taking place, too appears bright.
Once again, there is high possibility of warehouse consolidation with the change in tax regime; this is another reason for the positive outlook given to the Industry. Firms that have been focused on the market and are building businesses with the correct product market fit are slowly and gradually seeing their efforts payoff. The high level of chaos that existed with multiple start-ups using cash as a steroid for growth is now dying out and making way for viable and sustainable business to succeed. This fact further bolsters the positive outlook given to the Transportation and Logistics Industry in the Indian economy.
Now, in order to render completeness to the report, we have applied the framework to Patel Integrated Logistics Limited (a player in the Logistics sector). We will first look at the company profile.

COMPANY SPECIFIC RISK

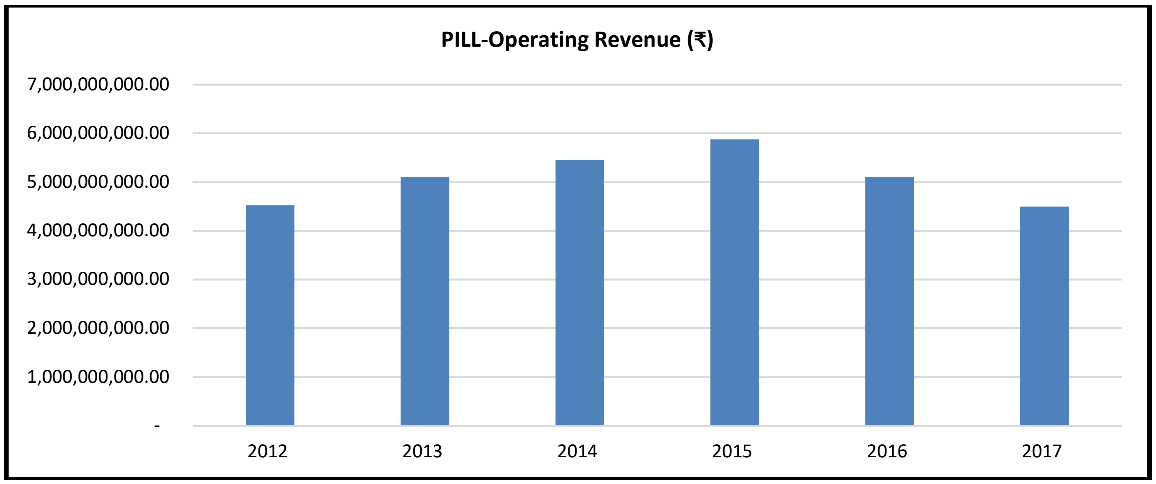
PILL- Patel Integrated Logistics Limited finds its origin in Patel Roadways Limited, which was promoted by Asgar Patel in 1959. Asgar Patel was himself the loader, driver and delivery boy for the first consignment from Bombay to Delhi. PRL later expanded its business to warehousing and secondary distribution, door-to-door delivery and pick up, thereby providing a one stop solution. It later moved up the value chain, towards express cargo segment with the launch of Patel Retail. With committed transit schedules and an online tracking system, Patel Retail enhanced the consumer experience and added extra convenience. Comprising of a network of 500 stations country wide, investment in IT and a 100% containerized fleet, Patel Roadways alone handles about INR 120 billion worth of cargo (about 5 lakh tones) annually.
In the early 1980s, the retail courier business assumed importance and a need for consolidation of cargo was felt. It was during these conditions, that Patel-On-Board Courier Limited was launched. Later, for strategic reasons, PRL and POBC were merged to form Patel Integrated Logistics Limited (PILL).PILL came for a public issue of equity shares in the year 1994. It offers unified logistics solutions through surface, air and sea transportation and Door-to-Door Express Service all over urban & rural India. It provides services ranging from door pick-ups and deliveries of small packages, to transportation and warehousing as well as distribution. In May 2016, PILL incorporated a new subsidiary –Delivrex – to provide last-mile delivery services for e-commerce companies in Tier II and III cities. The company has also formed a JV with Saudi Arabia's Nationwide Group to form a 3PL logistics company in Middle East. PILL will provide its knowhow, manpower and technology and manage the end-to-end operations of the venture.
For the financial statement analysis, we have used the Credit Monitoring Arrangement (CMA) Excel template. The following is a summary of the CMA (only those ratios that were considered important for decision making have been considered)-(https://drive.google.com/file/d/0BxKEFn3Nf65xWDF0SkZ6Z0I0aIU/view)- Link to the CMA.

TABLE 2

PARAMETER (₹ LAKHS)	2012	2013	2014	2015	2016	2017
OPERATING REVENUE	45244.77	50985.83	54579.91	58798.07	51136.32	45011
%CHANGE	0.00	12.69	7.05	7.73	-13.03	-1.20
GROSS PROFIT RATIO (%)	11.47	10.82	9.68	9.83	12.39	
PAT MARGIN (%)	0.59	0.47	0.43	1.02	1.64	1.56
EBITDA	3170.31	3369.87	3108.73	3587.39	3934.58	2149.00
%CHANGE	0.00	6.29	-7.75	15.40	9.68	-45.38
EBITDA MARGIN (%)	7.01	6.61	5.70	6.10	7.69	4.77
CURRENT RATIO	1.72	1.61	1.68	1.76	1.96	
INDEBTEDNESS RATIO (TOL/TNW)	1.10	1.23	1.16	1.09	0.94	
TD/TNW	0.42	0.45	0.45	0.46	0.50	
NCA/TD (%)	20.98	20.44	22.37	31.80	28.37	
DSCR	0.98	0.95	1.08	1.71	1.24	
INTEREST COVERAGE	4.27	3.67	3.40	3.94	4.36	
TD/EBITDA	1.13	1.17	1.26	1.14	1.33	
ROCE (%)	25.00	25.96	24.17	29.33	28.57	
RECEIVABLES TURNOVER(DAYS)	55.83	52.87	44.09	42.02	51.43	
TNW	8579.28	8722.16	8771.11	8824.38	10458.49	
%CHANGE		1.67	0.56	0.61	18.52	

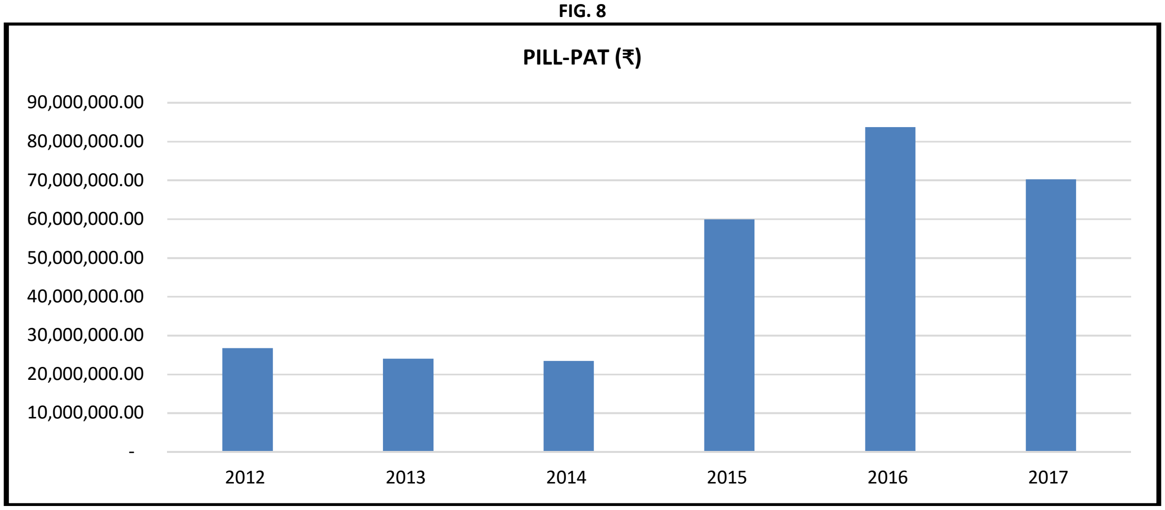
Operating Revenue and PAT- We can clearly see an upward trend in the operating revenue and then a fall in the year 2016 to 2017.

FIG. 7



However, the Profit after Tax of the company has shown the following behavior:

FIG. 8



The PAT as well as PAT margins have shown tremendous improvement. This is a positive for rating of the company.

Traditionally, the services industry has been the one to operate on considerably low margins and the Logistics industry in specific operates on meagre margins. Adding to that, road transportation space, due to the existence of many intermediaries, presents very little profit margins. Given these factors, we can say that PILL is in line with the industry as far as profitability is concerned.

The main reason for reduction in the operating revenue is weeding out of small unprofitable customers by the company, so as to protect its interests in the long run. There is now a shift of focus onto quality customers who can help the company preserve and generate additional value.

OTHER PROFITABILITY INDICATORS

1. EBITDA-The Company has more or less a stable EBITDA margin. However, a major fall was seen in the recently ended financial year. This can be attributed to the impact of demonetization on the company's business. Demonetization has mainly impacted the unorganized, cash driven sector and the trucking industry is the foremost among them (hence an impact on PILL's operational profitability is seen). Hence, we can expect the situation to pick up in the following quarters.
2. Return on Capital Employed-The ROCE value is consistently between 25%-30% and it is one of the highest in the indust. Thus, in terms of long term efficiency of capital, PILL can be said to be quite efficient in generating income. ROCE has been calculated using:

$$\text{ROCE (\%)} = \frac{\text{EBIT}}{\text{Capital Employed}} * 100$$

For calculating Capital Employed, we have simply subtracted the Current Liabilities from, the Total Assets. To interpret, for every ₹1 invested in the business, the company made an operational profit of ₹0.25-0.30. Hence, in terms of ROCE too, PILL delivers a good performance.

3. Gross Profit Margin- The trading account profit or the gross profit of PILL is also quite competitive when compared to its industry peers. The Gross Profit margin is consistently between 9.5%-12% of Net Sales. As discussed earlier as well, these margins are in line with the industry of operation, wherein the margins are generally low.

LEVERAGE INDICATORS

1. Indebtedness Ratio (TOL/TNW) - This is the first leverage indicator. The Indebtedness Ratio of PILL has shown a declining trend from 1.23 in 2013 to 0.94 in 2016 (Long-Term borrowing have been declining- Annexure). This speaks well of the company, because it is lesser and lesser dependent on borrowed amounts, and has sufficient capital of its own (TNW). In order to calculate Tangible Net Worth, we have reduced the Net Worth of the company by the portion of Intangible Assets. Thus, PILL ticks another box with regards to its financial performance. In other words, PILL can afford to be more leveraged compared to where it is now.
2. (Total Debt)/TNW- Also commonly referred to as Leverage Ratio, this ratio vindicates what Indebtedness Ratio has shown above. Leverage Ratio consistently hovers between 0.40-0.50. This means that for every ₹1 of PILL owned by the shareholders, PILL owes about ₹0.45 to external lenders (bank borrowings, public deposits, etc.). This goes to show that PILL can afford to take on more debt into its system. For Total Debt we have considered Short Term Debt, Term Loans and Public Deposits and Debentures (if any). This can prove to be one of the deciding factors, when a financial institution looks to grant credit to this company.

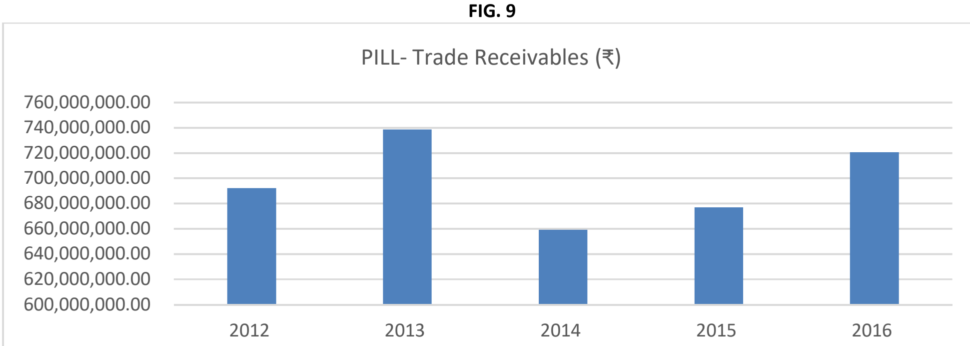
LIQUIDITY INDICATORS

1. Current Ratio- It is taken as one of the liquidity indicator. We observe an unusually high Current Ratio for PILL. In fact the ratio shoots up to close to 2 in 2016, from 1.7 in 2013. On further post mortem, we find that this hike in the value, is mainly on the back of increased cash and cash equivalents and also trade receivables (graph below). This could mean that the collection of receivables is not optimized and hence takes a significantly longer period of time and also there is a sizeable amount of cash in hand (which could lead to idealness). Therefore, a high value of current ratio for PILL, may actually cause problems because of the above mentioned reasons. The following ratio too indicate a similar problem.
2. Trade Receivables Turnover- The turnover of receivables in terms of days is found out to be consistently around 50 days. Although it showed a decline for a couple of years (from 2013 through to 2015), the value shot back again to 51 days in 2016. Also, for the other two companies of our consideration the ratio was found to be less than 30! Hence, we come to the conclusion that PILL may not be efficient enough in collecting what is due to it from the debtors, leading to relatively stressed working capital cycles. We did NOT have a mention of separate credit sales values. Thus, the turnover in days was calculated as:

$$\text{Receivables Turnover (days)} = \frac{365}{\text{Net Sales (₹)}} * \text{Receivables (₹)}$$

This delay in collecting dues from its customers may actually lead to increased short-term fund based borrowings and this is exactly what is reflected in the Working Capital borrowings portion of Current Liabilities. There is a significant increase in borrowing from about ₹28.73 cr. in 2015 to about ₹43 cr. in 2016 (increase by about 50%).

FIG. 9



COVERAGE INDICATORS

1. NCA/TD- The total debt to net cash accruals indicates the number of years that firm will take to repay all its debt obligations. Here, we have considered the reciprocal value, i. e, NCA/TD. This is basically done, just for the ease of interpreting percentage values. In case of PILL, a healthy NCA/TD percentage exists, primarily due to increasing cash accruals and a considerably stable level of borrowing. This has in fact been increasing at a good rate too (from about 20% in 2012 to about 31% in 2015). Considering the flip case, PILL would take about 4 years on an average to pay back all its debt (TD/NCA). Hence, this does not present any sort of problem to the company's existing debt obligations.
2. Interest Coverage Ratio (EBITDA/Interest Charges) - ICR basically represents the cushion which a company has in order to cover its interest charges using the profits it generates from operations. Interest coverage is consequence of a company's profitability, its level of leverage and its cost of borrowing.

We have already seen that PILL is not a highly leveraged firm; in fact its Leverage Ratio is only about 0.50. The same is reflected in its ICR values that hover around 4. This means that PILL's EBITDA is 4 times its existing Interest and Finance charges. Thus, it can afford to take up additional debt, as the operational profitability is much higher (compared to Interest expense). The ICR fell from 4.27 in 2012 to 3.64 in 2014 (due marginal declines in EBITDA), but has since then picked and reached up to a high of 4.36 in 2016.

3. TD/EBITDA- This ratio indicates a company's ability to pay off its incurred debt. Usually, before giving additional debt, rating bodies look at this ratio, in order to determine if the borrowing company would be able to bear the additional burden of debt or not. We find that, that is precisely the case for PILL. Their TD/EBITDA is consistently around 1, with only marginal changes y-o-y. Therefore, according to this parameter any additional debt given to them should be serviced promptly.
4. DSCR-The Debt Service Coverage Ratio, indicates a company's ability to service its debt obligations, both principal and interest using earnings it generates from operations. Here we have assumed that working capital funding takes higher priority over other payments. We have made use of CRISIL's methodology of DSCR calculation and the formula is as follows:

$$\text{DSDR} = \frac{\text{PAT + Depreciation}}{\text{Debts payable within one year}}$$

The DSCR values of PILL, have been improving from the year 2012 through to 2015, and a slight fall can be seen in the year 2016. In spite of that, the value is still greater than 1, which shows that PILL is in a position to service its debt obligations in a given year. Also, a majority (95%) of PILL's fund based borrowings are secured and thus there is financial flexibility to service temporary shortfalls in cash accruals. Also, as seen earlier the company's capital position (Net Worth) is quite strong, so temporary reductions in accruals can be managed with relative ease.

We now look at the positives and negatives at a glance-

- **Rating Positives**- The logistics sector industry is exposed to economic cycles and any slowdown in industrial production, EXIM trade may affect PILL like any other logistics player. However, the asset light nature of operations partially protects the company from economic down cycles. For its road transportation business, the company mainly uses hired trucks and owns only 50 trucks (as on 31-03-2017). Thus, around 90-95% of its fleet requirement is undertaken by hired vehicle which provides flexibility in its business model. Also, as stated earlier extensive experience of management in the field of logistics, adds to the positive aspects of the company. Pan-India presence with diversified end user industry profile and positive outlook on logistics industry driven by e-commerce sector further adds impetus.
- **Rating Negatives**- The above positives are, however, constrained by low profitability margins (an inherent characteristic of road transportation/ airfreight consolidation business), working capital intensive nature of operations leading to moderate liquidity profile and competitive industry nature along with dependence on economic cycle. An increase in the receivables turnover off late validates this fact (also receivables in absolute terms have been on the rise). Thereby, on account of the long credit period (also the inherent nature of the industry) the company is forced to rely on external borrowing to fund the working capital requirement.

We now have a summary of the merits and the demerits. We would like to say that the company is a fundamentally good one and can be relied upon if supplied with credit by any financial institution. So, the rating outlook assigned would be positive.

CONCLUSIONS

The basic aim of this study was to know, understand and implement a credit rating framework to the Transportation and Logistics industry.

A comprehensive framework was looked at, but some of its aspects could not be applied directly (such as Management Risk, Project Risk), due to paucity of such qualitative and categorical data.

The financial ratio analysis and the Industry Analysis formed the analysis portion.

The Industry as such was found to have a stable outlook, with the government policies and the existing case of inadequate supply, promising to drive the growth mantle further up.

The company considered too (PILL) was found to have a positive outlook.

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