

FROM BITS TO BYTES AT ASM TECHNOLOGIES LIMITED – A CASE STUDY**Dr Sunita Panicker***Associate Professor, Christ University, Bangalore.***Ms Anju K J***Research Scholar, Christ University, Bangalore.***Abstract**

Business Enterprises are an integral part of a nation's economy. They are incorporated with an aim to create value to the society. With growing industrialization of the Indian Economy, the incidence of industrial sickness has also been on the rise and a huge amount of scarce resources of banks and financial institutions remain locked up in the sick units. The process of bringing an organization from sickness to health is known as turnaround. Different organizations adopt different strategies for bringing about turnarounds. In this study, case study methodology has been adopted, which has aimed at understanding the internal and external causes of sickness and the turnaround strategies adopted by a private sector organization, ASM Technologies Limited. The dataset used in this study were spanned over the period from 1998-2014, by collecting various sources of data from Business India, Business World, Money Control and CMIE (Centre for Monitoring Indian Economy) Prowess database. In addition, the data was collected through online recorded interviews. Altman's Z score analysis for industrial sickness has been assessed. Further, the various turnaround strategies adopted by this organization is highlighted. This study is a very useful source of information and impartial advice for turnaround decision makers of ASM Technologies Limited. Thereby, it has relevance to all the stakeholders in the business, the reason being their money, talents and efforts should not go futile while making decision.

Key Words: *Industrial sickness, Turnarounds, Altman's Z-Score, Strategic Management, Case study, Private sector organization.*

Introduction

Uncertainty loomed over the Bangalore based ASM Technologies Limited in the year 2000, which was a pioneer in providing world class consulting services in Enterprise Solutions for the Packaged ERP Products and in Enterprise Product Development for SMB Segment and in Technology Solutions. Squeezed by tough competition, economic downturn, rupee appreciation from the international markets, ASM technologies went into a failure, making a loss of Rs.3.8crores in 1999-2000. To turn ASM's fortunes around, Mr. Rabindra Srikantan, the Managing Director of the company who is a veteran, team-oriented business entrepreneur with a highly successful track record of building businesses based on sound strategic analysis rejuvenated the company. His professional experience in a wide range of software systems in the areas of engineering, manufacturing, enterprise applications and Internet technologies was able to bring back the company to health. He has implemented operational strategies to improve quality and customer satisfaction ratings and has provided consulting services to more than 50 clients including multinational companies. His philosophy of driving continuous business reformation by leveraging on state-of-the-art technologies, backed by a strong customer driven service perspective, has enabled ASM to emerge as one of the leading IT consulting and software services company today.

Sketch of Indian IT Industry

In the present day knowledge economy, information and access to information have substituted traditional factor inputs such as land, labour and capital as the primary inputs into production. This revolution, caused by modern technological insurgency and rapid transformation in business models around the world, has offered vast prospects to developing countries. India, an otherwise slow adopter of technology and technology based development strategies, appears to have successfully leveraged this opportunity and its large endowment of human capital to establish a fast lane to economic growth.

The structure of the Indian information technology industry has three main components: 1) the computer hardware segment that includes computing and communications products and devices; 2) the computer software

segment that comprises computer programs, algorithms, user interfaces and applications; and 3) the information technology enabled services segment that enhance other business functionalities with the use of computer hardware and software. The software segment may be further categorized into two types: a) generic off the- shelf software products that may target a vertical business segment or multiple segments or b) customized software or application developed to suit the need of a particular user in the context of a specific technology or business need. In some cases, large software packages such as ERP or CRM products designed to serve multiple vertical segments on multiple technological platforms require a lot of tailoring and customisation before operating under a set of specific business needs.

India's information industry started off in the 1970s as a sheer resource base for developed economies that were beginning to feel the need for additional technology workers who could aid in automation and software production. A few Indian firms benefiting from the lack of significant competitive barriers to entry and India's endowment of highly educated workforce responded positively by supplying engineers and scientists. By the 1980s, India was graduating nearly 150,000 engineers, with a limited demand for their services from the Indian economy. Some of these scientists began to relocate to the US and other countries to work at the clients' premises, a process that came to be commonly known as 'body-shopping'. The Computer Policy announced by the Government of India in 1984 recognized software as an industry for the first time in India, making it eligible for investment allowance and other incentives. Since then a series of policy actions from an otherwise intrusive government simplified the process of obtaining clearances and permits, and eased the tariff structures and exports restrictions encouraging the development of the information technology industry. In addition to the policy shift at home, business paradigms were shifting around the world by the late 1980s. Most notably, outsourcing of business functions emerged as a strategic management tool. Information systems were increasingly outsourced in parts or in entirety for various strategic reasons, most significant being the cost advantages offered by the outsourcing service providers.

The information technology (IT) and information technology enabled services (ITeS) industry has been one of the key driving forces fuelling India's economic growth. The industry has not only transformed India's image on the global platform, but also fuelled economic growth by energising the higher education sector (especially in engineering and computer science). It has employed almost 10 million Indians and hence, has contributed a lot to social transformation in the country.

Indian organisations are turning to IT to help them grow business in the current economic environment. India is a preferred global destination for information technology (IT) and information technology enabled services (ITeS). The Indian IT-business process management (BPM) sector is estimated to expand at a compound annual growth rate (CAGR) of 9.5 per cent to reach US\$ 300 billion by 2020. The sector increased at a CAGR of 25 per cent over 2000–13, 3–4 times higher than global IT-BPM spends. Export of IT services accounted for 57.9 per cent of total IT exports in FY 13. Banking, financial services and insurance (BFSI) generated export revenue of around US\$ 31 billion during FY 13, accounting for 41 per cent of total IT-BPM exports from India.

Information technology in India is an industry consisting of two major components: IT Services and business process outsourcing (BPO). The sector has increased its contribution to India's GDP from 1.2% in 1998 to 7.5% in 2012. According to NASSCOM, the sector aggregated revenues of US\$100 billion in 2012, where export and domestic revenue stood at US\$69.1 billion and US\$31.7 billion respectively, growing by over 9%. Information technology and business process outsourcing are among the fastest-growing sectors, having a cumulative growth rate of revenue 33.6% between 1997 and 1998 and 2002–03 and contributing to 25% of the country's total exports in 2007–08. The growth in the IT sector is attributed to increased specialisation and an availability of a large pool of low cost, highly skilled, educated and fluent English-speaking workers, on the supply side, matched on the demand side by increased demand from foreign consumers interested in India's service exports, or those looking to outsource their operations.

Software Development

Software development can be broadly classified as custom developed software and packages or generic software products. Customized software development involves closer interaction between the development team and the end-user. Hence software companies that provide customized software concentrate on particular vertical market segments such as retail, banking and manufacturing. The customized software addresses the specific needs of the clients. Software products may be targeted to a vertical segment or may cut across segments, but rarely to a specific us. The different stages in software development include conceptualization, requirement analysis, high level design, low level design, coding, testing and support. These stages roughly correspond to stages described in the waterfall model of software development. The value added is typically greater in the earlier stages of development - namely requirement analysis and high level design, Indian software firms largely provide services more than products and Indian software exports consist largely of low level design, coding and maintenance services.

ASM – The Yesteryears

ASM Technologies Limited was established in 1992, offers a broad spectrum of enterprise services such as configuration, implementation, customization, end-user training and documentation, Post Implementation Support & Maintenance across leading commercial off-the-shelf products like SAP, Oracle Applications, PeopleSoft, JD Edwards and Microsoft Enterprise products.

ASM has been providing consulting Services (Product Engineering, Development, Product Support, Porting, Testing and Test Automation) to its Global Clientele in the Embedded Software and System Software space. ASM has been running ODCs both in India and Overseas successfully for its International Clients providing cost effective Onsite, Offsite and Offshore Services through a team of experienced Engineers and Consultants with extensive technical and Domain expertise, which reinforces its ability to provide solutions to Client needs.

The company was promoted by technocrats. ASM was offered IPO status as far back as 1994, and listed on the Mumbai and Bangalore Stock Exchange. With over 545 employees worldwide (As on 30th June 2008), the company has development centers in Bangalore (India), Singapore, Chicago, Toledo and Tampa (USA), and London (UK). In 2012 the company was awarded the D&B Indian Exporters' Excellence Awards.

Sickness and Turnaround at ASM

ASM Technologies Limited., established in 1992 has suffered huge losses and the erosion of net worth in 2000-2004. But the prospects of the company improved significantly from 2005-2014 onwards. The following graph shows the PAT (profit after tax) and NW (net worth) for the year 1999-2000 to 2013-2014. In the year 1999-2000 the company had a loss of Rs. 3.8 crores and continued to face losses till 2003-2004. However, it was in the year 2004-05 the company started to make profits and the networth is improving drastically from the year 2005-06 till March 2014. The Table below reveals the entire story as stated above.

Table 1 : PAT and NETWORTH of ASM (Rs in crores)

YEAR	PAT	NETWORTH
1999-2000	-3.8	6.16
2000-2001	0.11	6.26
2001-2002	-1.22	5.45
2002-2003	-3.89	3.59
2003-2004	-1.99	2.29
2004-2005	0.55	2.85
2005-2006	1.61	4.45
2006-2007	1.21	5.66

2007-2008	3.69	8.91
2008-2009	3.78	12.1
2009-2010	3.43	14.83
2010-2011	6.52	20.19
2011-2012	7.28	26.01
2012-2013	8.9	33.46
2013-2014	9.88	41.71

Source : Money Control

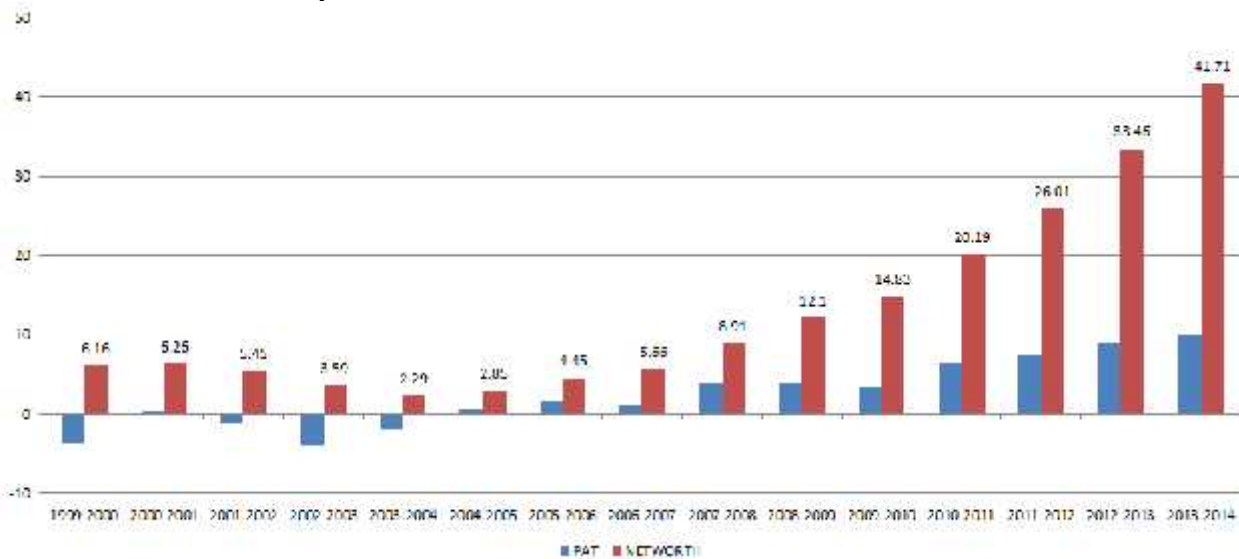


Figure 1: PAT and Network of ASM

The detection of a firm’s operating and financial difficulties is a subject which has been particularly amenable to analysis with financial ratios. To detect signs of looming bankruptcy, analysts calculate and analyze all kinds of financial ratios, viz. Working capital ratios, debts levels, profitability and liquidity ratios. The problem is each ratio is unique and tells a different story about a firm’s financial health. Many a time, they even appear to contradict each other. Having to rely on a bunch of individual ratios, the analyst may find it confusing and difficult to know when a stock is going to wall.

Z-Score of ASM - Distress Prediction Model

The Z-Score is the most thoroughly tested and broadly accepted distress prediction model. Rather than searching for single best ratio Prof. Edward Altman has built a new model that distils five key performance ratios into a single score called Z-score, which gives investors a pretty good snap-shot of a firm’s financial health. The model uses five ratios to consider both financial problems (X1, X2 and X3) and operating problems (X4 and X5) of the firms. He has used multiple discriminant analysis weightage used for different ratios which are:

- X1 = (Working Capital / Total Assets) * 0.717
- X2 = (Retained Earning / Total Assets) * 0.847
- X3 = (EBIT / Total Assets) * 3.107
- X4 = (Capital Fund / Total Liabilities) * 0.42
- X5 = (Sales / Total Assets) * 0.998

The final Z-Score is arrived at by adding all the above, i.e.,

$$Z = X1+X2+X3+X4+X5$$

Prof. Altman has empirically tested all the above ratios and arrived at the following conclusions

- If the Z-Score is above 2.90, the firm has good financial position;
- If the score is between 1.21 and 2.90, indicates the warning signals leading to a firm’s poor financial health, and
- If the score is below 1.21, means the firms is tending towards bankruptcy.

As a reliable test of corporate financial health, it is widely used by courts of law, and the banking, credit risk management and turnaround industries in the USA as a benchmark for credit status and corporate health. Thus, the Z score of ASM is shown in table 2.

Table 2 : Z – Score Table for ASM Technologies Limited

YEAR/ DETAILS	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
WORKING CAPITAL	4.14	3.38	3.27	2.96	1.75	3.74	6.49	6.85	9.74	13.96	12.48	14.1	16.24	11.52	13.97
TOTAL ASSETS	12.14	11.15	10.35	8.44	6.44	7.92	11.11	11.86	14.78	19.75	20.12	25.65	37.41	47.12	61.69
RETAINED EARNING	1.17	1.26	0.45	-1.4	-2.7	-2.15	-0.54	0.66	3.91	7.11	9.83	15.19	21.01	28.46	36.71
EBIT	1.6	1.32	-0.26	3.47	1.73	1.91	2.25	3.37	5.52	5.79	5.35	10.16	10.77	13.8	15.34
EQUITY	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
TOTAL LIABILITIES	12.14	11.16	10.35	8.43	6.44	7.92	11.12	11.85	14.77	19.75	20.12	25.65	37.41	47.12	61.69

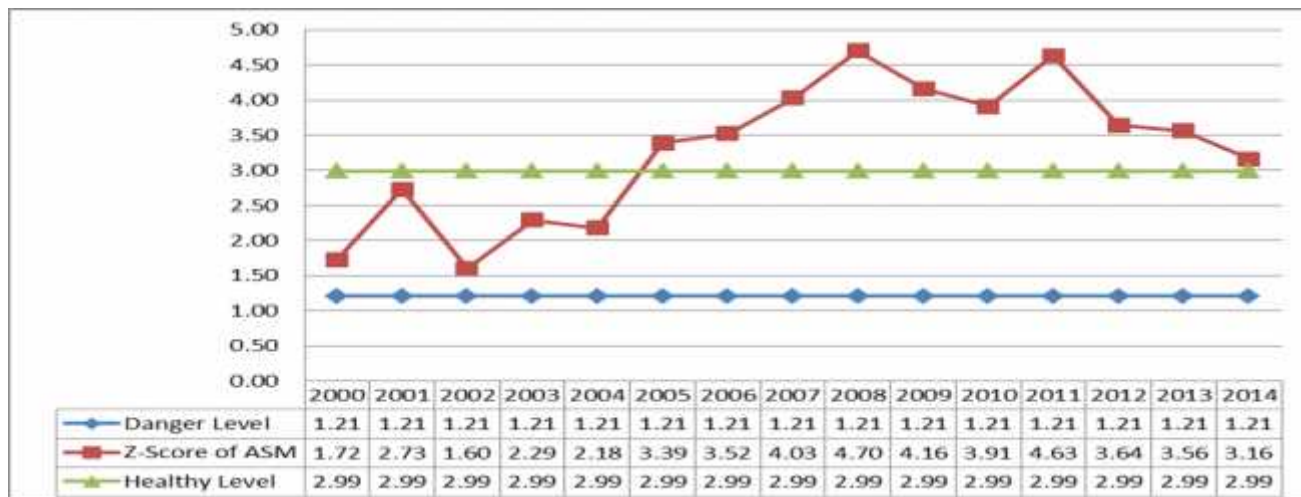


Figure 2: Z – Score Table for ASM Technologies Limited

Interpretation

The Z-score of ASM is between 1.21 and 2.90 from 2000 to 2004 indicating a poor financial health but from 2005 onwards it is above 2.9 indicating a good financial position. ASM has never landed below 1.2 in any of the financial years under consideration. The Z-Score started with 1.71 in 1999-2000, above the standard score of 1.21* (Danger Level) indicating the position of the company is good enough. From the above graph it is very clear that the financial position of ASM is good. The Z score level of ASM is above the danger mark which implies that there is no risk of bankruptcy.

* - *Caouette, John B; Edward I Altman, Paul Narayanan (1998). Managing Credit Risk - the Next Great Financial Challenge, John Wiley & Sons: New York. ISBN 978-0-471-11189-4*

Reasons for Sickness

The Company was excessively depending on foreign markets for which ASM Technologies Ltd, developed partnership with HAHT Software, a world-wide leader in providing enterprise e-business solutions to Global-2000 companies, in which it will develop, deploy and manage web-enabled applications with HAHT site. Advanced Synergic Microsystems limited, has announced their development partnership with HAHT Software, a world-wide leader in providing enterprise e-business solutions to global 2000 companies. In addition, to this, the company in order to provide an extensive suite of offering in the areas of e-commerce and end-user support to the ASEAN countries, ASM Technologies has strategically partnered with DA Consulting Group (DACG). In the year 1999, the company went into losses because of bad debts of Rs 1.43 crore. The bad debts continued to exist in the business till the company initiated a turnaround.

In 2003-2004, Software development expenses have increased from Rs.136,702,968 to Rs.149,710,784 and Administrative expense have also increased from Rs.17,247,869 to Rs.19,130,198. Also, in 2004-2005, Software development expenses rose from Rs. 149,710,784 to Rs.237,919,686 and Administrative expense rose from Rs. 19,130,198 to Rs.34,955,362 .Thus, the operating cost of the company was really very high.

The company had a gamut of various hardware and software services. Thereby, the company was not able to make right decisions. In addition, to this it was difficult for the company to focus on its businesses. The company had a poor capital structure and it can be depicted as follows. It explains the extent to which the debt is employed in the capital structure of the concerns and refers to employment of funds to accelerate rate of return to owners. Financial leverage increases the profitability where there is huge market potential and vice versa. It measures the relationship between the EBIT and Earnings Per Share (EPS) and it reflects the effect of change in EBIT on the level of EPS.

The degree of financial leverage (DFL) is computed as a ratio of change in earnings (EPS) available to common stockholders associated with a given percentage change in Earnings Before Interest and Taxes (EBIT) and is calculated as follows:-

$$DFL = \frac{\text{Percentage Change in EPS}}{\text{Percentage Change in EBIT}}$$

The greater the degree of financial leverage, the greater the fluctuations (positive or negative) in Earnings Per Share (EPS). The common stockholders are required to endure greater variations in returns when the firm's management chose to use more financial leverage rather than less.

Table 3: Statement of Degree of Financial Leverage and Earning Per Share

YEAR	DFL	EPS
1999-00	-0.21	-7.59
2000-01	6.95	0.19
2001-02	0.10	-2.61
2002-03	-0.70	-4.99
2003-04	-0.67	-2.59
2004-05	1.72	1.11
2005-06	0.70	3.22
2006-07	1.40	2.4
2007-08	0.75	7.38
2008-09	0.77	7.56
2009-10	0.78	6.86
2010-11	0.78	13.04
2011-12	0.74	14.55
2012-13	0.78	17.8
2013-14	0.78	19.77

From the below table, it can be seen that the company's EBIT and EPS were very poor from 1999-2004. The performance of the company improved subsequently in the following period from 2004-2005 onwards. The EPS was at its best for the financial year 2013-2014, i.e., 19.77. Overall the performance of the company was satisfactory during the period of analysis.

Note: Degree Financial Leverage (DFL) = Earnings before Interest Tax/ Earning Per Share

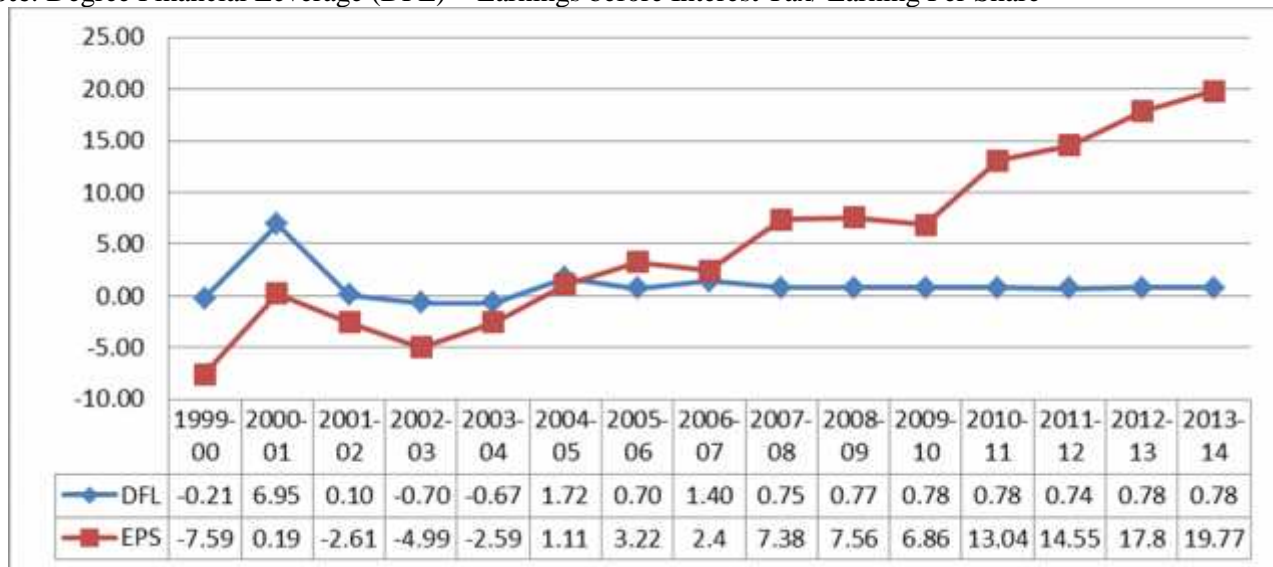


Figure 3: Graphical representation of Degree of Financial Leverage and Earning Per Share

In the year 2000 Indian rupee appreciated by about 8% against US\$ that affected operations by way of margin reduction. The reason being the company was mainly depending on the foreign markets. Recovery of the company from the economic slowdown in the year 2004 materialized only in the latter part of the year and thus hindered the scope for improved financial performance. The employees of the organisation were sceptical about the growth of the company. There was a change in the management of the company.

Successful Turnaround Strategies at ASM

Things changed dramatically for ASM in 2004 when the company, started turning its business around. The following are the strategies adopted by the company for revival.

In the year 2003-04 the company moved from its manufacturing of products to only consulting and providing software services. This enabled the company to be focused and also helped the company to come out of losses. From 2004-05 the Bangalore-based ASM Technologies, deals in enterprise applications and enterprise product development for manufacturing, retail, oil and gas verticals.

The Company continued to strengthen its market initiatives in the areas of presence, like India, Singapore, US and UK. The company expanded with plans of new offices in the Asia-Pacific and EMEA regions the horizon. In this way the company started expanding its distribution networks. The company wanted to financially restructure itself. So, in the year 2005 the company also repaid its term loan with IDBI resulting in a considerable reduction to its interest commitments. Secured loans of the company decreased from Rs.40.56 million to Rs.13.19 million as a result of its repay of IDBI loan in the year 2005. This enabled the company to have an effective capital structure. The company felt the need for technology upgradation for which it wanted to acquire ISO certification. Thus, ASM was certified during the month of January 2006 in ISO-9001-2000 for its software development and Support services in Enterprise Applications, Embedded and System software.

The company initiated various tie-ups to strengthen itself. ASM limited partnered with a company in China to promote the offerings in the Chinese market and looked for cost effective delivery options in the year 2006. In 2006, ASM partnered with Cincom to resell, implement and support Cincom's QTO Product which consists of Knowledge based Applications in India.

In the year 2007, ASM Technologies Ltd., was announced that it is an ISO 9001-2000 and a SEI CMMI Maturity Level 3 Company. They were targeting for a SEI CMMI Maturity Level 5 appraisal and ISO 27000 Information Security Management System (ISMS) for the 2007.

During the year 2007 the Company intended to deploy additional sales force to service its expanded client base and its foray into newer markets. ASM Technologies Ltd has strengthened its presence in the market and has grown both organically and inorganically. Thus, the company felt the need to enter into new markets.

The Company's operations involved low energy consumption. However the efforts to conserve and optimize the use of energy through improved operational method and other means continued. The Company has not imported any technology during the year 2007.

Major Findings of the Study

1. The study reveals that high cost of debt due to escalation of projects/funds, low operating margins, high employee cost, huge borrowings, huge stock of inventory, increased social consciousness, talent drain, adversarial union role, poor cash flow, product objection, high gearing, poor product planning, poor adaptation ability, obsolete technology, low employee morale, ambitious expansion and low capacity utilization are the important internal causes of industrial sickness.
2. The results highlights that high global competition, high interest costs, export stagnation, predatory dumping, increased government regulations, domestic market stagnation, external marketing environment and technology excellence are the prominent external causes of industrial sickness.

3. The study observes that product proliferation, competent product management, customer-centric approach, product mix and repositioning, aggressive penetration and futuristic approach are the major successful turnaround marketing strategies.
4. The result indicates that asset reduction, generation of funds, operational excellence, cost reduction and efficient cash management, reduction in cost of funds and better utilization of assets are the predominant successful turnaround financial strategies.
5. The result of the study suggests that holistic shift in human resource policies, hierarchical restructuring, competency management, rewarding talent for performance, employee safety and open door policy are key successful turnaround human resource strategies.
6. The study shows that quality in process and products, superior production efficiency, efficiency in raw material sourcing, process redesigning, technology excellence, infrastructure development is the key successful turnaround production strategy.
7. The study focuses that corporate governance and corporate social responsibility, broader value systems, social concern and corporate restructuring are other major successful turnaround strategies in this private sector organisation.

Conclusion

From the above analysis and references to various reports we find that the prospects of the company have significantly improved from 2005 onwards and with zero bad debts from 2006 onwards indicating a profitable position of the company. The global economic slow-down and crisis giving way to the recession is a challenge faced by the developed and the developing nations. Companies are holding on to the existing client base and increasing their value proposition to existing clients. For ASM this is an opportunity to provide greater value to existing clients and add new clients with its global delivery model. ASM looks to garner more work from the US and other markets by leveraging on the offshore work delivery and thereby reducing the Total Cost of Ownership and Operating Costs to the clients. Bangalore-based ASM Technologies, dealing in enterprise applications and enterprise product development for manufacturing, retail, oil and gas verticals, has reported net profit of Rs 9.88 crores for quarter-ended March 31, 2014, Revenue from operations stood at Rs 104.41 crores and PBDIT stood at Rs.17.47 crores for the financial year ended 31st March 2014.

Road Ahead

Encouraged by the progress achieved during the last six years of restructuring leading to the turnaround, the senior management team at ASM technologies deliberated about the road ahead. Emerging opportunities were indeed enormous. India was increasingly being seen in a very positive light by the world. Indian software industry was setting global benchmarks in excellence. ASM Technologies was rearing to increase its software development presence overseas. The company had already committed to increase its domestic capacity multi-fold. A series of well-orchestrated acquisitions were already completed and more were on the anvil. There almost seemed to be no stopping of the growth engine of the company. At the same time, many fresh challenges emerged.

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