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ASAHI INDIA GLASS LIMITED: LEVERAGE, A DOUBLE-EDGED SWORD[1]

Asahi India Glass Limited (AIS), India's largest integrated glass solutions company, had successfully raised INR2.5 billion through a rights issue[2] of equity shares in August 2013. This long-awaited equity infusion helped marginally to deleverage the capital structure of the company and reduce its interest burden; however, given the company's high debt-to-equity ratio, even these changes were not sufficient to fully ease the pressure. The company had always pursued a highly leveraged capital structure to maximize its return on equity; however, the slowdown in the business segments in which it operated made it difficult to sustain the interest burden.

The equity infusion through the rights issue had provided breathing space to AIS, but its situation was far from comfortable. AIS management realized that the company would need to maintain its focus on reducing its interest burden by improving working capital management and by substituting high-cost borrowings with low-cost borrowings and through continuous and sustained cost reduction in all its operations. However, the company also needed to explore opportunities for further infusions of capital. Doing so would not be an easy task, given the losses it had suffered in recent years — but it needed to be done.

THE BEGINNING

AIS was set up as a joint venture in 1984 by three parties: the Labroo family; Asahi Glass Company Limited, Japan (AGC); and Maruti Suzuki Limited (Maruti). Over a period of time, it emerged as the largest integrated glass manufacturer in India, with significant market share presence in the auto glass, architectural glass and consumer glass segments.[3]

Sanjay Labroo, a graduate in finance and management from the Wharton School of Business, Pennsylvania, had been the managing director and chief executive officer of AIS since 1990. The company's other co-promoter, AGC, was one of the world's leading glass producers. The company's

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[1] *This case has been written on the basis of published sources only. Consequently, the interpretation and perspectives presented in this case are not necessarily those of Asahi India Glass Limited or any of its employees.*
[2] *In a rights issue, new shares are offered not to the public, but only to existing shareholders in proportion to their existing shareholding.*
[3] *Asahi India Glass Limited, www.aisglass.com/aboutus/company-profile, accessed September 11, 2015.*

operations comprised flat glass, automotive glass, display glass, chemicals, electronics and energy. AGC had evolved as a top multinational glass manufacturer with a leading share of the global market in most of the key glass products.[4] Maruti, a subsidiary of Suzuki Motor Corporation, Japan, was India's largest car manufacturer. The company had manufactured and sold more than one million cars annually in India since 2009/10[5] and enjoyed a market share of more than 40 per cent in the Indian passenger car segment.

AIS made its initial public offering (IPO) of 40 per cent of the company's total equity. The promoters' holding was shared by the Labroo family (24 per cent), Asahi Glass Company (24 per cent) and Maruti Suzuki Limited (12 per cent). The shares of the company were listed on India's leading stock exchanges, the National Stock Exchange and the Bombay Stock Exchange Limited. The company made its first profit in the accounting year[6] 1990 and declared its first dividend the same year. It maintained an uninterrupted track record of profits and dividends for the next 17 years.

THE GROWTH PHASE: 1991–2008

The Indian economy had a watershed year in 1991. India had made a seismic shift from a closed economy to an open economy, according a larger role to market forces and the private sector. Describing India's path to economic reform, Montek Singh Ahluwalia, former deputy chairman of the Planning Commission, wrote:

> India was a latecomer to economic reforms, embarking on the process in earnest only in 1991, in the wake of an exceptionally severe balance of payments crisis. The need for a policy shift had become evident much earlier, as many countries in East Asia achieved high growth and poverty reduction through policies which emphasized greater export orientation and encouragement of the private sector. India took some steps in this direction in the 1980s, but it was not until 1991 that the government signaled a systemic shift to a more open economy with greater reliance upon market forces, a larger role for the private sector including foreign investment, and a restructuring of the role of government.[7]

Liberalization, privatization and globalization became the buzzwords in the new economic environment.

The Indian automotive industry was also delicensed and attracted substantial private investment, which gave rise to many new joint ventures for car manufacturing with investments from major automotive players such as General Motors, Toyota, Honda and Ford. AIS, which was already well established by this time, was able to diversify its customer base by becoming an original equipment manufacturer (OEM) for new customers such as Toyota, Tata Motors, Mahindra and Mahindra, and General Motors. AIS garnered more than 60 per cent of the market share in the OEM passenger car segment in India. It catered both to the original equipment component market and the after-sales service segment.

In 2001, AIS diversified from automotive glass into the float glass[8] business, taking over the manufacturing facilities of Floatglass India Limited and subsequently merging the company with AIS in 2003. (By 2013, the float glass business would contribute approximately 40 per cent of AIS's total revenue.) Next, the

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[4] Asahi Glass Company, Asahi Glass Company Overview, September 2015, www.agc.com/english/ir/pdf/c_overview.pdf, pp. 2–4, accessed September 11, 2015.
[5] Maruti Suzuki India Limited, www.marutisuzuki.com/ourfinancials.aspx, accessed September 11, 2015.
[6] The company prepared its accounts for the 12-month period starting on April 1 and ending on March 31 of the following year.
[7] Montek Singh Ahluwalia, "Economic Reforms in India Since 1991: Has Gradualism Worked?," Journal of Economic Perspectives, Summer 2002, 16(3), pp. 67–88.
[8] Float glass is primarily used in the construction of architectural exteriors and interiors, shop windows, showcases, mirrors, furniture and tabletops.

company made its foray into the consumer glass segment, offering automotive and architectural glass solutions directly to end users. The company also identified the solar glass segment for future growth.

AIS's 2004/05 annual report stated that "AIS has been guided by the financial goal of generating free cash flows from operations to earn a rate of return on capital employed (ROCE) of 40 per cent and to pay out 25 per cent of profits as dividends."[9] AIS had achieved robust growth from the time of its inception until 2006. Consistent growth was shown by all the key performance indicators — sales, EBITDA (earnings before interest, tax, depreciation and amortization) and profit after tax (PAT). Due to its small equity base, the company was able to declare healthy earnings per share and return on equity up to 2006.

Driven by an all-pervasive sense of optimism, AIS focused on expansion — both in size and capacity — by undertaking massive capital expenditures. The net fixed assets of the company grew by more than four times between 2004 and 2008 and exceeded INR3 billion. By 2008, AIS's turnover had grown from a modest INR115 million in its first year of operations to more than INR10 billion, with EBITDA of more than INR2 billion.

THE SETBACK

The year 2009 was a dampener not only for AIS but for the global economy as a whole. The sub-prime crisis in the United States and its subsequent impact on the global economy resulted in the stagnation of demand for AIS's products, which were mostly used in the construction and automobile industries — the two worst hit sectors of the Indian economy. The lack of liquidity and resultant credit squeeze also had a significant adverse impact. The slowdown in demand, increase in input costs and steep fall in the rupee led to the first net loss since the company's inception, despite healthy revenue growth. Increased interest costs also contributed to AIS's financial woes.

In response to this dire scenario, AIS embarked in 2010 on a new initiative, called "Look within: look beyond," whereby the company focused on improving internal processes and efficiencies in the areas of productivity, inventory management, receivables management, product mix and cash flow. The initiative had two broad objectives. "Look within" aimed to maximize return on capital employed by enhancing productivity, saving costs and optimizing working capital management across all processes and activities. "Look beyond" involved both scanning the environment to meet stakeholders' expectations and identifying opportunities to create products and services required by its customers.

Sales continued to grow in the subsequent years, although profitability remained weak. Not only did AIS's operating margin decline but higher depreciation and interest costs also led to a steep drop in profitability and to eventual losses. Although AIS reported its first loss in 2009, the signs had already begun to appear much earlier. Its PAT declined by more than 51 per cent and 68 per cent in 2007 and 2008, respectively, compared with the previous years. AIS was able to declare a marginal profit for 2010, thanks largely to other income and a deferred tax adjustment. After showing a marginal recovery during 2011, the company plunged into deeper losses in 2012 and 2013, substantially eroding its shareholders' funds, despite strong revenue growth (see Exhibits 1 to 3).

During 2012, the company achieved average capacity utilization of 86 per cent for its float glass and reflective glass business, 66 per cent for the toughened glass business and 76 per cent for the laminated glass business. However the capacity utilizations in respect of the architectural glass segment and the mirror segment were 17 per cent and 16 per cent respectively.[10]

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[9] *Asahi India Glass Limited 2004/05 Annual Report, p. 15.*
[10] *Securities and Exchange Board of India, Letter of Offer by Asahi India Limited, August 10, 2013, www.sebi.gov.in/cms/sebi_data/attachdocs/1376463351771.pdf, p. 119, accessed April 1, 2014.*

The company took several measures to reduce costs and mitigate operating risks in procuring the key inputs for float glass manufacturing — soda ash, sand, power and fuel. For example, AIS switched from high-cost furnace oil to lower-cost natural gas. This change not only reduced costs but also mitigated the risk of volatility in crude oil prices. With respect to another key input, sand, where transportation costs constituted a major portion of the cost, AIS acquired mining leases to indigenize its sand procurement. The company was thus able to procure sand closer to its production facilities, resulting in substantial savings. These measures helped to some extent, but the company continued to post losses.

The financial performance of the company was also reflected in the company's share price, which had reached a high of INR212 in 2006, but gradually declined to below INR50 by 2013, in line with its dwindling profitability (see Exhibit 4).

CAPITAL STRUCTURE OF THE COMPANY

The company invested aggressively in capacity expansion to position itself as the dominant player in the industry. The total funds deployed (shareholders' funds plus borrowed funds) grew 3.61 times from INR4,140 million in 2004 to INR14,969 million by 2013. Since the company had made no equity infusions after its IPO in 1987, its entire capital expenditure was funded from retained earnings and borrowings. The Indian primary market for equity remained active during this period; however, AIS did not tap this market and continued to rely on internal accruals and borrowed funds to fund its expansion (see Exhibit 5).

In 1997, the share capital of the company consisted of 1.85 million equity shares, each with a face value of INR10 (aggregating to INR18.5 million), of which 40 per cent was raised through AIS's initial public offering in 1987. Its share capital increased to INR74 million through two successive bonus issues[11] in the ratio of 1:1 in 1998 and 2002. The company's share capital increased further in 2002 to INR80 million, following its merger with Floatglass India Limited. The same year, the face value of its shares fell to INR1 each through a 10 for 1 split of shares. AIS made its third bonus issue in the ratio of 1:1 in 2005. Almost 85 per cent of the shares outstanding had been issued as bonus shares through the capitalization of reserves. The company had ploughed back a large part of its profits over the years into reserves and surplus, which amounted to INR2,785 million as on March 31, 2008. However, due to losses suffered during the subsequent years, its reserves and surplus stood at a mere INR388 million as on March 31, 2013. For the shareholding pattern of the company as on June 30, 2013 see Exhibit 6.

From the very beginning, the company had maintained an aggressive debt-equity ratio to fund its capital expenditures. Its very first project was funded with a debt-equity ratio of 5.5:1. The debt level of the company increased significantly from 2004 onward, resulting in a substantial increase in interest costs. Interest was a tax-deductible expense under the Indian Income Tax Act, 1961. With AIS's corporate tax rate of more than 30 per cent, the after-tax cost of debt was much lower due to this tax shield. Further, as per the applicable Indian accounting standards, the interest on borrowed funds used to acquire or construct a long-term asset could be capitalized until the asset was ready for its intended use, rather than including it in the income statement of the relevant year. However, once the facilities were put into operation, the interest on borrowed funds was treated as revenue expenditure, thereby reducing profitability.

A large portion of the loans were secured with the company's assets as collateral. The lenders also imposed significant restrictive covenants on the company and required it to regularly share financial information (see Exhibit 7).

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[11] *Bonus shares (stock dividends) are issued to existing shareholders in proportion to their existing shareholding by capitalization of reserves without consideration.*

Many of the company's loans were in foreign currency (see Exhibit 8) including interest-free loans from AGC. The interest rate on foreign currency loans was usually lower than the interest rate on rupee loans. However, the depreciation of the rupee against foreign currencies led to foreign-exchange losses, raising the real cost of the foreign currency loans (see Exhibit 9). In its 2005/06 annual report, the company stated:

> Glass is a capital intensive business, and projects — especially for float glass — have a long gestation period. We are currently in this process, i.e., putting in the investments into projects to build capacities and capabilities with a focus on capturing and leveraging each element of the auto and architectural glass value chains. The existing debt level reflects the fact that these projects are in execution phase and have yet to add to our top and bottom lines. Although most of our projects will be commissioned in the last quarter of the current fiscal, they will effectively contribute from next fiscal (2007-08) onwards, resulting in improved cash flows. This will help in reducing the debt levels significantly and improve the structural ratios from 2007-08 onwards.[12]

The borrowings of the company increased further in 2008. The management justified the increase by saying:

> The increase in borrowings of AIS has been mainly short term borrowings on account of increased working capital requirement. There are no major capital expansion programs in 2008-09, hence, long term borrowings are not expected to increase. Routine capital expenditure programs shall be met from internal accruals. The major concern remains the volatility of the Indian rupee against the U.S. dollar. AIS has substantial foreign currency borrowings and if the Indian rupee continues to depreciate against the U.S. dollar, profitability of 2008-09 may be negatively impacted.[13]

The borrowing level of the company continued to increase in the subsequent years, resulting in a higher interest burden. AIS delayed the repayment of two loan installments of INR42 million each to the lending banks by three days and 25 days, respectively, and requested its bank to reschedule the repayment of INR200 million in 2009.[14] With increased losses and difficulties in debt servicing, AIS, in its 2008/09 annual report, took note of its high level of borrowings:

> The Company is fully cognizant of the fact that there is need to reduce the borrowings and thus the interest cost and has been objectively working towards it. On the operations side, AIS is making all efforts to manage its working capital, including optimizing its inventory and maximizing debtors' realizations so that working capital needs are reduced to the feasible minimum. AIS is in discussions with its lenders to restructure the tenor of some of the loans which would allow the Company to improve its cash flow without altering its overall loan obligations or interest cost. Some of these discussions are in advanced stages. AIS has also been successful in converting some of its short-term borrowings into longer tenors whereby again, operational cash flows would be positively impacted.[15]

The company was able to reduce its debt marginally in 2010. However, there was no major change in the financial leverage of the company. The management addressed this issue in its 2009/10 annual report:

> The overall quantum of debt still remains an area of concern for the Company; however, it must also be appreciated that a certain amount of debt funds will remain in the Company's books for it

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[12] *Asahi India Glass Limited 2005/06 Annual Report.*
[13] *Asahi India Glass Limited 2007/08 Annual Report, www.aisglass.com/sites/default/files/investor_relations/annual-report-2007-2008.pdf, p. 33, accessed September 11, 2015.*
[14] *Asahi India Glass Limited 2008/09 Annual Report, www.aisglass.com/sites/default/files/investor_relations/annual-report-2008-2009.pdf, p. 54, accessed September 11, 2015.*
[15] *Ibid p. 31*

> to pursue growth opportunities. The Company is taking all possible measures both to optimize the debt quantum as well as reduce the average cost of debt. A significant portion of the Company's debt is denominated in foreign currency. With the Rupee having stabilized and, indeed, strengthened, the Company expects to be able to address its debt obligations better. AIS's debt will start tapering down from 2012 onwards, and with the interest and loan installment burdens reducing, both profitability and cash flow are expected to improve significantly. With growth being projected through 2010-11 and beyond, AIS's financials are expected to look bright in the near future.[16]

AIS managed to reduce its long-term borrowings by INR1,195 million between 2011 and 2013, but during the same period, its short-term borrowings increased by INR1,905 million.

The uncertain environment, dwindling profitability and increased level of borrowings also reflected on the company's credit rating. The credit rating for its long-term borrowings declined from CARE BBB− in 2012 to CARE BB in 2013. Likewise, the credit rating for its short-term borrowings was downgraded from CARE A3 to CARE A4 in the same period (see Exhibit 10). In justifying the downgrade, CARE Rating, the second largest rating agency in India observed:

> The ratings revision takes into account lower-than-expected performance of AIS with continuing net losses resulting in erosion of net worth coupled with delay in executing capital infusion plans. The ratings continue to be constrained by weak solvency position with increasing reliance on debt and higher refinancing risks, susceptibility of profitability to volatility in crude oil prices and foreign exchange fluctuations and high working capital intensity of operations. Furthermore, the capital structure of AIS is highly skewed towards debt with overall gearing of 16.01x as on March 31, 2012 on the account of debt-funded expansions in the past and reliance on short-term debt to meet cash flow mismatch. Moreover, erosion of net worth along with the increase in debt further affected the overall gearing and coverage indicators as on September 30, 2012. AIS was contemplating capital infusion from the promoters, however the process has been delayed when compared with the initial timeline and the company's ability to execute the same remains to be seen.[17]

Any further downgrade would not only result in higher borrowing costs for both existing and future borrowings but would also increase the difficulty of accessing additional borrowed funds.[18]

RIGHTS ISSUE

To reduce its debt level, AIS made the much-awaited equity infusion in 2013. AIS had two options for deleveraging. One was to issue the promoters preference shares, which had a fixed rate of dividend and were redeemable. The dividend was paid only out of distributable profits. In the event that profits were insufficient in any year to pay the preference dividend, the dividend could be carried forward to future years. The dividend on preference shares was not a tax-deductible expense and did not enjoy a tax shield. The other option was a public issue of equity shares. For a company that had posted losses in the two previous years, eliciting a sufficient response for the public issue, and that too at a fair valuation, would have been difficult. Its flotation cost also would have been high.

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[16] *Asahi India Glass Limited 2009/10 Annual Report, www.aisglass.com/sites/default/files/investor_relations/annual-report-2009-2010.pdf, p. 15, accessed September 11, 2015.*
[17] *CARE Ratings, "Brief Rationale," July 14, 2014, www.careratings.com/upload/CompanyFiles/PR/ASAHI%20INDIA%20 GLASS%20LTD-07-14-2014.pdf, accessed September 11, 2015.*
[18] *Letter of Offer by Asahi India Limited, August 10, 2013, op. cit.*

The company finally made the rights issue of 83.16 million equity shares with a face value INR1 each at the issue price of INR30 per share, aggregating to INR2,495 million. The proceeds of the issue were to be used primarily for the repayment of certain loan facilities and for payments to overdue trade creditors. The new shares were offered to existing shareholders at a ratio of 13 equity shares for every 25 equity shares held by shareholders on the record date. As the promoters fully subscribed to the shares offered to them, their shareholding post-issue remained unaffected. Since the shares were issued to existing shareholders, the success of the issue depended on the support of all the shareholders, particularly the promoters, who held more than 50 per cent of the share capital. The issuance cost of a rights issue was estimated to be lower than a public issue. AIS successfully completed the rights issue in 2013.

FUTURE OUTLOOK

Notwithstanding the recent setbacks, the future looked bright for AIS. A November 2013 article in *The Economic Times* quoted D. S. Rawat, the secretary general of the Associated Chambers of Commerce and Industry of India (ASSOCHAM), as saying, "Indian glass market is estimated to increase at a compound annual growth rate of 15 per cent over the next three years. The glass consumption growth is expected in construction (10 to 12 per cent), automotive (20 per cent), consumer goods (15 to 20 per cent) and pharmaceuticals (15 to 18 per cent) sectors."[19] ASSOCHAM predicted that the size of the glass industry would increase from INR225 billion in 2014 to INR340 billion by 2015.

An increase in the demand for float glass in the future was expected to be driven by the growth of the automobile, construction and realty sectors, and by greater awareness about the uses of float glass. According to an industry report published in 2010:

> The float glass market of India has huge growth potential. It is seen that general awareness about glass as a building material is increasing. The construction and automobile sectors which are the largest users of float glass are expected to grow with a CAGR [compound annual growth rate] of 20 per cent and 15 per cent respectively. Once the legislation for the usage of right type of glass for windows etc. is legislated by the government, the usage of float glass will get a further boost. Low per capita consumption of glass in India, which is 0.88 kg only, compared with other developing countries such as China 12 kgs, Thailand 9 kgs, Malaysia 13 kgs, Indonesia 4 kgs, is a clear indicator of huge potential for growth of this industry.[20]

The company, having surplus capacity, was in a position to grow sales without any additional capital expenditure. In the previous 10 years, its revenue had grown at a compound annual growth rate of 16 per cent. For 2013, the manufacturing, selling, marketing and administrative costs were 91 per cent of turnover. The operating cycle of the company was 159 days.[21] The company would be helped in generating additional cash flows by sales growth of 16 per cent, a 3 per cent reduction in expenses and a 10-day reduction in the operating cycle; however, an infusion of additional capital was also required.

The company now needed to consider the best way forward — how to finance the company at the lowest cost and risk in this rapidly growing market.

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[19] "Glass Industry to Touch INR 340 Billion by 2015: Assocham," PTI, The Economic Times, November 26, 2013, http://articles.economictimes.indiatimes.com/2013-11-26/news/44486923_1_piramal-glass-glass-industry-sezal-glass, accessed April 17, 2014.

[20] "The Glass Industry in India: An Analysis," Kanch, July-September 2010, 3(4): pp, 21–23. Kanch is the quarterly journal of the All India Glass Manufacturers Federation.

[21] The operating cycle is calculated as trade receivables plus inventories divided by average daily turnover. For 2013, it is calculated as (INR3,646 million + INR4,712 million) ÷ (INR19,134 million ÷ 365).

EXHIBIT 1: FINANCIAL PERFORMANCE OF ASAHI INDIA GLASS LIMITED, 2004–2013
(For the Year Ended March 31 in INR millions)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Operating Revenue	4,898	5,887	5,877	7,618	9,935	12,182	12,627	15,182	16,457	19,134
Other Revenue	149	74	36	227	601	115	339	167	120	108
Total Revenue	5,047	5,961	5,913	7,845	10,536	12,297	12,966	15,349	16,577	19,242
Manufacturing, Selling, Marketing and Administrative Expenses	3,739	4,673	4,826	6,205	8,487	10,877	10,622	12,624	14,706	17,460
EBDIT	1,308	1,288	1,087	1,640	2,049	1,420	2,344	2,725	1,871	1,782
Depreciation	501	403	67	653	1,005	1,135	1,245	1,184	1,265	1,486
EBIT	807	885	1,020	987	1,044	285	1,099	1,541	606	296
Interest	24	32	108	355	848	1,243	1,278	1,278	1,474	1,692
Profit Before Tax	783	853	912	632	196	(958)	(179)	263	(868)	(1,396)
Tax	60	67	49	209	59	(556)	(282)	108	(281)	(478)
Profit After Tax	723	786	863	423	137	(402)	103	155	(587)	(918)

Note: EBDIT = earnings before depreciation, interest and tax; EBIT = earnings before interest and tax
Source: Author's calculations based on Asahi India Glass Limited annual reports for the years 2004/05 to 2012/13.

EXHIBIT 2: BALANCE SHEETS OF ASAHI INDIA GLASS LIMITED, 2004–2013
(As of March 31 in INR millions)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Equity Share Capital	80	80	160	160	160	160	160	160	160	160
Preference Share Capital	139	60	60	60	–	–	–	–	–	–
Reserves & Surplus	1,217	1,673	2,349	2,651	2,785	1,736	1,885	2,024	1,319	388
Advance against Rights Issue										500
Shareholders' Funds	1,436	1,813	2,569	2,871	2,945	1,896	2,045	2,184	1,479	1,048
Borrowed Funds	2,704	4,451	8,667	12,397	13,914	16,173	14,706	15,349	13,564	13,921
Total Funds Deployed	4,140	6,264	11,236	15,268	16,859	18,069	16,751	17,533	15,043	14,969
Deferred Tax Liabilities			39	239	285					
Other Liabilities & Provisions	1,011	1,094	1,335	2,265	2,032	2,812	2,199	2,880	7,506	8,415
Total Equity and Liabilities	**5,151**	**7,358**	**12,610**	**17,772**	**19,176**	**20,881**	**18,950**	**20,413**	**22,549**	**23,384**
Fixed Assets	3,042	4,805	9,718	13,030	12,954	13,931	12,271	12,237	12,801	12,136
Investments	27	58	64	59	59	64	70	84	157	163
Deferred Tax Assets						241	270	161	442	920
Inventories	1,080	1,168	1,497	2,415	3,631	3,504	3,192	3,800	4,754	4,712
Trade Receivables	619	745	315	704	1,080	1,761	1,807	2,389	3,123	3,646
Cash and Cash Equivalents	121	95	81	240	164	169	122	217	166	603
Loans and Advances	215	411	833	1,200	1,146	1,080	1,082	1,370	1,103	1,195
Other Assets	47	76	102	124	142	131	136	155	3	9
Total Assets	**5,151**	**7,358**	**12,610**	**17,772**	**19,176**	**20,881**	**18,950**	**20,413**	**22,549**	**23,384**

Source: Author's calculation based on Asahi India Glass Limited annual reports for the years 2004/05 to 2012/13.

EXHIBIT 3: FINANCIAL INDICATORS FOR ASAHI INDIA GLASS LIMITED AND TWO INDIAN COMPETITORS FOR THE YEAR ENDED MARCH 31, 2013
(in INR millions)

	Piramal Glass	Hindustan National Glass	Asahi India Glass Limited
Share Capital	809	175	160
Reserves and Surplus	3,985	9,684	388
Share Application Money	0	146	500
Shareholders' Funds	4,794	10,004	1,048
Borrowed Funds	7,662	23,984	13,921
Inventories	1,918	4,982	4,712
Trade Receivables	3,607	4,896	3,646
Total Revenue	10,376	18,323	19,242
Profit After Tax	48	–1,718	–918
Book Value Per Share (INR)	59.25	112.87	34.25
Market Price Per Share (INR)	76.45	197.45	48
Days Sales Inventories (DSI)	67	99	89
Days Sales Outstanding (DSO)	127	98	69
Operating Cycle (Days)	194	197	159

Source: Author's calculation based on the annual reports of the respective companies.

EXHIBIT 4: YEARLY HIGH AND LOW SHARE PRICES OF ASAHI INDIA GLASS LIMITED ON THE BOMBAY STOCK EXCHANGE, MUMBAI, 2004/05 TO 2012/13

Year	High (INR)	Low (INR)
2004/05	190.00	80.65
2005/06	211.90	69.25
2006/07	152.00	70.00
2007/08	137.40	60.10
2008/09	68.90	30.05
2009/10	79.25	36.05
2010/11	123.70	59.35
2011/12	108.30	48.50
2012/13	74.40	46.00

Source: Asahi India Glass Limited annual reports for the years 2004/05 to 2012/13.

EXHIBIT 5: NUMBER OF ISSUES AND EQUITY RAISED BY INDIAN COMPANIES, 2004/05 TO 2012/13

Year	Number of Issues	Amount Raised (in INR billions)
2004/05	55	24,388
2005/06	138	27,372
2006/07	121	32,901
2007/08	120	79,739
2008/09	45	14,272
2009/10	72	54,875
2010/11	80	57,667
2011/12	51	12,857
2012/13	49	15,473

Source: Securities and Exchange Board of India, Handbook of Statistics on Indian Securities Market 2013, www.sebi.gov.in/cms/sebi_data/attachdocs/1404362427338.pdf, p. 18, accessed September 23, 2014.

EXHIBIT 6: ASAHI INDIA GLASS LIMITED'S SHAREHOLDING PATTERN AS ON JUNE 30, 2013

Category	% Holding
Promoters' Holdings	
Labroo Family & Relatives	21.84
Maruti Suzuki Limited	11.11
Foreign Promoters	22.21
Non Promoters' Holdings	
Institutional Investors	0.28
Others	44.56

Source: Securities and Exchange Board of India, Letter of Offer by Asahi India Limited, August 10 2013, www.sebi.gov.in/cms/sebi_data/attachdocs/1376463351771.pdf, p. 74, accessed April 1, 2014.

EXHIBIT 7: NEGATIVE COVENANTS IMPOSED ON ASAHI INDIA GLASS LIMITED BY ITS LENDERS (Excerpted from Asahi India Glass Limited's Letter of Offer)

1. The Company cannot without approval of the lender(s), *inter alia*, undertake the following:
    a. Permit change in its constitution or management, including change in its Memorandum and Articles of Association, or capital structure, which may have an adverse impact on its repayment capacity;
    b. Create any mortgage, charge, lien or other encumbrance in any form whatsoever of any of its properties and assets constituting security for any loan, except a pari-passu mortgage/charge in favour of bank/financing arrangements;
    c. Undertake or permit any reorganization, amalgamation, reconstruction, reconstitution, takeover or any other scheme of compromise or arrangement;
    d. Implement a new scheme of expansion or take up an allied line of business or manufacture;
    e. Declare or pay any dividend or make any other distribution of profits after deduction of taxes, except where installments of principal and interest payable to the bank are being paid regularly and there are no irregularities;
    f. Invest any funds by way of deposits or loans or in share capital of any other concern (including subsidiaries) so long as money is due to the bank, other than security deposits in the usual course of business, or required for the business;
    g. Permit any change in the ownership or control whereby effective beneficial ownership or control will change;
    h. Effect any material change in the management of the business;
    i. Repay unsecured loans from promoters, subordinating them to lender(s) loans, so long as monies are due and outstanding
    j. Assume, guarantee, endorse or in any manner become directly or contingently liable for or in connection with the obligation of any person, firm, company or corporation except for transactions in the ordinary course of business; and allow transfer or disposal of shareholding of any of the promoters in our equity/quasi equity capital or permit withdrawal of any of our subordinated loans or deposits, obtained at any time, from our directors and their friends and associates to finance a part of the working capital requirements or make prepayment of any long term debt.
2. Upon occurrence of financial default under the terms of the loan agreement, the lender(s) may appoint a nominee director to the board of directors of the Company. Further, such director will not be required to hold any qualification and will not be liable to retire by rotation; and
3. The Company is required to maintain insurance, to the extent of market value of security, on charged assets with financially sound and reputable insurers, approved by the lender(s), and also name the lender(s) as additional assured and sole loss payee in each insurance policy.

Source: Securities and Exchange Board of India, Letter of Offer of Asahi India Glass Limited, August 10, 2013, www.sebi.gov.in/cms/sebi_data/attachdocs/1376463351771.pdf, p. 203, accessed April 1, 2014.

EXHIBIT 8: COMPOSITION OF ASAHI INDIA GLASS LIMITED'S BORROWED FUNDS, 2011–2013
(As of March 31 in INR millions)

	2011	2012	2013
Long-term Borrowings			
Secured Term Loans from Banks			
• Foreign Currency	3,048	3,122	2,388
• Rupee	1,864	1,472	891
Secured Term Loans from Others			
• Foreign Currency	100	100	76
• Rupee	170	221	158
Unsecured Loan from Related Party			
• Foreign Currency	2,129	2,429	2,591
Long-term Maturities of Lease Obligations			
• Secured	0	1	
• Unsecured	0	14	12
	7,311	**7,359**	**6,116**
Short-term Borrowings			
Secured Loans			
• From Banks	4,677	4,461	5,066
• From Others	1,223	1,745	1,744
Unsecured Loans			
• From Banks			505
• From Others			490
	5,900	**6,206**	**7,805**
Total	**13,211**	**13,565**	**13,921**

Source: Author's calculations based on Asahi India Glass Limited annual reports for the years 2010/11 to 2012/13.

EXHIBIT 9: MOVEMENT OF THE INDIAN RUPEE AGAINST SELECTED OTHER CURRENCIES, 2003/04 TO 2012/13

	U.S. Dollar	Pound	Euro	Yen*
2012/13	54.3893	82.3209	69.5438	57.7600
2011/12	51.1600	81.7975	68.3550	62.4250
2010/11	44.6450	71.9163	63.2350	54.0175
2009/10	45.1350	68.0188	60.5913	48.4338
2008/09	50.9450	72.8575	67.4713	51.8900
2007/08	39.9850	79.5138	63.0963	40.0650
2006/07	43.5950	85.5938	58.1513	37.0338
2005/06	44.6050	77.7963	54.1875	38.0188
2004/05	43.7550	82.1125	56.5863	40.8075
2003/04	43.4450	79.6813	53.1725	41.6725

**Rupees per unit of foreign currency except yen. The data on exchange rate for yen is in rupees per 100 yen.*

Source: Reserve Bank of India, Database on Indian Economy, http://dbie.rbi.org.in/DBIE/dbie.rbi?site=publications#!2, accessed November 11, 2014.

EXHIBIT 10: DETAILS OF CREDIT RATING ASSIGNED TO ASAHI INDIA GLASS LIMITED, 2010/11 TO 2012/13

Period	Date of Receipt of Letter	Rating: Long Term	Interpretation	Rating: Short Term	Interpretation
2010/11	October 20, 2010	CARE BBB−	Instruments with this rating are considered to have a moderate degree of safety regarding timely servicing of financial obligations. Such instruments carry moderate credit risk.	PR3	Instruments with this rating are considered to have a moderate degree of safety regarding timely payment of financial obligations. Such instruments carry higher credit risk as compared to instruments rated in the two higher categories.
2011/12	September 21, 2011	CARE BBB−		CARE A3	
2012/13	August 14, 2012	CARE BB+	Instruments with this rating are considered to have a moderate risk of default regarding timely servicing of financial obligations.	CARE A4+	Instruments with this rating are considered to have a minimal degree of safety regarding timely payment of financial obligations. Such instruments carry very high credit risk and are susceptible to default.
2012/13	January 23, 2013	CARE BB		CARE A4	

Note: Modifiers {"+" (plus) / "−"(minus)} can be used with the rating symbols for the categories CARE AA to CARE C. The modifiers reflect the comparative standing within the category.

Source: CARE Ratings, "Ratings Symbols and Definitions," www.careratings.com/resources/rating-resources.aspx, accessed April 21, 2014.