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ABSTRACT

The corporate sector in India has witnessed a substantial growth of Mergers and Acquisitions (M&As) during the 1990s, facilitated by the policy-shift under Structural Adjustment Program. During the first wave (i.e., 1990-95), the Indian corporate houses seem to have been bracing up to face foreign competition while the second wave (i.e., 1995-2000) experienced a large presence of multinational firms. M&As also determined, to a large extent, the nature of foreign investment in the country during this period. A large share of these M&As were between firms belonging to the same business groups with a view to increase their respective controlling blocs in order to guard against a Takeover. However, the study could not find any evidence of efficiency-related factors influencing M&As. It is rather growth of the firm in terms of their asset-size and market share that have been noticed. There are indications that one of the main motives could have been financial, that is, to increase the equity size, which can be further used to borrow resources for modernization. It is indeed a matter of grave concern that with the end of licensing policies, not even a reliable list of MNEs in India could be located from a publicly available source, not to speak of reliable information about their operations in the country. The behaviour pattern of Acquiring firms alerts us to the importance of working towards a desirable and workable competition policy and an appropriate corporate governance regime for the country. This is to be done keeping in view the need to develop productive capacities and generate employment within the country, providing for adequate 'promotional measures' and safeguards to the small and medium entrepreneurs.

Key words: Mergers and Acquistions, Competition policy, Corporate governance.

JEL Classification: D43, G34, L5

Introduction

Mergers and Acquisitions (M&As) have been a prominent trend in the advanced capitalist countries since the late nineteenth century. But only in recent times has it become a regular phenomenon in 'developing' countries. The striking feature of the present wave of M&As at the global level is that it includes many cross-border (CB) deals and is propelled by a different set of forces. The total number of M&As worldwide increased almost three-fold during 1990 to 1999. The total value of M&As worldwide has increased more than five-fold during the corresponding period. Cross-Border M&As represented 30 per cent in deal-value and 28 per cent in number of M&A transactions worldwide between 1990-99. During 1999, out of the total 6079 CB M&A deals the world over, nearly half of the total value was accounted for by the US and UK together (UNCTAD 2000). The value of CB M&As in relation to total FDI inflows globally rose from 49 per cent in 1996 to 58 per cent in 1997 and further increased to as much as 83 per cent in 1999 (UNCTAD 2000: 14).

CB M&As accounted for over 60 per cent of total FDI inflows to the five crisis-hit countries (i.e, Indonesia, Malaysia, Philippines, Republic of Korea and Thailand) in 1998 and over 80 per cent in 1999, compared to less than 20 per cent before the crisis (Zhan & Ozawa 2001: 16). However the total values of CB M&As in the five crisis-hit countries as a whole during 1998-99 ($11 billion) was lower than that in Argentina (about $30 billion) and lower (about $40 billion) than that in Brazil. By contrast, in the case of China, most of the FDI before China's entry into WTO, had come in the form of joint ventures. US and UK

companies were the major purchasers in East Asia during the financial crisis, replacing firms from Japan and Germany that had been the top two purchasers before the crisis. Industries that received the largest share of M&As in the five crisis-affected countries were financial and business services (Zhan & Ozawa 2001). The global environment that emerged from the new policy regime, i.e. privatisation, liberalisation in trade, finance and investment, as well as technological changes have created a situation that facilitates CB Mergers (UNCTAD 2000).

The Indian evidence suggests that the new economic environment of the nineties has facilitated M&As. Mergers of firms belonging to the same business groups operating in similar product-lines appeared to dominate the Merger-wave in India. The participation of foreign-controlled firms in the M&As process has increased significantly during the second half of the nineties. According to Saha (2001), around 37.7 per cent of the total Foreign Direct Investment (FDI) made by multinational corporations (MNCs) during 1991-1998 was financed through cross-border M&As activity, either through Acquisition of substantial equity stakes in existing ventures or through buy-out of real assets through asset-sales.

An attempt has been made in the present paper to understand the motives and implications of the Merger-wave in the second half of the nineties. The analysis has been conducted in a comparative perspective by classifying the Acquiring firms into two categories in terms of ownership, namely, Indian owned and foreign owned. The paper is divided into seven sections: i) Theories on motives and implications of M&As, ii) Trends of M&As: Indian Experience iii) Policy-shift regarding M&As during the 1990s, iv) Sample, data and methodology, v) Impact of M&As on the performance of Acquiring firms, vi) Source of financing and some plausible issues for corporate governance and vii) Conclusion.

Section I: Theories on Motives and Implications of M&As

The theories on M&As extend over the vast terrains of industrial organisation, financial economic and international business studies. Thus it has been pointed out that the trends of M&As can be theoretically traced back to particular motives for M&As emphasized by industrial organization theories (i.e., market power and defensive reactions), the financial economic literature (i.e., managerial ego) and international business research (i.e., access to markets or technologies) (Cantwell and Santangelo 2002). We may classify these theories into four categories, namely, i) as efficiency enhancing measures, ii) as concentration and monopoly-enhancing, iii) driven by macro-economic changes and iv) driven by financial motives.

i) Mergers as efficiency enhancing measures: Mergers can lead to increased efficiencies. Such efficiencies and cost savings can flow from economies of scale and scope possible in the larger post-Merger operations, greater control over key inputs, product rationalisation, combining marketing, advertisement and distribution, or from cutting down overlapping Research and Development (Ansoff and Weston 1962). International M&As may be regarded as a new cross-border strategy that aims at increasing corporate global competitiveness by pursuing related diversification and by integrating affiliates into a global network (Cantwell & Santangelo 2002). Schemalensee (1987) argued that the cost-reducing effect of a particular proposed Merger might probably outweigh its collusion-enhancing effects. Sanjaya Lall rightly questions whether the positive economic effects that cross-border Acquisitions can have outweigh the concerns they arouse (Lall, 2002).

ii) Mergers as enhancing concentration and monopoly: The immediate effect of a Merger is to increase the degree of concentration as it reduces the number of firms. Another effect of Mergers on

competition is on the generation of barriers to entry. Artificial barriers can be raised or strengthened, if the Merger results in a strengthening of product differentiation through legal rights in designs, patents and know-how. Williamson (1968) argued that a small efficiency gain would generally be offset by a large increase in market power, which creates a situation that sets prices above the competitive levels. Further, the motives behind transnational or cross-border Acquisitions differ from those, which drive purely domestic Acquisitions. An Acquiring firm might decide to go in for international Merger in order to take advantage of cheap raw materials and labour, to capture profits from exchange rates, or to invest its surplus cash (Weston *et al.* 1996). The entry and subsequent activities of Multinational firms affect the structure of markets for goods and services in host countries in several different ways. Numerous studies for individual 'developing' countries as well as 'developed' economies indicate a positive association between TNC activities and the concentration of producers in host country industries (UNCTAD 1997: 137).

Some qualifications and exceptions have also been pointed out about this trend. 'Greenfield investment' in new production facilities adds to the number of firms engaged in the production of a good or service and it might reduce or at least, leave unchanged the concentration of producers in an industry. In contrast, "FDI-entry through a Merger or Acquisition would increase the concentration of producers if a Merger or Take-over results in increased sales for the newly created foreign affiliates; or leave it unchanged, if its size is the same as that of the incumbent firm acquired"(UNCTAD 1997: 141). The actual impact of an Acquisition on competition depends upon the marketing strategies of TNCs, as well as on industry and country-specific circumstances (Dunning 1993). The risk that CB M&As may reduce competition tends to be greater in those industries in which shrinking demand and

excess capacity are important motivations for M&As and in countries in which competition policy does not exist or where its implementation is weak (Zhan & Ozawa 2001: 61). In sum, M&As as concentration enhancing and building oligopolistic market power is a rather familiar view in studies on Mergers internationally.

iii) Mergers as driven by macro-economic changes: M&As are undertaken to compensate for instabilities such as wide fluctuations in demand and product mix, excess capacities related to slow sales growth and declining profit margins and technological shocks (Post 1994; Weston *et al.* 1996). Firms may pursue M&As for the sole reason of growing in size as size more than profitability or relative efficiency is considered to be the effective barrier against Takeovers (Singh 1975; 1992). It is also argued that the development of an active market for corporate control may encourage managers to 'empire build', not only to increase their monopoly power but also to progressively shield themselves from Takeover by becoming larger (Singh 2003). What is referred to herein is the defensive tactics of firms in a 'developing' country like India. While there are firm-specific motives for undertaking CB M&As, there are also economic forces that have acted to encourage the CB M&As, such as the economic integration of the European Union (EU) and NAFTA represented by the creation of a common market (Caves 1991;UNCTAD 1997). Macro-economic changes become the context or provide opportunities for M&As. Mergers may also be resorted to as defensive measures in response to major policy-shifts.

iv) Mergers as driven by financial motives: Firms adopt M&As as a route to growth whenever alternative investment opportunities for financing corporate expansion in specific environments are less attractive. Availability of capital to finance Acquisitions and innovations in financial markets such as junk-bonds can also be among the reasons

for cross-border Mergers (Sudersanam 1995). The valuation differences of the share prices or economic disturbances lead to Acquisitions of firms that are low-valued from the viewpoint of outsiders (Gort 1969). Lower interest rates also lead to more Acquisitions, as Acquiring firms rely heavily on borrowed funds (Melicher et al 1983). It is also argued that the under-valuation of the dollar vis-a-vis pound and yen in the early eighties had resulted in some very substantial Acquisitions of assets in the United States by British and Japanese firms (Dunning 1993). The currency devaluations in the crisis-affected countries as well as falling property prices reduced the foreign-currency costs of acquiring fixed assets in those countries and it has provided a golden opportunity for TNCs to enter their local markets (Zhan & Ozawa, 2001). Our own earlier study (Beena 2001) clearly pointed out how financial motives had a crucial role in M&As during the first half of the decade of liberalisation. The study argued that among the motives for Mergers, in many cases, could have been the desire to improve the financial position of the firm through a viable capital structure and the desire of firms to exploit the opportunity provided by the initial post-liberalization buoyancy in the Indian stock market. It should not be surprising if in latest phase of contemporary finance capitalism, financial motives are also the major determinants of M&As in our country. Paul Sweezy (1994[1999]: 249) had spoken of the enormous growth of a "financial superstructure" atop the real productive base of the world economy [over the last three decades]. However, the linkages between a huge financial superstructure of the global capitalist economy and the financial motives of M&As in India is not so apparent and would need further exploration.

Our classification of the four categories of theorisations on M&As throw light on one or the other aspect of the phenomenon. Each of them is true in its own right. However, it is context-specific studies that could substantiate the validity of each of these arguments.

Section II: Trends of M&As: Indian Experience

It is evident that a substantial growth of M&As in the Indian corporate sector has been witnessed during the 1990s. For instance, the total number of M&As has sharply increased to 1034 during 1990-2000 from the level of 268 during 1980-1990 (see Table 1). It is also evident that this trend is sharper in the latter half of the 1990s. A large share of M&As were witnessed in the manufacturing sector throughout this period.

Table 1: Trends of M&As during 1990 to 2000

Year	Non-Mfg	Mfg	Total
1990-95	116	175	291(20)
1995-00	233	510	743(236)
1990-00	349	685	1034(256)

Source: Monthly Review of the Indian Economy, CMIE and Department of Company Affairs, R&S division, New Delhi. Figures in brackets represent the number of MNE related deals. Mfg: Manufacturing; Non-Mfg: Non-Manufacturing

While the Indian corporate houses seem to have been bracing up to face foreign competition during the first phase (1990-95), the second phase (1995-2000) witnessed a large presence of multinational firms. MNCs have actively participated in the M&A process during the second half of the nineties with a view to gain market entry or to strengthen their presence. For instance, it is observed that 32 per cent of M&As during 1995-2000 were MNE-related deals.

The policy-shift that facilitated M&As has had implications for various industry groups. Our study observed that firms in beverages,

spirits and vinegar, financial and other services, chemicals, drugs and pharmaceuticals, electrical machinery and electronics sectors have had relatively higher involvement in M&As activity. A large share of M&As during second half of the nineties were group-Mergers, i.e., between firms belonging to the same business group (Agarwal 2003). This may go to indicate that the same pattern of strengthening the controlling bloc as witnessed during the first half of the decade (Beena 2001) is found repeated during the second half as well. The increasing interest of MNEs in financial services, advertising, travel agencies and other business services is notable. Consumer goods industries such as food and beverages, household appliances, pharmaceuticals and personal care products, automobiles and the like have had a high concentration of MNE-related deals. The deals relating to MNEs have been predominantly horizontal rather than vertical in nature.[1] Two-fifths of them involved buying out the local partners in joint ventures set up in India or raising the stake of MNEs (Kumar 2000 and Saha 2001). Before embarking on the motives of the firms that have gone in for M&As, let us place the issue in the context of the shift in industrial policies that have made M&As possible in the first place.

Section III: Policy-shift regarding M&As during the 1990s

Let us now briefly trace the dismantling of the protective industrial policy regime since the initiation of liberalisation. In 1991, the restrictive provisions of the Monopolies and Restrictive Trade Practices (MRTP) Act relating to licensing for expansion of enterprises, Amalgamations and Takeovers of business enterprises, and Acquisition of foreign technology and foreign investment were removed. This was done in the belief that such restrictions hampered the expansion, diversification and upgradation of technology required for international competitiveness, which had become imperative with the opening up of the economy. The FERA was substantially altered in early 1993 with

the intention of reversing the earlier policy of restricting foreign investment to one in which the State took on an active role in promoting it. All restrictions on FERA companies in the matter of borrowing funds or raising deposits in India as well as taking over or holding stakes in Indian companies were removed. Indian companies and Indian nationals were allowed to start joint ventures abroad and accept directorships in overseas companies – something hitherto prohibited. A number of reform initiatives in the financial sector accompanied these changes. New capital issues have been completely deregulated. Private mutual funds and Foreign Institutional Investors have been allowed to enter the capital market (Company News & Notes 1993). While deleting regulatory provisions under the MRTP Act, the government set up the Securities and Exchange Board of India (SEBI) under the SEBI Act, 1992 which was responsible for framing guidelines and rules regarding many aspects of corporate behaviour. Thus Securities and Exchange Board of India (SEBI) came out with a Regulation namely, Substantial Acquisition of Shares and Takeovers in 1994 (for further details, see Beena 2000). These regulations, however were further revised in 1997(Govt. of India 1999). It is now clear that the Structural Adjustment Programme and the new industrial regime being adopted by the Government of India allows business houses to undertake, without restriction, any programme of expansion either by entering into a new market or through expansion in an existing market. Thus the policy framework in India during the nineties has not been regulating M&A deals from an anti-trust or competition policy perspective as in the EU and in the US. EU policy concerning M&As which came into force in September 1990, has tended to discourage cross-border Mergers in order to maintain competitive markets. However, the new policy by EU initiated in June 2000 protects minority shareholders and encourages cross-border Mergers. The legal framework in UK is more flexible about foreign purchases of UK

companies (Cantwell & Santangelo 2002). With the dismantling of the protective regime in India, we seem to be still groping for a new competition policy regime. How far this purpose would be served through Competition Bill 2001 is a matter to be investigated.

Section IV: Sample, Data and Methodology

We have constructed our own list of Mergers and Acquisitions by compiling information available from different sources. The list of Amalgamations/Mergers was collected from the Division of Research and Statistics of the Department of Company Affairs and the list on Takeovers was collected from the *Monthly Review of Indian Economy* published by Economic Intelligence Service, Centre for Monitoring Indian Economy (CMIE) and also cross-checked with the list provided by SEBI. However, our sample consists of only 115 actual M&As which accounts for 22 per cent of the total number of M&As that occurred in the Indian manufacturing sector during 1995-2000.

Table 2: Sample of Acquiring Firms involved in M&As Process during 1995-2000

(Assets in Rs. Crores)

Year	Domestic owned Acquiring firms		Foreign owned Acquiring firms		Total Acquiring firms	
	T Asset	Number	T Asset	Number	T Asset	Number
1995-96	12770	6	3432.16	7	16202.69	13
1996-97	6771.82	15	5445.10	7	12216.92	22
1997-98	9342.03	16	856.81	4	10198.84	20
1998-99	127217	13	1225.69	4	128442.69	17
1999-00	41267.39	34	4463.42	9	45730.81	43
Total	197362.2	84	15423.18	31	212798	115

Source: PROWESS Data Base, CMIE, Bombay. T Asset = Total Asset

It consisted of 84 domestically owned Acquiring firms and 31 foreign-owned Acquiring firms involved in M&As in the manufacturing sector during this period. Our sample includes only those MNE-related Acquiring firms that were already operating in India as foreign subsidiaries. It is indeed a matter of concern that no information was available regarding other foreign-owned Acquiring firms like those buying out joint-ventures already existing or new entrants through CB M&As.[2] The choice of our sample was subject to the availability of adequate information relating to the period of analysis from the PROWESS database. For our analysis, we have grouped the total M&As that occurred during 1995-2000 into two groups, domestic M&As and CB M&As, and checked whether there is any significant difference in their performance between pre and post Merger phases. Whether there is any significant difference in their performance as compared to the average performance of the industry as a whole has also been examined. Here we have considered product-groups in which there has been incidence of at least one Merger or Acquisition during 1995 to 2000. Further we have looked into whether there has been any significant difference in performance between the two aforementioned groups. Although we have considered average performance of a period of 5 years before Merger for all firms in our sample, we had to reduce the number of years for the post-Merger performance depending on how many years have elapsed after the Merger before the bench-mark year, 2002. The performance has been measured in terms of Price-cost margin, Rate of return, Shareholders' profit, Dividend per equity and Debt-equity ratio, Export intensity, R&D intensity and Capacity utilisation. The study has also tested the significance of their mean difference between pre and post merger phase by using t-statistics.

Section V: Impact of M&As on the performance of Acquiring firms

Thus we observe that the profitability ratio in terms of Rate of return (PBT/TCE)[3] , Price-cost margin (PAT/Net Sales) and Shareholders'

profit (i.e., PAT/NW)[4] of all Acquiring firms declined during the post M&As period as compared to the period before M&As (see Table 3). However, their performance in terms of above-mentioned profitability ratios for the period 1990-2000 has been relatively better as compared to the overall manufacturing average (see Appendix 1). Further we notice that the foreign-owned Acquiring firms performed relatively better as compared to Indian-owned Acquiring firms (see Appendix 1). From the pre and post Merger performance analysis, it is noticed that the return on shareholders' equity (Dividend/Equity) has increased after Merger (see Table 3). Further, we have noticed that the same ratio for all firms involved in M&As has been quite high for the period 1990-00 as compared to the overall manufacturing average (Appendix 1). And this ratio is relatively high for foreign-owned Acquiring firms as compared to their Indian counterparts (see Appendix 1).

Table 3: Performance of Acquiring Firms During post-Merger Period

Performance Indicators	Total Acquiring firms	Domestic Acquiring firms	Foreign-owned Acquiring firms
Rate of return	↓ (-ve)	↓ (-ve)	↓ (-ve)
Price-cost margin	↓ (+ve)	↓ (+ve)	↓ (+ve)
Shareholders' profit	↓ (-ve)	↓ (-ve)	↓ (-ve)
Dividend per equity	↑ (+ve)	↑ (+ve)	↑ (+ve)
Debt-equity ratio	↑ (-ve)	↑ (-ve)	↑ (-ve)
R&D intensity	↓ (-ve)	↓ (-ve)	↑ (+ve)
Export intensity	↓(-ve)	↓ (-ve)	↑ (+ve)
Capacity utilisation	↓ (-ve)	↓ (-ve)	↓ (-ve)
Product market share	↑ (-ve)	↑ (-ve)	↓ (+ve)

Source: Appendices 1, 2 & 3.

The Debt-equity ratio of all Acquiring firms has increased after M&As (see Table 3). This ratio for all Acquiring firms is relatively high as compared to the industry as a whole and it is even higher for the domestically owned firms as compared to the foreign-owned firms (see Appendix 1). From a relatively high level of gearing ratio of all firms involved in M&As as compared to their industry averages, we could argue that these firms were using external sources of finance in terms of borrowings for modernisation or further expansion (see Appendix 1).

We have further looked into the economic performance of these Acquiring firms in terms of R&D intensity, Export intensity, Capacity utilisation and Product market share. This has been done in a comparative framework by grouping all M&As into two categories again, namely, domestic M&As and foreign-owned M&As and examining whether there are any differences in behaviour between these two groups during the Pre-Merger and Post-Merger phases. Thus our analysis of Research and Development (R&D) intensity (i.e., the ratio of R&D expenditure/Gross sales) showed the following trends: The R&D intensity of majority of the Acquiring firms has declined after Merger. R&D intensity of all Acquiring firms, both domestic and foreign was relatively higher, as compared to the manufacturing as a whole during 1990-2000. R&D intensity of domestic Acquiring firms was significantly higher than that of foreign owned Acquiring firms during 1990-2000 (see Appendix 2)[5].

Similarly from our analysis on Export intensity (Export/Gross sales), it is noticed that the average ratio for all Acquiring firms has decreased after Merger although it is not statistically significant. The Export intensity of all Acquiring firms during 1990-00 has been much higher than the manufacturing average (see Appendix 2). And this ratio was slightly higher for the domestically owned Acquiring firms as compared to the foreign-owned Acquiring firms.[6] Further, our study

shows that the Capacity utilisation ratio (Net Sales/Total Assets) has declined during the post-Acquisition period and this ratio is relatively low for all Acquiring firms as compared to manufacturing average (see Appendix 2).

From our analysis on the changes in the Product market share during the period 1995 to 2000, we observed that the market share of the majority of the Acquiring firms, especially Indian owned Acquiring firms has been on the increase (see Appendix 3). Majority of these Acquiring firms was found to be among the top-five players in their respective industries[7]. Another interesting observation is that the Herfindal Index concentration ratio of those industries where we find higher incidence of M&As, has increased during this period. These industries are Automobile ancillaries, Cement, Spun Yarn, Drugs & Pharmaceuticals, Tea and Synthetic Detergents (see Appendix 3).

Let us now sum up Section V, particularly with reference to Table 3: The profitability indicators especially the Rate of return is showing a statistically significant downward trend during the post-merger period[8]. But the shareholders were paid off better returns as dividends, probably, to win the shareholders' confidence in the post-Merger phase and this trend is statistically proved significant. The declining trend in Debt-equity ratio although it is not statistically significant shows that the capital structure could not become viable during the post-Merger phase. This may point towards the plausible tactic of the firms using Merger as the occasion for enhancing equity-size in order to mobilise capital through borrowings to further their modernising activities (see Beena 2001). In contrast to the recent evidence from the financial crises-hit countries (Zhan & Ozawa 2001), the post-Merger performance in terms of R&D intensity and Export intensity in India showed an insignificant downward trend[9]. Agarwal (2003) argued that firms with the

'expansionary motive' of using excess capacities resort to the tactic of Mergers. However, our evidence points to the contrary, as Capacity utilisation during the post-Merger phase shows a statistically significant downward trend. Lastly, it is rather commonplace to point out that increasing concentration enables firms concerned to set mark-up prices above competitive levels. However, our recent evidence in the case of India shows a mixed trend: Price-cost margin has not gone up significantly during the post-Merger period although Product market share has gone up with majority of the firms that have gone in for Mergers. This paper could not deal with aspects such as the impact of M&As on capital formation, employment, managerial and marketing skills, and quality of services. These are also issues that need careful scrutiny especially in the case of CB M&As. Before concluding, a couple of observations may be made concerning the source of financing of these Acquiring firms.

Section VI: Source of financing and some plausible issues for corporate governance

Our earlier analysis (Beena 2000) of the major sources of funds of the sample of 34 firms involved in Mergers during the first phase (1990-95), shows that 71 per cent of the total assets of the Acquiring firms during the period 1989-90 to 1994-95 was mobilised from external sources. Capital market accounted for 33 per cent of the total funds acquired and current liabilities for another 21.8 per cent. Only about 16 per cent of the total funds were mobilised through borrowings.

However, firms that were involved in Mergers during second phase (1995-00) have changed their corporate financing strategies as evident from Table 4. For instance, Acquiring firms were depending more on external financing during 1995. Among these, the capital market accounted for 34 per cent and borrowing accounted for 22 per cent. But

Table 4: Source of Financing (in percentage)

	Acquiring Firms		Corporate Sector	
	1995	2002	1995	2002
I. Internal	27.56	55.39	28	17
a. Retained Profit	18.01	17.32	15.7	-28.3
b. Depreciation	9.55	38.07	12.4	45.3
II. External	72.44	44.61	72	24
a. Capital market	33.68	-0.74	15.6	10
Share Premium	29.93	-1.40	9.2	15.6
b. Borrowings	21.85	5.24	31.8	-2.3
c. Current liablilities	16.89	40.10	24.6	16.4
Total	100	100	100	100

Source: Same as Table 2 and Corporate Sector, CMIE, June 2003

there is a change in corporate financing during 2002. Acquiring firms mobilised relatively larger shares of resources from the internal sources. Depreciation accounted for the major share (38 per cent) of internal financing during 2002 whereas it was only 9.55 per cent during 1995. As for external sources of financing with acquiring firms, Current liabilities accounted for the major share ranging to 40 per cent in 2002, up from 17 per cent in 1995. By contrast, in the corporate sector as whole Current liabilities fell from 25 per cent in 1995 to 16 per cent in 2002. Resource mobilisation from the capital markets by Acquiring firms suffered a drastic fall from 34 per cent in 1995 to nearly minus 1 per cent in 2002. The decline in resource mobilisation from the capital market in the corporate sector as a whole from 16 per cent in 1995 to 10 per cent in 2002 was not so marked a decline as compared to the case of Acquiring firms.

This new trend of internal financing of Acquiring firms conforms to the so-called ‘pecking order’ theory of financing corporate growth (as experienced in the ‘developed’ and ‘emerging’ economies). This indicates that firms resort to financing their investments from internal sources in order to maintain family ownership and control of corporations (Singh 2003). But what is surprising is that high levels of depreciation accounts for the major share of internal sources of finance during the second half of the nineties. For instance, the share of depreciation in total sources of finance in the Indian corporate sector was 52.5 per cent in 1976-77 and decreased to 20.12 per cent in 1990-91 and then to 12.4 per cent in 1995-96 (Rajagopalan 1989; Dennis 1996). Since then this share has been increasing continuously reaching 45.3 per cent during 2002 (Table 4).

Does such high levels of depreciation actually reflect a higher rate of obsolescence of plant and machinery during liberalisation? If it were not the case, the matter would need attention from the angle of corporate governance. Moreover, despite showing a declining trend in profitability (as on Table 4), the dividend pay-out per equity has been found increasing and would, once again, merit attention from a corporate governance angle. During the first half of the 1990s, the post-liberalisation buoyancy in the Indian stock market generated finances for the Acquiring firms (Beena 2001). However, during the second half of the decade, mobilisation of resources from the stock market showed a disturbingly negative/declining trend for the Acquiring firms and the corporate sector as a whole (Table 4). Once again, it calls for attention from the angle of regulation.

Section VII: Conclusion

The evidence suggests that the new economic environment of the nineties has facilitated M&As between companies under domestic or foreign ownership. The firms under the same business groups dominated the Merger-wave. The absence of anti-trust regulation in India in the 1990s has helped Foreign or Indian firms to expand its Product market

share through M&As. It could also be argued that one of the main motives was to increase the equity size, which could be further used to borrow resources for modernisation. Our exploration of the significance of Export intensity and R&D intensity, however, showed mixed trends and no substantial conclusions could be drawn therefrom. The study could not find any significant evidence of efficiency-related factors as primarily influencing M&As that occurred in the Indian corporate sector during second half of the nineties and this observation is quite consistent with our earlier findings related to the Merger-wave in the first half of the nineties[10] . It is rather growth of the firms in terms of asset-size, market share and the strengthening of the controlling bloc as a defensive measure to ward off Takeovers that have been noticed. It is indeed a matter of grave concern that with the end of licensing policies, not even a reliable list of MNEs in India could be located from a publicly available source, not to speak of reliable information about their operations in the country. The behaviour pattern of Acquiring firms alerts us to the importance of working towards a desirable and workable Competition policy and Corporate governance regime for the country. An appropriate Competition policy needs to be designed so as to address the possible anti-trust implications of overseas Mergers for India, as well as to deal with M&As among Indian enterprises. This needs to be done keeping in view the need to develop productive capacities and generate employment within the country, providing for adequate ‘promotional measures’ and safeguards to small and medium entrepreneurs.

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Notes

1 Vertical Mergers/Acquistions are resorted to, in order to achieve backward integration through control over sources of supply or forward integration towards market outlets. Horizontal Mergers/Acquistions involve combination of firms belonging to similar product-line, thereby achieving economies of scale.

2 The list provided by RBI consisted of 3,909 firms through which foreign investment inflow worth Rs. 479.75 billion has come into the country during 1990 to 2000. A recent survey carried out under a study conducted by LBS-NCAER on 'Entry strategies of MNEs in India during 1990s', in which this author was also part of the team, made an attempt to identify the addresses of the above-mentioned firms, based on the CD available from the Department of Company Affairs, GoI. Only 2,500 firms' addresses were available therein. On contacted, 1,000 addresses could not find the addressees concerned and returned the mails posted. Of the rest of the 1,500 firms, only 190 responded to the survey out of which only 22 companies were involved in M&As during 1990s, although this researcher herself had identified 100 companies from among those 1500 involved in M&As.

3 PBT/TCE is Profit Before Tax to the Total Capital Employed.

4 PAT/NW is Profit after Tax to the Net Worth.

5 This is not all that surprising as we have also observed a similar trend in the recent study based on 160 MNC affiliates that entered India during 1990s. The study found that most of the firms investing in India have small R&D budgets, relative to their turnover and most of them do not provide significant training to the employees in their Indian affiliates (Bhaumik, Beena, Bhandari and Gokarn 2002).

6 Infact, it has been argued by others that MNEs have less incentive to export if profitability in the domestic market is high when they have high

market-share and the domestic market is not yet mature (Patibandla 1995; Kumar & Siddharthan 1994).

7 The evidence based on the crisis-hit countries showed that TNCs had acquired local firms that were competing with them in the same market prior to the Acquisition (Zhan & Ozawa 2001).

8 It is so evident that the profitability of 64 per cent of the acquired firms in crisis-hit countries rose after Acquisition. Further it is observed that the profitability improved in those acquired firms in Asia and Latin America where Japanese executives replaced the old management in more than one half of the cases (Zhan & Ozawa 2001).

9 36 per cent of the acquired firms in crisis-hit countries showed an increase in exports after the Acquisition while 8 per cent of the acquired firms showed a declining trend in their exports after Acquisition (Zhan & Ozawa 2001).

10 The study could not find any evidence of improvement of profitability during the post-Merger period as compared to the pre-Merger period and similar findings were arrived at by other studies as well (see Agarwal 2003).

Acronyms/Abbreviations

CB M&As: Cross-Border Mergers and Acquisitions

EU: European Union

FERA: Foreign Exchange Regulation Act

M&As: Mergers and Acquisitions

MNCs: Multinational Corporations

MNEs: Multinational Enterprises

MRTP: Monopolies and Restrictive Trade Practices

NAFTA: North American Free Trade Area

SEBI: Securities and Exchange Board of India

TNCs: Transnational Corporations

References

Agarwal Manish (2003), 'Analyses of Mergers in India', Unpublished MPhil Dissertation submitted to the University of Delhi, Delhi School of Economics.

Ansoff H.I & J.F Weston (1962), "Merger Objectives and Organisational Structure," *The Quarterly Review of Economics and Business*, Vol 2, No.3, pp.49.

Beena P.L (2000), 'An Analysis of Mergers in the Private Corporate Sector in India', Working Paper 301,Centre for Development Studies, Trivandrum.

———— (2001), "Intangibles and Finance: Motives and Consequences of Mergers in the Indian Corporate Sector", in P. Banergee and F.J. Richter (eds), *Intangibles in Competition and Cooperation: Euro-Asian Perspectives.* New York: Palgrave.

Bhaumik S, Beena P.L, Bhandari L & Gokarn S (2002), 'Survey of FDI in India', DRC Working Paper No.6, London Business School, UK.

Basant R (2000), "Corporate Response to Economic Reforms", *Economic and Political Weekly,* Vol. XXXV, No.10.

Cantwell J and Santangelo G.D (2002), "M&As and the Global Strategies of TNCs", *The Developing Economies,* Vol. XL, Number 4.

Caves R.E (1991), "Corporate Mergers in International Economic Integration", in A Giovanni and C.Mayer (eds), *European Financial Integration*, pp.136-160, Cambridge, Cambridge University Press.

Centre for Monitoring Indian Economy, "PROWESS Computerised Data Base", CMIE, Bombay.

Department of Company Affairs (1993), "Important Features of Corporate Sector and Policy Development", *Company News and Notes* vol.31, No.1, pp.3-18.

Dennis Rajakumar (1996), "Financial Intermediation and Corporate Finance in India: Some Recent Experiences", *The Journal of Entrepreneurship*, Vol.5, No.2.

Dunning J.H (1993), "Multinational Enterprises and the Global Economy", Addison-Wesley Publishing Company.

EIS (Economic Intelligence Service)," Monthly Review of Indian Economy", Bombay, Centre for Monitoring Indian Economy, Bombay.

EIS (2002), "Industry Market Size & Shares", Centre for Monitoring Indian Economy, Bombay, August.

EIS (2002), " Corporate Sector", Centre for Monitoring Indian Economy, Bombay, May.

Gort M (1969), "An Economic Disturbance Theory of Mergers", *Quarterly Journal of Economics*, Vol. 83, pp.624-642.

Government of India (1999), "Economic Survey 1998-99", Ministry of Finance, Delhi.

Kumar, Nagesh (2000), 'Multinational Enterprises and M&As in India: Patterns and Implications', RIS Discussion Paper No: 5.

Kumar, Nagesh and Siddharthan, N.S (1994), "Technology, Firm Size and Export Behaviour in Developing Countries: The Case of Indian Enterprise", *Journal of Development Studies*, Vol. 31, No2, pp.289-309.

Lall S (2002), 'Implications of Cross-Border Mergers and Acquisitions by TNCs in Developing Countries: A Beginners' Guide', QEH, Working Paper No: 88.

Melicher, R,et al (1983), "A Time Series Analysis of Aggregate Merger Activity", *The Review of Economics and Statistics,* Vol. 65, pp.423-430.

Patibandla, Murali (1995), "Firm Size and Export Behaviour: An Indian Case Study", *Journal of Development Studies*, Vol. 31, No.6, pp.868-882.

Post, Alexandra (1994), *Anatomy of a Merger: The Causes and Effects of Mergers and Acquisitions, Prentice-Hall*, Englewood Cliffs, New Jersey.

Rajagopalan RV, et.al (1989), "Financing of Investment in the Private Corporate Sector", Monograph No.6, ASSOCHAM, New Delhi.

Saha, Biswatosh (2001), "Investment Policy in India" Paper presented in a seminar organised by CUTS Centre for International Trade, Economics and Environment, Jaipur.

Schmalensee R (1987), "Horizontal Merger Policy: Problems and Changes*", Journal of Economic Perspectives,* Vol 7, No 2, pp.41-54.

Sudersanam (1995), *The Essence of Mergers and Acquisitions*, NJ: Prentice-Hall.

Sweezy, Paul M. (1994)[1999], "The Triumph of Financial Capital", in Bobbye S. Ortiz & Tilak D. Gupta (eds) : *History as it Happened*, 1999, Cornerstone Publications, pp. 244-51.

Singh A (1975), "Take-overs, Economic Natural Selection and the Theory of the Firm*", Economic Journal*, September, vol 85,PP.497-515

———(1992), "Corporate Takeovers", in J Eatwell, M Milgate and P Newman (eds*), The New Palgrave Dictionary of Money and Finance*, London, Macmillan, pp.480-486.

———(2003), "The New International Financial Architecture and Competition in Emerging Markets: Empirical Anomalies and Policy Issues" in Ha-Joon Chang (eds), *Rethinking Development Economics,* Anthem Press.

UNCTAD (2000), 'Cross-border Mergers and Acquisitions and Development', *World Investment Report,* Geneva.

UNCTAD (1999), 'Foreign Direct Investment and the Challenge of Development', *World Investment Report,* Geneva.

UNCTAD (1997), 'Transnational Corporations, Market structure and Competition Policy', *World Investment Report*, Geneva.

Weston J.Fred et.al (1996), *Mergers, Restructuring, and Corporate Control*, Englewood Cliffs, NJ: Prentice-Hall.

Williamson J.E (1968), "Economics as an Antitrust Defence: The Welfare Trade-offs", *American Economic Review*, March.

Zhan James & Terutamo Ozawa (2001), *Business Restructuring Asia: Cross-Border M&As in the Crisis Period,* Copenhagen Business School Press, Denmark.

Appendix 1: Financial Behaviour of Acquiring Firms (Ratio in percentage)

Financial Ratios	Types of M&As	Pre-merger	Post-merger	Difference in means (t value)	Avg during 1990-00
Rate of Return	DOM M&As	14	10	5.94	13
	MNE M&As	16	13	2.13	15
	Total	15	11	5.96	14 (9.2)
Price Cost Margin	DOM M&As	.30	-6.9	3.05	-1.4
	MNE M&As	2.6	2.2	0.63*	2.8
	Total	1.3	-2.3	3.17	0.7(1.7)
Shareholder's profit	DOM M&As	15	1.0	1.09*	19
	MNE M&As	12	1.0	1.46*	10
	Total	13	1.0	1.46*	14(5.2)
Dividend per Equity	DOM M&As	25	32	-1.92*	25
	MNE M&As	30	45	-2.23	33
	Total	27	39	-2.97	29(15)
Gearing Ratio	DOM M&As	.86	1.69	-1.15*	2.87
	MNE M&As	.29	1.46	-1.08*	1.13
	Total	.58	1.58	-1.64*	2 (1.36)

Source: PROWESS database, CMIE, Bombay. Figures in bracket represent for the manufacturing sector and the * indicates statistically not significant.

Appendix 2: Economic Behaviour of Acquiring Firms (Ratio in percentage)

Indicators	Type of M&As	Pre-merger	Post-merger	Difference in Means (t-Value)	Avg during 1990-00
Capacity Utilisation	DOM M&As	95	88	2.84	94
	MNE M&As	92	88	0.005*	95
	Total	93	88	2.37	95(113)
Export Intensity	DOM M&As	19	15	0.52*	16
	MNE M&As	12	16	.04*	15
	Total	16	15	0.53*	16(9.5)
R&D Intensity	DOM M&As	1.5	0.5	0.90*	1.0
	MNE M&As	0.3	0.5	-0.53*	0.4
	Total	1.2	0.8	0.86*	0.9(0.5)

Souce: Same as Appendix 1. Figures in bracket represent for the manufacturing sector and * indicates statistically not significant.

Appendix 3: Distribution of Acquiring Firms in Terms of their Market Structure

Firms	Ownership	Product Groups	Ranking of MS	MS		HIC	
			2001	1995	2001	1995	2001
1	IO	Acetic acid	5	3.71	4.62	0.143	0.171
2	IO	Aluminium chloride	3	13.95	11.33	0.466	0.254
3	IO	Aluminium foils	3	24.39	17.28	0.28	0.175
4	IO	Aluminium products	3	27.79	11.29	0.209	0.114
5	FO	Refrigerators	1	20.82	31.87	0.29	0.176
6	FO	Automobile ancillaries ,brake assemble	1	66.96	78.28	0.45	0.63
7	FO	Automobile ancillaries ,shock absorbers	2	38.18	29.03	0.301	0.23
8	IO	Automobile tubes	9	2.50	3.35	0.112	0.138
9	IO	Automobile tyres	9	1.24	1.56	0.114	0.133
10	FO	Cement	1	14.65	12.47	0.044	0.056
11	IO	Cement	5	2.79	6.15	0.044	0.056
12	IO	Cement	4	4.62	6.82	0.044	0.056
13	IO	Computer software	1	21.29	15.70	0.067	0.054
14	FO	Spurn Yarn	5	0.79	0.74	0.001	0.002
15	IO	Spurn Yarn	2	0.51	1.17	0.001	0.002
16	IO	Diversified ,viscose stable fibre	1	77.63	91.67	0.628	0.847
17	IO	Drugs & pharmaceuticals	3	1.20	3.12	0.009	0.014
18	FO	Drugs & pharmaceuticals	5	3.20	3.00	0.009	0.014
19	IO	Drugs & pharmaceuticals	6	0.32	2.84	0.009	0.014
20	IO	Drugs & pharmaceuticals	15	0.70	1.36	0.009	0.014

cont'd.....

Firms	Ownership	Product Groups	Ranking of MS	MS		HIC	
			2001	1995	2001	1995	2001
21	IO	Drugs & pharmaceuticals	1	5.01	6.03	0.009	0.014
22	IO	Drugs & pharmaceuticals	9	0.84	1.75	0.009	0.014
23	IO	Finished steel	6	1.99	3.12	0.142	0.107
24	IO	Finished steel	8	2.26	2.39	0.142	0.107
25	IO	Finished steel	7	0.00	2.83	0.142	0.107
26	IO	Benzene	1	28.49	41.88	0.047	0.277
27	IO	BOPP	4	12.23	5.15	0.143	0.194
28	IO	Calcium carbide	1	0.00	11.70	0.059	0.019
29	FO	Capacitor	8	1.48	1.32	0.04	0.02
30	IO	Caustic soda	4	2.38	6.11	0.055	0.062
31	IO	Caustic soda	2	7.60	8.61	0.055	0.062
32	IO	Chlorine incl liquid chlorine	4	1.52	6.18	0.074	0.091
33	IO	Fabrics	1	0.54	0.69		
34	FO	Environment control equipment	4	6.79	3.79	0.032	0.048
35	IO	Ethylene glycol	1	30.64	56.40	0.192	0.422
36	FO	Glycerine	2	38.65	29.21	0.253	0.232
37	FO	Light commercial vehicles	7	2.46	0.02	0.42	0.42
38	IO	Linear alkyl benzene	2	32.82	34.87	0.34	0.348
39	IO	Liquid chlorine	4	1.52	6.18	0.074	0.091
40	IO	Medical equipment	6	0.33	0.49	0.004	0.007
41	IO	Mixed complex fertiliser	7	3.46	5.07	0.125	0.122

cont'd.....

Firms	Ownership	Product Groups	Ranking of MS	MS		HIC	
			2001	1995	2001	1995	2001
42	FO	Mopeds	5	0.13	0.00	0.284	0.292
43	FO	Opthalmic glass and contact lenses	9	4.95	0.16	0.057	0.067
44	FO	Passenger cars	5	5.61	5.77	0.502	0.285
45	IO	Pesticides	14	1.46	2.22	0.043	0.031
46	IO	Phosphatic fertilisers	5	3.09	6.43	0.045	0.072
47	IO	Poly vinyl chloride	1	36.00	34.61	0.169	0.195
48	IO	Poly vinyl chloride	5	7.03	4.98	0.169	0.195
49	IO	Polyster filement yarn	1	29.16	27.20	0.115	0.108
50	IO	Polyster staple fibre	1	42.37	53.99	0.21	0.358
51	IO	Primary aluminium	5	0.29	0.52	0.243	0.297
52	FO	Process control equipment	4	4.33	3.46	0.079	0.087
53	FO	Refractories	2	10.66	13.64	0.044	0.056
54	IO	Sanitarywares fittings	8	3.98	3.79	0.044	0.056
55	FO	Soaps	1	20.70	19.50	0.046	0.042
56	FO	Synthetic detergents	4	2.26	3.69	0.165	0.194
57	IO	Soda ash	2	25.14	25.09	0.271	0.235
58	FO	Sodium tri-poly-phosphate	1	55.83	0.00	0.49	0.47
59	FO	Sodium tri-poly-phosphate	2	43.07	44.92	0.497	0.476
60	IO	Stable bleaching powder	6	0.00	6.29	0.242	0.197
61	IO	Stable bleaching powder	1	22.83	26.08	0.242	0.197

cont'd.....

Firms	Ownership	Product Groups	Ranking of MS	MS		HIC	
			2001	1995	2001	1995	2001
62	FO	Steam and hydroturbines	9	0.11	0.17	0.56	0.234
63	FO	Switching apparatus	5	9.79	6.52	0.078	0.047
64	FO	Switching apparatus	2	7.87	8.95	0.078	0.047
65	FO	Synthetic detergents and scourers	1	34.24	36.93	0.165	0.194
66	FO	Tea	1	0.03	24.27	0.047	0.081
67	IO	Tea	13	1.97	1.40	0.047	0.081
68	IO	Tea	12	2.12	1.50	0.047	0.081
69	IO	Tea	20	1.33	0.76	0.047	0.081
70	IO	Tea	2	7.91	11.27	0.047	0.081
71	IO	Toughened and laminated glass	10	1.47	0.55	0.026	0.019
	FO	Transformers	4	5.83	5.66	0.093	0.075
73	FO	Transmission equipment	9	1.10	0.73	0.094	0.053
74	FO	Transmission tower	1	41.57	41.74	0.279	0.259
75	IO	Transmission tower	5	5.95	5.12	0.279	0.259
76	IO	Urea	11	3.10	2.93	0.08	0.1
77	FO	Washing machines	3	13.09	10.83	0.316	0.299
78	IO	Xylenes	1	1.54	76.91	0.016	0.591

IO=Indian Owned; FO=Foreign Owned; MS= Market Share; HIC=Herfindal Index Concentration.

Source: Industry Market Size and Shares, CMIE, August, 2002.

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