Strategic Groups in
Indian Private Banking Industry

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Abstract

The objective of the chapter is to examine whether the conduct of private banks is uniform or whether certain strategic groups exist within private banking industry. For this purpose we treat new private banks and old private banks as two distinct groups. This is in line with the idea of the policy makers, who expected the new banks to conduct their operations differently from their old counterparts. The study examines the standard variables that represent conduct in industrial organization literature and modifies it so that an appropriate set of conduct variables in banking industry are arrived at.

So far strategic groups have been treated as a separate approach in industrial economics. Where it has been linked to S-C-P (by Newman (1978)) it has been argued that strategic groups are part of structure. This study addressed this contentious issue and as opposed to Newman's view, argues that strategic groups are a part of conduct and not structure.

With the help of ANOVA (with replication for both old and new banks incorporating firm, time and variable effects) it is established that the two groups are not similar. With the exception of the time effect for new banks, all the other effects have turned out to be significant in the study. Later, a step-wise canonical discriminating analysis is as well used to compare old and new banks in terms of certain measures of conduct. It is verified that old and new private banks belong to two distinct strategic groups. The discriminating variables are identified and they help in analyzing the patterns that have occurred. With the help of the discriminant analysis we draw up a bank profile and a branch profile.

Key words: conduct, strategic groups, entry, deregulation

JEL Code: D21, D40, D49, L10, G21, P51.

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I.0 INTRODUCTION

One of the most significant measures suggested by the Narasimham committee to revitalise the banking industry is opening up the banking sector to new private sector banks. The policy makers expected the new banks to conduct their operations differently, compared to their old counterparts. It was expected that new banks would work on the basis of leaner structures with lower operating costs to total asset, and outperform the old banks in terms of numerous parameters including funds management, service and introduction of new technology. They would start with a clean slate and would be devoid of any of the weaknesses of the existing ones. The impact of new banks on private banking industry will be minimal if the new banks behave similarly as old banks. Such behavior can be understood in the light of key decision variables. This leads us to a study of conduct in private banking industry.

The objective of the paper is to analyse the discriminating conduct of the new private banks vis-à-vis the old private banks. The paper is divided into the following sections. Section II.0 is about the changing importance of the old and new banks in the private banking industry. Section III.0 provides theoretical framework of the paper. Section IV.0 reviews the literature. Section V.0 provides the conduct variables to be used in comparing the two groups and conducts a preliminary analysis of the data relating to these conduct variables. Section VI.0 develops the hypotheses. Section VII.0 and VIII.0 focus on the methodology and results. Summary and conclusions are presented in Section IX.0.

II.0 CHANGING IMPORTANCE OF OLD AND NEW BANKS IN THE INDUSTRY

It is clear from table I that old banks have been losing continuously, both in terms of market share and asset share. The ratio of the market share of the old and new banks was 80:20 in 1994-95, which changed to 34: 66 in 2001-02. The ratio of the asset share of the old and new banks in 1995 was 87:13, which reached 42:58 in 2001-02. This implies that the market share and asset share of the old banks was reduced to less than half at the end of the period of the study. On the other hand, the market share of new banks increased more than two times, and their asset share increased more than three times. Clearly, in the new situation, the new banks are dominating the private banking industry both in terms of market as well as asset share. Nevertheless, this dwindling market and asset share of old banks may be treated as only one aspect of dynamics of the private banking market. This is represented in figure I. A simple logarithmic trend equation of the asset share and market share of the old banks reveals a significant downward trend. Table II and III report that the asset share of the old banks has been falling at the rate of 10% and market share at the rate of 8% over the period 1994-95 to 2001-02.

A related aspect of market dynamics may be captured by comparing the ranks of banks, based on their market share between 1994-95 and 2001-02. Such an exercise is reported in table IV and V. It is observed from the table IV that over time, there has occurred a deterioration in ranks of all banks, except for only two banks, Jammu and Kashmir Bank and Lord Krishna. Deterioration in the case of a quite a number of old banks is significantly marked. They include Sangli Bank, Bank of Rajasthan, Vyasa Bank, Catholic Syrian Bank, United Western Bank, and Dhanalaxmi Bank. Bharat Overseas Bank etc. On the other hand, all the new banks have improved their rank over

the said period, as shown by table V. Most prominent among them are UTI Bank, HDFC Bank and ICICI Bank. Bank of Punjab, Centurion Bank, Global Trust Bank[1] and IndusInd Bank followed them. Hence, another element of market dynamics is derived from the fact that, most old banks have faced a deterioration in their ranks, while new banks, without exception have improved their rank over the period of the study.

To recapitulate, some aspects of the dynamics of private banking market are listed below.

- The old banks are faced with a fall in both asset and market share.
- Absolute and proportionate increase in relative market share over the period of time was greater for the new banks.
- The ranks of most old banks have fallen, while that of new banks improved.

III.0 THEORETICAL FRAMEWORK

To recapitulate, conduct refers to how firms react to the conditions imposed by market structure and interacts with rivals, in best pursuance of its goals. Under conduct, one conventionally looks at a host of decisions relating to the quality and range of products, pricing, advertising and marketing, financing, investment, R& D, collusion and merger (Hay and Morris, 1973). However, one has to look closely at the variables in order to modify it so that an appropriate set of conduct variables in banking industry are arrived at. A subset of the variables in the list are retained, while a few new variables, typical of banking industry are included. They include branch network, location of branch in metropolitan cities, and spread. Spread depends on interest earned on advances and investment, and interest expended. Both of them are conduct variables. Interest expended depends on determination of borrowing rate,

[1] The rank of Global Trust Bank has improved from fourteen to nine. However, it was not an unmixed blessing.

elasticity of supply of deposit, banking habit of the population. Return on advances depends on fixing the PLR as well as elasticity of demand for advances, while return on investments depends on choices of instruments for investment. Thus spread is derived from a number of conduct variables and hence it may be treated as such. Apart from spread, diversification into fee based activities and NPA are other important conduct variables. Inclusion of NPA in the list of conduct variables is rationalised by the fact that NPA results from two sources, both of which are related to conduct. The sources of NPA include undertaking risky ventures and adverse selection. Other conduct variables in the list, which relate to behaviour with regard to advertising, capital investment and financing are retained because they also relate to banks in as much as they relate to firms. Size is part of structure but there is a feedback effect on it from conduct. Therefore as an exception, size is considered as a part of conduct variables, to be analysed in this paper.

Conduct, in the conventional S-C-P paradigm, has been conceptualised in a narrow way. Two dimensions need to be included while conceptualizing a broader approach to conduct. They include goals and strategic groups.The distinction between goals and conduct may not merit separation of goals from conduct as components of the paradigm, since certain types of goals result in a certain conduct. For instance, profit maximisation, as a goal, would result in a conduct wherein the pricing decisions are geared to maximizing the price cost margin. However, the conduct of the firm will differ if objective is to maximize profits in the short run or long run. If firms are interested in short run maximization of profits, then firms must feel that barriers to entrants are sufficiently high to ensure that their profits will not induce entry. Alternatively, pursuit of the objective of long run maximization of profit requires that entry into the industry should be restricted. This may lead to a price being set such

that entry into the industry is restricted. In other words, limit pricing is being practiced. It may also take the form of erecting barriers to entry[2]. Similarly if growth is an objective, diversification may be an appropriate conduct to achieve it. Investment and financing decisions are also related to the objective of growth. Similarly, R& D leads to innovation and is powered by the goal of growth. As for the role of goals in the context of conduct in the case of banking industry, the primary goal is not unique but dual. For a bank both the goals of profitability and liquidity are equally important. Hence the analysis of conduct in banking needs to consider the role of asset structure and a corresponding analysis of performance cannot be restricted only to profit.

Caves and Porter (1978) have extended Bain's initial concept of entry barriers to mobility barriers, formulated in terms of their concept of strategic group. Mobility barriers include both artificial and natural ones and are related to the ability of the firms to shift from one strategic group in the industry to the other. Strategic groups consist of firms following similar strategy,[3] and firms belonging to different strategic groups operating in the same industry need not behave alike in terms of key decision variables. Depending on their history, management philosophy, firm specific assets, they differ in their strategic approach to competition. The products they produce may differ significantly in non-price attributes in response to heterogeneous buyers' preferences. Firms within a strategic group resemble one another very closely and stand out from firms belonging to another strategic group. Potential entrants to a strategic group include existing firms in other industries considering diversification, firms in the same industry contemplating a shift to another strategic group and

[2] It is implicitly assumed that the costs of preventing entry are outweighed by the enhanced profits resulting from absence of entry (Sawyer, 1985).

[3] Strategy can be defined as the determination of the basic long-term goals and objectives of an enterprise, and the adoption of courses of action and the allocation of resources necessary for the carrying out of these goals (Chandler, 1962).

completely new firms. Entry to a group thus depends on the height and nature of barriers, both to entry into the industry and to intergroup mobility within the industry. The impact of entry barriers is different for firms belonging to different strategic groups due to the presence of mobility barriers.

A contentious issue in the context of the S-C-P paradigm, is whether strategic groups are an aspect of structure or conduct. It is a critical issue and a quotation from Newman (1978) is produced as follows.

"If corporate strategies can differ persistently among direct market rivals, we can speak of strategic groups-each group consisting of firms highly symmetrical in their corporate strategies-as a stable element of market structure. Strategic groups are elements of market structure because strategic choice affects the preference system employed by the firm's decision makers in selecting short term operating policies."

However, the reasons cited by Newman to justify the treatment of strategic groups as an element of market structure are related to difference in 'corporate strategies', on the one hand, and 'strategic choice' influencing 'decision making mechanism' of firms, on the other hand. Corporate strategies and strategic choice clearly fall in the realm of conduct and not structure. Basic conditions may allow for creation of strategic groups, but the distinction between the strategic groups may be understood only in terms of differential behaviour. The stable 'elements' arise out of continued pursuit of a certain type of strategic behaviour. The existence and continuance of different strategic groups within an industry rests on the members of a particular strategic group following similar strategies or conduct. Hence it may be argued that a strategic group should logically related to aspect of conduct, which may in turn have a feedback effect on market structure. Newman failed to emphasize the

fine line of distinction between formation of strategic groups of strategic groups on the basis of basic conditions, which are prior to structure, and the implication of the presence of such groups for conduct. Our approach is to refine the conventional S-C-P paradigm by including strategic groups within the ambit of conduct. We study strategic groups by analysing the contrasting behaviour in terms of key decision variables, which is very much a part of conduct.

The central point in the discussion is captured by the entry of new banks. This is also a source of confusion. While the fact of entry is in the realm of structure, the nature of 'new' firms entering the industry may be different. They may represent a different strategic group, distinguishable on the basis of their conduct. Right from the beginning these 'new' firms are distinctive. For instance, they represent new technology. Therefore, in this context, we shall examine two strands in literature, which attribute innovation with new firms. Schumpeter in his two books "The Theory of Economic Development"(1934) and "Capitalism, Socialism and Democracy"(1942) had expressed two different views about innovation. In the first work, Schumpeter points out that innovation is not associated with an established firm but is typically created by a newcomer. As opposed to this, the other view suggests that innovation is the product of efforts of existing large or monopolistic enterprises. Thus two views of Schumpeterian innovation may be linked to two modes of development of an industry. The first one is an "entrepreneurial mode of development of an industry" in which innovation is associated with the entry of new firms while the other is "routinised mode of development" in which innovations typically come from established large firms. The distinction between the two Schumpetarian regimes involves a reversal of relative roles of innovation by entrants and established firms. The entrepreneurial regime is one that is favourable to innovative entry and unfavourable to innovation by established firms

while a routinised regime is one in which the conditions are other way around. There is no reason to expect that the real situation, relating to any industry, would necessarily neatly fit into one pattern or other. We are arguing that in private banking in India the 'entrepreneurial mode' has taken place, as a result of the emergence of a new strategic group, which has been made possible due to the intuitional reform(change in basic conditions), which has permitted entry of new firms.

Hawtrey (1943) argued that the potential competition of newcomers is the primary competitive factor in the determination of profit. He went on to add that competition from inside is important when firms in an industry are struggling to maximize their share in a shrinking business. But, in the case of a growing industry[4], demand is found to be outstripping capacity, and the immediate result is to enable all the producers to secure high prices and augmented profit margins. If all the established producers prefer to hold back, perhaps from a tacit understanding that no one of them should endanger the excess profits enjoyed by them, the initiative is likely to come from outside, and newcomers would enter the industry with innovation. Gerosky (1989) also argues that entry and innovation are undoubtedly intertwined in the case of new firms.

IV.0 REVIEW OF LITERATURE

There is apparently a complete dearth of studies on existence of strategic groups in Indian banking industry, even when the canvas is broadened to include Indian industry over and above banking. There is no study that suggests that strategic groups must be incorporated into the broad S-C-P paradigm. So reference to studies related to other countries is a must. One such study by Amel and Rhoades (1988), did

[4] This implies existing firms are enjoying external economies. We shall pursue this argument later.

not presuppose either the existence of strategic group and their number within the industry. They used cluster analysis to classify banks into groups and various other procedures to analyse quantitative differences among groups, and the stability of memberships in groups over time. Their work resembles Hayes, Spence and Marks (1983) on the one hand and Passmore (1985) on the other. The study concludes that stable groups exist in banking markets. This provides us with sufficient grounds to proceed with the study of strategic groups in private banking in India.

V.0 A PRELIMINARY ANALYSIS OF DATA

A large number of conduct variables is incorporated in the paper. Out of these, two variables, expenditure on wages and advertising expenditure are incorporated both at the bank as well as the branch level. Table VI provides the definition of conduct variables covered in the paper. A preliminary analysis of such conduct variables relating to old and new banks is attempted below. This analysis is based on table VII, which provides the mean and coefficient of variation of the conduct variables for old and new banks.

Table VI: Definition of Conduct Variables used in the Study

BRNCH	No of branches
NPA	Ratio of net NPA to net advances
WAGEOP	Ratio of wages and salaries to operational Expenditure
ADV	Ratio of advertising expenditure to operational Expenditure
SIZE	Sum of advances and deposits
MB	Ratio of number of branches in metro to total no. of branches
OPEX	Ratio of operational expenditure to total Expenditure
OFABR	Ratio of other fixed asset to no of branches
WAGEBR	Ratio of wages and salaries to no of branches
ADVBR	ratio of advertising expenditure to total income

DIV	Ratio of non-interest income to total income
SPRD	Ratio of difference between interest earned and Interest expended to assets
STAFFBR	Ratio of no of staff to no of branches

Old banks had a larger number of branches on the average compared to the new banks. However, the relatively disadvantageous position of the new banks vis-à-vis the old banks was continuously improving from less than 6% to more than 60%. While there occurred a slow rise in the average number of branches of the old banks, there was a ten times rise in the same for the new banks. The most abrupt rise in the average number of branches for the new banks took place for during 2000-01, when it was doubled. This is attributed to the merger of ICICI bank with bank of Madura, which also led to a steep rise in the coefficient of variation in the number of branches of the new banks.

The average ratio of net NPA to net advances for the old banks was always more than the same for the new banks. This is expected, as the old banks were in operation for a much longer period of time. For both the groups, the figure has peaked in 1998-99. But the advantageous position of the new banks over the old banks, in respect of the ratio, started eroding. It is interesting to note that the coefficient of variation in the ratio for the both the groups was showing a tendency to converge at the same level.

The figures of coefficient of variation for both the groups are at a stable level for the groups. The average of ratio of wages to operating expenditure is consistently more for the old banks as compared to the new banks. There is not much change in the average of the variable over time for both the groups. The coefficient of variation of this

variable as well also does not change very much over time. However, the coefficient of variation in this variable is larger for the new banks, as compared to old banks.

The average of the ratio of advertising expenditure to operational expenditure always in favour of the new banks, while more heterogeneity in this regard was observed in case of old banks. The coefficient of variation in this variable was always higher in case of old banks.

Average size continuously increased over the period of the study for both groups of banks. While the average size of an old bank was more than its counterpart only in the first two years of the study, the scenario was reversed in later period. One may also notice a very sharp rise in average size of new banks during 2000-01. The coefficient of variation for the size was roughly at the same level for the old banks over the period of the study. But one can observe a rise in the same for the new banks from 2000-01 onwards. One may again recall that the first merger, between HDFC and Times Bank had taken place in 1999-2000.

The average ratio of operating expenditure to total expenditure was found to be very stable both the groups of banks. However, while the coefficient of variation of this variable was stable as well, at a low level (around twenty percent), for the old banks, the same declined for the new banks during the period of the study. This implies that the old banks remained as homogenous as before with regard to the ratio, while the new banks became more homogenous in this regard over the period of the study.

In the data, fixed assets have three categories: premises, fixed assets under construction and other fixed assets. Apparently, other fixed assets will consist of new equipment like computers and hence will be related to modernization of a bank. It is

observed that the average of the ratio of other fixed assets to the number of branches is at a much higher level for the new banks as compared to old banks. The coefficient of variation in the ratio was found to invariably lower for the new groups as compared to the old groups. This indicated the new groups are a more homogenous category in this respect as compared to old banks. The ratio for new banks has been falling since 1997. The coefficient of variation in number of branches of the old banks remained at the same level during the period of the study. But the coefficient of variation in the ratio of other fixed asset to number of branches for the old banks was consistently found to be exceeding one. A substantial part of the volatility in the ratio may be attributed to volatility in other fixed assets. Different old banks were adding to other fixed assets in a discrete fashion, causing high volatility.

The average of the ratio of expenditure on wages to the number of branches was found to be rising for both the groups of firms over the period of study. The average of the ratio of advertising expenditure to branches was found to be larger for the new group as compared to the old group. The coefficient of variation in the ratio is always more for the old group than for the new group. Once again, the variation in the ratio for old banks is much more compared to the variation in their number of branches. Thus a large part of the volatility in the ratio related to old banks is attributed to variation in their advertising expenditure. The old banks incur advertising expenditure, as when they feel it necessary. This causes volatility in the ratio for the old banks.

No group apparently enjoyed any advantage with regard to the ratio of other income to total income. Similar is the situation with the average of the ratio of net NPA to net advances and average spread for both groups of banks. Nevertheless, a steeper fall in coefficient of variation in the ratio was observed for the new banks. No

clear trend is observed for the average of the ratio of number of staff to number of branches. The average of the ratio did not consistently favour one group of banks. However, the coefficient of variation in the ratio was found to be much higher for the old group, excepting the first year. The average ratio of capital to asset was always found to be higher in the new group as compared to the old group. However, the average ratio for the new group has consistently declined to reach the same level as the old banks. The coefficient of variation in the ratio for the old group was always found to be higher than the new group.

VI.0 HYPOTHESES AND MAIN DISCRMINANTS

A commonplace notion is that old and new banks are located in different regions of the country and hence do not compete among themselves. This implies that there exists market segmentation between the old and new banks. There appears to be a supposed localisation of banks because there may be natural proliferation of deposit holders in the regions contiguous to the banks. With proliferation of accounts and hence deposits, the total output of the bank will increase. This is one way of arguing that banks are localized and hence do not compete. However, in terms of impact on the total output, even a single advance provided to a non-contiguous region may be so sizable, that it may outweigh the total impact of a large number of localized depositors. Two other arguments may be provided to counter the idea that old banks are localised and do not compete with new banks. While advances of one bank could become deposits of other banks through credit creation mechanism, inter-bank transfers take place through an all India clearing system. These arguments militate against the idea that market segmentation exists between old and new banks. Thus it is clear that old and new banks, wherever they are located, do compete with each

other. This is also clear from the response of old banks to the competition that they had faced at the hands of the new banks.

After twenty years of state control, the banking industry was reformed through opening up to partial private ownership and entry of private sector banks. An appropriate work ethos is an essential ingredient of the success formula and new private banks were conceived to be in a better position to create an appropriate work ethos. New private sector banks would have less transaction cost which would facilitate speedy decision-making. New private sector banks will show considerable initiative and innovative ability to compete with public sector branch network. They could introduce new products with a view to capturing new savers. Their innovative ability would reflect itself both in the area of mobilization of resources and lending. In lending, new private sector banks would improve the case of access, by simplified banking procedures and practices. Flexibility would be an important advantage with the new banks. They would experiment with new techniques designed to reduce transaction costs and ensure better repayment performance. It appears that RBI expects new private banks to concentrate on the core of banking activities, although the core has not been defined.

Old private banks began and continue to function as community branches. They were nurtured and developed by particular communities. The source of their business was also large from their linkage to such communities[5]. While the old banks were patronised and nurtured by local businessmen, the new banks owe their origin to professional bankers, having close linkage with industry. The old banks were among the small regional banks, which escaped nationalization and sailed more through time.

[5] The only exception is Jammu and Kashmir bank, which has grown largely because business of the state government has been conducted almost entirely through this bank.

Regional concentration is their feature even now. A large number of them were established in Tamil Nadu and Kerala. Most banks have around 75% of their branches in the state they were founded in. All the old banks were born before independence and the new banks have started their operations as an aftermath of deregulation of the private banking sector. These two groups of banks are very much the products of different times. The difference in their management philosophy and conduct may be traced to the historical circumstances in which they were born.

Apparently, the old private sector banks have a wider branch network compared to both new private sector banks. However, small capital bases, regional nature of operations, technology profile and lower exposure to metros are their problems. On the other hand, the strength of old banks is a dedicated clientage with strong community sentiments. This could mean less importance of advertising for old banks.

The new banks targeted the upper middle class segment in the metros and sought to serve them with services comparable to foreign banks at prices less than those charged by them. Provision of better and cheaper services (for example ATM, internet banking and phone banking) needed sophisticated technology. It is a new technological paradigm[6], which has brought forward new opportunities for development of new products and service. New banks use electronics based production techniques, which are characterized by savings in terms of labour, fixed and circulating capital and energy saving, as well improvement in quality. A consideration of these characteristics makes it clear that electronics based production techniques are generally unequivocally superior to electromechanical ones,

[6] A technological paradigm defines contextually the needs that are meant to be fulfilled, the scientific principles utilized for the task, the material technology to be used. (Dosi, 1988)

irrespective of relative prices. Electronic technologies associated with superior techniques and pieces of equipment have appeared for new banks, like the other users' sectors, as "dropping from an exogenous domain".

New banks began their operations with number intangible assets like access to information technology, and reservoirs of organisational and managerial skills[7] and even brand name and goodwill in some cases. These intangible assets distinguish new banks quite clearly from their old rivals, and lend them special advantages over old firms that may get reflected in their scale of operations, advertising behaviour and profit margins. New banks mainly opened branches in metropolitan centers and port towns, targeted the richer segment of the society and sought to service them, with a large proportion of staff in the officer's category with the objective of carrying on profit-oriented banking. To serve the needs of their affluent and aspiring customers, they started building up product and service brands while most old banks were still offering generic products. They stipulated higher levels of minimum amounts to be maintained as deposits with them and charged relatively higher interest rates and service charges (e.g. credit cards etc) compared to old banks. The strategic advantages of these groups of banks are different. They optimize the use of their advantages in pursuance of their strategy, which result in differential conduct. The study compares the conduct of two groups of firms over a period of time.

Let us first look at some typical features of the old banks vis-à-vis the new banks.

[7] Professional bankers started a number of these banks and a few like IDBI Bank, ICICI Bank and HDFC bank. These banks had access to parental brand names and goodwill.

1. New banks have a larger proportion of branches located in metros

The new banks seem to have derived lessons from the history of the private sector banking in India. None of the old banks survived unless they came up in state capitals or big cities or shifted their bases to bigger towns. The low capital base and limited business opportunity of the banks in small towns and lack of courage to move into bigger towns have sealed the fate of these banks. The banks of the new breed chose bigger cities for their operations. They mainly opened branches in metropolitan centers, where there is high potential for large business growth. The regional characteristics of old banks are quite visible in their operations, and their branch network is confined to their state of origin.

2. New and old banks target different groups of consumers

The new banks stipulated higher levels of minimum amounts to be maintained as deposits with them and sought to service the needs of the affluent, aspiring and discerning customers. The old banks cater to the common people. They have stipulated a minimum balance of Rs 1,000, while the minimum balance for new banks is Rs 5000. An important difference between the two groups of bank relates to the segment of the population served. This is likely to have a bearing on their differential conduct.

3. Old banks have larger network of branches and hence use more labour and spends more on wages

Differences in the target group naturally lead to differences in the mode of servicing clients. The tangible advantages of the old banks include a larger network of branches and a strong customer base in their respective regions. Old banks possess a

larger network of branches and use proportionately more labour. The new banks on the other hand, rely more on modern methods of serving the clients rather than mere branch banking. They make more use of technology related services like telephone banking, Internet banking, call centers and ATMs. The marketing strategies of the new private sector banks include reliance on a smaller network of branches and manpower in order to create a host of technology led conveniences, which cannot be easily copied, by other local banks. They maintain high service levels and hard sell through well-trained sales teams.

4. There is greater reliance on information technology on the part of the new banks

The new banks possess certain strategic tangible advantages not possessed by its competitors and optimise their use in line with their strategy. Their tangible assets include widespread access to information technology. All new private sector banks have the state of the art technology and have begun providing improved customer service, flexible and customized products. Basic delivery channels like ATMs, call centers, Internet banking and tele banking started acting as product differentiators through quality of services offered. The old banks were slow to catch up with modern technology. The first old bank to provide the facility of Internet banking was Federal Bank. However, it could provide the service only as late as April 2000. The gap between the technology profile of the old and new banks is very glaring as the new banks entered the industry in 1995 with new technology.

5. New banks rely more on the use of brand names and advertising

ICICI bank and UTI bank started very aggressively campaigning for their high tech brands called "Infinity" and "I-connect". Global Trust bank, an erstwhile leading

private bank also began offering high tech products to stay in the competition. It was clear that the bank, which would reach the customers faster and service him better, would win the race. In order to build brand name advantages in an attempt to differentiate products from the competitors, the new banks entered in a big way into advertising campaigns. New banks produce technology-based products and services, differentiate products, constantly add new services and products and hence relies more on advertising compared to old banks. The intangible advantage of the old banks including the presence of a dedicated clientage creates a situation in which advertising is not a strategically important variable for them. By virtue of being community banks, they were practicing relationship finance since an era when such terms were not even coined.

The following hypotheses about old and new banks will be tested in this paper.

- The new and old banks constitute two strategic groups in the private banking industry in India.
- New banks entered the industry with innovation.
- Old banks have the advantage of larger network of branches compared to new banks.
- The non-performing assets of the new banks are lower than the old ones, because the new banks have been operating for a shorter period of time.
- A larger part of operating expenditure is spent on wages and salaries by old banks as compared to old banks.
- The average size of the new banks is less than the old banks in the initial period, but slowly the new banks will acquire larger average size in the later period by virtue of judicious use of their intangible assets.

- In an attempt to cope up with competition, the new banks stay trim, which is reflected in lower operational expenditure.
- Faced with competition from foreign banks and public sector banks, the new banks build up brand names, reflected in larger advertising expenditure.
- Reliance on information technology is greater on the part of new banks.
- Due to more exposure to metro, new banks will be more diversified and enjoy better spread compared to the old banks.
- Old banks were designed to serve the needs of local communities in towns. Thus it is expected that their capital base will be lower compared to new banks, which had to statutorily begin their operations with minimum Rs 100 cores.
- Old banks have a larger number of staff as well as a larger number of branches compared to new banks. Thus the ratio of staff to number of branches, as well as the ratio of wages and salaries to number of branches will be compared between old and new banks without any prediction.

VII.0 METHODOLOGY

The initial component of the methodology used in the study relates to ANOVA with replication. The basic idea behind use of ANOVA is to express total variation in the set of observations as a sum of few components, which may be attributed to specific sources of variation. In the present case, variation in the observation may arise due to firm effect, time effect and variable effect or due to interaction between any of the two effects. A part of the variation may be random as well. There will be no observable effect if variation in the data set is entirely random. The technique of ANOVA with replication can simultaneously take only two effects

out of three effects to be studied. Hence it has to be used twice for both groups of banks, because there are three effects. In both cases, the data set has to be arranged before conducting the exercise of ANOVA. In the first case, years are arranged as columns and firms are arranged as rows. This is designed to reveal time effect and firm effect and an effect due to interaction between the two, if any such effect is present. In the second case, the data set has to be reorganized, with variables as the columns and years as rows. This will reveal variable effect, time effect and an interaction effect between the two. These exercises are done separately for old and new banks. Thus, in total, there are four-exercises of ANOVA in the paper.

Secondly, a step-wise canonical discriminating analysis is used to compare old and new banks in terms of certain measures of conduct. This is followed by another similar exercise to compare the five largest old and new banks in terms of same variables.

The model used in conducting two way ANOVA with replication to reveal existence of firm and time effect in the observation set is given in (1) The other model used in conducting two way ANOVA with replication to reveal existence of time effect and variable effect is provided in (1).

$$X_{jkl} = \mu + \alpha_j + \beta_k + \gamma_{jk} + \varepsilon_{jkl} \qquad (1)$$

Here, X_{jkl} is an observation due to the k_{th} year (column), the j_{th} firm-group (row - block). The random variable X_{jk} is normally distributed across the grand mean μ with four additive effects;

i) α_j - the firm-group effect;

ii) β_k - the time effect;

iii) γ_{jk} - the group-time interaction effect; and

iv) ε_{jkl} - the random effect.

The random effect is normally distributed while the total variance (V) is

$V = V_R + V_C + V_I + V_E$

The total effect, V, is the sum of the firm-group effect (between firm-group variance (V_R)), the time effect (between time variance (V_C)), interaction effect (variance V_I) and the overall random variance $V_{E.}$ Their respective mean square errors were used to test whether either of these effects was statistically significant.

Similarly, the second model used in conducting two ways ANOVA with replication to reveal existence of time effect and variable effect is provided in (2).

$$X_{mnp} = \mu + \alpha_m + \beta_n + \gamma_{mn} + \varepsilon_{mnp} \qquad (2)$$

Here, X_{mnp} is an observation due to the n_{th} variable (column), the m_{th} year-group (row - block). The random variable X_{mn} is normally distributed across the grand mean μ with four additive effects;

i) α_m - the year-group effect;
ii) β_n - the variable effect;
iii) γ_{mn} - the group-variable interaction effect; and
iv) ε_{mnp} - the random effect.

In this case, the total variance is the sum of the year-group effect (between firm-group variance), the variable effect (between variable variance), interaction effect and the overall random variance. As earlier, their respective mean square errors were used to test whether either of these effects was statistically significant.

VIII.0 RESULTS

The results emerging from the ANOVA are reported in tables VIIIA, VIIIB, IXA and IXB. The first two tables reveal that firm effect, time effect and an interaction effects are present in the data set for both old and new banks. Table IXA shows that time effect, variable effect and their interaction effect characterizes the set of observations for old banks. Out of the above three effects, only two effects including variable effect and the time-variable interaction effect emerged significant for new banks, as revealed by Table IXB. With the exception of the time effect for new banks, all the other effects have turned out to be significant in the study. Existence of these effects reflects the complex dynamics of conduct and constitutes a sufficient reason for carrying on further analysis.

The exercises related to ANOVA are followed by a step-wise discriminant analysis conducted over a period of time from 1995-96 to 2001-02. Fourteen variables, as shown by table VII, are used in the analysis. The results of the analysis are reported separately for each year in tables XA, XB, XC, XD, XE, XF and XG. These results are also summarised in table IX for easy reference. Discriminant functions are able to classify 100% of the observations in all the years, from 1995-96 to 2001-02.

It is seen that the variable defined by wages, as a proportion to operational expenditure was higher for the old banks compared to new banks. This is in line with the hypothesis. With regard to size, spread and number of branches, there was no difference between the two groups. These results run counter to the hypotheses. The result with regard to the number of branches is a little perplexing as it goes against the common notion that while old banks rely on brick mortar technology, new banks

depend more on information technology. However, high density of population, higher per capita income as well as widespread banking habit in metros and big cities may have forced the new banks to have a branch network, similar to old banks.

New banks failed to emerge larger than their old counterparts, even when apparently they have better potential of growth. It seems that the current period is a transition period, during which the new banks are competing with the old ones to tighten their hold over the market. It is only after some time, size will emerge as a consistent discriminator between the old and the new banks.

In the current deregulated phase, the asset and liability side of the balance sheets of both groups of banks are under pressure. High prudential standards are forcing the banks to compete for quality borrowers in an attempt to improve their asset quality. Interest liberalization gives banks flexibility to offer borrowers more attractive interest rates. Quality borrowers are also demanding better terms because of competition among banks and because of the opening of domestic and foreign capital markets to look for cheaper funds outside the banking system. Bank margins are threatened as the quality clients get access to other sources, particularly international sources. With good corporates reducing their dependence on bank funds, the risk profile of the corporate business is rising even as the spreads get thinner. It is interesting to see that spread has failed to turn out as a significant discriminant between the old and new banks over the period covered by the thesis.

While the new banks are coping up with public sector banks as well as foreign banks in the metros, the situation is no better for old banks, whose traditional clientage consisting of second rung companies has been affected with the onset of industrial recession. It is only during 1996-97 and 2001-02, the ratio of net non-

performing assets as a proportion to net advances emerged smaller for the new banks. Despite being in existence for a very short period of time, the new banks did not enjoy any steady advantage over the old banks with regard to NPA accumulation and hence belied expectations pinned on them by the policy makers.

The data on the number of metro based branches, as a proportion to all branches was available only during 1995-96. This variable failed to turn out as a significant discriminant between the two groups, despite the fact that this variable is around fifth times compared to the new banks. This is not in line with the hypothesis. This may be attributed to high coefficient of variation in the said variable for the new banks. The variable related to advertising was captured in terms of two ratios: ratio of advertising expenditure to total expenditure and the advertising expenditure per branch. The first variable turned out to be a significant discriminant only in two years, 1996-97 and 1999-2000. On the other hand, the second variable emerged significant in all the years except the initial two years and the terminal year of the study. This is again not in line with the hypothesis according to which new banks are advertising-intensive entities. It only means that the old banks were not exclusively relying on their traditional clientage. They were also looking for new markets and in the process became equally advertising intensive as the new banks during larger part of the period under study. The old banks are reacting to new banks and hence an alternating pattern with regard to advertising has emerged. The study employed a variable, defined as a ratio of other income to total income, in order to indicate to diversification of the bank into non-funded business. The two groups emerged no different from each other in this respect, barring one exception. This implies that the extent of diversification of new banks was no more than their old counterpart. The extent to which new banks are exposed to the metropolitan cities may be clue to

diversification of new banks into fee-based business. But unfortunately, relevant time series data was not available. The variable related to modernization is proxied by other fixed assets as a proportion to number of branches. The result in this regard appears to be interesting. The advantage with regard to computerization was greater for the new banks for the first two years of the study after which it disappeared. Such advantage again appeared during the terminal year covered in the study. Clearly, the old banks had an initial disadvantage with regard to computerization in the initial years. To compete in the new scenario, they went for computerization, so much so that there was no difference between them and their new counterparts in this regard for a period of four years. It was only during 2001-02 that new banks regained their advantage on this front. A leaner structure in terms of lower operating expenditures as a proportion to total assets was hypothesised in the study. The result does not confirm the hypothesis. The greater vulnerability of the old banks as compared to new banks in terms of a lower capital to asset ratio was found to be true only during the first three years of the study. The variable failed to emerge as a significant discriminant from 1998-99 onwards. This may be attributed to the attempts on the part of the old banks to recapitalise themselves, in order to function in the new scenario. There were no specific hypotheses with regard to certain variables. They include wages per branch as well as staff per branches. The emergence of the first variable as significant discriminants during the period of the study was sporadic. But, staff per branch emerged as a significant discriminant during the major part of the study. It may be noted that a minimum of three variables always emerged as significant discriminants between the groups of old and new banks at any point of time. Some of the variables did emerge as discriminants, although not as consistently as other

variables. This is precisely the meaning of “variable effect”. Similarly “time effect” and “firm effect” are also responsible.

To sum up the results of the study, most of the variables have turned out to be significant discriminants between the two groups at one point or the other. A summary result of the study is that the ratio of wages to operational expenditure consistently turned out to be a significant between the two groups of banks. The average of the variable for the group of new banks was always less than that of the other group. Other variables, which emerged as significant discriminants during the greater part of the period covered under the study, include the ratio of advertising expenditure per branches and staff per branch. While the average of the first variable is greater for the group of new banks, the average of the second variable does not consistently favour one group or the other

It was hypothesised that the number of branches will emerge as a significant discriminant between the two groups. However, the results did not support this hypothesis. It may be argued that the variable may distinguish between large sized old and new banks, and not necessarily between the entire group of new and old banks. Accordingly, five largest firms were selected from both the groups and discriminant analysis with the same set of variables was performed. The principal hypothesis of the exercise is that a lesser number of variables would emerge as discriminant between the groups consisting of large old and new banks as compared to the entire groups of old and new banks. The results of the analysis are reported separately for each year in tables XIIA, XIIB, XIIC, XIID, XIIE, XIIF and XIIG. These results are also summarised in table XIII for easy reference. Here again, discriminant functions are able to classify 100% of the observations in all the years, from 1995-96 to 2001-02.

The number of branches appeared as a significant discriminant between two groups for the first five years under study and not thereafter. While, the top old banks initially had an advantage in terms of larger branch network, over time this advantage was neutralised as the new banks continuously increased their branch network over the period. The other significant result is that the variable wages as a proportion to operational expenditure emerged as a significant discriminant barring only one year. It may be mentioned that the same variable emerged significant when the entire group of old and new banks were compared. Over all, variables related to size, advertising expenditure, operational expenditure and modernisation did not emerge as significant. Spread and NPA also failed to emerge as significant discriminants. This has implications for performance, which is being studied in a later paper. Wages as a proportion to number of branches, number of staff as a ratio of number of branches and diversification did not emerge as significant discriminants excepting only one year. Very interestingly, the two groups emerge very similar to each other during the last two periods of study. Only one variable, wages deflated by operational expenditures turned out to be different between them.

Table XIV provides the number of discriminants between the entire groups of old and new banks on the one hand and only the top five largest old and new banks. A cursory look at the table reveals the following. First, the number of discriminants between the top two groups showed a tendency to fall over time. Secondly, the number of discriminants between the five largest old and new banks, in general, is lower than the number of discriminants between the entire group of old and new banks. A t test confirms that the average number of significant discriminants between the top old and new groups of banks is significantly lower compared to the significant discriminants between entire groups of old and new banks. The t test is depicted in

table XV. This implies that the top five largest old and new banks are more similar to each other compared to all the old and new banks taken together. This result is completely in line with the hypotheses.

The exercise was carried out over a period of time, so that it is possible to bring out the dynamic influences of entry of new banks on different aspects of conduct of the old banks. Since firms in an industry interact mutually, the conduct of old banks could be altered, through competitive and demonstration effects. It is apparent that the old and new banks learned from each other and changed their strategies in course of competition. As a result, discriminants between two groups changed over time, which reflected market dynamics. It may be seen from table 12 that non-price rivalry (captured by ratio of advertising expenditure to operational expenditure) was not significant to begin with. It turned out to be significant discriminant between the two groups in 1996-97. The variable failed to emerge as significant during 1997-98 and 1998-99 to emerge significant again in 1999-2000. After 1999-2000, it remained insignificant again. The emergence of advertising expenditure as a significant discriminant in 1996-97 is explained by the need on the part of the new banks to make their presence felt, in its initial period of existence, in a new industry, consisting of different types of competitors. During the next two years, the old banks also followed suit, in an attempt to defend their dwindling market share. Hence the variable failed to emerge as a Discriminant over these two years. During 2000, the new private banks started promoting their different brands of high tech banking. No wonder, the variable turned out to be significant in 1999-2000.

Similar phenomena may be observed with respect to modernisation. The ratio of other fixed assets to the number of branches appeared as a significant discriminant in the first two years of the study. Clearly, the new banks entered the industry with

information technology, in an attempt to cope up with rivals. In this scenario, the old banks were forced to go for new technology and the variable ceased to be a significant discriminant in the next four years, to reemerge only in 2001-02. Thus it is seen that the conduct of the new banks in terms of modernization and advertising had an impact on the conduct of the old banks. On the other hand, it may be argued that the five largest new banks imitated certain conduct of their old counterparts over the period covered by the study. During the first five years of the study, it is observed that that the old banks had enjoyed an advantage in terms of a wider branch network. However, the new banks increased their branch network at faster pace throughout the period, and during the last two years of the study, the advantage of the old banks relating to a wider branch network disappeared.

It may be useful to compare the strategy of the new and old banks both at the bank and the branch level. This is provided by table XVIA and table XVIB. Discriminant analysis has used a number of variables at branch level including advertising, technology, staff and expenditure on wages. It is seen that despite of differences in certain strategies adopted by the two groups of banks, they follow similar strategies relating to branch network, operational expenditure, size and spread. On the other hand, difference between the two groups with regard to their strategy is most signficant at the branch level. The Table XVIB reveals while there are as many as four similarities in the strategy of old and new banks at the bank level, there is no similarity in strategic behaviour of these groups of firms. Thus while at the bank level, similar strategies are adopted by the two groups of banks, they distinct strategies at the branch level.

IX.0 SUMMARY AND CONCLUSIONS

The paper refined the conventional S-C-P paradigm by including the possibility of strategic groups within its ambit in an attempt to explain conduct of private banks. Firstly, ANOVA exercises revealed that the dynamics of conduct of old and new groups of banks is complicated enough to need further analysis. This was followed by step-wise discriminant analysis at seven points of time, from 1995-96 to 2001-02. It is found that new and old banks constitute two strategic groups in the private banking industry in India. The most consistent discriminant turned out to be expenditures on wages and salaries deflated by operating expenditure. It may also be argued that expectations of the policy makers are only partially fulfilled. The new banks entered with innovation in the form of modern technology. This is in line with contention of Schumpeter and Hawtrey. It was clear from the fact that new banks enjoyed a significantly higher ratio of other fixed assets to total assets for the first two years of the study, after which this advantage was lost to old banks. This must augur well for the industry. However, there are some weak spots. The expectations of a leaner structure for the new banks were belied. New banks were not found to different from the old banks so far as the ratio of operating expenditure to total expenditure is concerned. The spread management capability of the new banks was not found to be better than their old counterparts. Clearly, the new banks could not achieve a cutting edge over their old rivals in a scenario of deregulation of rate of interest ushered in by the recommendations of Narasimham Committee. The extent of diversification of the new banks was found to be no different compared to the old ones. It should be pointed out that the conduct of the new banks were found similar to the old ones in respect of three important parameters: spread, operating cost and diversification. The weakest point of new banks relates to NPA. Since new banks started from a clean slate, it is

perplexing to discover that they do not enjoy a stable advantage over the old banks with regard to NPA. New banks are not in operation for a very long period of time, unlike their old counterparts. However, there was no difference between the two groups with regard to NPA during major part of the period covered in the study. The study generated some evidence against the commonplace notion that old banks depend more on branch networks, as compared to the new ones. The study finds that the discriminants between the old and new banks have been changing, reflecting firm effect, variable effect and time effect. Lastly, the empirical evidence on the comparative conduct of new and old banks in two areas has critical bearing on developments in the industry. They include technology, product differentiation and expenditure on wages.

We have a rare observation with regard to entry in the banking industry in India. The environment of deregulation, by itself, did not precipitate the formation of strategic groups. It only permitted entry. The formation of two groups was not contingent upon the opening up of private banking industry. It was only a historical accident in the form of a change in basic conditions, which gave rise to the possibility of two strategic groups in private banking in India: old and new. But it is pursuance of the respective strategies that has led to sustenance of two strategic groups and to healthy competition amongst the two groups.

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