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Strategic posture and financial performance of the banking industry in California: A strategic management study

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STRATEGIC POSTURE AND FINANCIAL PERFORMANCE OF THE BANKING INDUSTRY IN CALIFORNIA: A STRATEGIC MANAGEMENT STUDY

A Dissertation
Presented to the
Graduate Faculty of the
School of Business and Management
United States International University

In Partial Fulfillment
of the Requirements for the Degree of
Doctor of Business Administration

by
Alfred Olanrewaju Lewis
San Diego, 1989

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DEDICATION

To the Almighty, for his love and goodness;

To my parents-words are inadequate to express my gratitude;

To my wife, Sylvia, for the love, support, and patience.

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Chapter 1

THE RESEARCH PROBLEM

The environment of the banking Industry in the United States had been transformed from a fairly stable environment to a rapidly changing and highly competitive environment as a result of new challenges posed by new entities in the finance industry as well as by global banking operations. Established banking practices were conflicting with high-technology computer-driven techniques being used by institutions not bound by government regulations to which banks had to adhere.

At the time of this study, bank profits were at their lowest in 15 years due to a steady erosion of banks' profit base. From 1981 to the third quarter of 1986, return on assets for all banks dropped from .76 percent to .68 percent. Furthermore, since 1980, the banks' share of all financial assets had fallen from 35 percent to 32 percent by the end of 1985. New financial instruments that turn assets into securities, such as mortgage backed by certificates of automobile receivables were cutting out the banks' traditional roles as middlemen.

Bank failures had been on the rise since the deregulation that occurred in 1982. The number of bank failures is illustrated below on Table 1.

Table 1

Number of Bank Failures - 1983 to 1988

1983	1984	1985	1986	1987	1988
48	79	120	138	141	221

Basic Data: Federal Deposit Insurance Corporation.

William Seidman, the chairman of the FDIC expected bank failures to exceed 200 if the pace continued. The high rate of bank failures exerted a tremendous strain on the reserves of the FDIC, since the FDIC guaranteed deposits at insured banks for up to $100,000 each.

Robert Shapiro, the chairman of the Securities Industry Association observed that every bank failure led to a loss in confidence. Arthur Soter, senior banking analyst at Morgan Stanley & Company, a New York investment-banking firm helped to summarise the problem, saying these were tough times to be a bank manager.

This new and continually changing environment in which banks had to operate brought about major departures from the previous way of doing business, by forcing management to seriously rethink overall goals, strategies, and operations in order to remain viable. A number of studies had been conducted during the decade preceding this study in order to investigate the strategic behavior of firms according to Ansoff's theory (1979). The studies attempted to measure the differences between the environmental turbulence, aggressiveness of strategy, and general mangement capability of the firm, using one or more of the three variables in relation to financial performance. A study of the strategic posture analysis of banks might help in an understanding of the banking industry.

The framework of this study was based on a model developed by H.I. Ansoff (1984), entitled "Strategic Posture Analysis"; it is an extension of an earlier model developed by Chandler (1962). A firm's strategic posture is made up of three elements, namely: level of environmental turbulence, aggressiveness of strategy, and general management capability.

Environmental turbulence was defined as the level of changeability of the environment in which an Environment Serving Organization (ESO) operates, the discontinuity of events combined with the speed at which the events surface and develop in the environment. Strategic aggressiveness was defined as the degree of discontinuity (changes) between successive moves by a firm. A strategic move is the process within a company which lasts from conception to the point of establishment of a new product/service in a strategic business area, or a change in the firm's competitive strategy in a business area.

General management capability refers to the capability of the management groups and individuals responsible for the overall success of all or a part of the firm. General management capability can be sub-divided into two parts: the human and the systems. The human is composed of culture, mentality and overall qualifications of the managers. The system includes structure of the organization, rewards and incentives, information and planning systems being used. The general management capability is the driving force that causes the change and adjustment of the corporate strategic behavior to occur in accordance with the environment.

The purpose of this study was to examine the strategic posture of banks in San Diego, California and its relation to their financial performance. Another aim of the study was to test the applicability of the model in a service-based industry. Questions were formulated to assess the following: top management's perceptions of the level of environmental turbulence in the banking industry, expert outside observers' perception of pre-deregulation level of environmental turbulence, expert outside observers' perception of the level of turbulence, top management's perceptions of aggressiveness of strategy, top management's perceptions of general management's capability, the financial performance of the bank, as well as the relationships between the elements of strategic posture and performance measures. Figure 1 illustrates the components of strategic posture. The questions were as follows:

Q.1 What is the difference between outside observers' perceptions of the post-deregulation level of environmental turbulence and the bank managers' perceptions of the post-deregulation level of environmental turbulence when both are measured on a five-point Likert scale?

Q.2 What is the difference between bank managers' perceptions of post-deregulation level of environmental turbulence and their perceptions of post-deregulation aggressiveness of strategy when both are measured on a five-point Likert scale?

Q.3 What is the difference between bank managers' perceptions of the post-deregulation level of environmental turbulence and their perceptions of the level of post-deregulation general management capability when both are measured on a five-point Likert scale?

Figure 1. Strategic Posture Components.

ATTRIBUTES/ LEVELS	1	2	3	4	5
Environmental Turbulence	Repetitive	Expanding	Changing	Dis-Continuous	Surprise-ful
Aggressiveness of Strategy	Stable	Reactive	Anti-cipating	Exploring	Creative
General Management Capability	Custodial	Production	Marketing	Strategic	Flexible

Source: H. I. Ansoff, Implanting Strategic Management (1984).

Q.4 What is the difference between the pre-deregulation level of environmental turbulence as perceived by the bank managers and:

a. Expert outside observers' perceptions of the pre-deregulation level of environmental turbulence?

b. Bank managers' perceptions of pre-deregulation level of aggressiveness of strategy?

c. Bank managers' perceptions of pre-deregulation level of general management capability?

Q.5 What is the difference between bank managers' pre-deregulation and post-deregulation perceptions of the three elements of the strategic posture?

Q.6 What are the relationships between the eight financial performance variables and the following:

6.1 Each of the six elements of the strategic posture?

6.2 Each of 30 sub-elements of strategic posture?

6.3 Strategic gaps: turbulence, strategy, capability, strategy/capability, and total gap?

Delineation

The research examined the strategic posture of banks by determining top managers' perceptions of the level of environmental turbulence in which they operated, of aggressiveness of strategy, and of general management capability. The relationships of these to financial performance were then examined. The research examined mismatches or gaps in the banks' strategic posture profile in order to achieve a better understanding of the problems plaguing the banking industry. The banks that were studied were in San Diego, California.

Three independent variables, seven dependent variables, and five intervening variables were considered.

The three independent variables were as follows:

1. Perceived level of environmental turbulence.
2. Aggressiveness of strategy, which is made up of two elements:
    a) Aggressiveness of bank's marketing strategy as perceived by bank managers.
    b) Aggressiveness of bank's innovation strategy as perceived by bank managers.
3. Openness of capability, which contained three elements:
    a) Manager's profiles.
    b) Organizational structure.
    c) Characteristics of the system.

The elements were constructed with the aid of the responses provided by the bank managers.

The seven dependent variables which measured financial performance were divided into three categories, as follows:

a) Overall financial performance measures.

b) Operating financial performance measures.

c) Strategic financial performance measures.

The intervening variables are the strategic gaps, which are differences or mismatches in the strategic posture profile, as defined on a five-point Likert scale.

The intervening variables were as follows:

a) Gap between outside observers' perceived level of environmental turbulence and bank managers' perception of the level of environmental turbulence.

b) Gap between bank managers' perceived level of environment turbulence and their perception of their aggressiveness of strategy.

c) Gap between bank managers' perceived level of environmental turbulence and their perception of general management capability.

d) Gap between bank managers' perceived level of aggressiveness of strategy and their perception of general management capability.

e) Total gap: this is the average of gaps a, b, and c above.

The data were obtained from senior executives or executives in charge of major divisions, of 22 banks in San-Diego.

Objective financial data were obtained from financial statements and public domain records.

Theoretical Perspective

This study examined the relationships among the level of environmental turbulence, the level of aggressiveness of strategy, the level of general management capability, and the firm's financial performance.

Various research studies have been conducted on one or more of the above variables in order to gain better insights regarding the behaviors of firms (Ansoff, 1979; 1984; Bourgeois, 1980; Chandler, 1962; Drucker, 1979; Leontiades, 1980; Steiner, 1983).

This study was based on one of the strategic success hypotheses. The hypothesis states that "an organization will be successful if environment, response, culture, and capability match each other" (Ansoff,1979:3). The theory of strategic management attempts to provide insights into managerial issues such as: behavioral patterns of environment-serving organizations, success and failure factors of environment-serving organizations, processes of transition by which environment-serving organizations shift from one style to another, and matching the shift from one style to another, and matching the environment, culture, response and capability of the environment-serving organization to each other in order to ensure success. The theory of strategic management is a synthesis of other disciplines, described by Ansoff (1979:3) as follows:

> The theory is multi-disciplinary in the sense that it seeks an optic appropriate to the problem and not to a particular scientific discipline. There are two paths to such an optic. One is to attempt an integration of the available disciplinary insights into a coherent whole. The other is to work back from the "real world" problem, abstract the features which appear critical to explanations of behavior, and then selectively borrow from theoretical insights which may be available.

H. I. Ansoff constructed the second part of the theory in his book Strategic Management (Ansoff, 1979). Strategic Management theory encompasses a wide scope of possible associations between and/or among seven elements. The elements include environmental turbulence, strategic thrust, culture, competence, power structure, strategic behavior, and strategic leadership. This study utilizes the concept of "strategic posture analysis" (Ansoff, 1984). The analysis requires an examination of the level of environmental turbulence, level of aggressiveness of strategy, and the level of general management capability. Optimum performance will occur whenever three elements mentioned above match each other on a a "five point scale of matching triplets."

Research Hypotheses

This study investigated the following two research hypotheses:

H.1a Performance is negatively related to the extent of the difference between aggressiveness of strategy and the prevailing level of environmental turbulence.

H.1b Performance is negatively related to the extent of the difference between general management capability and the prevailing level of environmental turbulence.

H.1c Performance is negatively related to the extent of the difference between the sum of aggressiveness of strategy and general management capability and the prevailing level of environmental turbulence.

H.2 Performance is negatively related to the extent of the difference between the bank managers' perceptions of the level of environmental turbulence and the outside observers' perception of the level of environmental turbulence.

This study investigated seven financial measures with emphasis on the examination of the above-stated two hypotheses which were derived from Ansoff's theory of strategic management.

Variables and Relationships

Three types of variables were utilized in this study. There were three independent variables, seven dependent variables, and five intervening variables.

Independent Variables

The three independent variables were:

1. Levels of environmental turbulence as perceived by:
   a. Expert outside observers.
   b. Bank managers.
2. Aggressiveness of strategy as perceived by:
   a. Bank managers.
3. Openness of capability as perceived by:
   a. Bank managers.

The first independent variable was the mean response value for the total of five characteristics of the level of environmental turbulence. The second independent variable was the mean response value for the total of 10 attributes of the aggressiveness of strategy. The third independent variable was the mean response value for the total of the 10 components of capability.

Dependent Variables

The seven dependent variables were classified into three types of measures as follows:

Overall Performance Measures:

1. Return on equity.
2. Return on assets.

Operating Financial Measures:

3. Ratio of expenditure to net income.
4. Profit margin.

Strategic Financial Measures.

5. Equity utilization.
6. Assets utilization.
7. Ratio of loans to deposits.

The dependent variables were the financial measures of the banks over a six-year period (1980-1986).

Intervening Variables

The intervening variables used in this study were the strategic gaps or differences between the independent variables. Emory (1980) defined an intervening variable as a conceptual mechanism through which the independent variables affect the dependent variables. There were five intervening variables as follows:

a) The gap between outside observers' perceived levels of environmental turbulence and bank managers' perception of the level of environmental turbulence.

b) The gap between bank managers' perceived levels of turbulence and their perceived levels of aggressiveness.

c) The gap between bank managers' perceived levels of turbulence and their perceived levels of general management capability.

d) The gap between bank managers perceived levels of strategic aggressiveness and their perceived levels of general management capability.

e) Observers' total gap: the mean of the gaps between

i) outside observers' perceived level of environmental turbulence and bank managers' perceived level, and

ii) outside observers' perceived level of environmental turbulence and bank managers' perceived level of aggressiveness of strategy, and

iii) outside observers' perceived level of environmental turbulence and bank managers' perceived level of general management capability.

Research Questions

The six research questions utilized in this study were as follows:

Q.1. The first question required the examination of outside observers' and top management's perception of the level of environmental turbulence. An instrument developed by Ansoff (1984) was utilized. Level of Environmental Turbulence was defined as changeability in an environment characterized by the degree of novelty and challenges, and the speed and rapidity with which they occurred. In specific terms, this involved:

1. Familiarity of events in the environment.
2. Difference between succeeding strategic moves within a strategic business area.
3. Difference in capability required for response to successive moves.
4. Changes in the economic, technological, cultural, socio-political and competitive environment.

Each of the characteristics of the level of environmental turbulence is illustrated in Figure 2. The horizontal axis is made up of a five-point scale containing five descriptive factors of the elements, namely: repetitive, expanding, changing, discontinuous, and surpriseful. An interval scale was used for measurement. The vertical axis is made up of five characteristics as follows:

1. Familiarity of events: events which occur in the bank's environment.

   a. Nothing really changes much in the environment.
   b. Changes merely repeated experience.
   c. Changes were incremental but understood in terms of historical development.

Figure 2. LEVELS OF ENVIRONMENTAL TURBULENCE

Level of growing Environmental Turbulence	Repetitive	Expanding	Changing	Dis-continuous	Sur-priseful
1. Familiarity of events.	Very familiar	Repetition of experience	Understood in terms of history	Understood in terms of experience	Unfamiliar experience
2. Rapidity of change	Much slower than bank's response	Slower than bank's response	Comparable to bank's response	Shorter than bank's response	Big lag in bank's response
3. Visibility of the Future	Expected to remain unchanged	Predictable by extrapolation	Forseen by analysis of threats & oppt.	Difficult to predict	Unpredictable surprises
4. Business Scope	Local	Statewide	Regional	Nationwide	Global
5. Decision-Making in terms of:	<----------------IMPORTANT----------------> LOW				HIGH
A. Economic Changes.	1	2	3	4	5
B. Technological changes	1	2	3	4	5
C. Socio-political changes	1	2	3	4	5

Source: H. I. Ansoff, Implanting Strategic Management (1984).

d. Changes were discontinuous but explainable if thoughts were oriented towards experience.

e. Changes were new and not experienced before.

2. Rapidity of change: the comparison between the speed of environmental change and the speed of the bank's response. The speed of environmental change was

a. Much slower than the bank's speed of response.

b. Slower than the bank's speed of response.

c. Comparable to the bank's speed of response.

d. Shorter than the bank's speed of response.

e. Much shorter than the bank's speed of response.

3. Visibility of the future: the bank's ability to predict events that are likely to occur in the environment, any of the following:

a. Predictable from experience.

b. Forseeable by extrapolation.

c. Foreseen through analysis of threats and opportunities.

d. Difficult to predict.

e. Unpredictable and surpriseful.

4. Business scope: the geograhical boundaries in which the bank does business, any of the following:

a. Local.

b. Statewide.

c. Regional.

d. Nationwide.

e. Global.

5. Decision-making: the decision-making process of banks' in terms of:

a. Economic changes.

b. Technological changes.

c. Socio-political changes.

The second question required the examination of the bank managers' perception of their aggressiveness of strategy. An instrument containing the two elements of aggressiveness of strategy was developed based upon a previous instrument of Ansoff (1984). Strategic aggressiveness was defined by H. I. Ansoff (1984:475) as "degree of discontinuity between successive strategic projects."

The elements were as follows:

1. Aggressiveness of innovation strategy.
2. Aggresssiveness of marketing strategy.

The elements were demonstrated through tabular analysis in Figures 3 and 4. A five-point scale consisting of the following levels : stable, reactive, anticipatory, exploring and creative is contained on the horizontal axis. The elements were measured respectively by 1, 2, 3, 4, and 5 on an interval scale. The vertical axis is made up of the five attributes of the first element, and five attributes of the second element depicted on Tables 4 and 5 respectively. The elements were defined as follows:

Aggressiveness of innovation strategy was defined as the degree of discontinuity between successive research and development projects, represented by the following attributes:

1. Responsiveness to customers: the strategy utilized for responding to customers' needs. This can be:

    a. Customers are neglected.

    b. The product is what the customer wants.

    c. The bank anticipates customer needs.

    d. The bank identifies unfulfilled customer needs.

    e. The bank identifies latent customer needs.

2. Market development: the strategy utilized for developing the bank's market share.

    a. Sticking to customers.

    b. Following competitors.

    c. Expanding to familiar markets.

    d. Expanding to foreign markets.

    e. Creating new markets.

3. Frequency of new product introduction: the frequency of introducing new bank services to the market.

    a. Very low.

    b. Low.

    c. Moderate.

Figure 3. AGGRESSIVENESS OF INNOVATION STRATEGY

Aggressiveness of innovation strategy	STABLE	REACTIVE	ANTICIPATING	EXPLORING	CREATIVE
1. Responsive-to customers	Neglect	Our product is what the customer wants	Anticipation of needs	Identifica-ition of unfulfilled needs	Identifi-cation of unfulfill-ed needs
2. Market Development	Stick to our customers	Follow competitors	Expand to familiar markets	Expand to foreign markets	Create new markets
3. Frequency of new service introduction	Rare	Low	Moderate	High	Very high
4. Role of R. & D. department	Seen but not heard	Called in whenever the need arises	Support of marketing	Source of new products	The Elite
5. Focus of research	Little or no research	Imitate competition	Improve existing services	Adoption of emerging services	Pioneer new services

Source: H. I. Ansoff, Implanting Strategic Management (1984).

d. High.

e. Very high.

4. Role of research and development department: the activities initiated by the research and development department of the bank.

a. Little or no research and development.

b. Research and development called in when necessary.

c. Research and development provides support for marketing department.

d. Research and development is a source of new products.

e. Research and development is the elite.

5. Service development: the bank's focus on new service development.

a. No service development.

b. Imitation of services emerging elsewhere.

c. Improvement of existing services.

d. Development of new services as needed.

e. Pioneering new services

Aggressiveness of bank's marketing strategy: the degree of discontinuity between successive marketing projects represented by the following attributes:

1. Sales aggressiveness: the degree of intensity in

selling the bank's product and services.

a. Very low.

b. Low.

c. Moderate.

d. High.

e. Very High.

2. Responsiveness to competition: the strategy utilized by the bank in response to competition.

a. Does not compete.

b. Responds to aggression.

c. Positions the bank appropriately.

d. Leads the pack.

e. Provides own competition.

3. Market share: strategy used by the bank to expand share of the market.

a. Holding own.

b. Defending.

c. Increasing.

d. Controlling.

e. Dominating.

4. Role of marketing department: the activities initiated by the marketing department of the bank.

a. Making services available at the market place.

b. Convincing existing and potential customers that bank's services were superior.

Figure 4. AGGRESSIVENESS OF MARKETING STRATEGY

Aggressiveness of marketing strategy	STABLE	REACTIVE	ANTICIPATING	EXPLORING	CREATIVE
1. Sales aggressiveness	Very Low	Low	Moderate	High	Very High
2. Responsive-ness to competition	Does not compete	Responds to competition	Positioning	Lead the pack	Provides own compe-tition
3. Market share	Growing	Defending	Increasing	Controlling	Dominate
4. Role of marketing department	To sell the ser-vices of the bank	To convince customers our service is superior	To serve the customers	To establish the bank as a leader	To estab-lish the bank as an innovator
5. Promotion and adverrtising	Bank's services speak for themselves	Similar to that of competitors	Aggressive, anticipates new trends	Provides an edge on competition	Creative, starts new trends

Source: H. I. Ansoff, Implanting Strategic Management (1984).

c. Influencing service development to be responsive to customer needs.

d. Establishing the bank as a marketing leader.

e. Establishing the bank as a marketing innovator.

5. Promotion and advertising: the strategy utilized by the bank in its promotion and advertising.

a. Not important.

b. Reactive.

c. Aggressive.

d. Advanced

e. Creative.

The third research question required the examination of banks' top management perceptions of capability. General management capability was defined by H. I. Ansoff (1984:475), as the "capability of the units charged with general management responsibility." The capability of general management is also its propensity and its ability to engage in behavior which will optimize attainment of the firm's near and long term objectives. Three elements of capability were developed with the aid of an instrument developed by Ansoff (1984). The elements were as follows:

1. Managers' profiles.
2. Organizational structure.
3. Characteristics of the systems.

The above elements are shown in Figures 5, 6 and 7. The horizontal axis is composed of a five-point scale of general mangement capability containing five factors that describe the three elements. The five factors were: custodial, production, marketing, strategic, and flexible.

1. Custodial: management capability operating in a closed system, oblivious to change.

2. Production: management capability seeking efficiency in the process of adapting to change.

3. Marketing: management capability that utilizes the synergistic approach to seek familiar change.

4. Strategic: management capability that utilizes a more global approach for effectiveness while seeking change.

5. Flexible: management capability operating in a wide open system, seeking novel and creative changes.

The elements of general management capability are described as follows:

<u>Managers</u>' <u>profiles</u>: consists of the following four components:

1. Risk propensity: bank management's propensity to accept risks.

   a. Rejecting risk.

   b. Accepting familiar risks.

   c. Seeking familiar risks.

Figure 5. General Management Capability: MANAGERS' PROFILES

Managers Profiles	CUSTODIAL	PRODUCTION	MARKETING	STRATEGIC	FLEXIBLE
1. Risk Propensity	Reject	Accept familiar risks	Seek familiar risks	Seek unfamiliar risks	Seek novel risks
2. Problem solving	Trial & error	Diagnostic	Optimization	Search for alternatives	Create alternatives
3. Knowledge	Internal politics	Internal operations	Traditional markets and competitors	Global opportunities	Emerging environment
4. Model of success	Stability	Service efficiency	Responsiveness to markets	Strategic positioning, balanced portfolio	Technological activity

Source: H. I. Ansoff, Implanting Strategic Management (1984).

d. Seeking unfamiliar risks.

e. Seeking novel risks.

2. Problem solving: bank managers' method of solving problems.

a. Trial and error.

b. Diagnosis.

c. Choosing among existing alternatives.

d. Searching for new alternatives.

e. Creating alternate solutions.

3. Knowledge: the knowledge required by the bank management for conducting business. Knowledge of:

a. Internal politics.

b. Internal operations.

c. Traditional markets.

d. Global opportunities.

e. Changes in the environment.

4. Model of success: the bank management's model of success.

a. Stability.

b. Service efficiency.

c. Responsiveness to market and competitive differentiation.

d. Strategic positioning, balanced portfolio.

e. Creativity.

Organizational structure: is composed of the following elements:

1. Organizational form: the form adopted in the bank.
   a. Fluid.
   b. Flexible.
   c. Hierarchical.
   d. Functionally structured.
   e. Requirement structured.

2. Managers' function: the role of managers in the various divisions. Managers are:
   a. Held on a tight rein.
   b. Accountable for specific goals.
   c. Accountable for general goals.
   d. Assigned a field of opportunities.
   e. Left free to create and exploit new opportunities.

3. Power center: the dominant power base in the bank. The main power base is:
   a. No dominant power.
   b. The retail division.
   c. The investment division.
   d. The corporate division.
   e. The general management.

Characteristics of the system: is composed of the following elements.

1. Informal decision-making process: the speed of the

Figure 6. General Management Capability: ORGANIZATIONAL STRUCTURE

Organizational structure	CUSTODIAL	PRODUCTION	MARKETING	STRATEGIC	FLEXIBLE
1. Organizational form	Fluid	Flexible	Hierarchical	Functionally structured	Requirement structured
2. Managers' function	Held on tight rein	Accountable for specific goals	Accountable for general goals	Assigned a field of opportunities	Free to create and exploit
3. Power center	No dominant power	Retail division	Investment division	Corporate division	General mgmt.

Source: H. I. Ansoff, Implanting Strategic Management (1984).

decision-making system in the bank.

a. Extremely slow.

b. Slow.

c. Moderately paced.

d. Fast.

e. Very fast.

2. Management system: management system utilized by the bank. Use of:

a. Policy and procedure manuals

b. Capital budgeting.

c. Long-range planning.

d. Strategic planning.

e. Strategic issue analysis/crisis management.

3. Problem-Solving: the change trigger that activates management's response to problem(s). Problems are solved in response to:

a. An immediate crisis.

b. Accumulated evidence.

c. Anticipated threats.

d. Anticipated threats and opportunities.

e. New breakthroughs.

The fourth research question required the examination of the difference between the first, second, and third independent variables for the period before deregulation of the banking industry. Operational definitions are the

Figure 7. General Management Capability: CHARACTERISTICS OF THE SYSTEM

Characteristics of the system	CUSTODIAL	PRODUCTION	MARKETING	STRATEGIC	FLEXIBLE
1. Informal decision-making process	Extremely slow	Slow	Moderately paced	Fast	Very fast
2. Management system	Policy & procedure manuals	Capital budgeting	Long range planning	Strategic planning	Strategic issues & crisis mgt
3. Change trigger	Immediate crisis	Accumulated evidence	Anticipated threats	New opportunities	New breakthroughs

Source: H. I. Ansoff, Implanting Strategic Management (1984).

same for Research Questions One, Two and Three.

The fifth research question required the examination of the differences between the pre-deregulation and post-deregulation independent variables as perceived by the bank managers.

The sixth research question required the examination of banks' financial performance (dependent variables) in relation to the elements and sub-elements of the independent variables as well as the strategic gaps (intervening variables).

The seven variables were grouped into three catagories as follows:

A. <u>Overall performance measures</u>.

1. Return on equity - measures profits generated per dollar of bank capital. It is derived by the following equation:

   Return on equity = Net income/Equity.

2. Return on assets - measures the profits generated per dollar of the bank's assets. It is derived by the following equation:

   Return on assets = Net income/Total assets.

B. <u>Operating financial measures</u>.

3. Expenditure to net income - measures the relation-

ship between the expenses of the bank and its net income. It is derived as follows:

Expenditure to net income = Total expenditures/Net income.

4. Profit Margin - measures the profitability of the bank. It helps to differentiate high/low performing banks. It is derived as follows:

   Profit margin = Net income/Revenue.

C. <u>Strategic financial measures</u>.

5. Loans to deposits - measures the amount of loans advanced by the bank in relation to its deposits. A high ratio makes the bank relatively illiquid whilst a low ratio suggests inefficient use of deposits. It is derived by the following equation:

   Loans to deposits = Total loans/Total deposits.

6. Equity utilization - measures the turnover rate of the owners/shareholders investment. It is derived as follows:

   Equity Utilization = Revenue/Equity.

7. Assets Utilization - measures what the bank can generate per dollar of its assets. It is measured as follows:

Assets utilization = Revenue/Total assets.

Criteria for Data Sources

The criteria for the data sources were divided into two sections. The first criteria were for the banks, and the second were for the expert outside observers.

Criteria for the First Data Sources - BANKS.

1) Banks were required to be be FDIC-Federal Deposit Insurance Corporation insured.
2) The location of the banks was San Diego, California.
3) Subjective data were to be obtained from senior executives, or executives in charge of major divisions.
4) Objective financial data were to be obtained from financial statements of the banks and public domain financial records.
5) The period under study was December 1983 to December 1986.

Criteria for the Second Data Sources - OUTSIDE OBSERVERS.

Expert Outside Observers: These were composed of -

a) Financial Columnists/Journalists.

b) Financial Consultants.

c) American Banker Publications Executives.

d) FDIC Officials.

e) Retired Bankers.

A sample of 15 outside observers (not directly involved with any of the banks being studied) selected according to the above criteria was used.

Background

The banking industry in the United States had been transformed from a fairly stable environment to a rapidly changing and highly competitive environment as a result of new challenges posed by new entities in the finance world and competition brought about by global banking. Old-fashioned bank methods seemed to be losing to high-technology computer-driven techniques being used by institutions not bound by government regulations that banks had to adhere to.

Bank profits were at their lowest in 15 years due to a steady erosion of banks' profit base; from 1981 to the third quarter of 1986, return on assets for all banks dropped from .76 percent to .68 percent. Furthermore, since 1980, the banks' share of all financial assets had fallen from 35 percent to 32 percent by the end of 1985. New financial instruments that turn assets into securities, such as mortgage backed by certificates of automobile receivables were cutting out the banks' traditional roles as middlemen.

This new and continually changing environment in which banks had to operate was bringing about major departures from the prior way of doing business, by forcing management to seriously rethink their way of doing business in order to remain viable. Furthermore, bank failures were at an all time high; hence, a study of the banking industry's strategic posture was deemed to be of assistance to practicing bank managers in their response to the discontinuity being encountered in the industry's environment.

Various studies in the field of strategic management have been conducted similar to the purpose of this research. H. I. Ansoff (1984) developed a model that can be adapted in the study of any organization. This model, termed as Strategic Posture Analysis, is used to diagnose:

a) the current or the future level of environmental turbulence of a single firm or an industry,
b) the current or the appropriate level of aggressiveness of strategy and,
c) the current or the appropriate capability that will match the two levels stated above.

The resultant hypothesis of strategic posture analysis according to H. I. Ansoff (1979, 1984) is that optimum performance will be achieved when the level of environmental turbulence, aggressiveness of strategy, and capability are aligned.

Other studies have investigated issues that are related to the present area of concern in an effort to further understanding. Wood and LaForge (1979) examined the relationship between "comprehensive planning" and "financial performance" of large American banks, and Smart and Vertinsky (1984) examined four types of strategies which were employed in responding to environmental challenges in ninety-four firms engaged in various functions. Salameh (1987) studied the relationship between the strategic posture and the financial performance of banks in a developing high-income oil-exporting country in the United Arab Emirates. Chabane (1987) studied restructuring and performance in Algerian state-owned enterprises. Sullivan (1987) studied the relationship between proportion of income derived from subsidy and strategic performance.

The hypotheses developed for this study are supportive of previous research as well as a further extension. This study provides a dynamic perspective of the strategic posture analyis as well as a further validation of the strategic success hypothesis developed by H. I. Ansoff (1984).

Summary

This chapter stated the purpose of this study, which was to examine the relationship between the strategic posture and the financial performances of banks in

California. The study involved the examination of banks' financial performance as related to gaps between bank managers' perceptions of the levels of environmental turbulence, their perceptions of aggressiveness of strategy, and their perceptions of general management capability. Six research questions were formulated for the study. Operational definitions were formulated for all the variables and terms used in study. The criteria for the selection of data sources were presented. The research approach was descriptive-correlational and descriptive-elemental. The chapter concluded with a section on the background of the research problem.

Chapter 2

REVIEW OF SELECTED LITERATURE

This chapter provides a review of literature related to strategic management and performance of organizations. The review is made up of four parts. The first part of the review examined studies in strategic management and planning. The second part addressed studies conducted on the environment, the third part was on the element of strategy. The fourth part examined studies conducted on general management capability as well as studies that dealt with performance in relation to environment, strategy, and capability.

Studies in Strategic Management

H. I. Ansoff (1979) defined strategic management as a process for managing a firm's relationship with its environment, which consists of Strategic planning, Capability planning, and Management of change.

Chandler (1962) provided generalizations about growth and management of certain large industrial firms he examined. He asserted that the fundamental purpose of structure is to integrate all the different activities of the firm in order to meet market demands; structure was examined as the combination of organizational structure, systems and planning.

J. K. Galbraith (1969), in reference to American industry acknowledged that change has always occurred and will continue to occur as a result of the inapplicability of traditional economic models; hence, new developments were needed in order to respond to these changes. Furthermore, he maintained that firms face technological consequences which are brought about by technological innovations which impact the relationships between other organizations, customers and the state.

Ackoff (1970) proposed a philosophy of planning which focuses more on the objectives and logic of the planning process than on planning techniques. Strategic planning was distinguished from tactical planning, the former being long-range corporate planning that is ends-oriented but not exclusively so. Three philosophies of planning were analyzed: satisficing, optimizing and adaptivizing. The latter represents a new planning concept requiring scientific methods, tools and techniques. Planning is divided into five "parts," including: ends - specification of objectives and goals; means-selection of policies, programs; resources-determining needs, and how they can be attained and allocated; implementation or detecting and correcting failures in the plan.

D. Channon (1973) focused on the sequence of strategy and structure in order to achieve normative performance. His study was based on the pioneering work by Chandler (1962). After completing a survey on British enterprise, Channon wrote that the adoption of new strategy, caused by changes in the environment, resulted in a dramatic change in the administrative structure of large corporate enterprise. The reorganization of the enterprises into various divisions provided the administrative mechanism to control, consolidate, and institutionalize the new strategy (Channon, 1973:238).

R. Rummelt (1974:33) examined the behavior of firms in in the Fortune 500 in the years 1949, 1959, and 1969. He found that the strategy for success was in the diversification of the companies for growth. He examined structure more as the organism of the firm whilst maintaining that structure consists of "systems of control, planning information flow, methods of rewards and punishment as well as degree of delegation."

Thorelli (1977) discussed the issues of strategy, structure and performance. He distinguished between internal and external environment of the firm. He talked about performance but did not mention how the performance is affected when changes of strategy and structure occur. He furthermore mentioned bargaining power/"politics" in achieving the goals of the firm.

E. H. Schein (1980) emphasized "organizational effectiveness." He stressed that "good communication, flexibility, creativity, and genuine psychological commitment," are the background for effectively organizing the firm, and coping with environmental changes.

Ackoff (1981) emphasized four basic traits in planning:

1. Reactive: typifies those who avoid change, respect history, as well as preserve tradition. They are not satisfied with the present or the future. They want things the way they are at present.

2. Inactive: typifies those who have stability and survival as their objectives. Their response to crises is delayed until their objectives are threatened. They want things to be like in the past.

3. Proactive: typifies those who anticipate the future, are willing to minimize the impact of predicted threats, and take advantage of predicted future opportunities. They are change seekers who like to detach from the past.

4. Interactive: typifies those who bring about the future, learn new developments, adapt to sudden changes. They are highly capable of responding to high levels of environmental turbulence.

H. I. Ansoff (1965, 1979, 1984) analyzed the relationship of capability, strategy, environment and performance. It contains theoretical propositions whereby for different types of environments, different solutions are applied. This study was based on H. I. Ansoff (1979, 1984).

Various studies have attempted to examine the relationships between strategic planning and performance. Two groups have emerged as a result of their findings:

1. Strategic Planning does contribute to a better performance (Ansoff, Brandeburg, and Radosevich, 1971; Burt, 1978; Herold, 1972; Kager and Malik, 1975; Rue and Fulmer, 1973; Rhyne, 1986; 1978; Wood and LaForge, 1979; and others).

2. Strategic Planning does not contribute to better performance (Kudla, 1980; Leontiades and Tezel, 1980; and others).

Five weaknesses were pointed out by Greenly (1986) regarding studies concerning strategic planning and performance. They include:

1. Not identifying other variables associated with the implied relationships.

2. Subjectivity in paradigmic conceptualization.

3. Personal and methodological bias.

4. Uncommon parameters of assessments were evident.

5. Statistical significance of results varied, and was not reported in some cases.

Day (1983) suggested that institutions have employed various strategy analysis ranging from PIMS to portfolio management over the past 10 years. Furthermore, he noted that a skillful combination of the various theories and models would aid in clarifying even the most complex strategy. In "the stages of planning," he classified stategy analysis in four steps. The first step is Situation Assessment, whereby business definition, current position, assumptions and issues represent the variables to be examined. The second step is Strategy Generation Evaluation, which is composed of alternatives ("directional indicators"), objectives, and the allocation of resources. The third step is the implementation of the generated strategy - programs, budgets, and timetables. The final step is the monitoring of the above.

Logie-Smith (1985) conducted an analysis of the various tools used by leading corporations in the U.S.A. and the U.K. It was found that the commonly used analytical tools employed are:

a) Portfolio Analyses,

b) Competitive Analyses,

c) Value Chain Analyses,

d) Technology Analyses.

Portfolio analyses consist of the use of growth share matrix and the industry attractiveness/business strength matrix. Competitive analysis requires the analysis of a firm's competitive position in relation to a competitor's strengths and weaknesses. This analysis was being used with great frequency as a result of advances being made by Japanese manufacturing firms as well as deregulation in the telecommunication and banking industries.

Competitive analysis is composed of five factors:

a) Competitive key success factors in order to identify relative competitive position.

b) Technology in terms of product, process and information technologies.

c) Overall product and customer service quality.

d) Competitive cost structures - in manufacturing and total cost to the end user.

e) Market segmentation.

Value Chain Analysis is used in the analysis of relative cost position differentiation, as well as the role of competitive scope in achieving competitive advantage and identifying opportunities.

Technology Strategy Analysis is made up of three areas, namely:

a) Information technology,

b) Manufacturing process technology,

c) Product technology.

According to H.I. Ansoff (1979,1984), strategic planning is only one of four elements that make up the "Management Competence Profiles," hence too much emphasis was being placed on strategic planning. Greenly's first critique therefore has some validity, albeit he did not identify the other variables, which may impact performance. The variables might be environment, strategy, and capability. This study examined financial performance with the aid of the aforementioned variables.

Environment

Modern firms were operating in a highly competitive and changing environment. Furthermore, the traditional role of the firm was being challenged by society which places many conflicting demands on organizations. The environment could thus be classified as being very turbulent. The fundamental ability of top management's accurate anticipation or perception of future turbulence would enhance the firm's ability to survive in such turbulent environments.

R. M. Steers (1977) asserted that the capability of an organization to adapt to its environment is facilitated greatly by its ability to know what the external environment is going to be like in the future.

Aguilar (1967) identified the environment as an important variable for a firm's survival. Adapting to the environment is the core of survival. He divided the environment into four elements, social, economic, political, and technological.

Stodgill (1966) asserted that the survival of an organization is based upon the relationships that it maintains with the environment in which it exists. It must be capable of coping with environmental discontinuity by providing the mechanisms to identify and evaluate the present and trend of environmental change in relation to its internal condition.

Lawrence and Lorsch (1969) conducted a study of organizations in the chemical processing industry. They found that the most successful organizations were those that had the level of differentiation necessary to deal with the complexity posed by the environment, and a level of integration that was adequate to assure organizational unity. Furthermore, they measured strategic success in terms of differentiation appropriate to the environment, and operating success in terms of integration. They defined overall success as a function of the balance between differentiation and integration. It was also observed that members of a subsystem would develop a primary concern for coping with their particular sub-environments.

Duncan (1972) defined the environment of a firm as being physical as well as social. These two elements are directly considered when decision-making arises in the firm, according to Duncan. Furthermore, he maintained that the environment is divided into internal and external components. The internal is composed of social and physical elements inside the firm, whilst the external is composed of the same two elements outside the firm. In conclusion, he emphasized the importance of environment when decisions are made. Furthermore, he maintained that as the turbulence of the environment increases, the level of uncertainty increases, and as the environmental turbulence decreases, the level of uncertainty decreases likewise.

Jurkovitch (1974) suggested that the rate of change of the environment can be defined by measuring the amount of changes and alternatives to major goals in a given period. He found that the higher the change rate of the environment, the higher the number of major organizational goals that must be altered and vice-versa.

R. E. Miles, C. C. Snow, and J. Pfeffer (1974:263) addressed the extent to which the environment shapes the organization. In their article on organizational environment, they maintained that "we have no doubts that organizations must, and do adjust their strategies, technologies, structures, and processes to meet changing environmental demands." Furthermore, they added that managerial perceptions of the environment are a key variable in deciding how to adjust to the environment.

Lenz (1980) conducted an empirical field study of 50 savings and loan associations. He found that high performing organizations differ significantly in their environment, strategy, and organizational structure from low-performing organizations. He however maintained that each of the factors individually (environment, strategy, and organization structure) is not sufficient to explain the difference in performance.

Smart and Vertinsky (1984) asserted that modern organizations exist in turbulent environments which cause survival and growth threats. The relationship between strategy and environment was examined. Based upon their findings, they emphasized that perception of the environment, and the cost to respond, are critical elements of success.

Javidan (1984) examined the relationship between strategic planning and environmental perception. The result of the study implied that perception of the environment is a strong moderator for responding to the environment.

Cyrt and March (1963) found that organizations learn to adapt their behavior over time. They achieve this by changing their goals, refocusing their attention, revising procedures for search, as well as learning what to strive for in the environment.

Miller (1969) asserted that systems are generally kept in tune with their environments by a process of mutual inputs and outputs, which helps to prevent inconsistencies in the environment from destroying the systems either by a collapse or explosion.

Eisenstadt (1969) asserted that the internal structure and the relationship a firm maintains with the environment in which it operates are affected by the firm's major goals, the place of the goals in the social structure as well as the type of dependence of the firm on external forces.

Hatziantoniou (1986) studied the strategic posture of 59 firms and found that optimum financial performance occurred when strategy and capability matched the level of environmental turbulence.

Salameh (1987), in his study on the strategic posture analysis of the banking industry, found that an accurate perception of the level of environmental turbulence in which a firm operates was directly related to performance. He characterized firms that misperceive the environment in which they operate as being "strategically myopic."

Chabane (1987) in his study of state-owned enterprises in Algeria found that a reduction in subsidy dependence of these enterprises resulted in an increase in efficiency and better response to the environment.

Sullivan (1987) tested the environmental dependence hypothesis of Ansoff (1979) in his study on not-for-profit government agencies. He found that a reduction in subsidy dependence was accompanied by increase in efficiency and better market response.

Strategy

Ansoff (1984) defined the response of an organization to the environment as strategic thrust. Strategic thrust is composed of two elements, namely: marketing strategy and innovation strategy.

Andrews (1971) defined strategy as the "pattern of major objectives, purposes, or goals and essential policies and plans for achieving those goals, stated in such a way as to define what business a company is in or is to be and the kind of company it is or is to be." The general manager's task is viewed in terms of four functions: supervising current operations, planning future operations, coordinating the functions and human capabilities of the organization, and making a distinctive personal contribution. Coordination of these functions is the primary job of the general manager: supervising the process for formulating, refining and realizing the organization's strategy.

Argenti (1974:121) described the philosophy and the technology of planning. He defined corporate planning as "a systemic approach to clarify corporate objectives, make strategic decisions and check the progress of those decisions." He maintained that the key distinction between strategic planning and other planning is the corporate nature of strategic planning.

Ferguson (1974) advanced the view that a manager should be more concerned with "concepts" than with technology. In order to evaluate changes that will occur in an organization, a "concept audit" was suggested to probe the major elements of the corporation: organization structure and systems, management quality, style and compensation resource allocation, interaction with the environment. Furthermore, a "Strategy Implementation Task Force" was proposed in order to help clarify top management expectations about how the company should function and reveal differences in those expectations.

Rothschild (1976:125) approached strategic management from an investment standpoint. He defined strategy as "a statement of an organization's investment priorities, the management thrust, and the ways that it will use its strengths and correct its limitations to pursue the opportunities and avoid threats facing it." Strategy is made up of three different levels: investment decisions, resources decisions, and a specific set of programs describing how resources will be employed to build on strengths and correct limitations.

Smith (1977:65) defined strategy as "the plan for getting the best returns from resources, the selection of the kind of business to engage in, and the scheme for obtaining a favorable position in the business field." Strategy is said to encompass three areas:

1) Perspective strategy: the investigation of the nature of the market, industry and environmental structures and the development of informational tools.

2) Optimizing strategy: the process of fitting the organizational programs into the industry structure and the way in which the resources can be utilized to to maximum benefit.

3) Prospective strategy: a means for dealing with change either expected or unexpected and a plan for adjusting to new environmental developments. Guidelines were provided in order to minimize potential errors in strategy formulation.

Gluck, Kaufman, and Walleck (1980:154-161) asserted that the best firms are those which plan their future formally and explicitly. They stressed that their "findings indicate that formal strategic planning does indeed evolve along similar lines in different companies." Furthermore, extrapolations of past trends, and attempting to predict future political, economic, and social events, would be of great importance in order to provide the most appropriate strategy for the future.

Jauch, Osborn, and Glueck (1980) conducted an examination of the short-term success of 358 large business firms over a 45-year period. Their findings suggested that short-term success occurs when environment and strategic change are linked in the organization.

Hall (1980) studied the strategic choices which offer the best probability for survival, growth, and ROI in a hostile environment. His study spanned 64 large firms in 8 different industries. His findings stressed that perception of emerging hostilities in the environment and early strategic repositioning are keys for success.

Pearce (1982) emphasized that one of the tools of strategic management is the "company mission." He elaborated on a framework for developing a company mission, and also emphasized further the importance of stating it. This would help to highlight the demands placed on the mission internally as well as externally. He maintained that the mission statement is derived from specifying the firm's ultimate aim. The ultimate result of this will be sustained survival, growth, and profitability.

Miller and Friesen (1983:221-235) investigated the strategy and environment relationship among two distinct samples. They emphasized that an increase in environmental change should be positively correlated with the strategy. Furthermore, their findings implied that positive correlations between strategy and environment are stronger in successful firms. In summation, they said that "a third link, that between strategy and environment, must also be carefully managed."

Capability

The concept of capability was relatively new. Capability is composed of four diagnostic elements: 1) managers, 2) climate, 3) competence, and 4) capacity (Ansoff, 1979; 1984). The ability of an organization to sustain a certain level of strategic thrust is its general management capability.

Researchers have thought of capability as being the organizational structure of a company. Structure is one of the many elements of capability.

Ansoff (1979:79) incorporated structure as an attribute of "general management competence," which is a part of capability. He furthermore provided a conceptual framework for the integration of environment, strategy, and capability and their relation with performance.

Hatziatoniou (1986) examined the strategic posture of 59 firms in the United States of America engaged in different strategic business areas. The study found that optimum financial performance occurs when the environment, strategy, capability gap is smallest. Firms which had no gap were significantly different, in terms of their financial performance, from firms which had a gap, and they performed better than those with a gap.

Salameh (1987) examined the strategic posture and the financial performance of the banking industry in the

United Arab Emirates. The study found that optimum overall financial performance occurred when levels of environmental turbulence, aggressiveness of strategy, and openness of capability matched each other. Furthermore, banks which were not strategically myopic outperformed banks which were strategically myopic.

Chabane (1987) studied restructuring and performance in Algerian state-owned enterprises. He found that the organizations that had aggressiveness of strategy and capability that were aligned with the prevailing level of turbulence performed better than those that were misaligned.

Sullivan (1987) studied the relationship between proportion of income derived from subsidy and strategic performance. He found that the concepts and constructs of strategic management can be applied to public not-for-profit organizations, and are meaningful in terms of their dependence on transaction or subsidy income.

The above studies have tested H. I. Ansoff's strategic success hypothesis in various settings as follows:

1) Different industries.
2) Government Enterprises.
3) Not-for-profit organizations.

All the studies provided strong empirical support for the strategic success hypothesis of Ansoff.

This Study

The model used for this study was based on the strategic success hypothesis formulated by H. I. Ansoff (1979, 1984), which states that an organization will be successful when its aggressiveness of strategy and general management capability matches the level of turbulence in the environment in which it conducts business.

This research builds upon the above-mentioned studies and specifically on the research conducted by Salameh (1987) on the strategic posture analysis of banks in the United Arab Emirates. He found that banks that misperceived the level of turbulence in the environment in which they operated did not perform as well as those that perceived the level of turbulence correctly. He also found that banks that did not have the appropriate aggressiveness of strategy or general management capability to respond to the turbulence in the environment did not perform as well as those that did.

This study provided a test of the strategic success hypothesis in a dynamic setting of an industry in transition from a low level of turbulence to a higher level of turbulence. Furthermore, strategic myopia was examined and the importance of accurate perception of levels of environmental turbulence was reemphasized. Figure 8 presents an illustation of literature supporting this research.

Figure 8. Literature Supporting This Study

ENVIRONMENT	STRATEGY	CAPABILITY
Ansoff (1979, 1984)	Ansoff (1979, 1984)	Ansoff (1979,1984)
Steers (1977)	Andrews (1971)	Lenz (1980)
Aguilar (1967)	Argenti (1974)	Hatziantoniou (1986)
Stodgill (1966)	Ferguson (1974)	Salameh (1987)
Lawrence & Lorsch (1969)	Rothschild (1976)	Chabane (1987)
Duncan (1972)	Smith (1977)	Sullivan (1987)
Jurkovitch (1974)	Gluck, Kaufman & Walleck (1980)	
Miles, Snow, & Pfeffer (1974)	Hall (1980)	
Lenz (1980)	Pearce (1982)	
Smart & Vertinsky (1984)	Miller & Friesen (1983)	
Javidan (1984)	Hatziantoniou (1986)	
Cyert & March (1963)	Salameh (1987)	
Miller (1969)	Chabane (1987)	
Eisenstadt (1969)	Sullivan (1987)	
Hatziantoniou (1986)		
Salameh (1987)		
Chabane (1987)		
Sullivan (1987)		

STRATEGIC SUCCESS HYPOTHESIS

Summary

Chapter 2 reviewed the literature upon which this study was built. It consisted of four sections. Section One provided an overview of the evolution to strategic management, containing selected publications on various types of work on strategic management. Part Two reviewed work done on the concept of environmental tubulence. Part Three reviewed selected articles and studies done on aggressiveness of strategy, and Part Four provided a review of studies related to the openness of capability. The chapter concluded by emphasizing that little research had been done on the relationships between environment, strategy, capability, and performance.

Chapter 3

METHOD

This chapter describes the methods that were used in the collection and analysis of data. The research design, instrumentation, pilot study, research assumptions, delimitations and the research hypotheses are also described.

The survey instrument obtained subjective data through personal interviews and objective data from financial statements. The purpose of this study was to examine the relationships between financial performance measures and levels of environmental turbulence, levels of aggressiveness of strategy, and levels of general management capability.

Research Hypotheses

The data were collected for the purpose of testing the following research hypotheses:

H.1a Performance is negatively related to the extent of the difference between aggressiveness of strategy and the prevailing level of environmental turbulence.

H.1b Performance is negatively related to the extent of the difference between general management capability and the prevailing level of environmental turbulence.

H.1c Performance is negatively related to the extent of the difference between the sum of aggressiveness of strategy and general management capability and the prevailing level of environmental turbulence.

H.2 Performance is negatively related to the extent of the difference between the bank managers' perception of the level of environmental turbulence and the actual level of turbulence.

Six research questions were formulated from the above hypotheses as follows:

<u>Research Questions</u>

Q.1 What is the difference between outside observers' perceptions of the post-deregulation level of environmental turbulence and the bank managers' perceptions of the post-deregulation level of environmental turbulence when both are measured on a five-point Likert scale?

Q.2 What is the difference between bank managers' perceptions of post-deregulation level of environmental turbulence and their perceptions of post-deregulation aggressiveness of strategy when both are measured on a five-point Likert scale?

Q.3 What is the difference between bank managers' perceptions of the post-deregulation level of environmental turbulence and their perceptions of the level of post-deregulation general management capability when both are measured on a five-point Likert scale?

Q.4 What is the difference between the pre-deregulation level of environmental turbulence as perceived by the bank managers and:

a. Expert outside observers' perceptions of the pre-deregulation level of environmental turbulence?

b. Bank managers' perceptions of pre-deregulation level of aggressiveness of strategy?

c. Bank managers' perceptions of pre-deregulation level of general management capability?

Q.5 What is the difference between bank managers' pre-deregulation and post-deregulation perceptions of the three elements of the strategic posture?

Q.6 What are the relationships between the eight financial performance variables and the following:

6.1 Each of the six elements of the strategic posture?

6.2 Each of 30 sub-elements of strategic posture?

6.3 Strategic gaps-turbulence, strategy, capability, strategy/capability, and total gap?

Data Collection

The data sources, instrumentation, the tryout study and the procedures for data collection are described in this section. The data collection was conducted over a period of two and a half months, while the interviews lasted approximately three hours each.

Data Sources

The primary data sources were the 22 banks based in San Diego that met the specific criteria established for the study. Fifteen (15) of the banks were still existing at the end of the study, while seven (7) of them had failed during the course of this study. Subjective data were obtained from top managers of the banks. The subjective data were composed of the bank managers' perceptions of the following:

a. Level of environmental turbulence.

b. Level of aggressiveness of strategy.

c. Level of general management capabililty.

The bank managers' perceptions of the above levels were determined by the use of a questionnaire.

The secondary data sources were the 15 expert outside observers that met the criteria established for the study. Subjective data were obtained from the expert outside observers on their perception of the level of environmental turbulence.

Objective financial data were obtained from the following:

a. American Banker Publications.

b. Findley Reports on California Banks.

c. Federal Deposit Insurance Corporation Reports.

The total number of branches represented by the 15 banks that were still existing amounted to 105 bank branches throughout San Diego.

Instrumentation

The instrument was made up of two elements as follows:

a. A researcher-designed survey instrument, and

b. An adaptation by R. Ansoff (1987) of an instrument originally developed by H. Ansoff (1979,1984).

The survey instrument was made up of nine parts.

Instrumentation for Bankers. The instrumentation for the bankers was subdivided into the pre-deregulation period (December 1982 and earlier), and the post-deregulation period (December 1983-December 1986). Part One: The first part addressed the level of environmental turbulence and was divided into two sections. The first section consisted of a general open-ended question about perceived turbulence. The second section was made up of seven structured questions which measured the level of environmental turbulence. The questions used five-point Likert scales, to match the five levels of environmental turbulence: stable, reactive, anticipating, exploring, and creative. Respondents chose one of the levels for each of the seven questions.

Part Two: The second part contained one section and provided information regarding the level of aggressiveness of strategy of the banks. It was made up of 10 structured questions about aggressiveness of strategy. The first five questions were about the banks' aggressiveness of innovation strategy, and the remaining five were attributes of the banks' marketing strategy. The 10 questions were measured on five-point Likert scales matching the five levels of aggressiveness of strategy: stable, reactive, anticipating, exploring, and creative. Respondents chose one of the levels for each of the 10 questions.

Part Three: The third part concerned the level of general management capability. It was made up of 10 structured questions which were attributes of general management capability. The first four questions were attributes of the bank managers' profiles, the three questions that followed were attributes of the banks' organizational structure and the last three questions were attributes of characteristics of the system. The 10 questions were measured on five-point Likert scales matching of the five levels of general management capability: custodial, production, marketing, strategic, and flexible. Respondents chose one of the levels for each of the 10 questions.

Part Four: This was composed of an instrument developed for collecting demographic information about the bank managers and the expert outside observers. The data collected consisted of the following:

a. Age.
b. Sex.
c. Position.
d. Length of service.
e. Level of education/background.
f. Strategic business areas of involvement.

Instrumentation for Expert Outside Observers. The instru- ment used for data collection of the bankers' perceptions of the level of environmental turbulence was adapted for the collection of data from the expert outside observers. The instrument was made up of two parts, each containing two sections. The first part was designed to obtain information about the pre-deregulation level of environmental turbulence, while the second part provided information regarding the period after deregulation. The first section was made up of two open-ended questions which sought spontaneous insights into the level of environmental turbulence for the pre- and post-deregulation periods respectively. The second section was made up of seven structured questions which were the characteristics of the level of environmental turbulence. The questions were measured on a five-point Likert scale as a match of the five levels of environmental turbulence: stable, reactive, anticipating, exploring, and creative. Each of the expert outside observers was asked to choose one of the levels for each of the five questions respectively.

Tryout Study

The instrument was tested for suitability, clarity, and acceptability with the aid of four banks and two expert outside observers in San Diego. The respondents were asked to evaluate the instrument on question quality, content, wording, biased and/or ambiguous questions. This resulted in the identification of errors which were corrected, whereafter the test was readministered to the same respondents. The revised instrument was approved by the respondents, thereby supporting the instrument's validity and suitability for its intended audience.

Procedures

The first stage of the procedure was to identify all San Diego based banks by using the Findley Report on California Banks. There were twenty-two (22) banks that met the stated criteria. Seven of the banks failed during the study.

The second stage of the procedure was as follows:

1. Potential respondents in each of the banks selected were identified.
2. Telephone calls were made to the potential respondents in order to set up appointments for interviews.
3. The interview commenced by giving the respondent a copy of the survey instrument. A tape recorder was used for the open-ended questions, with the permission of the respondent.
4. The researcher went through the instrument step by step, providing assistance whenever the need arose.
5. Letters of appreciation were sent to those who responded.
6. Objective financial data were collected from the Findley Reports on California Banks and financial statements of the various banks.

The third stage of the procedure was as follows:

1. The names, addresses, and telephone numbers for the expert outside observers were obtained.

2. Each of the observers was telephoned to set up an appointment for an interview.
3. The interview commenced by giving the expert outside observer a copy of the survey instrument. A tape recorder was used for the open-ended questions, with the permission of the respondent.
4. The researcher went through the instrument step by step, providing assistance whenever the need arose.
5. Letters of appreciation were sent to those who responded.

Method for Analyzing Data

A number of statistical methods were utilized to analyze the data:

1) Data were analyzed by comparing the mean of the distribution of top managements' perceptions of the independent variables with the mean of outside observers' perceptions of the pre-deregulation level of turbulence.

2) Data were analyzed by comparing the mean of the distribution of top managements' perceptions of the independent variables with the mean of outside observers' perceptions of the level of turbulence. Student's *t*-tests were performed in order to identify any significant differences between means.

3) Pearson *r*'s were used to measure the relationships between performance measures and the various gaps.

Research Assumptions and Delimitations

The study was undertaken with the following assumptions and delimitations:

Assumptions

1. The methods of data gathering and analysis were sufficient and accurate for the purpose of the study.

2. The bank managers were qualified enough to understand the requirements and as such responded to the best of their ability.

3. The validity of the survey questionnaire was established with the aid of a pilot study as well as consultation with experts in the field.

4. The expert outside observers were informed and possessed the qualifications needed to provide information about the level of environmental turbulence.

Delimitations

1. The study was limited geographically to San Diego.
2. The study was limited to 22 that met the criteria established for the study.
3. The objective data consisted of financial measures for the period from December 31, 1983 to December 31,1986.
4. The research population was limited to top managers of banks and selected expert outside observers.

Summary

This chapter discussed the methodology used in the execution of the research. The study utilized a research design composed of a four-part survey instrument which was used to collect data on the perceived levels of environmental turbulence, aggressiveness of strategy, general management capability, and demographic data.

The chapter also described the sample of data sources, the data collection procedure, the instrumentation, the data analysis, and the assumptions and delimitations of the study.

Chapter 4

FINDINGS

This chapter presents the findings that were obtained from the analyses of the data collected for the study. The findings will be presented based upon the order in which the research questions and related hypotheses were stated. The questions were formulated to obtain the following: top management's perception of the post-deregulation level of environmental turbulence, outside observers' perception of the post-deregulation level of environmental turbulence, top management's perception of aggressiveness of strategy, top management's perception of general mangement capability, top management's perception of pre-deregulation level of environmental turbulence, outside observers' perceptions of the pre-deregulation level of environmental turbulence, top management's perception of pre-deregulation aggressiveness of strategy, top management's perception of pre-deregulation general management capability, the relationship between the sub-elements of the strategic posture and financial performance measures. Six research questions were formulated.

Research Question One

The first research question examined the difference between outside observers' perceptions of the post-deregulation level of environmental turbulence and bank managers' perceptions of the post-deregulation level of environmental turbulence in which they operated.

Outside Observers' vs. Bank Managers' Perception of Environmental Turbulence in the Post-Deregulation Period

The findings for Question One are presented in this section. The mean of the 15 outside observers' perceptions of the level of environmental turbulence (based on 7 items) amounted to 3.83, while the mean for the bank managers was 3.53.

A *t*-test was conducted to detect any significant difference between the outside observers' perceptions and the bank managers' perceptions of the level of environmental turbulence. Results of the *t*-test are presented in Table 2. The test revealed a significant difference, with the bank managers' perceiving less turbulence than the outside observers did (t=-2.35, $p<.05$).

Table 2

Student's t-test for Bank Managers' and Outside Observers' Perception of Environmental Turbulence in the Post-Deregulation Period

Variable	N	Mean	S.D.	t	Significance
Outside Observers' Environmental Turbulence	15	3.838	0.194		
				-2.346	$p < 0.05$
Environmental Turbulence of Bank Managers	15	3.5333	0.466		

Research Question Two

The second research question examined the difference between bank managers' perceptions of the level of environmental turbulence in which they operated and their perception of their aggressiveness of strategy for the post-deregulation period.

Bank Managers' Perception of Aggressiveness of Strategy in the Post-Deregulation period

The findings for Question Two are presented in this section. Aggressiveness of strategy is divided into two elements, namely:

a. Aggressiveness of Innovation Strategy.

b. Aggressiveness of Marketing Strategy.

Two *t*-tests were conducted to determine if there was any significant difference between:

a. Outside observers' perception of the level of environmental turbulence and bank managers' perception of their aggressiveness of strategy.

b. Bank managers' perceptions of the level of environmental turbulence and their perceptions of the aggressiveness of strategy.

Table 3 presents the results of the t-test. The results demonstrate that there is a significant difference, with bank managers perceiving a higher level of environmental turbulence than of aggressiveness of strategy (t=3.35, $p<.005$), as depicted on Table 3. The outside observers' perception of the level of environmental turbulence was higher than the bank managers' perception of their aggressiveness of strategy.

Research Question Three

The third research question examined the difference between bank managers' perceptions of the level of environmental turbulence in which they operated and their perception of their general management capability.

Post-Deregulation Bank Managers' Perception of General Management Capability

The findings for Question Three are presented in this section. General Management Capability is divided into three elements, namely:

a. Managers' Profiles.

b. Organizational Structure.

c. Characteristics of the System.

Three t-tests were conducted to detect any significant

Table 3

Student's t-test for Bank Managers' and Outside Observers' Perceptions of the Level of Environmental Turbulence and Bank Managers' Perceptions of their Level of Aggressiveness of Strategy in Post-Deregulation

Variable	N	Mean	S.D.	t	Significance
Bank Managers Aggressiveness of Strategy	15	2.9067	0.593		
Environmental Turbulence of Bank Managers	15	3.5333	0.466	3.35	$p < 0.005$
Outside Observers Environmental Turbulence	15	3.8381	0.194	-5.7	$p < 0.0001$
Bank Managers Aggressiveness of Strategy	15	2.9067	0.593		

difference between:

a. Outside observers' perceptions of the level of environmental turbulence and bank managers' perception of general management capability.

b. Bank managers' perceptions of the level of environmental turbulence and their perceptions of general management capability.

c. Bank managers' perceptions of their aggressiveness of strategy and their perceptions of general management capability.

Results of the t-tests are presented in Tables 4, 5, and 6. The results demonstrated no significant difference between bank managers' perceptions of the level of environmental turbulence and general management capability (t=.19, p=0.849), as depicted in Table 4. Furthermore, the results in Table 5 show a significant difference, with the outside observers perceiving a higher level of environmental turbulence than the bank managers' perception of their general management capability (t=-2.65, p<.02). A significant difference was found between bank managers' aggressiveness of strategy and general management capability, as shown in Table 6 (t=-4.73, p<0.0001), with their general management capability higher than their aggressiveness of strategy.

Table 4

Student's t-test for Bank Managers' Level of Environmental Turbulence and General Management Capability in Post-Deregulation

Variable	N	Mean	S.D.	t	Significance
Bank Managers' General Management Capability	15	3.4933	0.467		
				0.19	$p > 0.849$ ns
Environmental Turbulence of Bank Managers	15	3.5333	0.466		

Table 5

Student's t-test for Outside Observers' Level of Environmental Turbulence and General Management Capability in Post-Deregulation

Variable	N	Mean	S.D.	t	Significance
Outside Observers' Environmental Turbulence	15	3.8381	0.194	-2.65	$p < 0.02$
Bank Managers' Capability of General Management	15	3.4933	0.467		

Table 6

Student's t-test for Bank Managers' Aggressiveness of Strategy and General Management Capability in Post-Deregulation

Variable	N	Mean	S.D.	t	Significance
Bank Managers' Aggressiveness of Strategy	15	2.9067	0.593	-4.73	$p < 0.0001$
Bank Managers' Capability of General Management	15	3.4933	0.467		

Research Question Four(A)

The fourth research question examined the difference between bank managers' and outside observers' perceptions of the pre-deregulation level of environmental turbulence.

A *t*-test was conducted to detect any significant difference between the outside observers' perceptions and the bank managers' perceptions of the level of environmental turbulence. Results of the *t*-test are presented in Table 7. The test revealed that there was no significant difference between the perception of the outside observers and that of the bank managers. The bank managers' perception was similar to that of the outside observers (t=0.39, $p>.05$).

Research Question Four(B)

The fourth research question also examined the difference between bank managers' perception of the pre-deregulation level of environmental turbulence in which they operated and their perception of their pre-deregulation aggressiveness of strategy.

Two *t*-tests were conducted to identify any significant differences between:

a. Outside observers' perceptions of the level of environmental turbulence and bank managers' perceptions of their aggressiveness of strategy.

Table 7

Student's t-test for Bank Managers' Level of Environmental Turbulence and General Management Capability in Pre-Deregulation period

Variable	N	Mean	S.D.	t	Significance
Outside Observers' Environmental Turbulence	15	2.59	0.314		
				0.39	$p > 0.05$
Environmental Turbulence of Bank Managers	15	2.64	0.497		

b. Bank managers' perceptions of the level of environmental turbulence and their perceptions of their aggressiveness of strategy.

Table 8 presents the results of the *t*-test. The results demonstrate that there was a significant difference, with the bank managers perceiving a higher level of environmental turbulence than of aggressiveness of strategy (t=2.44, $p<0.029$), as depicted in Table 8. Furthermore, the results in Table 8 show that there was a significant difference, with the outside observers' perception of the level of environmental turbulence higher than bank managers' perception of their aggressiveness of strategy.

Research Question Four (C)

Question Four also examined the difference between bank managers' perception of the pre-deregulation level of environmental turbulence and their perception of their pre-deregulation general management capability.

Three *t*-tests were conducted to identify if there were any significant differences between:

a. Outside observers' perceptions of the level of environmental turbulence and bank managers' perceptions of general management capability.

b. Bank managers' perceptions of the level of

Table 8

Student's t-test for Bank Managers' and Outside Observers' Perceptions of the Level of Environmental Turbulence and Bank Managers' Perceptions of Level of Aggressiveness of Strategy in Pre-Deregulation

Variable	N	Mean	S.D.	t	Significance
Bank Managers' Aggressiveness of Strategy	15	2.2600	0.485	2.44	$p < 0.02$
Environmental Turbulence of Bank Managers	15	2.6476	0.497		
Outside Observers' Environmental Turbulence	15	2.5905	0.314	-2.17	$p < 0.05$
Bank Managers' Aggressiveness of Strategy	15	2.2600	0.485		

environmental turbulence and their perceptions of general management capability.

c. Bank managers' perceptions of their aggressiveness of strategy and their perceptions of general management capability.

The results of the t-tests are presented in Tables 9, 10, and 11. Table 9 demonstrates that there was no significant difference between bank managers' perceptions of the level of environmental turbulence and general management capability. Table 10 shows that there was no significant difference between the outside observers' perception of the level of environmental turbulence and the bank managers' perception of their general management capability. Table 11 shows a significant difference between bank managers' aggressiveness of strategy and general management capability ($t=-4.19$, $p<0.001$), with general management capability higher than aggressiveness of strategy.

Research Question Five (A)

The fifth research question examined the differences between the pre-deregulation and the post-deregulation perceptions by bank managers of the three elements of strategic posture, namely:

a. Level of environmental turbulence.

b. Level of aggressiveness of strategy.

Table 9

Student's t-test for Bank Managers' Level of Environmental Turbulence and General Management Capability in Post-Deregulation

Variable	N	Mean	S.D.	t	Significance
Bank Managers' General Management Capability	15	2.7733	0.491		
				-0.61	$p > 0.05$
Environmental Turbulence of Bank Managers	15	2.6476	0.497		

Table 10

Student's t-test for Outside Observers' Level of Environmental Turbulence and General Management Capability in Pre-Deregulation

Variable	N	Mean	S.D.	t	Significance
Outside Observers' Environmental Turbulence	15	2.59	0.314		
				1.19	$p > 0.05$
Bank Managers Capability of General Management	15	2.77	0.491		

Table 11

Student's t-test for Bank Managers' Aggressiveness of Strategy and General Management Capability in Pre-Deregulation Period

Variable	N	Mean	S.D.	t	Significance
Bank Managers' Aggressiveness of Strategy	15	2.2600	0.485		
				-4.19	$p < 0.001$
Bank Managers' Capability of General Management	15	2.7733	0.491		

c. Level of general management capability.

The findings for Question Five are presented in this section. The findings are as follows:

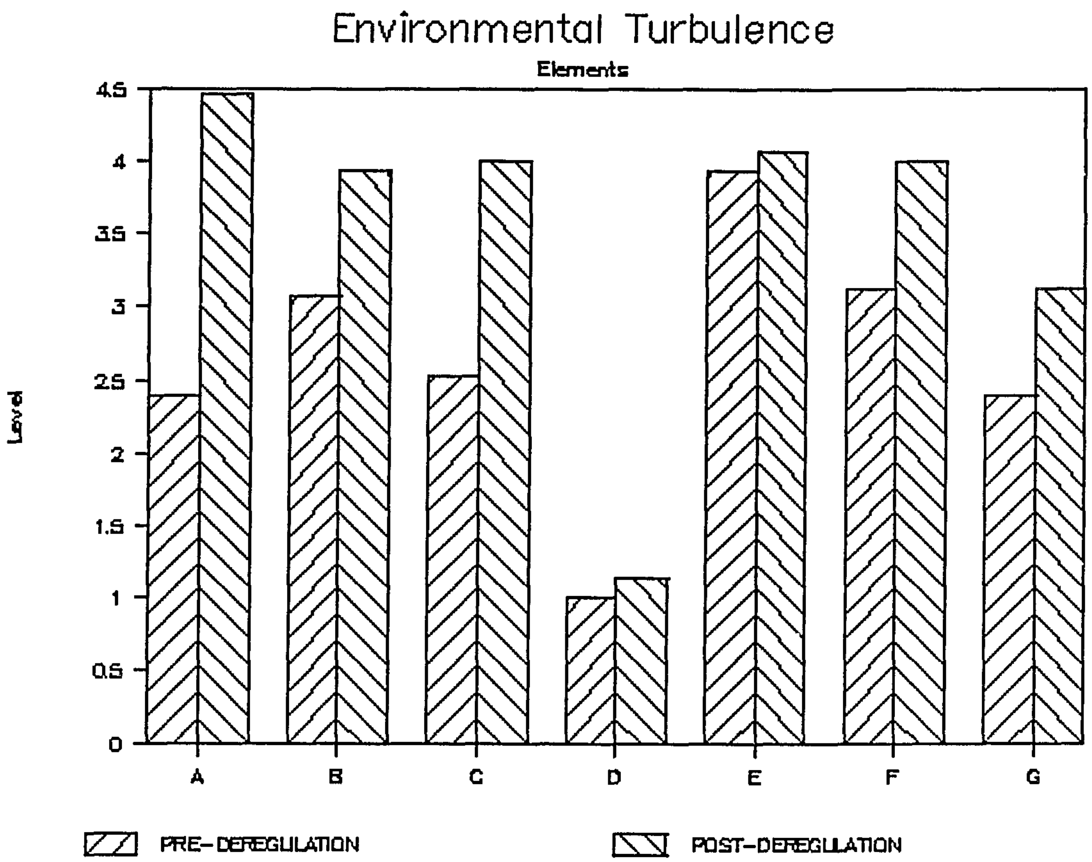
The mean of the bank managers' perception of the pre-deregulation level of environmental turbulence amounted to (2.65), while the mean of their post-deregulation level of turbulence was (3.53). A graphical representation of the elements for the two periods is presented in Figure 9.

A t-test was conducted to detect any significant difference between the bank managers' perceptions of the pre- and post-deregulation level of environmental turbulence. Results of the t-test are presented in Table 12. The test revealed that there was a significant difference between the two periods. The bank managers' perception of the pre-deregulation level was significantly less than their post-deregulation perception of the level of environmental turbulence ($t=4.45$, $p<0.001$).

Research Question Five(B)

The findings for Question Five (b) are presented in this section. Aggressiveness of strategy is divided into two elements, namely:

Figure 9



A. Familiarity of Events.

B. Rapidity of Change.

C. Visibility of the Future.

D. Business Scope.

Decision-Making Terms of:
E. Economic Changes.

F. Technological Changes.

G. Socio-Political Changes.

Table 12

Student's t-test for Bank Managers' Perceptions of Pre-Deregulation and Post-Deregulation Level of Environmental Turbulence

Variable	N	Mean	S.D.	t	Significance
Bank Managers' Perception of Post-Deregulation Environmental Turbulence	15	3.5333	0.466		
				4.45	$p < 0.001$
Bank Managers' Perception of Pre-Deregulation Environmental Turbulence	15	2.6476	0.497		

a. Aggressiveness of innovation strategy.

b. Aggressiveness of marketing strategy.

The mean of the bank managers' perception of their pre-deregulation aggressiveness of strategy was 2.26, while the mean of their post-deregulation aggressiveness of strategy was 2.90. Figure 10 shows the mean changes of the 10 elements of aggressiveness of strategy.

A *t*-test was conducted to detect any significant difference between the bank managers' perceptions of their pre- and post-deregulation aggressiveness of strategy. Table 13 reveals that there was a significant difference between the pre- and post-periods. The bank managers' perception of the pre-deregulation level was significantly less than their post-deregulation perception of aggressiveness of strategy (t=-3.72, $p<0.0001$).

Research Question Five(C)

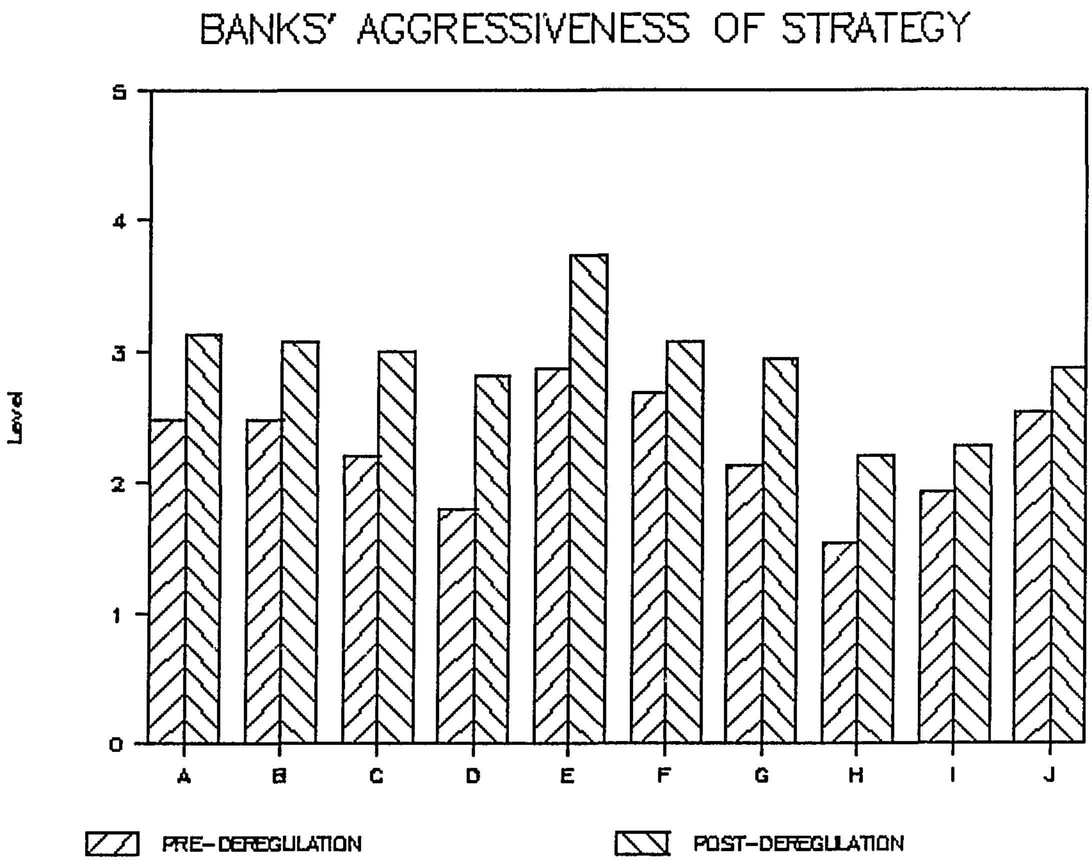
The findings for Question Five (c) are presented in this section. General management capability was divided into three elements, namely:

a. Managers' profiles.

b. Organizational structure.

c. Characteristics of the system.

Figure 10



A. Responsiveness to Customers.

B. Market Development.

C. Frequency of New Service Introduction.

D. Role of Research and Development.

E. Focus of Research.

F. Sales Aggressiveness.

G. Responsiveness to Competition

H. Market Share.

I. Role of marketing Development.

J. Promotion and Advertising.

Table 13

Student's t-test for Bank Managers' Perceptions of Pre-Deregulation and Post-Deregulation Level of Aggressiveness of Strategy

Variable	N	Mean	S.D.	t	Significance
Bank Managers' Post-Deregulation Aggressiveness of Strategy	15	2.9067	0.593		
				-3.72	$p < 0.0001$
Bank Managers' Pre-Deregulation Aggressiveness of Strategy	15	2.2600	0.485		

The mean of the bank managers' perception of their pre-deregulation general management capability was 2.77, while the mean of their post-deregulation general management capability was 3.49. Figure 11 shows the mean changes of the 10 elements of general management capability. Figure 12 shows the pre-post differences of the banks strategy-capability elements. Figures 13 and 14 present the differences in the pre- and post-deregulation strategic posture of the banks.

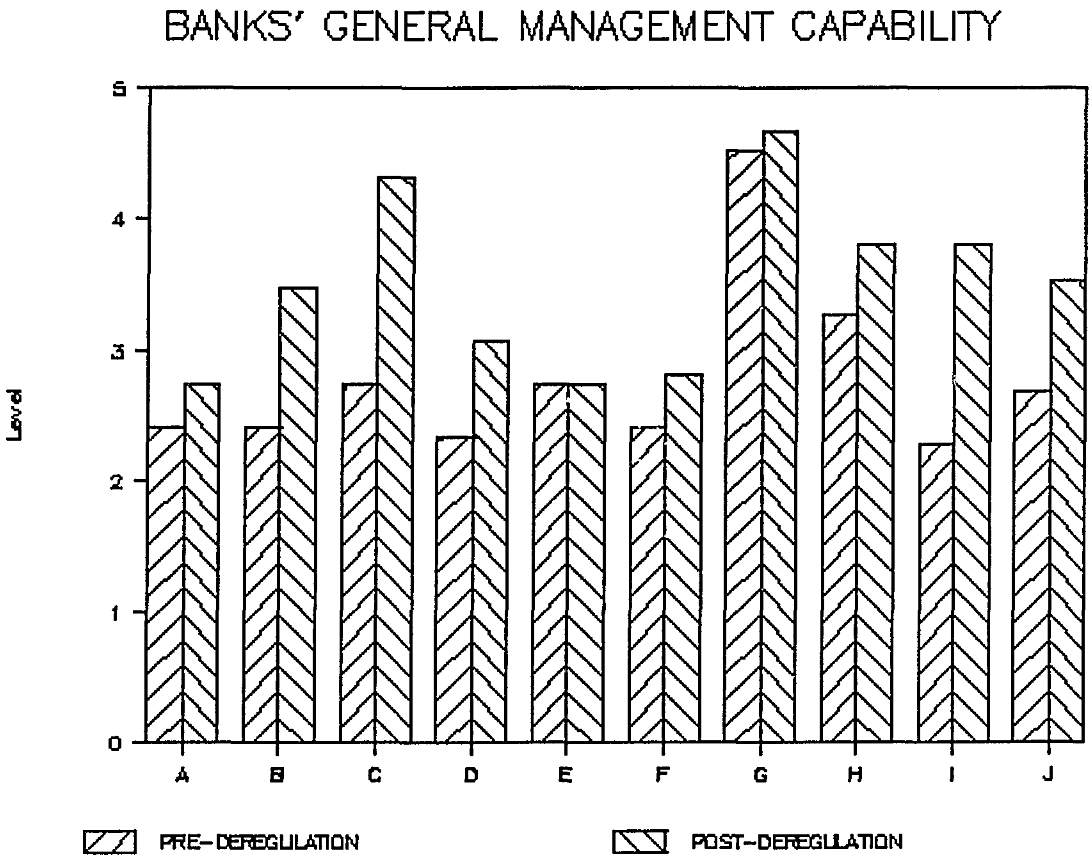
A *t*-test was conducted to detect any significant difference between the bank managers' perceptions of their pre- and post-deregulation general management capability. Results of the *t*-test are presented in Table 14. The test revealed that there was a significant difference between the pre- and post-periods. The bank managers' perception of the pre-deregulation level was significantly less than their post-deregulation perception of general management capability (t=-4.1152, $p<0.0001$).

Research Question Six

The sixth research question examined the relationships between the dependent variables (seven financial performance measures) and the following:

a. Six elements of the strategic posture.

Figure 11



A. Risk propensity.

B. Problem Solving.

C. Knowledge.

D. Model of Success.

E. Organizational Form.

F. Managers' Function.

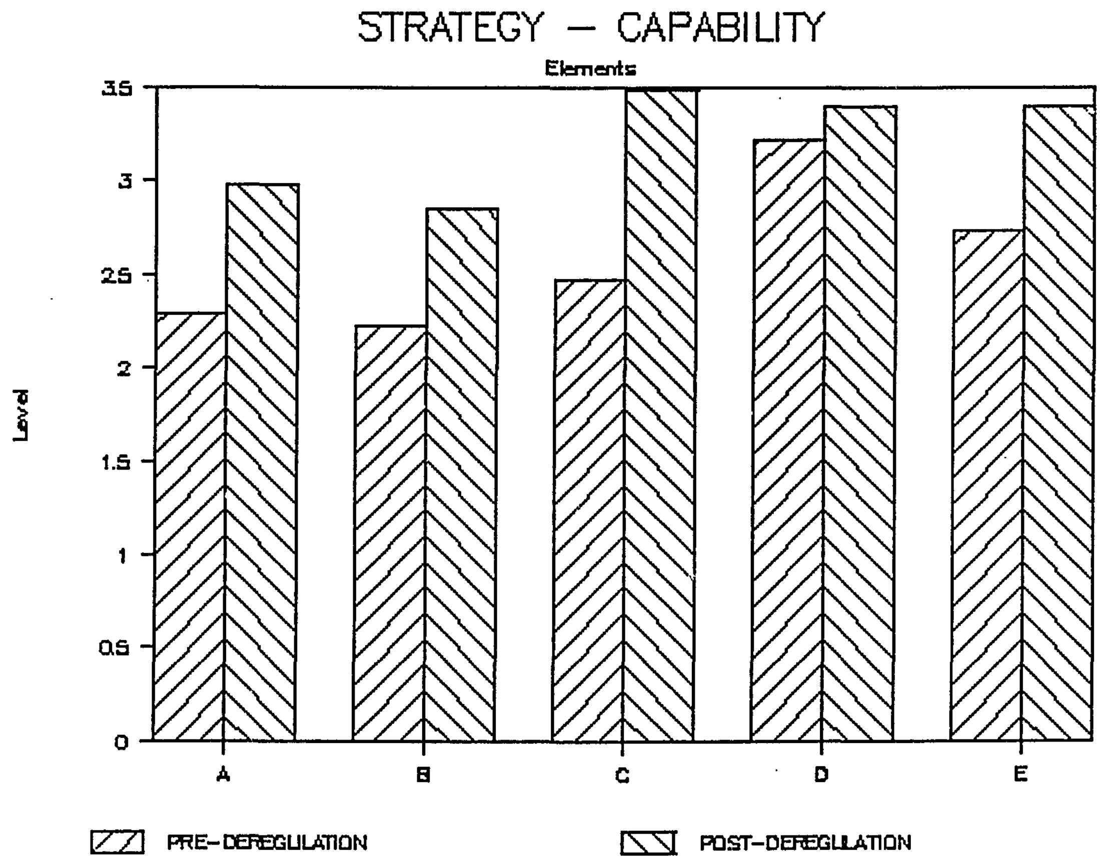
G. Power Center.

H. Informal Decision Making Process.

I. Management System.

J. Change Trigger.

Figure 12



A. Aggressiveness of Innovation Strategy.

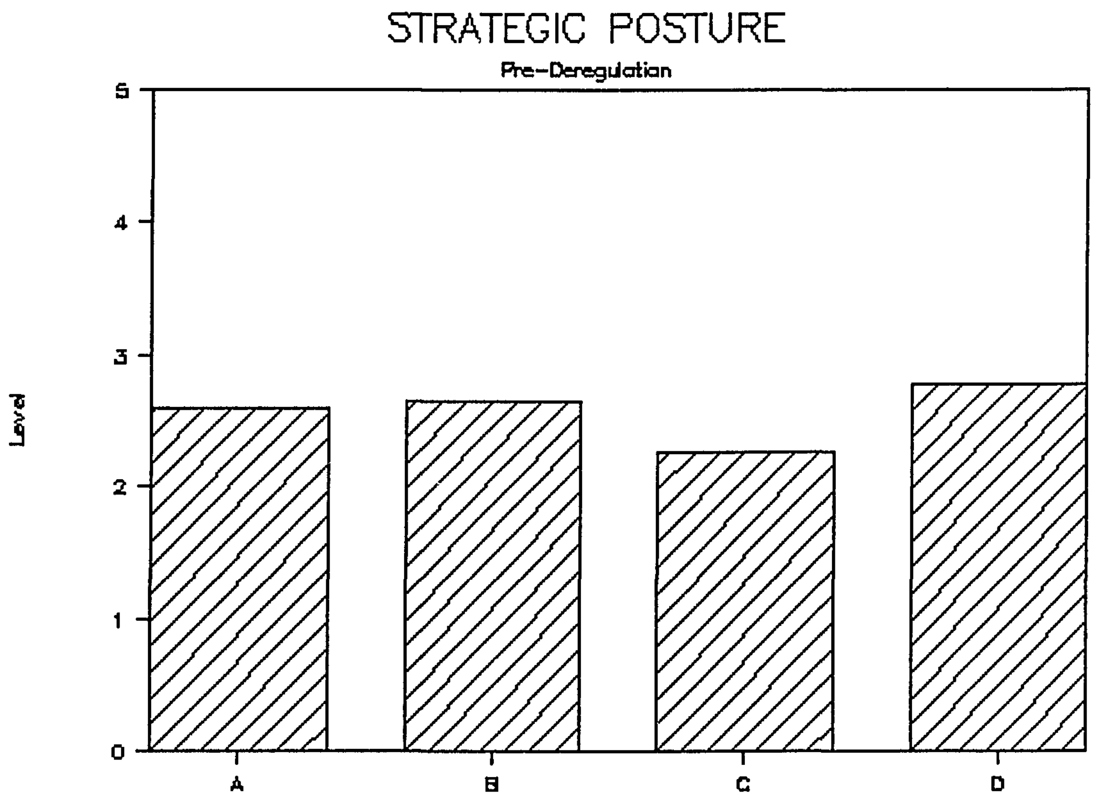
B. Aggressiveness of Marketing Strategy.

C. Managers' Profiles.

D. Organizational Structure.

E. Characteristics of the System.

Figure 13



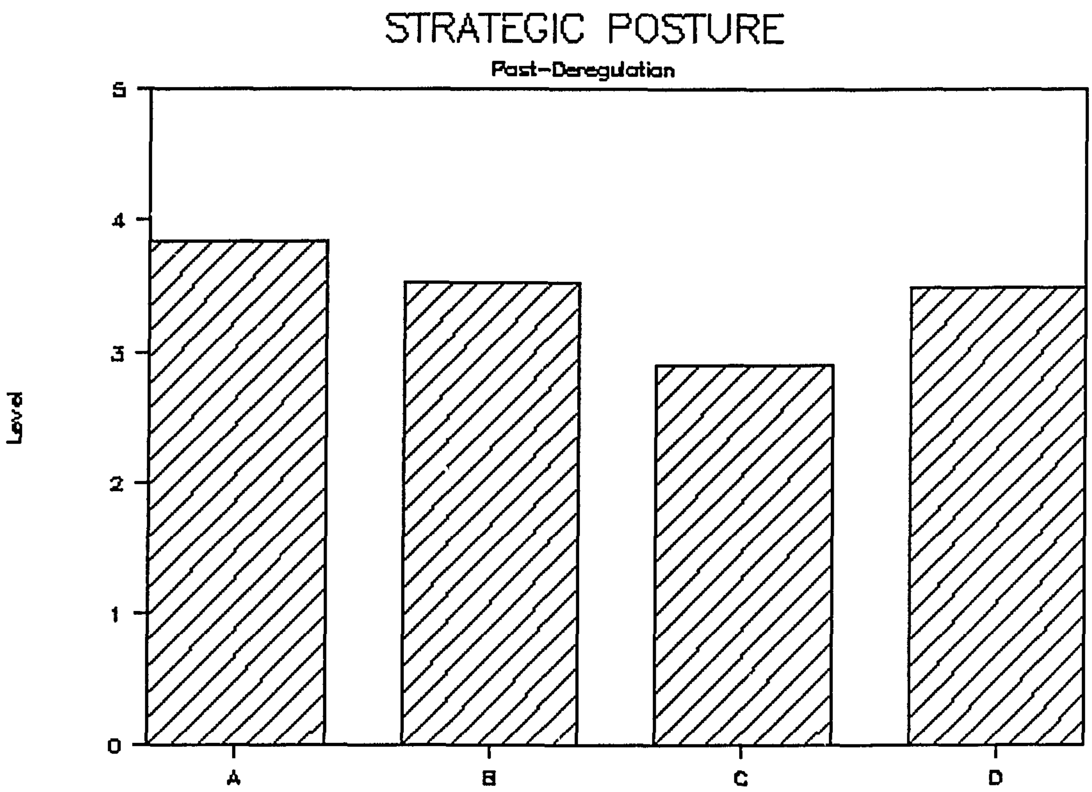
A. Outside Observers' perception of the level of environmental turbulence.

B. Outside Observers' perception of the level of environmental turbulence.

C. Bank managers' aggressiveness of strategy.

D. Bank managers' general management capability.

Figure 14



A. Outside Observers' perception of the level of environmental turbulence.

B. Outside Observers' perception of the level of environmental turbulence.

C. Bank managers' aggressiveness of strategy.

D. Bank managers' general management capability.

Table 14

Student's t-test for Bank Managers' Perceptions of Pre-Deregulation and Post-Deregulation Level of General Management Capability

Variable	N	Mean	S.D.	t	Significance
Bank Managers' Post-Deregulation General Management Capability	15	3.4933	0.467		
				-4.11	$p < 0.0001$
Bank Managers' Pre-Deregulation General Management Capability	15	2.7733	0.491		

b. Thirty sub-elements of the strategic posture.

c. Five strategic gaps - turbulence, aggressiveness, capability, strategy/capability and total gap.

Correlations were run to determine the linear associations. The Pearson r describes the strengths of the various associations and their significance levels are determined by two-tailed tests of significance at the .01 level.

The findings were as follows:

1) There was a positive linear association between "response to competition" and ROE ($r=0.6284$, $p<.01$). Thus, an increase in the bank managers' "response to competition" was accompanied by an increase in ROE.

2) There was a positive linear association between "change trigger" and ROE ($r=0.6175$, $p<.01$). Thus, an increase in the bank managers' "change trigger" was accompanied by an increase in ROE.

3) There was a positive linear association between "change trigger" and ROA ($r=0.6134$, $p<.01$). Thus, an increase in the bank managers' "change trigger" was accompanied by an increase in ROA.

4) There was a positive linear association between "model of success" and equity utilization ($r=0.7768$, $p<.01$). Thus, an increase in the bank managers' "model of success" was accompanied by an increase in equity

utilization.

5) There was a positive linear association between "model of success" and assets utilization ($r=0.6531$, $p<.01$). Thus, an increase in the bank managers' "model of success" was accompanied by an increase in assets utilization.

Relationships between Strategic Gaps and Dependent Variables

1) There was a negative linear association between "total gap" and profit margin ($r=-0.6827$, $p<0.005$). Thus, a decrease in the total gap exhibited by a bank was accompanied by an increase in profit margin.

2) There was a negative linear association between "total gap" and ROA ($r=-0.7568$, $p<0.001$). Thus, a decrease in the total gap exhibited by a bank was accompanied by an increase in ROA.

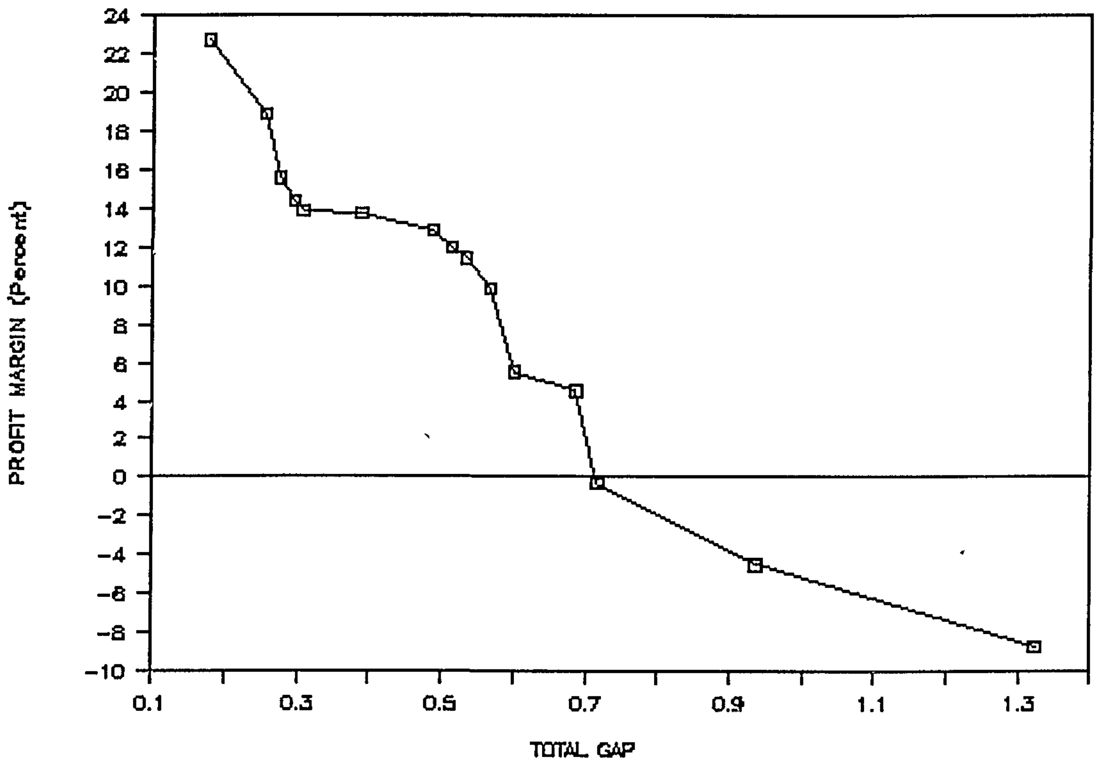
3) There was a negative linear association between "total gap" and ROE ($r=-0.9135$, $p<0.0001$). Thus, a decrease in the total gap exhibited by a bank was accompanied by an increase in ROE.

4) There was a negative linear association between "observer's environment less strategy gap" and ROE ($r=-0.6223$, $p<0.01$). Thus, an increase in "observer's environment less strategy gap" was accompanied by a decrease in ROE.

5) There was a negative linear association between

Figure 15

TOTAL GAP vs. PROFIT MARGIN



TOTAL GAP = Turbulence Perception Gap + Strategy Gap + Capability Gap

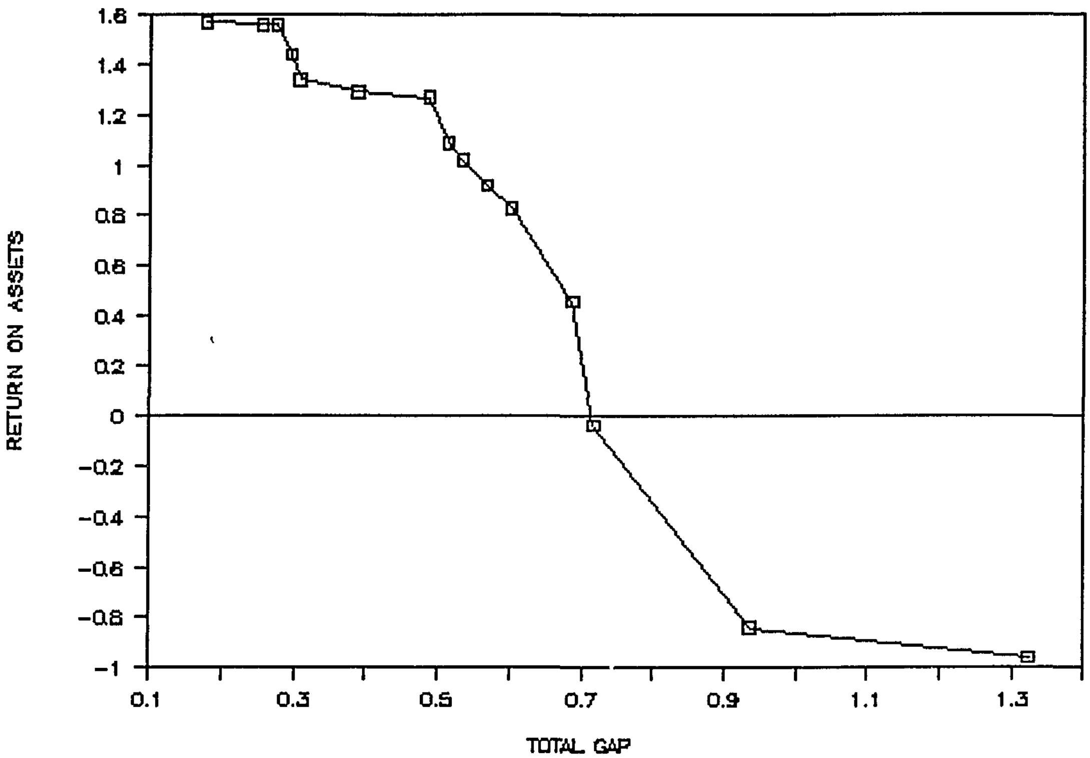
Turbulence Gap = Difference between outside observers' perception of environmental turbulence and bank managers' level of turbulence.

Strategy Gap = Difference between outside observers' perception of environmental turbulence and bank managers' aggressiveness of strategy.

Capability Gap = Difference between outside observers' perception of environmental turbulence and bank managers' general management capability.

Figure 16

TOTAL GAP vs. RETURN ON ASSETS



TOTAL GAP = Turbulence Perception Gap + Strategy Gap + Capability Gap

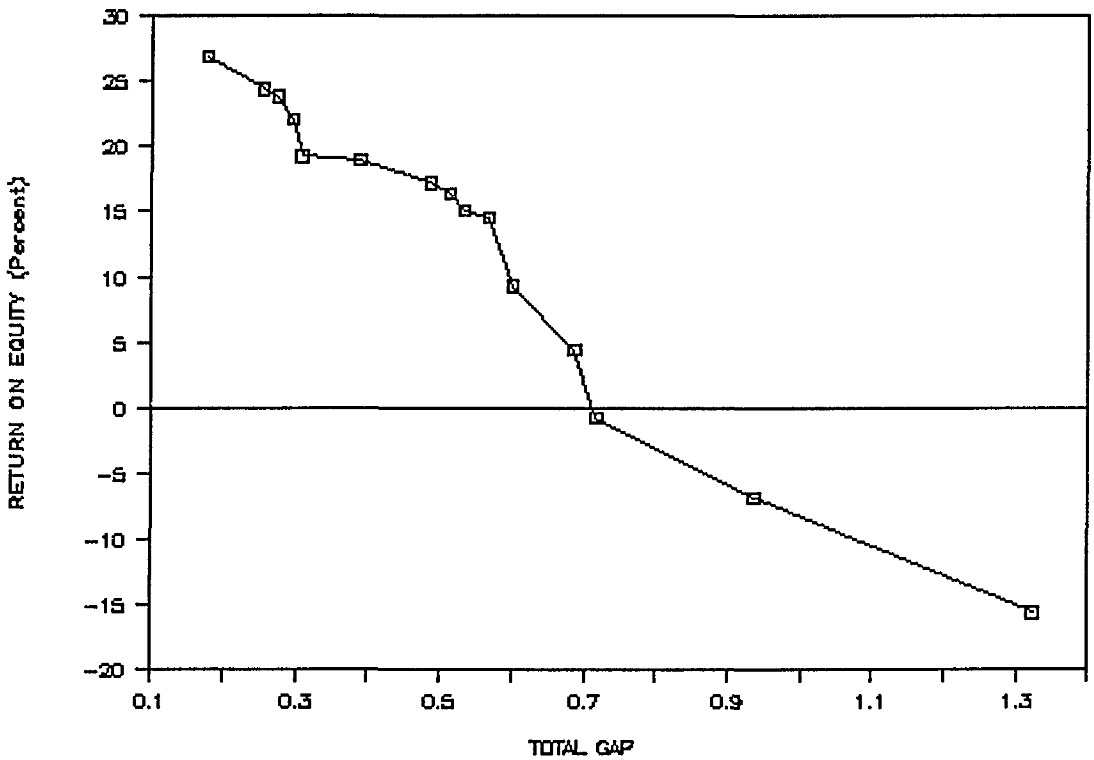
Turbulence Gap = Difference between outside observers' perception of environmental turbulence and bank managers' level of turbulence.

Strategy Gap = Difference between outside observers' perception of environmental turbulence and bank managers' aggressiveness of strategy.

Capability Gap = Difference between outside observers' perception of environmental turbulence and bank managers' general management capability.

Figure 17

TOTAL GAP vs. RETURN ON EQUITY



TOTAL GAP = Turbulence Perception Gap + Strategy Gap + Capability Gap

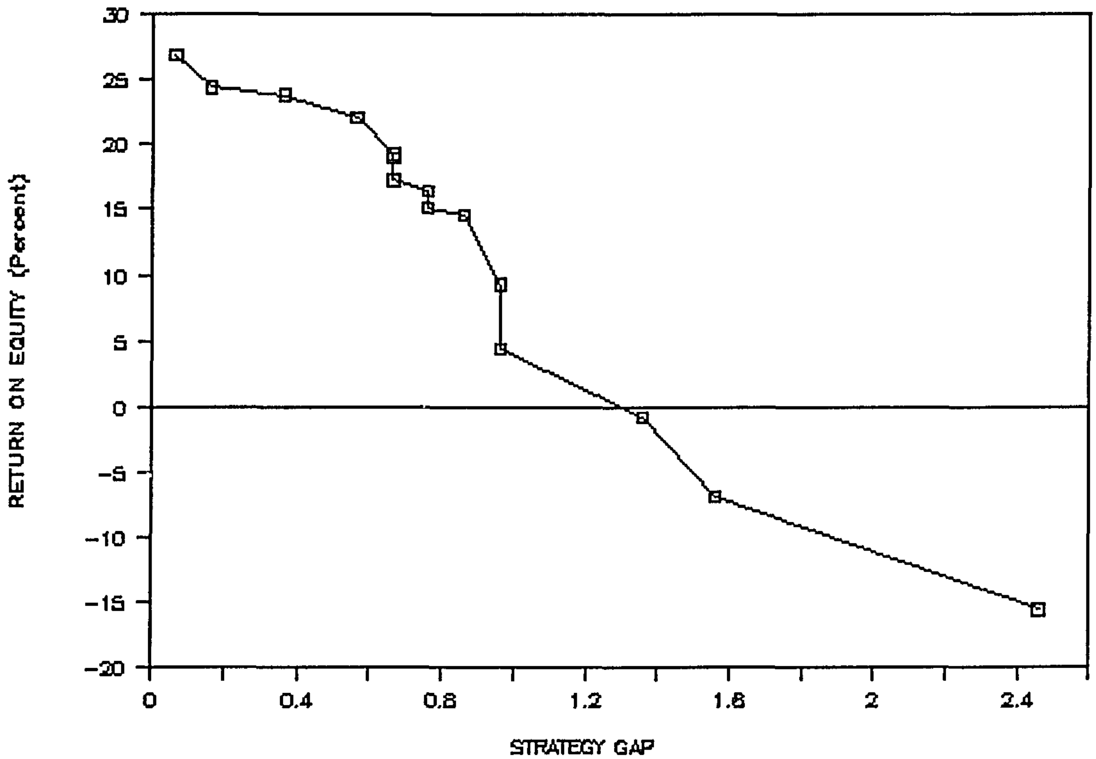
Turbulence Gap = Difference between outside observers' perception of environmental turbulence and bank managers' level of turbulence.

Strategy Gap = Difference between outside observers' perception of environmental turbulence and bank managers' aggressiveness of strategy.

Capability Gap = Difference between outside observers' perception of environmental turbulence and bank managers' general management capability.

Figure 18

STRATEGY GAP vs. RETURN ON EQUITY



STRATEGY GAP	=	Difference between the means of the outside observers' perceptions of the level of environmental turbulence and bank managers' aggressiveness of strategy

Return on Equity = Net Income/Equity.

"observer's environment less strategy gap" and ROA, (r=-0.6692, p<0.01). Thus, an increase in "observer's environment less strategy gap" was accompanied by a decrease in ROA.

6) There was a negative linear association between "observer's environment less capability gap" and ROA (r=-0.6821, p<0.01). Thus, an increase in "observer's environment less capability gap" was accompanied by a decrease in ROA.

7) There was a negative linear association between "turbulence gap" and equity utilization (r=-0.7127,p<.01). Thus, an increase in the gap between the outside observer's level of environmental turbulence and the bank managers' perception of the level of environmental turbulence was accompanied by a decrease in equity utilization.

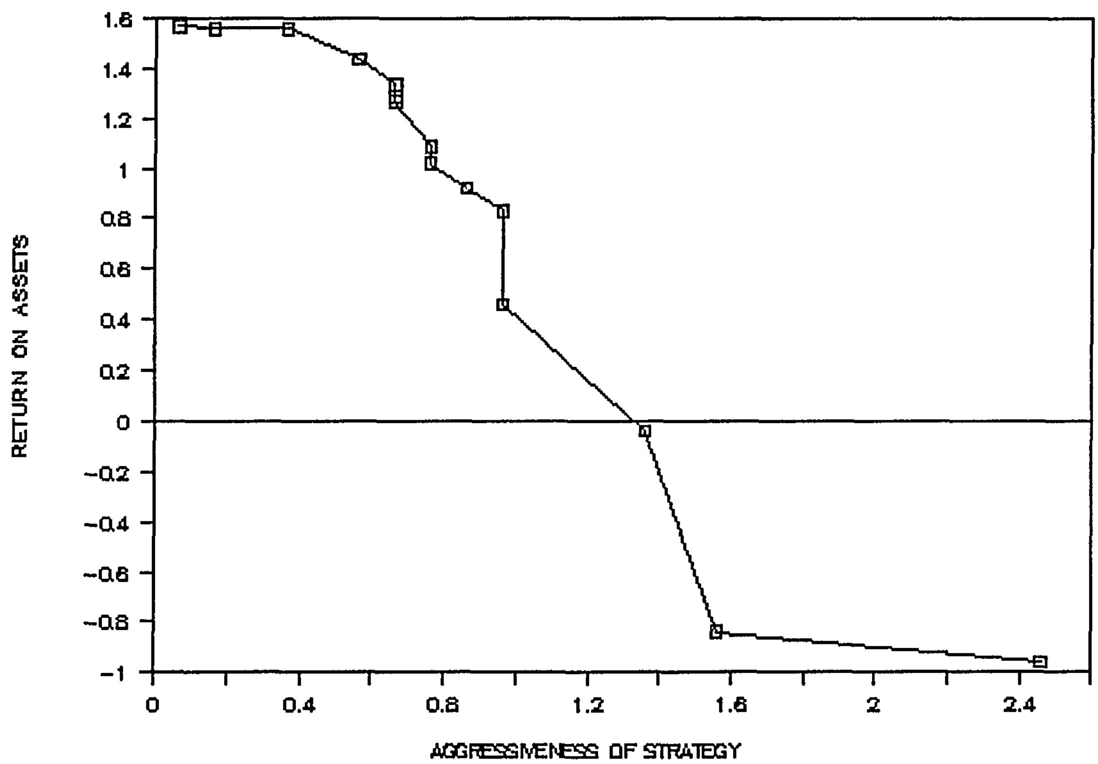
8) There was a negative linear association between "strategy less capability gap" and ROE (r=-0.7824, p<0.001). Thus, a decrease in the "strategy less capability gap" was accompanied by an increase in ROE.

9) There was a negative linear association between "strategy less capability gap" and ROA (r=-0.6650,p<0.01). Thus, a decrease in the "strategy less capability gap" was accompanied by an increase in ROA.

10) There was a negative linear association between "strategy less capability gap" and profit margin

Figure 19

STRATEGY GAP vs. RETURN ON ASSETS

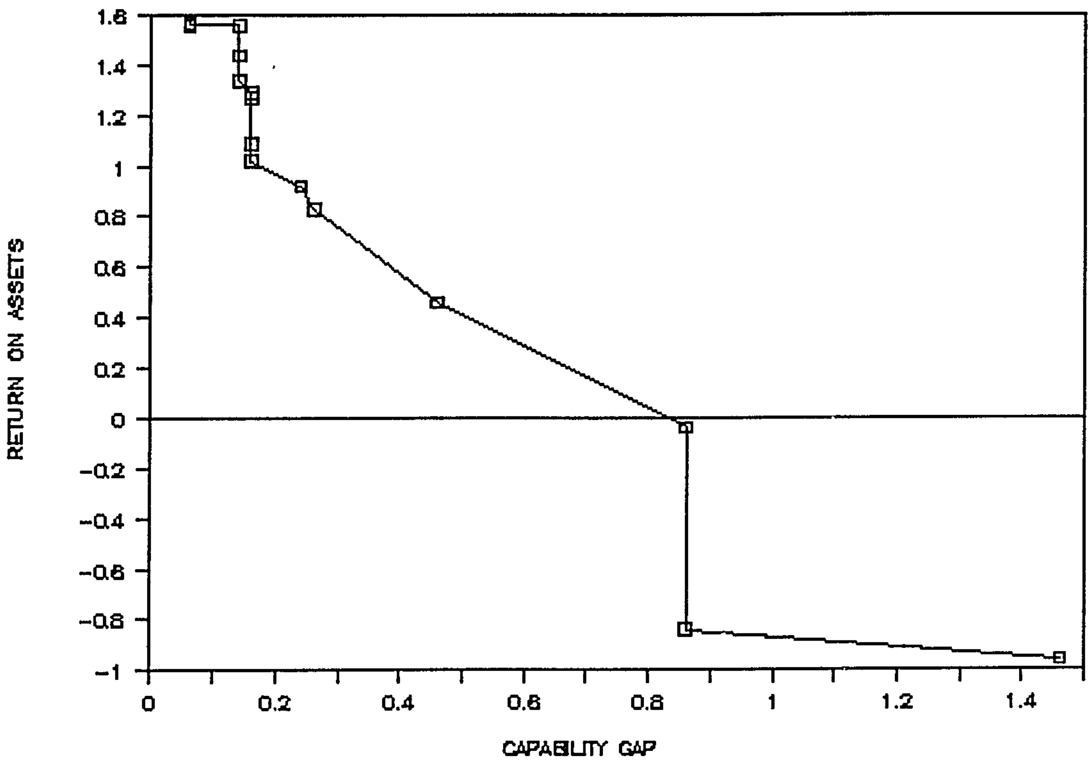


STRATEGY GAP = Difference between the means of the outside observers' perceptions of the level of environmental turbulence and bank managers' aggressiveness of strategy

Return on Assets = Net Income/Total Assets.

Figure 20

CAPABILITY GAP vs. RETURN ON ASSETS

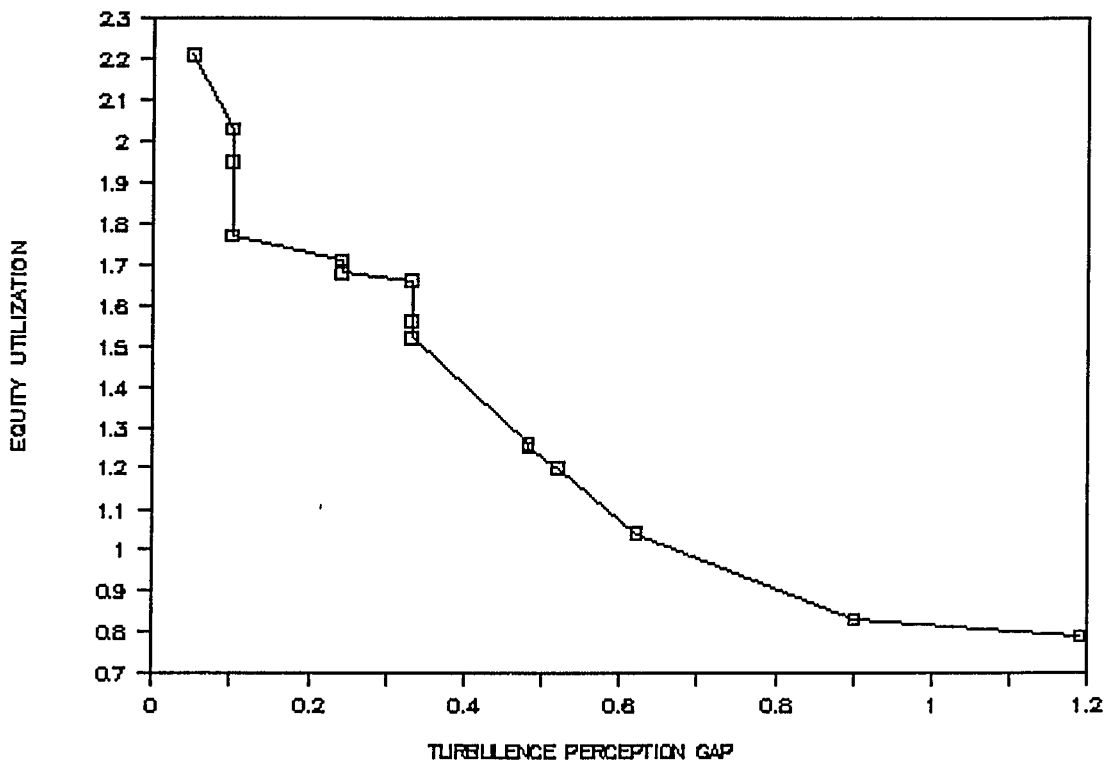


CAPABILITY GAP = Difference between the means of the outside observers' perceptions of the level of environmental turbulence and bank managers' general management capability.

Return on Assets = Net Income/Total Assets.

Figure 21

TURBULENCE PERCEPTION GAP vs. EQUITY UTILIZATION

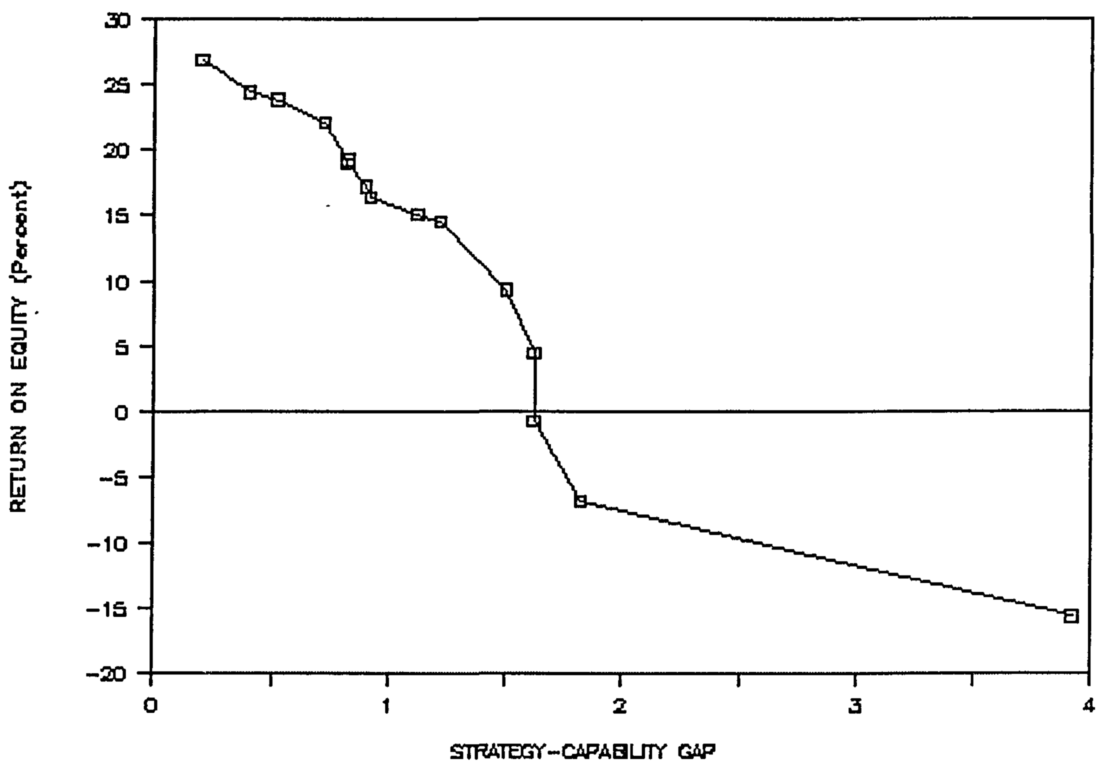


Turbulence Perception Gap	=	Difference between the means of the outside observers' and bank managers' perceptions of the level of environmental turbulence.

Equity Utilization = Revenue/Equity.

Figure 22

STRATEGY-CAPABILITY GAP vs. RETURN ON EQUITY

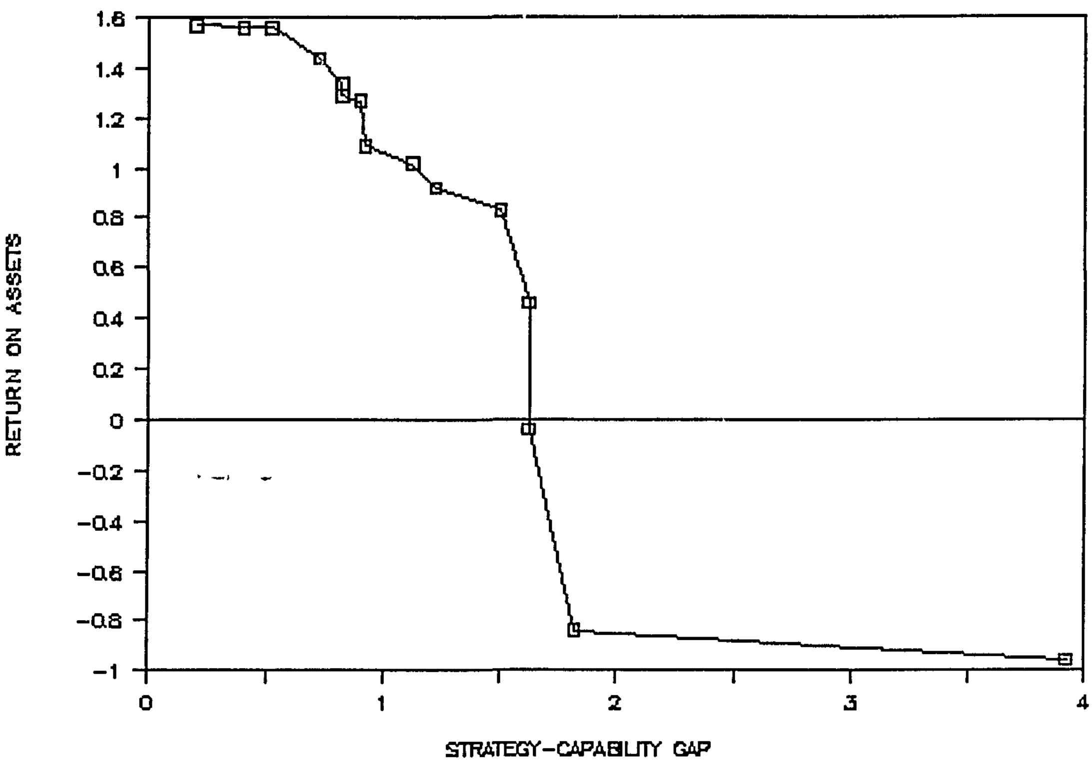


STRATEGY-CAPABILITY GAP	=	Difference between the mean of the outside observers' perceptions of the level of environmental turbulence and the sum of bank managers' aggressiveness of strategy and general management capability.

Return on Equity = Net Income/Equity.

Figure 23

STRATEGY-CAPABILITY GAP vs. RETURN ON ASSETS

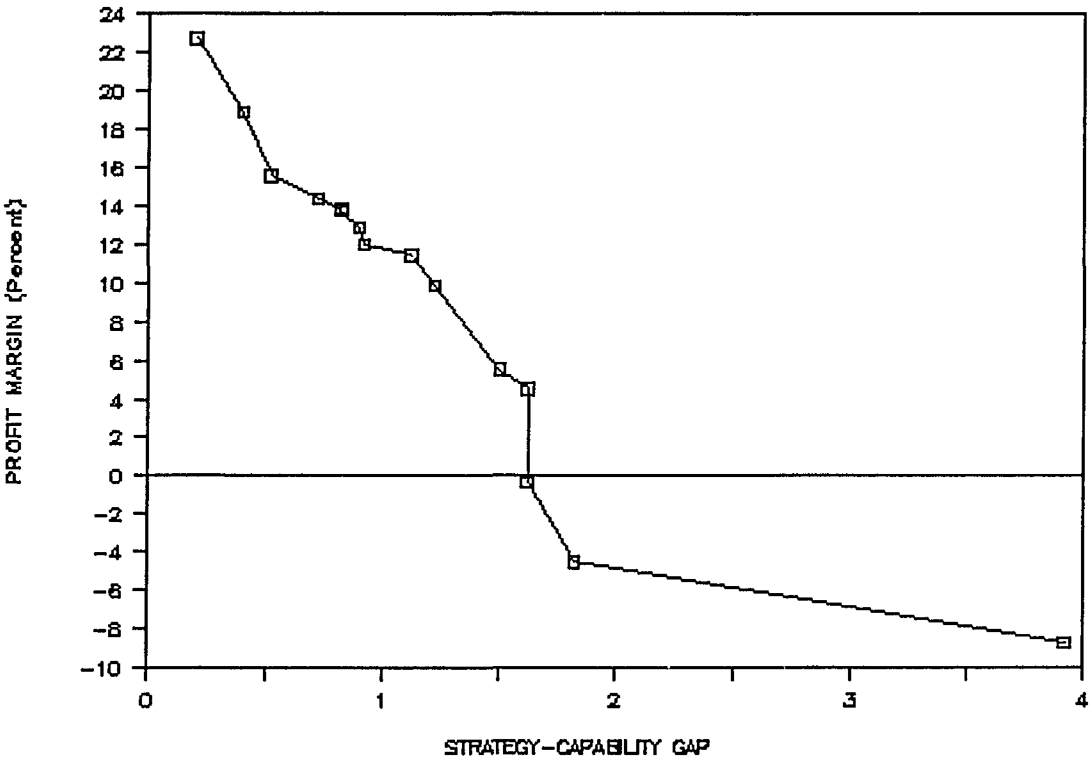


STRATEGY- CAPABILITY GAP	=	Difference between the mean of the outside observers' perceptions of the level of environmental turbulence and the sum of bank managers' aggressiveness of strategy and general management capability.

Return on Assets = Net Income/Total Assets.

Figure 24

STRATEGY-CAPABILITY GAP vs. PROFIT MARGIN



STRATEGY-CAPABILITY GAP	=	Difference between the mean of the outside observers' perceptions of the level of environmental turbulence and the sum of bank managers' aggressiveness of strategy and general management capability.

Profit Margin = Net Income/Revenue.

($r=-0.6031, p<0.01$). Thus, a decrease in the "strategy less capability gap" was accompanied by an increase in the profit margin.

11) There was a negative linear association between "observer's environment less capability gap" and profit margin ($r=-0.6869$, $p<0.01$). Thus, an increase in "observer's environment less capability gap" was accompanied by a decrease in profit margin.

Additional Findings

The total population of banks that met the criteria established for this study at its inception amounted to twenty-two (22). Only fifteen (15) of the banks remained in existence at the completion of the study. The high number of bank failures prompted research into the cause(s) of the problems. An effort was made to locate the top officials of the banks that had failed in order to obtain insights about their banks' respective strategic posture when it failed. The results of this sub-study are presented below:

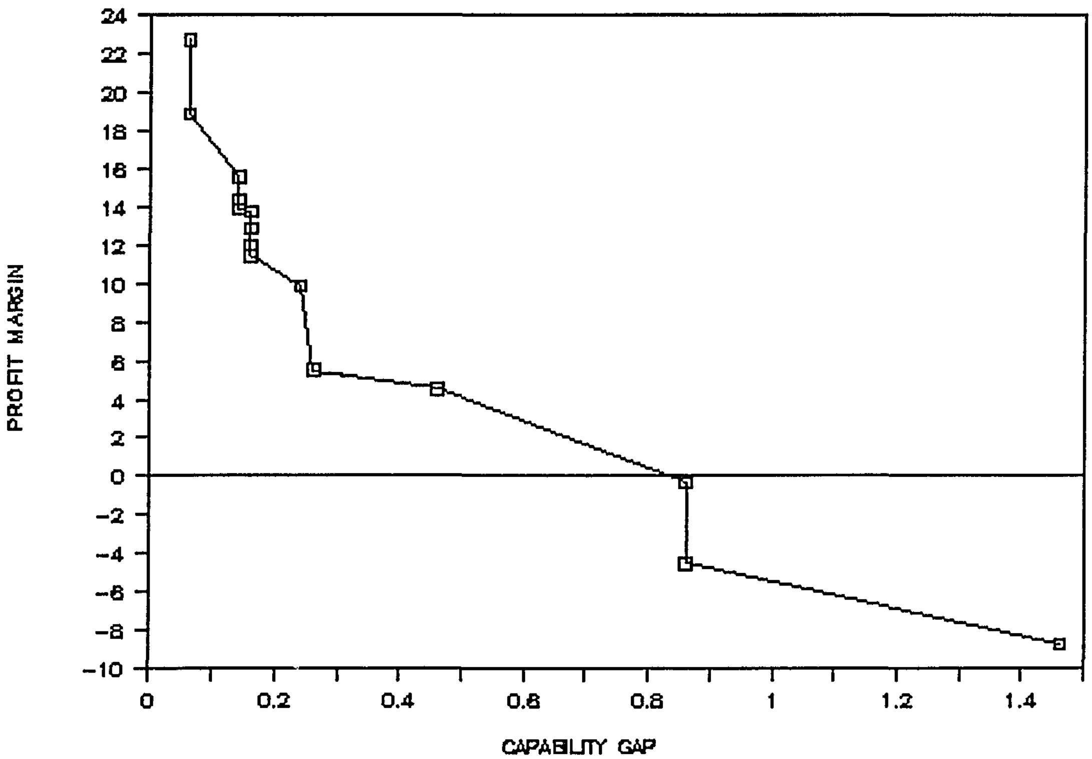
a) The mean of the perceptions of managers of failed banks about the level of environmental turbulence was 2.20.

b) Their mean perceived aggressiveness of strategy was 1.96.

c) Their mean perceived capability was 2.37.

Figure 25

CAPABILITY GAP vs. PROFIT MARGIN



CAPABILITY = GAP	Difference between the mean of the outside observers' perceptions of the level of environmental turbulence and bank managers' general management capability.

Profit Margin = Net Income/Revenue.

Table 15

Student's t-test for Bank Managers of Existing and Failed Banks Perception of the Level of Environmental Turbulence

Variable	N	Mean	S.D.	t	Significance
Bank Managers' Perception of Environmental Turbulence (Existing)	15	3.533	0.466		
				5.79	$p < 0.0001$
Bank Managers' Perception of Environmental Turbulence (Failed)	7	2.204	0.575		

Table 16

Student's t-test for Bank Managers of Existing and Failed Banks Perception of Aggressiveness of Strategy

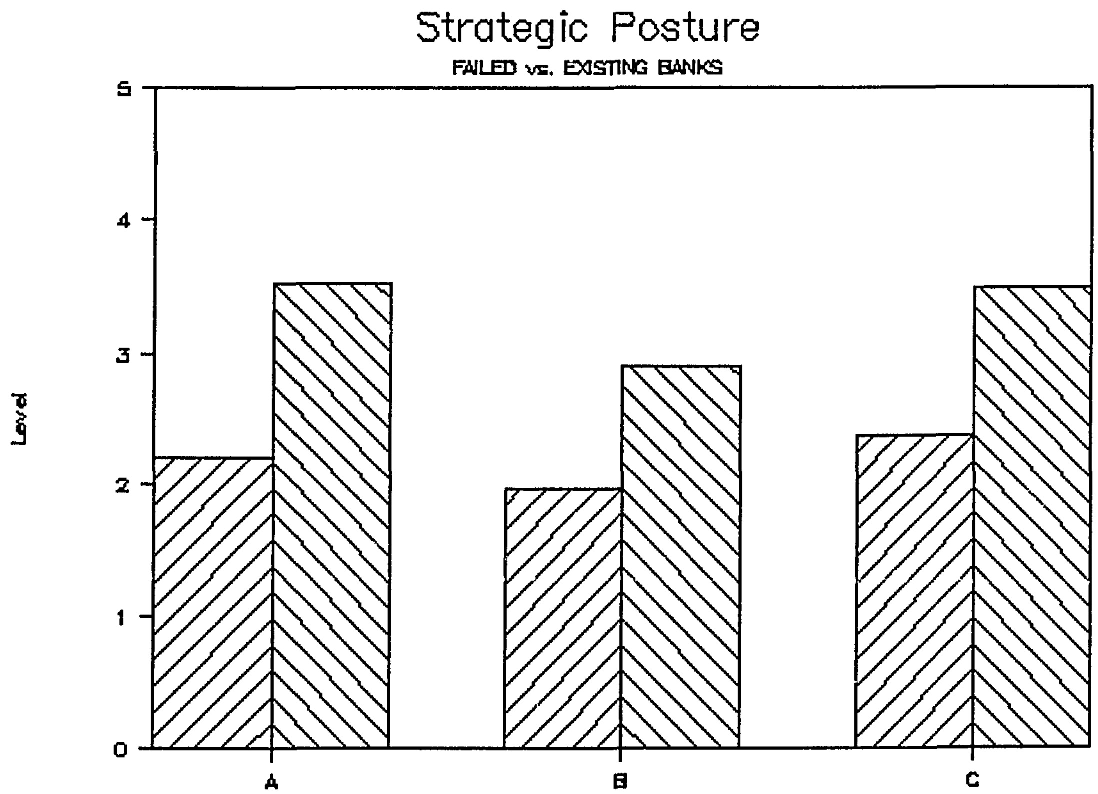
Variable	N	Mean	S.D.	t	Significance
Bank Managers' Aggressiveness of Strategy (Existing)	15	2.9067	0.593		
				3.80	$p < 0.01$
Bank Managers' Aggressiveness of Strategy (Failed)	7	1.957	0.424		

Table 17

Student's t-test for Bank Managers of Existing and Failed Banks Perception of General Management Capability

Variable	N	Mean	S.D.	t	Significance
Bank Managers' General Management Capability (Existing)	15	3.4933	0.467	4.30	$p < 0.0001$
Bank Managers' General Management Capability (Failed)	7	2.368	0.761		

Figure 26



A. Mean of Bank Managers' perception of the level of environmental turbulence.

B. Mean of Bank Managers' perception of the level of aggressiveness of strategy.

C. Mean of Bank Managers' perception of the level of general management capability.

Three *t*-tests were conducted to detect any significant differences between the responses provided by the managers of the defunct banks and those of the banks in existence. Results of the tests are presented in Tables 15, 16 and 17. The tests revealed that there were highly significant differences between the perceptions of the managers of the defunct banks and the perceptions of the managers of banks that were still in existence. The managers of the existing banks perceived the level of turbulence, aggressiveness of strategy, and general management capability as being much higher than did the managers of failed banks. Figure 26 presents a graphical representation of the results.

Summary

In summary, the following generalizations are evident from the findings:

1. Banks that misperceived the environment did not perform as well as those that perceived the environment correctly.

2. A low strategy-capability gap is associated with an increase in profit of a bank.

3. Optimum financial performance occurs when the levels of environmental turbulence, aggressiveness of strategy and general management capability are aligned, producing a minimal total gap.

4. Decreases in any of the gaps under investigation are associated with better financial performance.

Chapter 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter contains a review of the four previous chapters as well as the meaning and interpretation of the findings obtained from the study.

Summary

This study was based on Dr. H. I. Ansoff's strategic success hypothesis. The study addressed the relationships between the level of environmental turbulence, aggressiveness of strategy, general management capability and financial performance.

The Research Problem

The environment of the banking industry in the United States had been transformed from a fairly stable environment to a rapidly changing and highly competitive environment as a result of new challenges posed by new entities in the finance industry as well as by global banking operations. Established banking practices were conflicting with high-technology computer-driven techniques being used by institutions not bound by government regulations to which banks had to adhere.

At the time of this study, bank profits were at their lowest in 15 years due to a steady erosion of banks' profit base. From 1981 to the third quarter of 1986, return on assets for all banks dropped from .76 percent to .68 percent. Furthermore, since 1980, the banks' share of all financial assets had fallen from 35 percent to 32 percent by the end of 1985. New financial instruments that turn assets into securities, such as mortgage backed by certificates of automobile receivables, were cutting out the banks' traditional roles as middlemen.

Bank failures had been on the rise since the deregulation that occurred in 1982. The high rate of bank failures exerted a tremendous strain on the reserves of the FDIC, since the FDIC guaranteed deposits at insured banks for up to $100,000 each.

Robert Shapiro, the chairman of the Securities Industry Association observed that every bank failure led to a loss in confidence.

Arthur Soter, senior banking analyst at Morgan Stanley & Company, a New York investment-banking firm helped to summarise the problem, saying these were tough times to be a bank manager.

This new and continually changing environment in which banks had to operate brought about major departures from the previous way of doing business, by forcing management to seriously rethink overall goals, strategies, and operations in order to remain viable. A number of studies had been conducted during the decade preceding this study in order to investigate the strategic behavior of firms according to Ansoff's theory (1979). The studies attempted to measure the differences between the environmental turbulence, aggressiveness of strategy, and general mangement capability of the firm, using one or more of the three variables in relation to financial performance. A study of the strategic posture analysis of banks might help in an understanding of the banking industry.

The framework of this study was based on a model developed by H.I. Ansoff (1984), entitled "Strategic Posture Analysis"; it is an extension of an earlier model developed by Chandler (1962). A firm's strategic posture is made up of three elements, namely: level of environmental turbulence, aggressiveness of strategy, and general management capability.

Environmental turbulence was defined as the level of changeability of the environment in which an Environment Serving Organization (ESO) operates, the discontinuity of events combined with the speed at which the events surface and develop in the environment. Strategic aggressiveness was defined as the degree of discontinuity (changes) between successive moves by a firm. A strategic move is the process within a company which lasts from conception to the point of establishment of a new product/service in a strategic business area, or a change in the firm's competitive strategy in a business area.

General management capability refers to the capability of the management groups and individuals responsible for the overall success of all or a part of the firm. General management capability can be sub-divided into two parts: the human and the systems. The human is composed of culture, mentality and overall qualifications of the managers. The system includes structure of the organization, rewards and incentives, information and planning systems being used. The general management capability is the driving force that causes the change and adjustment of the corporate strategic behavior to occur in accordance with the environment.

The purpose of this study was to examine the strategic posture of banks in San Diego, California and its relation to their financial performance. Another aim of the study was to test the applicability of the model in a service-based industry. Questions were formulated to assess the following: top management's perceptions of the level of environmental turbulence in the banking industry, expert outside observers' perception of pre-deregulation level of environmental turbulence, expert outside observers' perception of the level of turbulence, top management's perceptions of aggressiveness of strategy, top management's perceptions of general management's capability, the financial performance of the bank, as well as the relationships between the elements of strategic posture and performance measures. Figure 1 illustrates the components of strategic posture. The questions were as follows:

Q.1 What is the difference between outside observers' perceptions of the post-deregulation level of environmental turbulence and the bank managers' perceptions of the post-deregulation level of environmental turbulence when both are measured on a five-point Likert scale?

Q.2 What is the difference between bank managers' perceptions of post-deregulation level of environmental turbulence and their perceptions of post-deregulation aggressiveness of strategy when both are measured on a five-point Likert scale?

Q.3 What is the difference between bank managers' perceptions of the post-deregulation level of environmental turbulence and their perceptions of the level of post-deregulation general management capability when both are measured on a five-point Likert scale?

Q.4 What is the difference between the pre-deregulation level of environmental turbulence as perceived by the bank managers and:

a. Expert outside observers' perceptions of the pre-deregulation level of environmental turbulence?

b. Bank managers' perceptions of pre-deregulation level of aggressiveness of strategy?

c. Bank managers' perceptions of pre-deregulation level of general management capability?

Q.5 What is the difference between bank managers' pre-deregulation and post-deregulation perceptions of the three elements of the strategic posture?

Q.6 What are the relationships between the eight financial performance variables and the following:

6.1 Each of the six elements of the strategic posture?

6.2 Each of 30 sub-elements of strategic posture?

6.3 Strategic gaps: turbulence, strategy, capability, strategy/capability, and total gap?

Theoretical Perspective

This study examined the relationships among the level of environmental turbulence, the level of aggressiveness of strategy, the level of general management capability, and the firm's financial performance.

Various research studies have been conducted on one or more of the above variables in order to gain better insights regarding the behaviors of firms (Ansoff, 1979; 1984; Bourgeois, 1980; Chandler, 1962; Drucker, 1979; Leontiades and Tezel, 1980; Steiner, 1983).

This study was based on one of the strategic success hypotheses. The hypothesis states that "an organization will be successful if environment, response, culture, and capability match each other" (Ansoff,1979:3). The theory of strategic management attempts to provide insights into managerial issues such as: behavioral patterns of environment-serving organizations, success and failure factors of environment-serving organizations, processes of transition by which environment-serving organizations shift from one style to another, and matching the environment, culture, response and capability of the environment-serving organization to each other in order to ensure success. The theory of strategic management is a synthesis of other disciplines, described by Ansoff (1979:3) as follows:

> The theory is multi-disciplinary in the sense that it seeks an optic appropriate to the problem and not to a particular scientific discipline. There are two paths to such an optic. One is to attempt an integration of the available disciplinary insights into a coherent whole. The other is to work back from the "real world" problem, abstract the features which appear critical to explanations of behavior, and then selectively borrow from theoretical insights which may be available.

H. I. Ansoff constructed the second part of the theory in his book Strategic Management (Ansoff, 1979). Strategic Management theory encompasses a wide scope of possible associations between and/or among seven elements. The elements include environmental turbulence, strategic thrust, culture, competence, power structure, strategic behavior, and strategic leadership. This study utilizes the concept of "strategic posture analysis" (Ansoff, 1984). The analysis requires an examination of the level of environmental turbulence, level of aggressiveness of strategy, and the level of general management capability. Optimum performance will occur whenever three elements mentioned above match each other on a a "five-point scale of matching triplets."

Based on the above, two research hypotheses were investigated as follow:

H.1a Performance is negatively related to the extent of the difference between aggressiveness of strategy and the prevailing level of environmental turbulence.

H.1b Performance is negatively related to the extent of the difference between general management capability and the prevailing level of environmental turbulence.

H.1c Performance is negatively related to the extent of the difference between the sum of aggressiveness of strategy and general management capability and the prevailing level of environmental turbulence.

H.2 Performance is negatively related to the extent of the difference between the bank managers' perceptions of the level of environmental turbulence and the outside observers' perception of the level of environmental turbulence.

This study investigated seven financial measures, with emphasis on the examination of the above-stated two hypotheses which are derived from Ansoff's theory of strategic management.

Variables and Relationships

Three types of variables were utilized in this study. There were three independent variables, seven dependent variables, and five intervening variables.

The three independent variables were:

1. Levels of environmental turbulence as perceived by:
   a. Expert outside observers.
   b. Bank managers.
2. Aggressiveness of strategy as perceived by:
   a. Bank managers.
3. Openness of capability as perceived by:
   a. Bank managers.

The aforementioned variables were measured for two time periods: pre-deregulation (pre-1983), and post-deregulation (1983-1986).

The seven dependent variables were classified into three types of measures as follows:

<u>Overall Performance Measures</u>:

1. Return on equity.
2. Return on assets.

<u>Operating Financial Measures</u>:

3. Ratio of expenditure to net income.
4. Profit margin.

<u>Strategic Financial Measures.</u>

5. Equity utilization.
6. Assets utilization.
7. Ratio of loans to deposits.

The dependent variables were the financial measures of the banks over a three-year period (December 1983 to December 1986).

The intervening variables used in this study were the strategic gaps or differences between the independent variables. Emory (1980) defined an intervening variable as a conceptual mechanism through which the independent variables affect the dependent variables. There were five intervening variables, as follows:

a) The gap between outside observers perceived levels of environmental turbulence and bank managers' perception of the level of environmental turbulence.

b) The gap between bank managers' perceived levels of turbulence and their perceived levels of aggressiveness.

c) The gap between bank managers' perceived levels of turbulence and their perceived levels of general management capability.

d) The gap between bank managers' perceived levels of strategic aggressiveness and their perceived levels of general management capability.

e) Observers' total gap: the mean of the gaps between

i) outside observers' perceived level of environmental turbulence and bank managers' perceived level, and

ii) outside observers' perceived level of environmental turbulence and bank managers' perceived level of aggressiveness of strategy, and

iii) outside observers' perceived level of environmental turbulence and bank managers' perceived level of general management capability.

Criteria for Data Sources

The criteria for the data sources were divided into two sections. The first criteria were for the banks, and the second were for the expert outside observers.

Criteria for the First Data Sources - BANKS.

1) Banks were required to be be FDIC-Federal Deposit Insurance Corporation insured.
2) The location of the banks was San Diego, California.
3) Subjective data were to be obtained from senior executives, or executives in charge of major divisions.
4) Objective financial data were to be obtained from financial statements of the banks and public domain financial records.
5) The period under study was December 1983 to December 1986.

Criteria for the Second Data Sources - OUTSIDE OBSERVERS.

Expert Outside Observers: These were composed of:

a) Financial Columnists/Journalists.
b) Financial Consultants.
c) American Banker Publications Executives.
d) FDIC Officials.
e) Retired Bankers.

A sample of 15 outside observers (not directly involved with any of the banks being studied) selected according to the above criteria was used.

Background

The banking industry in the United States had been transformed from a fairly stable environment to a rapidly changing and highly competitive environment as a result of new challenges posed by new entities in the finance world and competition brought about by global banking. Old-fashioned bank methods seemed to be losing to high-technology computer-driven techniques being used by institutions not bound by government regulations that banks had to adhere to.

Bank profits were at their lowest in 15 years due to a steady erosion of banks' profit base; from 1981 to the third quarter of 1986, return on assets for all banks dropped from .76 percent to .68 percent. Furthermore, since 1980, the banks' share of all financial assets had fallen from 35 percent to 32 percent by the end of 1985. New financial instruments that turn assets into securities, such as mortgage backed by certificates of automobile receivables were cutting out the banks' traditional roles as middlemen.

This new and continually changing environment in which banks had to operate was bringing about major departures from the prior way of doing business, by forcing management to seriously rethink their way of doing business in order to remain viable. Furthermore, bank failures were at an all-time high; hence, a study of the banking industry's strategic posture was deemed to be of assistance to practicing bank managers in their response to the discontinuity being encountered in the industry's environment.

Various studies in the field of strategic management have been conducted similar to the purpose of this research. H. I. Ansoff (1984) developed a model that can be adapted in the study of any organization. This model, termed Strategic Posture Analysis, is used to diagnose:

a) the current or the future level of environmental turbulence of a single firm or an industry,
b) the current or the appropriate level of aggressiveness of strategy, and
c) the current or the appropriate capability that will match the two levels stated above.

The resultant hypothesis of strategic posture analysis according to H. I. Ansoff (1979, 1984) is that optimum performance will be achieved when the level of environmental turbulence, aggressiveness of strategy, and capability are aligned.

Other studies have investigated issues that are related to the present area of concern in an effort to further understanding. Wood and LaForge (1979) examined the relationship between "comprehensive planning" and "financial performance" of large American banks, and Smart and Vertinsky (1984) examined four types of strategies which were employed in responding to environmental challenges in 94 firms engaged in various functions. Salameh (1987) studied the relationship between the strategic posture and the financial performance of banks in a developing high-income oil-exporting country in the United Arab Emirates. Chabane (1987) studied restructuring and performance in Algerian state-owned enterprises. Sullivan (1987) studied the relationship between proportion of income derived from subsidy and strategic performance.

The hypotheses developed for this study are supportive of previous research as well as a further extension. This study provides a dynamic perspective of the strategic posture analyis as well as a further validation of the strategic success hypothesis developed by H. I. Ansoff (1984).

Data Collection

The data sources, sample of data sources, the instrumentation, the pilot study and the procedures for data collection are described in this section. The data collection was conducted over a period of two and a half months, while the interviews lasted approximately three hours each.

Instrumentation

The instrument was made up of two elements as follows:

a. A researcher-designed survey instrument, and

b. An adaptation by R. Ansoff (1988) of an instrument originally developed by H.Ansoff (1979,1984).

The survey instrument was made up of nine parts.

Instrumentation for Bankers

The instrumentation for the bankers was subdivided into two, covering the period before deregulation (December 1982 and earlier), and the post-deregulation period (December 1983-December 1986).

Part One: The first part addressed the level of environmental turbulence and was divided into two sections. The first section consisted of a general open-ended question about perceived turbulence. The second section was made up of seven structured questions which measured the level of environmental turbulence. The questions used five-point Likert scales, to match the five levels of environmental turbulence: stable, reactive, anticipating, exploring, and creative. Respondents chose one of the levels for each of the seven questions.

Part Two: The second part contained one section and provided information regarding the level of aggressiveness of strategy of the banks. It was made up of 10 structured questions about aggressiveness of strategy. The first five questions were about the banks' aggressiveness of innovation strategy, and the remaining five were attributes of the banks' marketing strategy. The 10 questions were measured on five-point Likert scales matching the five levels of aggressiveness of strategy: stable, reactive, anticipating, exploring, and creative. Respondents chose one of the levels for each of the 10 questions.

Part Three: The third part concerned the level of general management capability. It was made up of 10 structured questions which were attributes of general management capability. The first four questions were attributes of the bank managers' profiles, the three questions that followed were attributes of the banks' organizational structure, and the last three questions were attributes of characteristics of the system. The 10 questions were measured on five-point Likert scales matching the five levels of general management capability: custodial, production, marketing, strategic, and flexible. Respondents chose one of the levels for each of the 10 questions.

Part Four: This was composed of an instrument developed for collecting demographic information about the bank managers and the expert outside observers. The data collected consisted of the following:

a. Age.
b. Sex.
c. Position.
d. Length of service.
e. Level of education/background.
f. Strategic business areas of involvement.

Instrumentation for Expert Outside Observers

The instrument used for data collection of the bankers' perceptions of the level of environmental turbulence was adapted for the collection of data from the expert outside observers. The instrument was made up of two parts, each containing two sections. The first part was designed to obtain information about the pre-deregulation level of environmental turbulence, while the second part provided information regarding the period after deregulation.

Tryout Study

The instrument was tested for suitability, clarity, and acceptability with the aid of four banks and two expert outside observers in San Diego. The respondents were asked to evaluate the instrument on question quality, content, wording, biased and/or ambiguous questions. The initial test resulted in errors which were corrected, whereafter the test was readministered to the same respondents. The revised instrument was approved by the respondents thereby affirming the instrument's validity and suitability for its intended audience. The instrument can be found in Appendices B and D.

Procedure for Data Sources

The procedure involved identifying the respondents, contacting them to set up an appointment, and conducting the interview.

Research Assumptions and Delimitations

The study was undertaken with the following assumptions and delimitations:

Assumptions

1. The method of data gathering and analysis were sufficient and accurate for the purpose of the study.
2. The bank managers were qualified enough to understand the requirements and as such responded to the best of their ability.
3. The validity of the survey questionnaire was established with the aid of a pilot study as well as consultation with experts in the field.

4. The expert outside observers were informed and possessed the qualifications needed to provide information about the level of environmental turbulence.

Delimitations

1. The study was limited geographically to San Diego.
2. The study was limited to 22 banks that met the criteria established for the study.
3. The objective data consisted of financial measures for the period from December 1983 to December 1986.
4. The research population was limited to top managers of banks and selected expert outside observers.

Findings and Implications

This section presents the findings and implications derived from the study. The major findings are presented below:

Major Findings

1. Banks that misperceived the level of environmental turbulence did not perform as well as banks that perceived the level of environmental turbulence correctly.

The extent of a bank's misperception can be used as a determinant of the bank's performance. This knowledge can be used by banks internally as well as regulators of the industry in their monitoring process.

2. Financial performance is directly related to the size of the strategic gaps.

Banks that exhibited smaller gaps in their strategic posture performed better than banks with bigger gaps. This finding is very valuable to management in determining how much variance from the optimum gap will lead to a decline in financial performance.

3. Optimum financial performance occurred when the levels of banks strategic posture matched each other:

    a. Environmental Turbulence.

    b. Aggressiveness of Strategy.

    c. General Management Capability.

Banks can use strategic posture analysis as a reference tool to constantly monitor the posture exhibited by individual banks in order to determine areas of weakness or strengths, thereby optimizing scare resources to effect change(s) where most needed.

4. Banks that were unable to make the necessary transition from the pre-deregulation period to the post-deregulation period failed or no longer had an independent existence.

The implication of this finding for management is the need to optimize the bank's strategic posture based on the immediate level of turbulence as well as the importance of positioning the bank appropriately in order to respond to the future level of turbulence in which they have to operate.

5. Expert outside observers provided very valuable information regarding the level of environmental turbulence. The outside observers were also better predictors of success, when compared with the bank managers.

The results of the study demonstrated that banks that perceived the level of environmental turbulence as being closer to that of the outside observers' perception performed better than those whose perception was further away.

6. <u>The above findings provide a further validation of Ansoff's strategic success hypothesis.</u>

This study provided a test of the strategic hypothesis in a dynamic setting (transition of an industry from a low level of environmental turbulence to a higher level). The results obtained were similar to those obtained in other studies that have been conducted in a number of different settings as follows:

i) Different industries.
ii) Government enterprises.
iii) Not-for-profit organizations.

Conclusions

This section presents the conclusions derived from the study.

<u>Question 1</u>. What is the difference between outside observers' perceptions of the level of environmental turbulence and the bank managers perceptions of the level of turbulence when both are measured on a five point Likert scale?

The conclusion is as follows:

Misperception of the level of environmental turbulence is evident by the bank managers' response.

Question 2. What is the difference between bank managers' perceptions of environmental turbulence and their perceptions of aggressiveness of strategy when both are measured on a five-point Likert scale?

The conclusion is as follows:

The bank managers' aggressiveness of strategy lagged behind their perception of the level of environmental turbulence and the outside observers' perception of the level of environmental turbulence.

Question 3. What is the difference between bank managers' perceptions of the level of environmental turbulence and their perceptions of the level of general management capability when both are measured on a five point Likert scale?

The conclusions are as follows:

The bank general management capability was not sufficient to respond to the perception of the level of turbulence or the outside observers' perception of the level of environmental turbulence. Furthermore, the bank managers' general management capability was incapable of supporting their aggressiveness of strategy.

Question 4. What is the difference between the pre-deregulation level of environmental turbulence as perceived by the bank managers and:

a) Expert outside observers' perception of the pre-deregulation level of environmental turbulence?

b) Bank managers' perception of pre-deregulation level of aggressiveness of strategy?

c) Bank managers' perception of pre-deregulation level of general management capability?

The conclusions are as follows:

Bank managers' perception of pre-deregulation level of environmental turbulence was similar to the outside observers' perception, which suggests that the bank managers perceived the level of environmental turbulence correctly, however the bank managers' aggressiveness of strategy was not sufficient to respond to their perception of turbulence. The bank managers' perception of the post-deregulation turbulence was higher than that of their pre-deregulation perception. This suggests that they recognised that the turbulence in the environment in which they were operating was considerably different from that of the past. The bank managers' general management capability was not adequate to support their aggressiveness of strategy.

<u>Question 5</u>. What is the difference between the pre- and post-deregulation perceptions of the three elements of the strategic posture as perceived by the bank managers?

The conclusions are as follows:

1. Banks that were able to perceive the increased level of turbulence in the environment in which they operated performed better than banks that misperceived the environment.

2. Banks that made the effort to strengthen their aggressiveness of strategy performed better than those that did not - the amount of the effort was directly related to performance.

3. Banks that made the necessary investment to shift their general management capability from the pre-deregulation level to match the increasing level of turbulence in the environment in which they operated were better performers. The size of the shift was directly related to performance.

Question 6. What are the relationships between the eight financial performance variables and the following:

6.1 Six elements of strategic posture?

6.2 Each of 30 sub-elements of strategic posture?

6.3 Strategic gaps?

The conclusions are as follows:

1. Increases in the elements of the independent variables significantly contributed to better financial performance.

2. Increases in the sub-elements of the independent

variables significantly contributed to better financial performance.

3. The size of the various strategic gaps was significantly related to financial performance. Banks with small gaps performed better than those with larger gaps.

Recommendations

The findings obtained from this study provide a number of practical implications for the practice of management. Suggestions for further research that will help to build upon this study will be discussed.

Further Research

Beneficial future research could include:

1. A study which examines the important components of the strategic posture based on different industries (service, production, etc).
2. A study which examines/addresses the concept of multi-capability within a firm.
3. A study which examines the relationships between the variables from a cause-effect perspective.

Applicability of Findings to Practice of Management

1. Strategic posture analysis can be used internally

by managers to examine their posture composition in order to determine areas of strength and weakness, thereby maximizing the use of limited resources. Externally, strategic posture analysis can be used by stakeholders to determine strength/weakness of a firm.

2. Strategic posture analysis can be used to determine the possible financial performance of a firm based on the amount of mismatch in its posture.

3. The concept of strategic posture can be used in the restructing of firms, i.e.,

a. the type of human resources required for a particular firm can be accurately determined by the level of turbulence in which the firm will conduct business (custodial type of human resource is sufficient in a relatively stable environment, whilst a creative type of human resource is critical to succeed in a turbulent or discontinuous environment).

b. the type of management system that will contribute to success will vary, based upon the level of turbulence in which a firm operates (policy and procedure manuals maybe sufficient for a firm that operates in a low turbulence environment, whilst a more advanced system such as strategic issue analysis will be required for a firm that operates in an environment of high turbulence).

4. Environmental surveillance is an important part of strategic management whereby firms can develop systems

that will help them monitor changes that occur in the environment in which they operate. The results obtained from the study demonstrated that consultation with expert outside observers helps to reduce the risk of strategic myopia (misperception of the level of turbulence).

5. Banks can use strategic posture analysis as a supplemental tool for credit assessment by enabling the bank to determine the possibility of default on loans. This tool will also enhance the usefulness of the bank by making it possible for the bank to make suggestions that might help clients increase the success factor of proposed investments.

6. The above findings are readily applicable to the savings and loan industry. Implementation of the recommendations will be of value in the restructuring effort of the industry. Another significant outcome is the importance of the general management capability that will be needed to ensure the success of the industry in an environment of increasing turbulence.

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BIBLIOGRAPHY

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APPENDICES

APPENDIX A

TRANSMITTAL LETTER

BANK MANAGERS

Dear Respondent,

The purpose of this study is to evalute the environment of the banking industry and the banks' response to the threats and opportunities posed by the environment. The study will help to examine and build theory as well as contribute to knowledge.

Please feel free to ask questions and share thoughts that you feel might further enhance the study.

All responses will be confidential.

Thank you for your time and consideration.

Very truly yours,

Alfred Lewis

Researcher

APPENDIX B

SURVEY INSTRUMENT

BANK MANAGERS

QUESTIONNAIRE

PART I LEVEL OF ENVIRONMENTAL TURBULENCE

SECTION I (Pre-deregulation :- Prior to 1983)

1. Please describe the nature of the changes in your bank's external environment over the period stated above.

SECTION II

The following questions address the changes that took place in the bank's external environment.

1. Which one of the following best describes your bank's familiarity regarding the changes that took place in the environment of the banking industry prior to 1983?

   a. The environment was stable.
   b. Changes in the environment were consistent with the bank's experience.
   c. Changes in the environment were understood in terms of historical developments.
   d. Changes in the environment were understood in terms of the bank's collective experience.
   e. Changes in the environment were new and hence unfamiliar.

2. Which one of the following best describes your bank's response to change prior to 1983?

   a. Speed of change in the environment was much slower than my bank's response to it.
   b. Speed of change in the environment was slower than my bank's response to it.
   c. Speed of change in the environment was comparable to my bank's response to it.
   d. Speed of change in the environment was faster than my bank's response to it.
   e. Speed of change in the environment was much faster than my bank's response to it.

3. Which one of the following best describes your bank's visibility of the future in the environment of the banking industry prior to 1983?

   a. My bank's environment remained relatively unchanged.
   b. My bank's environment evolved in a historically logical manner.
   c. My bank's environment was forseen through analysis of threats and opportunities.
   d. My bank's environment was difficult to predict.
   e. My bank's environment was characterized by unpredictable surprises.

4. Which one of the following best describes your bank's business scope prior to 1983?

   a. My bank's business scope was Local.
   b. My bank's business scope was Statewide.
   c. My bank's business scope was Regional.
   d. My bank's business scope was Nationwide.
   e. My bank's business scope was Global.

5. For the period prior to 1983, please indicate the extent of the importance of the following factors as they affected your bank's decision making with regard to changes in the external environment.

	LOW <---------	----------	IMPORTANCE	----------	---------> HIGH
Economic changes	1	2	3	4	5
Technological changes	1	2	3	4	5
Socio-political changes	1	2	3	4	5

PART II LEVEL OF AGGRESSIVENESS OF STRATEGY

The following questions address your bank's response to the changes that occured in the external environment prior to 1983?

1. Which one of the following best describes your bank's response to customers prior to 1983?

   a. We neglected responding to customers.
   b. Our service was what the customer wanted.
   c. We anticipated the customers' needs.
   d. We identified unfulfilled needs.
   e. We identified the customers latent needs.

2. Which of the following best describes the strategy utilized for developing the bank's market share prior to 1983?

   a. We stuck to our customers.
   b. We followed our competitors.
   c. We expanded to familiar markets.
   d. We expanded to foreign markets.
   e. We created new markets.

3. Which of the following levels best describes the frequency with which your bank introduced new services prior to 1983?

Seldom or Never	Once a Year	Twice a Year	3 - 5 times a Year	5 - 7 times a Year
1	2	3	4	5

Other: please specify:_________

4. Which one of the following best describes the activities initiated by the research and development department of your bank prior to 1983?

a. Little or no research and development.
b. Our research and development department was called in when necessary.
c. Our research and development department provided support for the marketing department.
d. Our research and development department was the source of new product/service ideas.
e. Our research and development department was the "elite" department.

5. Which one of the following best describes the extent of the bank's emphasis in marketing it's products and services prior to 1983?

VERY LOW	LOW	MODERATE	HIGH	VERY HIGH
|	|	|	|	|

<--1---------2----------3--------------4-----------5-->

6. Which one of the following best describes the strategy utilized by your bank in response to competition prior to 1983?

a. We did not compete.

b. We responded to aggression.

c. We positioned the bank appropriately.

d. We led the pack.

e. We were our own competitors.

7. Which one of the following best describes the strategy used by your bank to expand it's share of the market prior to 1983?

   a. We grew with the market.
   b. We defended our market share.
   c. We increased our share of the market.
   d. We controlled the market.
   e. We dominated the market.

8. Which one of the following best describes the activities initiated by the marketing department of your bank prior to 1983?

   a. Making services available at the market place.
   b. Convince existing and potential customers that bank's services were superior.
   c. Influence service development to be responsive to customer needs.
   d. To establish the bank as a marketing leader.
   e. To establish the bank as a marketing innovator.

9. Which one of the following best describes the promotion and advertising strategy utilized by your bank prior to 1983?

   a. Products spoke for themselves; promotion and advertising were not important factors.
   b. Our promotion and advertising was similar to that of our competitors.
   c. Our promotion and advertising was aggressive, we anticipated new trends.
   d. Our promotion and advertising enabled us to have an edge on competition.
   e. Our promotion and advertising was creative; we started new trends.

10. Which one of the following best describes your bank's focus on new service development prior to 1983?
   a. We had no service development
   b. Our focus on service development was the imitation of emerging new services.
   c. Our focus was on service development and the improvement of existing services.
   d. Our focus of research was on the adoption of developing services.
   e. Our focus of research was on pioneering new services.

PART III GENERAL MANAGMENT CAPABILITY

The following questions are related to your bank's top management abilities which were used in your bank's response to the changes that occured in the bank's external environment prior to 1983?

1. Which of the following best describes your bank's top management risk propensity prior to 1983?

   a. Top managers rejected risks.
   b. Top managers accepted familiar risks.
   c. Top managers sought familiar risks.
   d. Top managers sought unfamiliar risks.
   e. Top managers sought novel risks.

2. Which of the following best describes your bank's top management method of solving problems prior to 1983?

   a. They solved problems by trial and error.
   b. They solved problems through diagnosis.
   c. They solved problems by choosing among existing alternatives.
   d. They solved problems by searching for new alternatives.
   e. They solved problems by creating alternate solutions.

3. Which of the following represents the personal knowledge required by your bank's top management in order to conduct business prior to 1983?

   a. Knowledge of internal politics.
   b. Knowledge of internal operations.
   c. Knowledge of traditional markets.
   d. Knowledge of global opportunities.
   e. Knowledge of changes in the environment.

4. Which of the following best describes top management's model of success for your bank for the period prior to 1983?

   a. Top management's model of success was stability.
   b. Top management's model of success was service efficiency.
   c. Top management's model of success was responsiveness to the market and competetive differentiation.
   d. Top management's model of success was based on strategic positioning and balanced portfolio.
   e. Top management's model of success was creativity.

5. Which of the following best describes your bank's organizational form prior to 1983?

   a. My bank's organizational form was fluid.
   b. My bank's organizational form was flexible.
   c. My bank's organizational form was hierarchical.
   d. My bank's organizational form was functionally structured.
   e. My bank's organizational form was requirement structured.

6. Which of the following best describes the role of managers in the various divisions prior to 1983?

   a. Managers were held on a tight rein.
   b. Accountable for specific goals.
   c. Accountable for general goals.
   d. Assigned a field of opportunities.
   e. Left free to create and exploit new opportunities.

7. Which of the following represents the dominant power base in your bank prior to 1983?

   a. No dominant power.
   b. Retail division.
   c. Investment division.
   d. Corporate division.
   e. General management.

8. Which of the following best describes the response of your bank's decision-making process prior to 1983?

   a. Extremely slow.
   b. Slow.
   c. Moderately paced.
   d. Fast.
   e. Very fast.

9. Which of the following best describes the type of management system utilized in your bank prior to 1983?

   a. Policy and procedure manuals.
   b. Capital budgeting.
   c. Long-range planning.
   d. Strategic planning.
   e. Strategic issue analysis/crisis management.

10. Which of the following represents the trigger that initiated top management response to change prior to 1983?

a. An Immediate crisis.
b. Accumulated evidence.
c. Anticipated threats.
d. New opportunities.
e. New breakthroughs.

PART IV (December 31, 1983 - December 31 1986)

1. In this section you will be asked to describe the nature of the changes in your bank's external environment over the three year period stated above;
2. describe the problems that your bank encountered during the transition period from pre to post deregulation, and
3. report on the reasons/causes of the problems your bank encountered in transitioning to a new environment.

PART V LEVEL OF ENVIRONMENTAL TURBULENCE

The following questions address the changes that took place in the bank's external environment.

1. Which one of the following best describes your bank's familiarity regarding the changes that took place in the environment of the banking industry during the period from 1983-1986?
   a. The environment was stable.
   b. Changes in the environment were consistent with the bank's experience.
   c. Changes in the environment were understood in terms of historical developments.
   d. Changes in the environment were understood in terms of the bank's collective experience.
   e. Changes in the environment were new and hence unfamiliar.

2. Which one of the following best describes your bank's response to change during the period from 1983-1986?

a. Speed of change in the environment was much slower than my bank's response to it.
b. Speed of change in the environment was slower than my bank's response to it.
c. Speed of change in the environment was comparable to my bank's response to it.
d. Speed of change in the environment was faster than my bank's response to it.
e. Speed of change in the environment was much faster than my bank's response to it.

3. Which one of the following best describes your bank's visibility of the future in the environment of the banking industry during the period from 1983-1986?

a. My bank's environment remained relatively unchanged.
b. My bank's environment evolved in a historically logical manner.
c. My bank's environment was forseen through analysis of threats and opportunities.
d. My bank's environment was difficult to predict.
e. My bank's environment was characterized by unpredictable surprises.

4. Which one of the following best describes your bank's business scope during the period from 1983-1986?

   a. My bank's business scope was Local.
   b. My bank's business scope was Statewide.
   c. My bank's business scope was Regional.
   d. My bank's business scope was Nationwide.
   e. My bank's business scope was Global.

5. For the period (1983-1986), please indicate the extent of the importance of the following factors as they affected your bank's decision making with regard to changes in the external environment.

	LOW <--------IMPORTANCE---------> HIGH				
Economic changes	1	2	3	4	5
Technological changes	1	2	3	4	5
Socio-political changes	1	2	3	4	5

PART VI LEVEL OF AGGRESSIVENESS OF STRATEGY

The following questions address your bank's response to the changes that occured in the external environment during the period from 1983-1986.

1. Which one of the following best describes your bank's response to customers during the period from 1983-1986?

   a. We neglected responding to customers.
   b. Our service was what the customer wanted.
   c. We anticipated the customers' needs.
   d. We identified unfulfilled needs.
   e. We identified the customers latent needs.

2. Which one of the following best describes the strategy utilized for developing the bank's market share during the period from 1983-1986?

   a. We stuck to our customers.
   b. We followed our competitors.
   c. We expanded to familiar markets.
   d. We expanded to foreign markets.
   e. We created new markets.

3. Which one of the following levels best describes the frequency with which your bank introduced new services during the period from 1983 - 1986?

Seldom or Never	Once a Year	Twice a Year	3 - 5 times a Year	5 - 7 times a Year
1	2	3	4	5

Other: please specify:_________

4. Which one of the following best describes the activities initiated by the research and development department of your bank during the period from 1983-1986?

a. Little or no research and development.

b. Our research and development department was called in when necessary.

c. Our research and development department provided support for the marketing department.

d. Our research and development department was the source of new product/service ideas.

e. Our research and development department was the "elite" department.

5. Which one of the following best describes the extent of the bank's emphasis in marketing it's products and services during the period from 1983-1986?

VERY LOW	LOW	MODERATE	HIGH	VERY HIGH
|	|	|	|	|

<--1---------2----------3--------------4-----------5-->

6. Which one of the following best describes the strategy utilized by your bank in response to competition during the period from 1983-1986?
   a. We did not compete.
   b. We responded to aggression.
   c. We positioned the bank apppropriately.
   d. We led the pack.
   e. We were our own competitors.

7. Which one of the following best describes the strategy used by your bank to expand it's share of the market during the period from 1983-1986?
   a. We grew with the market.
   b. We defended our market share.
   c. We increased our share of the market.
   d. We controlled the market.
   e. We dominated the market.

8. Which one of the following best describes the activities initiated by the marketing department of your bank during the period from 1983-1986?

   a. Making services available at the market place.
   b. Convince existing and potential customers that bank's services were superior.
   c. Influence service development to be responsive to customer needs.
   d. To establish the bank as a marketing leader.
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   a. Products spoke for themselves; promotion and advertising were not important factors.
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   e. Our promotion and advertising was creative; we started new trends.

10. Which one of the following best describes your bank's focus on new service development during the period from 1983 to 1986?

a. We had no service development

b. Our focus on service development was the imitation of emerging new services.

c. Our focus was on service development and the improvement of existing services.

d. Our focus of research was on the adoption of developing services.

e. Our focus of research was on pioneering new services.

PART VII GENERAL MANAGMENT CAPABILITY

The following questions are related to your bank's top management abilities which were used in your bank's response to the changes that occured in the bank's external environment during 1983 to 1986.

1. Which one of the following best describes your bank's top management risk propensity during the period from 1983 to 1986?
   a. Top managers rejected risks.
   b. Top managers accepted familiar risks.
   c. Top managers sought familiar risks.
   d. Top managers sought unfamiliar risks.
   e. Top managers sought novel risks.

2. Which of the following best describes your bank's top management method of solving problems during the period from 1983 to 1986?
   a. They solved problems by trial and error.
   b. They solved problems through diagnosis.
   c. They solved problems by choosing among existing alternatives.
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   a. Knowledge of internal politics.
   b. Knowledge of internal operations.
   c. Knowledge of traditional markets.
   d. Knowledge of global opportunities.
   e. Knowledge of changes in the environment.

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   a. Top management's model of success was stability.
   b. Top management's model of success was service efficiency.
   c. Top management's model of success was responsiveness to the market and competetive differentiation.
   d. Top management's model of success was based on strategic positioning and balanced portfolio.
   e. Top management's model of success was creativity.

5. Which of the following best describes your bank's organizational form prior during the period from 1983 to 1986?

   a. My bank's organizational form was fluid.
   b. My bank's organizational form was flexible.
   c. My bank's organizational form was hierarchical.
   d. My bank's organizational form was functionally structured.
   e. My bank's organizational form was requirement structured.

6. Which of the following best describes the role of managers in the various divisions during the period from 1983 to 1986?

   a. Managers were held on a tight rein.
   b. Accountable for specific goals.
   c. Accountable for general goals.
   d. Assigned a field of opportunities.
   e. Left free to create and exploit new opportunities.

7. Which of the following represents the dominant power base in your bank during the period from 1983 to 1986?

   a. No dominant power.
   b. Retail division.
   c. Investment division.
   d. Corporate division.
   e. General management.

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   a. Extremely slow.
   b. Slow.
   c. Moderately paced.
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9. Which of the following best describes the type of management system utilized in your bank during the period from 1983 to 1986?
   a. Policy and procedure manuals.
   b. Capital budgeting.
   c. Long-range planning.
   d. Strategic planning.
   e. Strategic issue analysis/crisis management.

10. Which of the following represents the trigger that initiated top management response to change during the period from 1983 to 1986?

   a. An Immediate crisis.
   b. Accumulated evidence.
   c. Anticipated threats.
   d. New opportunities.
   e. New breakthroughs.

APPENDIX C

TRANSMITTAL LETTER

OUTSIDE OBSERVERS

Dear Respondent,

The purpose of this study is to evalute the environment of the banking industry and the banks' response to the threats and opportunities posed by the environment. The study will help to examine and build theory as well as contribute to knowledge.

Please feel free to ask questions and share thoughts that you feel might further enhance the study.

All responses will be confidential.

Thank you for your time and consideration.

Very truly yours,

Alfred Lewis

Researcher

APPENDIX D

SURVEY INSTRUMENT

OUTSIDE OBSERVERS

EXPERT OUTSIDE OBSERVERS

QUESTIONNAIRE

ENVIRONMENTAL TURBULENCE

SECTION I

(1982 and earlier)

1. a) Please describe the nature of the changes in the banking industry's external environment prior to 1983.

   b) Please elaborate on the most significant change(s)?

SECTION II

The following questions address the banking industry's external environment prior to 1983.

1. Which of the following best describes the banking industry's familiarity regarding the changes that took place in the environment prior to 1983?

   a. The environment was stable.

   b. Changes in the environment were consistent with the bank's experience.

   c. Changes in the environment were understood in terms of historical developments.

   d. Changes in the environment were understood in terms of the bank's collective experience.

   e. Changes in the environment were new and hence unfamiliar.

2. Which of the following best describes the banking industry's response to change prior to 1983?

   a. Speed of change in the environment was much slower than the industry's response.

   b. Speed of change in the environment was slower than the industry's response.

   c. Speed of change in the environment was comparable to the industry's response to.

   d. Speed of change in the environment was faster than the industry's response.

   e. Speed of change in the environment was much faster than the industry's response.

3. Which of the following best describes the visibility of the future in the environment of the banking industry prior to 1983?

   a. The banking industry's environment remained relatively unchanged.

   b. The banking industry's environment evolved in a historically logical manner.

   c. The banking industry's environment was forseen through analysis of threats and opportunities.

   d. The banking industry's environment was difficult to predict.

   e. The banking industry's environment was characterized by unpredictable surprises.

4. Which of the following best describes the banking industry's business scope prior to 1983?

   a. The banking industry's business scope was Local.
   b. The banking industry's business scope was Statewide.
   c. The banking industry's business scope was Regional.
   d. The banking industry's business scope was Nationwide.
   e. The banking industry's business scope was Global.

5. For the period prior to 1983, please indicate the extent of the importance of the following factors as they affected the banking industry's decision making with regard to changes in the external environment.

	LOW <---------IMPORTANCE-----------> HIGH				
Economic changes	1	2	3	4	5
Technological changes	1	2	3	4	5
Socio-political changes	1	2	3	4	5

SECTION III

(December 31, 1983 - December 31, 1986)

1. a) Please describe the nature of the changes in the banking industry's external environment over the three year period stated above.

   b) Please elaborate on the most significant change(s).

SECTION IV

The following questions address the changes that took place in the banking industry's external environment.

1. Which one of the following best describes the banking industry's familiarity regarding the changes that took place in the environment during the period from 1983-1986.
   a. The environment was stable.
   b. Changes in the environment were consistent with the bank's experience.
   c. Changes in the environment were understood in terms of historical developments.
   d. Changes in the environment were understood in terms of the bank's collective experience.
   e. Changes in the environment were new and hence unfamiliar.

2. Which one of the following best describes the banking industry's response to change during the period from 1983-1986?

   a. Speed of change in the environment was much slower than the industry's response.
   b. Speed of change in the environment was slower than the industry's response.
   c. Speed of change in the environment was comparable to the industry's response to.
   d. Speed of change in the environment was faster than the industry's response.
   e. Speed of change in the environment was much faster than the industry's response.

3. Which one of the following best describes the visibility of the future in the environment of the banking industry during the period from 1983-1986?

   a. The banking industry's environment remained relatively unchanged.
   b. The banking industry's environment evolved in a historically logical manner.
   c. The banking industry's environment was forseen through analysis of threats and opportunities.

d. The banking industry's environment was difficult to predict.

e. The banking industry's environment was characterized by unpredictable surprises.

4. Which one of the following best describes the banking industry's business scope during the period from 1983-1986?

   a. The banking industry's business scope was Local.
   b. The banking industry's business scope was Statewide.
   c. The banking industry's business scope was Regional.
   d. The banking industry's business scope was Nationwide.
   e. The banking industry's business scope was Global.

5. For the period (1983-1986), please indicate the extent of the importance of the following factors as they affected the banking industry's decision making with regard to changes in the external environment.

	LOW <--------		IMPORTANCE		-----------> HIGH
Economic changes	1	2	3	4	5
Technological changes	1	2	3	4	5
Socio-political changes	1	2	3	4	5

APPENDIX E

DATA

BANK MANAGER'S
PRE-DEREGULATION Level of Environmental turbulence
Frequency Response (Numbers and Percentages)

Level of growing Environmental Turbulence	Repetitive	Expanding	Changing	Dis-continuous	Sur-priseful
1. Familiarity of events.	Very familiar	Repetition of experience	Understood in terms of history	Understood in terms of experience	Unfamiliar experience
N =	5	3	2	5	0
% =	33.3	20	13.3	33.3	0
2. Rapidity of change	Much slower than bank's response	Slower than bank's response	Comparable to bank's response	Shorter than bank's response	Big lag in bank's response
N =	1	2	7	5	0
% =	6.7	13.3	46.6	33.3	0
3. Visibility of the Future	Expected to remain unchanged	Predictable by extrapo-lation	Forseen by analysis of threats & oppt.	Difficult to predict	Unpre-dictable surprises
N =	2	7	2	4	0
% =	13.3	46.7	13.3	26.7	0
4. Business Scope	Local	Statewide	Regional	Nationwide	Global
N =	15	0	0	0	0
% =	100	0	0	0	0
5. Decision Making in terms of:	<----------------IMPORTANT----------------------> LOW				HIGH
A. Economic Changes.	1	2	3	4	5
N =	0	1	0	13	1
% =	0	6.7	0	86.7	6.7
B. Technolo-gical changes	1	2	3	4	5
N =	1	4	5	2	3
% =	6.7	26.7	33.3	13.3	20
C. Socio-poli-tical changes	1	2	3	4	5
N =	1	9	4	0	1
% =	6.7	60	26.7	0	6.7

BANK MANAGERS'
PRE-DEREGULATION Aggressiveness of Innovation Strategy
Frequency Response (Numbers and Percentages)

Aggressiveness of innovation strategy	STABLE	REACTIVE	ANTICIPATING	EXPLORING	CREATIVE
1. Responsive- to customers	Neglect	Our product is what the customer wants	Anticipation of needs	Identifica- ition of unfulfilled needs	Identifi- cation of unfulfill- ed needs
N =	1	7	6	1	0
% =	6.7	46.7	40.0	6.7	0
2. Market Development	Stick to our customers	Follow competitors	Expand to familiar markets	Expand to foreign markets	Create new markets
N =	1	6	8	0	0
% =	6.7	40.0	53.3	0	0
3. Frequency of new service introduction	Rare	Low	Moderate	High	Very high
N =	4	4	7	0	0
% =	26.7	26.7	46.7	0	0
4. Role of R. & D. department	Seen but not heard	Called in whenever the need arises	Support of marketing	Source of new products	The Elite
N =	6	7	1	1	0
% =	40.0	46.7	6.7	6.7	0
5. Focus of research	Little or no research	Imitate competition	Improve existing services	Adoption of emerging services	Pioneer new services
N =	1	6	2	6	0
% =	6.7	40.0	13.3	40.0	0

BANK MANAGERS'
Pre-Deregulation Aggressiveness of Marketing Strategy
Frequency Response (Numbers and Percentages)

Aggressiveness of marketing strategy	STABLE	REACTIVE	ANTICIPATING	EXPLORING	CREATIVE
1. Sales aggressiveness	Very Low	Low	Moderate	High	Very High
N =	1	5	7	2	0
% =	6.7	33.3	46.7	13.3	0
2. Responsiveness to competition	We do not compete	Respond to competition	Positioning	Lead the pack	We are our own competition
N =	6	1	8	0	0
% =	40.0	6.7	53.3	0	0
3. Market share	Growing	Defending	Increasing	Controlling	Dominate
N =	8	6	1	0	0
% =	53.3	40.0	6.7	0	0
4. Role of marketing department	To sell the services of the bank	To convince customers our service is superior	To serve the customers	To establish the bank as a leader	To establish the bank as an innovator
N =	4	9	1	1	0
% =	26.7	60.0	6.7	6.7	0
5. Promotion and advertising	Bank's services speak for itself	Similar to that of competitors	Aggressive anticipate new trends	Provides an edge on competition	Creative, start new trends.
N =	1	5	9	0	0
% =	6.7	33.3	60.0	0	0

BANK MANAGERS'
Pre-Deregulation General Management Capability-MANAGERS' PROFILES
Frequency Response (Numbers and Percentages)

Managers Profiles	CUSTODIAL	PRODUCTION	MARKETING	STRATEGIC	FLEXIBLE
1. Risk Propensity	Reject	Accept familiar risks	Seek familiar risks	Seek unfamiliar risks	Seek novel risks
N =	3	5	5	2	0
% =	20.0	33.3	33.3	13.3	0
2. Problem solving	Trial & error	Diagnostic	Optimization	Search for alternatives	Create alterna-tives
N =	5	2	6	1	1
% =	33.3	13.3	40.0	6.7	6.7
3. Knowledge	Internal politics	Internal operations	Traditional markets and competitors	Global opportuni-ties	Emerging environ-ment.
N =	1	2	12	0	0
% =	6.7	13.3	80.0	0	0
4. Model of success	Stability	Service efficiency	Responsive-ness to markets	Strategic positioning, balanced portfolio	Techno-logical activity
N =	4	3	7	1	0
% =	26.7	20.0	46.7	6.7	0

BANK MANAGERS'
Pre-Deregulation General Management Capability-ORGANIZATIONAL STRUCTURE
Frequency Response (Numbers and Percentages)

Organizational structure	CUSTODIAL	PRODUCTION	MARKETING	STRATEGIC	FLEXIBLE
1. Organizational form	Fluid	Flexible	Hierarchical	Functionally structured	Requirement structured
N =	1	5	6	3	0
% =	6.7	33.3	40.0	20.0	0
2. Managers' function	Held on tight rein	Accountable for specific goals	Accountable for general goals	Assigned a field of opportunities	Free to create and exploit
N =	4	4	5	1	1
% =	26.7	26.7	33.3	6.7	6.7
3. Power center	No dominant power	Retail division	Investment division	Corporate division	General mgmt.
N =	0	2	0	1	12
% =	0	13.3	0	6.7	80.0

BANK MANAGERS'
Pre-Deregulation General Management Capability-CHARACTERISTICS OF THE SYSTEM
Frequency Response (Numbers and Percentages

Characteristics of the system	CUSTODIAL	PRODUCTION	MARKETING	STRATEGIC	FLEXIBLE
1. Informal decision making process	Extremely slow	Slow	Moderately paced	Fast	Very fast
N =	0	1	9	5	0
% =	0	6.7	60.0	33.3	0
2. Management system	Policy & procedure manuals	Capital budgeting	Long range planning	Strategic planning	Strategic issues & crisis mgt
N =	5	4	3	3	0
% =	33.3	26.7	20.0	20.0	0
3. Change trigger	Immediate crisis	Accumulated evidence	Anticipated threats	New opportunities	New breakthroughs
N =	2	5	4	4	0
% =	13.3	33.3	26.7	26.7	0

OUTSIDE OBSERVERS'
PRE-DEREGULATION Level of Environmental turbulence
Frequency Response (Numbers and Percentages)

Level of growing Environmental Turbulence	Repetitive	Expanding	Changing	Dis-continuous	Sur-priseful
1. Familiarity of events.	Very familiar	Repetition of experience	Understood in terms of history	Understood in terms of experience	Unfamiliar experience
N =	3	5	6	1	0
% =	20.0	33.3	40.0	6.7	0
2. Rapidity of change	Much slower than bank's response	Slower than bank's response	Comparable to bank's response	Shorter than bank's response	Big lag in bank's response
N =	0	4	3	0	0
% =	0	26.7	73.3	0	0
3. Visibility of the Future	Expected to remain unchanged	Predictable by extrapo-lation	Forseen by analysis of threats & oppt.	Difficult to predict	Unpre-dictable surprises
N =	2	7	5	1	0
% =	13.3	46.7	33.3	6.7	0
4. Business Scope	Local	Statewide	Regional	Nationwide	Global
N =	15	0	0	0	0
% =	100	0	0	0	0
5. Decision Making in terms of:	<------IMPORTANT------> LOW				HIGH
A. Economic Changes.	1	2	3	4	5
N =	2	8	3	2	0
% =	13.3	53.3	20.0	13.3	0
B. Technolo-gical changes	1	2	3	4	5
N =	0	0	4	11	0
% =	0	0	26.7	73.3	0
C. Socio-poli-tical changes	1	2	3	4	5
N =	0	7	7	0	1
% =	0	46.7	46.7	0	6.7

BANK MANAGERS'
POST-DEREGULATION Level of Environmental turbulence
Frequency Response (Numbers and Percentages)

Level of growing Environmental Turbulence	Repetitive	Expanding	Changing	Dis-continuous	Sur-priseful
1. Familiarity of events.	Very familiar	Repetition of experience	Understood in terms of history	Understood in terms of experience	Unfamiliar experience
N =	1	1	0	1	12
% =	6.7	6.7	0	6.7	80.0
2. Rapidity of change	Much slower than bank's response	Slower than bank's response	Comparable to bank's response	Shorter than bank's response	Big lag in bank's response
N =	0	0	5	6	4
% =	0	0	33.3	40.0	26.7
3. Visibility of the Future	Expected to remain unchanged	Predictable by extrapolation	Forseen by analysis of threats & oppt.	Difficult to predict	Unpredictable surprises
N =	0	1	3	6	5
% =	0	6.7	20.0	40.0	33.3
4. Business Scope	Local	Statewide	Regional	Nationwide	Global
N =	15	0	0	0	0
% =	100	0	0	0	0
5. Decision Making in terms of:	<---------IMPORTANT---------> LOW				HIGH
A. Economic Changes.	1	2	3	4	5
N =	0	0	3	8	4
% =	0	0	20.0	53.3	26.7
B. Technological changes	1	2	3	4	5
N =	0	1	3	6	5
% =	0	6.7	20.0	40.0	33.3
C. Socio-political changes	1	2	3	4	5
N =	0	5	3	7	0
% =	0	33.3	20.0	46.7	0

BANK MANAGERS'
POST-DEREGULATION Aggressiveness of Innovation Strategy
Frequency Response (Numbers and Percentages)

Aggressiveness of innovation strategy	STABLE	REACTIVE	ANTICIPATING	EXPLORING	CREATIVE
1. Responsive- to customers	Neglect	Our product is what the customer wants	Anticipation of needs	Identifica- ition of unfulfilled needs	Identifi- cation of unfulfill- ed needs
N =	0	2	9	4	0
% =	0	13.3	60.0	26.7	0
2. Market Development	Stick to our customers	Follow competitors	Expand to familiar markets	Expand to foreign markets	Create new markets
N =	1	1	11	0	2
% =	6.7	6.70	73.3	0	13.3
3. Frequency of new service introduction	Rare	Low	Moderate	High	Very high
N =	1	3	6	5	0
% =	6.7	20.0	40.0	33.3	0
4. Role of R. & D. department	Seen but not heard	Called in whenever the need arises	Support of marketing	Source of new products	The Elite
N =	1	7	1	6	0
% =	6.7	46.7	6.7	40.0	0
5. Focus of research	Little or no research	Imitate competition	Improve existing services	Adoption of emerging services	Pioneer new services
N =	0	3	2	6	4
% =	0	20.0	13.3	40.0	26.7

BANK MANAGERS'
Post-Deregulation Aggressiveness of Marketing Strategy
Frequency Response (Numbers and Percentages)

Aggressiveness of marketing strategy	STABLE	REACTIVE	ANTICIPATING	EXPLORING	CREATIVE
1. Sales aggressiveness	Very Low	Low	Moderate	High	Very High
N =	1	2	8	3	1
% =	6.7	13.3	53.3	20.0	6.7
2. Responsiveness to competition	We do not compete	Respond to competition	Positioning	Lead the pack	We are our own competition
N =	2	2	8	1	2
% =	13.3	13.3	53.3	6.7	13.3
3. Market share	Growing	Defending	Increasing	Controlling	Dominate
N =	2	8	5	0	0
% =	13.3	53.3	33.3	0	0
4. Role of marketing department	To sell the services of the bank	To convince customers our service is superior	To serve the customers	To establish the bank as a leader	To establish the bank as an innovator
N =	6	3	3	2	1
% =	40.0	20.0	20.0	13.3	6.7
5. Promotion and advertising	Bank's services speak for itself	Similar to that of competitors	Aggressive anticipate new trends	Provides an edge on competition	Creative, start new trends.
N =	2	2	8	2	1
% =	13.3	13.3	53.3	13.3	6.7

BANK MANAGERS'
Post-Deregulation General Management Capability-MANAGERS' PROFILES
Frequency Response (Numbers and Percentages)

Managers Profiles	CUSTODIAL	PRODUCTION	MARKETING	STRATEGIC	FLEXIBLE
1. Risk Propensity	Reject	Accept familiar risks	Seek familiar risks	Seek unfamiliar risks	Seek novel risks
N =	1	5	6	3	0
% =	6.7	33.3	40.0	20.0	0
2. Problem solving	Trial & error	Diagnostic	Optimization	Search for alternatives	Create alternatives
N =	0	3	2	10	0
% =	0	20.0	13.3	66.7	
3. Knowledge	Internal politics	Internal operations	Traditional markets and competitors	Global opportunities	Emerging environment.
N =	0	0	5	0	10
% =	0	0	33.3	0	66.7
4. Model of success	Stability	Service efficiency	Responsiveness to markets	Strategic positioning, balanced portfolio	Technological activity
N =	1	4	4	5	1
% =	6.7	26.7	46.7	33.3	6.7

BANK MANAGERS'
Post-Deregulation General Management Capability-ORGANIZATIONAL STRUCTURE
Frequency Response (Numbers and Percentages)

Organizational structure	CUSTODIAL	PRODUCTION	MARKETING	STRATEGIC	FLEXIBLE
1. Organizational form	Fluid	Flexible	Hierarchical	Functionally structured	Requirement structured
N =	1	8	0	6	0
% =	6.7	53.3	0	40.0	0
2. Managers' function	Held on tight rein	Accountable for specific goals	Accountable for general goals	Assigned a field of opportunities	Free to create and exploit
N =	1	7	3	2	2
% =	6.7	46.7	20.0	13.3	13.3
3. Power center	No dominant power	Retail division	Investment division	Corporate division	General mgmt.
N =	0	1	0	2	12
% =	0	6.7	0	13.3	80.0

BANK MANAGERS'
Post-Deregulation General Management Capability-CHARACTERISTICS OF THE SYSTEM
Frequency Response (Numbers and Percentages

Characteristics of the system	CUSTODIAL	PRODUCTION	MARKETING	STRATEGIC	FLEXIBLE
1. Informal decision making process	Extremely slow	Slow	Moderately paced	Fast	Very fast
N =	0	0	4	10	1
% =	0	0	26.7	66.7	6.7
2. Management system	Policy & procedure manuals	Capital budgeting	Long range planning	Strategic planning	Strategic issues & crisis mgt
N =	0	1	2	11	1
% =	0	6.7	13.3	73.3	6.7
3. Change trigger	Immediate crisis	Accumulated evidence	Anticipated threats	New opportunities	New breakthroughs
N =	0	1	5	9	0
% =	0	6.7	33.3	60.0	0

OUTSIDE OBSERVERS'
POST-DEREGULATION Level of Environmental turbulence
Frequency Response (Numbers and Percentages)

Level of growing Environmental Turbulence	Repetitive	Expanding	Changing	Dis-continuous	Sur-priseful
1. Familiarity of events.	Very familiar	Repetition of experience	Understood in terms of history	Understood in terms of experience	Unfamiliar experience
N =	0	0	0	0	15
% =	0	0	0	0	100
2. Rapidity of change	Much slower than bank's response	Slower than bank's response	Comparable to bank's response	Shorter than bank's response	Big lag in bank's response
N =	0	0	0	5	10
% =	0	0	0	33.3	66.7
3. Visibility of the Future	Expected to remain unchanged	Predictable by extrapo-lation	Forseen by analysis of threats & oppt.	Difficult to predict	Unpre-dictable surprises
N =	0	0	0	5	10
% =	0	0	0	33.3	66.7
4. Business Scope	Local	Statewide	Regional	Nationwide	Global
N =	15	0	0	0	0
% =	100	0	0	0	0
5. Decision Making in terms of:	<----------------IMPORTANT----------------------> LOW				HIGH
A. Economic Changes.	1	2	3	4	5
N =	0	0	9	5	1
% =	0	0	60.0	33.3	6.7
B. Technolo-gical changes	1	2	3	4	5
N =	0	0	0	5	10
% =	0	0	0	33.3	66.7
C. Socio-poli-tical changes	1	2	3	4	5
N =	0	4	4	4	3
% =	0	26.7	26.7	26.7	20.0

A. LEWIS' DATA FOR EXPERT OUTSIDE OBSERVERS 4/21/89

TX1	TX2	TX3	TX4	TX5A	TX5B	TX5C	TY1	TY2	TY3	TY4	TY5A	TY5B	TY5C	ID	TTOTXEXP	TTOTYEXP
3	3	2	1	3	4	2	5	5	5	1	3	5	2	0	2.57	3.71
2	2	1	1	3	4	3	5	4	5	1	3	4	3	0	2.29	3.57
1	3	2	1	4	4	2	5	4	4	1	4	5	2	0	2.43	3.57
3	3	2	1	5	4	3	5	4	5	1	5	5	2	0	3.00	3.86
3	3	2	1	3	3	2	5	4	4	1	4	5	4	0	2.43	3.86
1	3	4	1	5	4	5	5	5	5	1	3	4	5	0	3.29	4.00
3	3	2	1	3	4	2	5	5	4	1	3	5	3	0	2.57	3.71
2	3	3	1	4	4	3	5	5	5	1	4	5	2	0	2.86	3.86
1	3	3	1	3	4	3	5	5	4	1	3	4	3	0	2.57	3.57
2	3	2	1	2	4	3	5	5	5	1	4	5	4	1	2.43	4.14
3	2	2	1	2	3	3	5	5	5	1	3	5	5	1	2.29	4.14
2	3	3	1	4	4	2	5	5	5	1	3	4	3	1	2.71	3.71
2	2	1	1	3	3	2	5	4	5	1	4	5	4	1	2.00	4.00
3	3	3	1	3	3	3	5	5	4	1	3	5	5	1	2.71	4.00
4	3	2	1	2	4	3	5	5	5	1	.	4	4	1	2.71	3.86

Number of cases read = 15 Number of cases listed = 15

ID	TA86	TA85	TA84	TA83	TD86	TD85	TD84	TD83
1	72133	68935	65898	61152	66576	63958	60512	55827
2	93607	94369	78768	71236	84926	86407	66669	59457
3	44146	52175	71337	61907	40661	47781	64713	56400
4	43420	38697	31846	27211	39711	35334	28958	23380
5	174667	160146	193352	187574	161405	147569	179594	175020
6	60343	51580	67487	45235	56523	48157	63559	41458
7	43665	38630	35828	32502	40382	35112	31404	27453
8	94286	66892	49524	37227	88043	61213	44386	32697
9	225985	137712	103985	72876	207303	118095	83710	51444
10	336535	319325	275992	243854	305537	289556	248648	221163
11	92653	63162	44067	43055	86646	58278	39406	38498
12	142010	115695	89157	78056	132380	106912	81735	72168
13	110774	93023	72158	62576	95749	78659	60270	48335
14	1342697	1108613	975632	940494	1194805	990261	874763	844769
15	332889	205980	113559	83737	308409	185441	102651	76127

Number of cases read = 15 Number of cases listed =

ID	REV86	REV85	REV84	REV83	EXP86	EXP85	EXP84	EXP83	LNS86
1	7923	8302	9860	6924	7016	7502	9067	6277	55805
2	10637	10431	10433	6779	9287	9160	9389	6056	69999
3	4761	7290	8680	7462	5167	8103	7525	6026	15761
4	4128	3971	3551	2777	3488	3451	3471	2677	28210
5	17941	21241	25601	18428	17163	19694	22806	16270	122957
6	6602	7043	7193	5280	6624	7334	7609	4920	45969
7	4506	4506	4343	3935	4901	4777	5027	3705	25645
8	7123	6142	4762	3377	6102	5193	4101	2973	40543
9	14008	12322	10421	5615	12497	10996	8764	4270	139009
10	31800	34728	32438	25244	28793	30648	27503	22096	203371
11	7809	6216	5407	4674	6767	5392	4784	4131	48188
12	12948	12315	11192	9113	10934	10272	9736	7771	79151
13	9423	8381	7985	5950	7819	6972	6087	4433	71980
14	133126	129733	121992	109256	120685	116169	110989	98637	679399
15	23524	17097	12956	8192	20588	15431	11372	7459	190864

Number of cases read = 15 Number of cases listed = 15

ID	LNS85	LNS84	LNS83	TX1	TX2	TX3	TX4	TX5A	TX5B
1	51815	50953	46274	3	3	4	1	4	2
2	66770	59118	56993	2	4	4	1	4	3
3	37354	45973	42808	4	4	3	1	4	2
4	26497	19438	16887	1	1	2	1	4	5
5	108102	139617	124880	3	2	2	1	4	3
6	39838	53152	34529	4	4	4	1	4	5
7	27786	24783	17495	1	3	2	1	2	2
8	37220	27043	20082	1	3	2	1	4	3
9	99306	81003	50304	1	3	2	1	4	1
10	204844	197117	149799	1	3	4	1	4	3
11	40112	31181	25167	4	4	1	1	4	3
12	75231	64063	50880	4	3	2	1	4	4
13	55591	51255	40347	2	2	1	1	4	4
14	568502	537882	491448	4	4	2	1	4	5
15	137544	85633	60605	2	3	3	1	5	2

Number of cases read = 15 Number of cases

ID	TX5C	AX1	AX2	AX3	AX4	AX5	AX6	AX7	AX8
1	2	2	3	2	2	2	2	3	1
2	1	4	2	3	2	2	2	3	1
3	2	1	3	1	2	2	2	1	1
4	2	3	2	2	1	2	2	1	1
5	2	2	3	2	1	4	4	3	2
6	5	2	2	3	1	3	1	1	1
7	2	2	1	1	1	1	2	1	1
8	3	2	2	3	1	2	3	1	1
9	2	3	2	1	2	4	3	3	2
1Ø	3	3	3	3	2	3	3	3	1
11	2	3	3	3	2	4	3	3	2
12	3	3	3	3	1	4	3	3	2
13	2	2	2	3	4	2	3	1	2
14	3	3	3	2	3	4	4	2	2
15	2	2	3	1	2	4	3	3	3

Number of cases read = 15 Number

ID	AX9	AX1Ø	CX1	CX2	CX3	CX4	CX5	CX6	CX7
1	2	2	3	3	3	2	1	5	5
2	2	3	3	5	3	4	4	3	5
3	2	2	1	1	2	1	3	1	5
4	2	1	4	1	3	3	3	1	5
5	3	5	3	1	2	3	3	2	4
6	2	2	1	1	3	1	3	1	5
7	1	2	1	2	3	1	2	1	5
8	2	3	2	1	3	1	2	2	5
9	1	3	2	3	3	3	4	4	5
1Ø	2	3	2	3	3	3	2	3	5
11	4	3	3	3	3	3	3	2	2
12	2	3	2	4	3	2	2	3	5
13	1	2	2	3	3	2	4	3	5
14	2	3	4	2	1	3	3	2	2
15	1	3	3	3	3	3	2	3	5

Number of cases read = 15 Number

ID	CX8	CX9	CX1Ø	TY1	TY2	TY3	TY4	TY5A	TY5B
1	3	4	3	5	4	4	1	3	4
2	3	2	2	5	4	4	1	4	4
3	3	1	1	5	5	5	1	5	4
4	3	1	1	1	3	3	1	4	4
5	2	3	4	5	4	5	1	4	4
6	3	1	2	2	3	3	1	4	3
7	4	1	2	5	5	5	1	4	3
8	3	4	2	5	4	5	1	3	5
9	4	2	3	5	5	4	3	5	2
1Ø	3	2	4	5	4	4	1	5	5
11	4	2	3	5	5	5	1	5	5
12	4	3	2	5	3	3	1	4	4
13	3	3	4	5	4	2	1	4	5
14	3	1	3	5	3	4	1	3	5
15	4	4	4	4	3	4	1	4	3

Number of cases read = 15 Number

ID	TY5C	AY1	AY2	AY3	AY4	AY5	AY6	AY7	AY8
1	2	3	5	3	4	4	3	3	2
2	2	3	5	4	2	4	4	5	2
3	2	3	3	3	4	5	3	3	2
4	2	2	3	1	2	2	4	4	1
5	4	3	2	3	2	2	2	2	3
6	4	4	3	4	2	4	3	3	3
7	3	2	1	2	1	2	1	1	1
8	4	3	3	4	2	4	3	3	2
9	4	3	3	2	2	5	2	5	2
1Ø	4	3	3	4	4	5	3	3	2
11	4	4	3	3	2	4	5	3	2
12	4	3	3	3	3	4	4	3	3
13	2	3	3	4	4	3	3	1	2
14	3	4	3	3	4	5	3	2	3
15	3	4	3	2	4	3	3	3	3

Number of cases read = 15 Number

ID	AY9	AY10	CY1	CY2	CY3	CY4	CY5	CY6	CY7
1	5	4	3	4	5	4	4	2	5
2	3	5	4	4	5	5	2	2	5
3	3	2	2	4	5	4	2	4	5
4	2	1	2	4	5	2	2	5	5
5	3	2	4	4	5	4	4	3	5
6	1	3	3	4	5	4	2	5	5
7	1	1	1	2	3	2	2	1	5
8	4	4	3	4	5	3	2	2	5
9	1	3	2	2	3	1	4	2	4
10	4	3	4	4	5	3	1	2	5
11	1	3	2	2	5	2	2	2	2
12	2	3	3	3	3	4	2	3	5
13	2	3	2	4	3	2	4	3	5
14	1	3	3	4	5	3	4	2	4
15	1	3	3	3	3	3	4	4	5

Number of cases read = 15 Number

ID	CY8	CY9	CY10	CSHSEC86	CSHSEC85	CSHSEC84	CSHSEC83	YRSBANK
1	4	5	4	22	24	20	18	28
2	4	4	4	22	27	18	15	23
3	3	3	4	61	24	35	29	25
4	5	4	3	31	28	34	33	22
5	3	4	3	27	30	25	30	11
6	4	4	3	20	17	16	20	16
7	3	2	2	35	19	20	34	16
8	4	4	4	58	44	45	48	25
9	4	4	3	39	29	23	37	18
10	4	4	4	38	32	24	34	19
11	4	4	4	46	33	24	37	37
12	4	3	3	43	32	24	31	23
13	4	4	4	36	41	32	40	25
14	3	4	4	48	45	42	46	49
15	4	4	4	42	31	18	20	26

Number of cases read = 15 Number of cases listed =

ID	TE86	TE85	TE84	TE83	NI86	NI85	NI84	NI83
1	4711	4309	4080	3435	907	800	793	647
2	6198	4363	4056	3754	1371	1340	1044	723
3	3126	3818	5199	4257	-214	-811	1155	1436
4	3273	3111	2675	2659	780	538	80	100
5	8823	10012	11075	8233	815	1987	2799	2214
6	2979	2498	2757	3028	-22	-291	-402	418
7	2534	2938	3721	4158	-395	-263	-684	230
8	5919	5364	4758	4287	1021	949	661	404
9	17590	17440	16678	16711	771	1326	1657	1345
10	25312	22688	21464	16308	3822	4323	5019	3304
11	3988	3405	2998	2794	1072	834	623	543
12	8253	7159	5906	4974	2014	2043	1456	1342
13	11305	10111	9725	9513	2141	1515	1890	1517
14	79868	63418	55377	50710	13111	13359	10994	10619
15	22501	12502	8393	5472	3266	1784	1584	855

Number of cases read = 15 Number of cases li

ID	EXPTNI86	EXPTNI85	EXPTNI84	EXPTNI83	PM86	PM85	PM84	PM83
1	7.74	9.38	11.43	9.70	.11	.10	.08	.09
2	6.77	6.84	8.99	8.38	.13	.13	.10	.11
3	-24.14	-9.99	6.52	4.20	-.04	-.11	.13	.19
4	4.47	6.41	43.39	26.77	.19	.14	.02	.04
5	21.06	9.91	8.15	7.35	.05	.09	.11	.12
6	-301.09	-25.20	-18.93	11.77	-.00	-.04	-.06	.08
7	-12.41	-18.16	-7.35	16.11	-.09	-.06	-.16	.06
8	5.98	5.47	6.20	7.36	.14	.15	.14	.12
9	16.21	8.29	5.29	3.17	.06	.11	.16	.24
10	7.53	7.09	5.48	6.69	.12	.12	.15	.13
11	6.31	6.47	7.68	7.61	.14	.13	.12	.12
12	5.43	5.03	6.69	5.79	.16	.17	.13	.15
13	3.65	4.60	3.22	2.92	.23	.18	.24	.25
14	9.20	8.70	10.10	9.29	.10	.10	.09	.10
15	6.30	8.65	7.18	8.72	.14	.10	.12	.10

Number of cases read = 15 Number of cases listed = 15

ID	EQUT86	EQUT85	EQUT84	EUQT83	AU86	AU85	AU84	AU83
1	1.68	1.93	2.42	2.02	.11	.12	.15	.11
2	1.72	2.39	2.57	1.81	.11	.11	.13	.10
3	1.52	1.91	1.67	1.75	.11	.14	.12	.12
4	1.26	1.28	1.33	1.04	.10	.10	.11	.10
5	2.03	2.12	2.31	2.24	.10	.13	.13	.10
6	2.22	2.82	2.61	1.74	.11	.14	.11	.12
7	1.78	1.53	1.17	.95	.10	.12	.12	.12
8	1.20	1.15	1.00	.79	.08	.09	.10	.09
9	.80	.71	.62	.34	.06	.09	.10	.08
10	1.26	1.53	1.51	1.55	.09	.11	.12	.10
11	1.96	1.83	1.80	1.67	.08	.10	.12	.11
12	1.57	1.72	1.90	1.83	.09	.11	.13	.12
13	.83	.83	.82	.63	.09	.09	.11	.10
14	1.67	2.05	2.20	2.15	.10	.12	.13	.12
15	1.05	1.37	1.54	1.50	.07	.08	.11	.10

Number of cases read = 15 Number of cases listed = 15

ID	TURBXDIF	AGRXDIF	CAPXDIF	TURBYDIF	AGRYDIF	CAPYDIF	TOTGAPX	TOTGAPY
1	-.05	.57	-.53	.48	.16	-.24	-.01	.40
2	-.05	.27	-.73	.33	.06	-.14	-.51	.26
3	-.19	.97	.77	-.10	.66	.16	1.54	.73
4	.38	.97	.17	1.19	1.56	.06	1.52	2.81
5	.24	-.03	-.03	-.10	1.36	-.14	.17	1.13
6	-1.19	.87	.57	.90	.76	-.14	.24	1.53
7	.81	1.37	.47	.05	2.46	1.46	2.64	3.97
8	.24	.67	.17	-.10	.56	.16	1.07	.63
9	.67	.27	-.63	-.24	.96	.86	.30	1.59
10	-.05	.07	-.33	-.24	.36	.16	-.31	.29
11	-.05	-.33	-.13	-.52	.76	.86	-.51	1.10
12	-.33	-.03	-.33	.33	.66	.46	-.70	1.46
13	.38	.47	-.53	.48	.96	.26	.32	1.70
14	-.62	-.13	.27	.33	.66	.16	-.48	1.16
15	.10	.17	-.73	.62	.86	.06	-.47	1.54

Number of cases read = 15 Number of cases listed = 15

ID	TURBTOTX	AGRTOTX	CAPTOTX	TURBTOTY	AGRTOTY	CAPTOTY	ROE86	ROE85
1	2.71	2.10	3.20	3.29	3.60	4.00	.19	.19
2	2.71	2.40	3.40	3.43	3.70	3.90	.22	.31
3	2.86	1.70	1.90	3.86	3.10	3.60	-.07	-.21
4	2.29	1.70	2.50	2.57	2.20	3.70	.24	.17
5	2.43	2.70	2.70	3.86	2.40	3.90	.09	.20
6	3.86	1.80	2.10	2.86	3.00	3.90	-.01	-.12
7	1.86	1.30	2.20	3.71	1.30	2.30	-.16	-.09
8	2.43	2.00	2.50	3.86	3.20	3.60	.17	.18
9	2.00	2.40	3.30	4.00	2.80	2.90	.04	.08
10	2.71	2.60	3.00	4.00	3.40	3.60	.15	.19
11	2.71	3.00	2.80	4.29	3.00	2.90	.27	.24
12	3.00	2.70	3.00	3.43	3.10	3.30	.24	.29
13	2.29	2.20	3.20	3.29	2.80	3.50	.19	.15
14	3.29	2.80	2.40	3.43	3.10	3.60	.16	.21
15	2.57	2.50	3.40	3.14	2.90	3.70	.15	.14

Number of cases read = 15 Number of cases listed = 15