# What Account for Performance of Financial Institutions : Literature Review and Further Implications

Li, Yuhua

https://doi.org/10.15017/3000479

出版情報：経済論究. 136, pp.255-269, 2010-03. 九州大学大学院経済学会
バージョン：
権利関係：

# What Account for Performance of Financial Institutions: Literature Review and Further Implications

Yuhua Li



## 1 . Introduction

The global economic downturn that closed the first decade of the 21st century revealed the centrality of finance to American society (Davis, 2009). In the U.S. economy, between 1979 and 2005, the contribution of the finance, insurance and real estate (FIRE) sector to GDP rose from 15.2 percent to 20.4 percent. At the same time, FIRE employment as a share of total private sector employment rose from 6.6 percent to 7.3 percent[1]. Finance is not only important to America but also to the other parts of the world. Due to the importance of financial sector in one country's economy development, 2008 Subprime Crisis has affected the global financial system and the global economy. Many advanced countries are close to or moving into recession, while growth in emerging countries is also weakening. In a nutshell, financial service is more and more important in the modern society.

As the provider of financial service, financial institutions play an important role in society facilitating the process which acquiring surplus funds from economic units—business firms, governmental agencies, and individuals— for the purpose of making available such funds to other economic units. In doing so, it enables firms and households to cope with economic uncertainties by hedging, pooling, sharing, and pricing risks, thereby facilitating the flow of funds from the ultimate lenders to the ultimate borrowers, improving both the quality and quantity of real investments, and thereby increasing income per capita and raising our standards of living (Harker & Zenios, 1998). Therefore, the performance and efficiency of financial institutions has received extensive scrutiny from scholars, analysts, practitioners, and policy makers. While the efficiency of the financial markets has been studied and debated at length, much less has been done

1) Palley T. (2007). Financialization: What it is and why it matters. *The Levy Economics institute, Working Paper, 525.* Although the data includes the real estate part, it is small part of the data, therefore, financial service is very important in the economy.

in understanding the performance of financial institutions that operate in the markets (Harker & Zenios, 1998).

During the past several years, financial institutions face a complex and turbulent environment, such as deregulation, technological innovation, globalization, customers, and increasing competition. Under these intense competitive environment, some financial institutions perform well, some financial institutions face bankruptcy or being acquired or merged, and others just survive. Especially, in the 2008 Subprime Crisis, many financial institutions face bankruptcy, and some financial institutions have been acquired, such as American International Group, Bear Sterns, and Washington Mutual. Therefore, these questions why some financial institutions succeed and some fail in the Subprime Crisis, and what contribute to the performance of financial institution are very interesting.

This paper mainly reviews literatures on performance of financial institutions, especially on what account for the performance of financial institutions. In the next section, literature on what is performance of financial institutions and how to measure it is reviewed. In this section, the differences between performance and efficiency are also compared. In section 3, factors which account for the performance of financial institutions are analyzed from external environment, internal organization, strategy, and strategy implementation perspectives. Section 4 describes the further implications on the research of financial institutions performance. In the concluding section, conclusions and shortcomings of this paper are presented.

## 2 . Performance of Financial Institutions

Before starting the study on what contribute to the performance of financial institutions, the concept of performance, the measurement of performance should be clearly understood in avoid of confusion and frustration. The difference between performance and efficiency would help to understand what performance is and what would affect performance.

### 2.1 What Is Performance

Performance is mostly used in the organization theory field. Organizational performance refers to the achievement of an enterprise with respect to some criterion (Lenz, 1980). Organizational performance comprises the actual output or results of an organization as measured against its intended outputs. Specialists in many fields are concerned with organizational performance including strategic planning, operations, finance, legal, and organizational development. In recent years, performance is tracked and measured in multiple dimensions such as: financial performance, customer service, social responsibility, and employee stewardship. For financial institutions, Harker and Zenios (2000) describe financial institutions are for profit

organization and they define performance to mean economic performance as measured by a host of financial indicators.

According to above literatures, performance is a measure of the results financial institutions achieved. Performance can be expressed in non-financial and financial terms although many researchers use financial terms to describe performance of financial institution. Researcher may use different meaning of performance according to different background, and then use different performance measurement.

### 2.2 Performance Measurement of Financial Institutions

Performance measurement is fundamental to organizational improvement and it plays a central role for profit organization. There is substantial disagreement concerning the measurement of performance. Some suggest the use of multiple measures while others assert that various aspects of performance may be captured in a single measure (Hatten et al., 1978; Kirchhoff, 1977). Table 1 shows the selected studies of performance measurement of financial institutions.

Table 1 Selected studies of the performance measurement of financial institutions

| Authors | Performance measurement |
|---|---|
| Stiroh & Rumble (2006) | Profit ratios, e.g., ROE, ROA, RARROE, RARROA, and Z-score |
| Bonin et al. (2005) | Stochastic cost and profit frontiers to develop efficiency measures of bank performance<br>ROA and efficiency scores are used to examine the effects of ownership on bank performance |
| Harker & Zenios (1998) | Price-to-earnings ratios, the firm's stock beta and alpha, and Tobin's q-ratios are indicators for short- and long-term financial performance |
| Williams (1996) | Size dimension: asset and market share in Australia<br>Return dimension: return assets after tax and return assets before tax in Australia |
| Boyd & Runkle (1993) | The empirical performance indicator is Tobin's q ratio and the risk indicator is the Z-score |
| Swamy et al. (1996) | Confirms that ROA and ROE can be effectively utilized as measures of performance |
| Klein & Saidenberg (1997) | In the production approach banks are seen as transforming stocks of capital and labor into stocks of accounts (loans and deposits), measured by the number of accounts<br>In the intermediation approach, banks are seen as intermediaries transforming flows of deposits into interest-earning assets (loans), measured in dollar values |

Source: This study.

For measuring financial institution performance, price-to-earnings ratios, the firm's stock beta and alpha, and Tobin's q-ratios are indicators for short- and long-term financial performance (Harker & Zenios, 1998). Especially, they think that Tobin's q—the ratio of market value to

replacement cost—is a measure of the firm's incentive to invest and thus, is an indicator of its long-term financial performance. The performance of banks operating across borders can be measured across the size and return dimensions (Williams, 1996). Klein & Saidenberg (1997) conduct performance measurement of financial institutions from production and intermediation approach. And in either approach, economies of scope are due to combined use of some input.

In conclusion, performance is not only measured by the financial indicators, but also by value creation activities, such as the customer satisfaction, employee satisfaction, etc. However, most researchers just use financial indicators to measure performance of financial institutions. Because financial indicator data is easier to get from annual report, some database, and website, but non-financial indicator data are difficult to get, for example, employee satisfaction and customer satisfaction.

### 2.3 Difference between Performance and Efficiency

There are three important economic efficiency concepts—cost, standard profit, and alternative profit efficiencies have the best foundation for analyzing the efficiency of financial institutions (Lozano et al., 1997). Bonin et al. (2005) think efficiency is one kind of measures of bank performance. Economic efficiency is used to refer to a number of related concepts. It is the using of resources in such a way as to maximize the production of goods and services (O'Sullivan & Sheffrin, 2003). Berger & Humphrey (1997) make a survey on the efficiency measurement and consider it from parametric and nonparametric approach. There is no consensus on the sources of differences in measured efficiency (Lozano et al., 1997). About the relationship between efficiency and performance, Berger et al. (1993) contend that if these institutions are becoming more efficient, it means improved profitability, greater amounts of funds intermediated, better prices and service quality for consumers, and greater safety and soundness if some of the efficiency savings are applied towards improving capital buffers that absorb risk.

Efficiency can be divided into cost efficiency and profit efficiency, but performance won't be divided into cost performance and profit performance. And performance could be divided into economic performance and managerial performance. In this paper, efficiency is from economics perspectives to describe the outcome of economic activities, but performance is from managerial perspectives to describe the outcome of managerial activities.

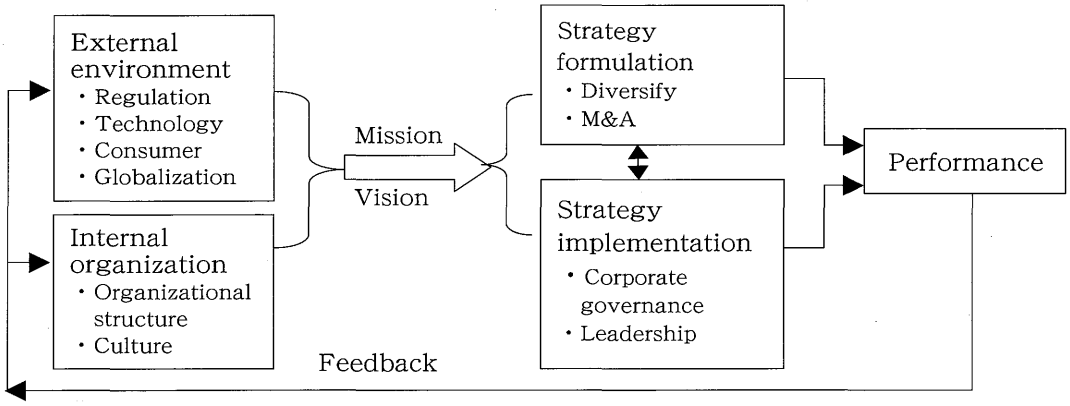
## 3 . What Account for Performance of Financial Institutions

For many years both researchers and practitioners have attempted to learn why some organizations achieve higher levels of performance than other organizations. Thomson (1967) suggests that the success of an enterprise seldom depends upon a single factor. Also, empirical studies

generally employ either a single variable or relationships between two variables to explain variations in organizational performance (Lenz, 1980).

There are some frameworks to analyze what contribute to organizational performance. Harker and Zenios (1998), classify the factors which affect the financial institution performance into three abroad classes: 1) strategy, 2) execution of strategy, and 3) the environment. Rogers (1993) employs the McKinsey's organization analysis approach, 7-S framework, which can be best understand in terms of the interaction of their structure, strategy, systems, style, skills , staff, and super ordinate goals. Lenz (1980) considers that environment, strategy, and organization structure all affect performance. In this paper, the framework of Ireland, Hoskisson, & Hitt (2007) is been selectively used. In their framework, the external environment and internal organization factors would affect mission and vision. Then the mission and vision would affect the strategy formulation and strategy implementation. Finally the strategy formulation and strategy implementation would affect the performance. Figure 1 shows the framework of what contribute to organization performance. This paper considers regulation, technology, customers, and globalization in analyzing external environment, organizational structure and culture in analyzing internal organization, diversity and M&A in analyzing strategy, and corporate governance, and leadership in analyzing strategy implementation.

Figure 1 Framework of what contribute to performance




Source: This figure is draw according to Ireland, Hoskisson, and Hitt's book "The Management of Strategy: Concepts" pp.5.

### 3.1 External Environment

There is no widely held consensus concerning how external environments should be assessed and which aspects of environment affect performance. According to the above framework and existing literatures, this paper considers some factors from industry environment and competitor

environment. And industry environment includes regulation/deregulation and consumer. Competitor environment includes technology and globalization.

### 3.1.1 Industry Environment

*Regulation and deregulation.* Regulation would be a public interest tool for correcting shortcomings of private-sector markets (Harker & Zenios, 2000). Financial institutions, like most non-financial companies, are subject to substantial moral hazard and adverse selection. However, regulation can decline the performance of financial institutions. Deregulation is typically undertaken to improve the performance of the industry being deregulated. Given that a primary goal of deregulation has been to improve efficiency, the results have been mixed. Turkish financial institutions experienced improved efficiency and productivity after deregulation which did in a more liberalized banking environment (Zaim, 1995). In contrast, banking efficiency in the U.S. was relatively unchanged by the deregulation of the early 1980s (Bauer & Hancock, 1993; Elyasiani & Mehdian, 1995). Spain experienced deregulation results similar to the U.S. (Grifell-Tatje & Lovell, 1996). The bursting of the speculative bubble in Japan seemes to have little effect overall on the efficiency of Japanese banks (Fukuyama, 1995), although the bad loans it created clearly had a significant adverse effect on the financial conditions of Japanese banks. Above all, regulation and deregulation is a dilemma government policy maker face.

*Picky consumer.* Consumers are demanding anytime-anywhere delivery of financial services, while demonstrating a rapid evolution of their needs and desires (Harker & Zenios, 1998, pp. 7). In 1990, most of the U.S. consumer financial assets are in bank deposits. Now, consumers' financial assets are not only in bank deposits, but also in mutual funds and insurance funds. Modern consumers also demand access to more than one delivery channel. Now, they can get services from internet, phone, electronic transfer, and ATM. As a result of consumer needs, there is an accelerated growth of financial innovation.

### 3.1.2 Competitor Environment

*Technology.* As a result of the use of new technology, e.g. ATMs and videotext system, it has generally increased the scale, scope, volume, and volatility of transactions (Rogers, 1993). Whereas, technology innovation adds more competitive pressures to financial institutions, because 1) it opens up new delivery channels for customer to receive the services; 2) it makes the emergence of many finance software and adds more new competitors for tradition financial institutions (Harker & Zenios, 1998). With the development of information technology, PC banking services and some finance software has emerged and greatly threaten the tradition financial services (Brynjolfsson & Hitt, 1995). The dominance of banks over other financial institutions and other organizations has been seriously challenged, partly due to the computer

technology, internet, new development of new financial markets, and new instruments (Harker & Zenios, 1998). However, new technology remains a potentially high risk aspect of the business which financial institutions may make false starts and lose money in building large infrastructures.

*Globalization.* Globalization increases the opportunities for one country's financial institutions, e.g. they were able to open overseas branches and to service the home country company in foreign market, but it was also accompanied by the entry of foreign financial competitors into home country market to threaten their market shares. Rogers (1993) thinks many non-U.S. banks were able to undercut their U.S. competitors, in providing letters of credit, extending loans, and underwriting municipal bonds, partly because their governments imposed lower capital requirements on them. Above all, globalization not only increases the opportunities but also threat for financial institutions.

Restrictions on lines of business and geographical locations have been relaxed. Domestic and foreign markets have been integrated. Ceilings on deposit rates have mostly been lifted. All this has had an impact on financial institution profitability.

### 3.2 Internal Organization

#### 3.2.1 Organizational Structure

Organization structure refers to administrative relationships among participants in an organization (Lenz, 1980). In his study, the objective measures of organizational structure is been employed. And the objective assessments generally focus upon two related aspects of structure. The first concerns the overall configuration, or shape, of the administrative hierarchy. The second aspect of structure pertains to processes used to monitor, control, and coordinate activities of individuals and organizational subunits.

Financial institutions are organized in a number of different ways, such as agency theory, mutual organizations. Relying on agency theory, some studies have investigated whether organizational form is associated with differences in frontier efficiency (Berger & Humphrey, 1997). Kahn & Winton (2004) investigate how an institution can best choose its internal structure to pursue a given set of activities and find that the choice of subsidiary structure affects a financial institution's lending, monitoring, and screening decisions. DeYoung & Hasan (1998) compare the operating profits and efficiency of de novo with established banks including small urban commercial banks. Results suggest that efficiency improves rapidly at the de novo bank during years 2 and 3 of operation and the average de novo bank attains established bank efficiency levels after 9 years and then leveled off.

The above literatures introduce the organization structure and the organizational form of financial institutions. Whether there exist the perfect organizational structure and what kind of

structure would be suitable to most of the financial institutions are interesting to study.

### 3.2.2 Culture

Much empirical research has largely been on the functionalist perspective with impressive evidence on the role of organizational culture for firm outcomes (Denison & Mishra, 1995; Gordon & DiTomaso, 1992; Kotter & Heskett, 1992). Furthermore, many academics and practitioners argue that the performance of an organization is dependent on the degree to which the values of the culture are widely shared, that is, are strong (Deal & Kennedy, 1982; Kotter & Heskett, 1992). If an organizational possesses "strong culture" by exhibiting a well-integrated and effective a set of specific values, beliefs, and behavior patterns, then it will perform at a higher level of productivity (Denison, 1984). An effective culture also aligns with the business strategy to ensure the organization meets its long-term goals and improves the performance. Strong corporate cultures can help firms operate like well-oiled machines, cruising along with outstanding execution and perhaps minor tweaking of existing procedures here and there[2)] and create excellent business.

## 3.3 Strategy

The concept of strategy is rather complex. This complexity encourages a proliferation of definitions, not one of which is universally accepted. A strategy is an intergraded and coordinated set of commitments and actions designed to exploit core competencies and gain a competitive advantage (Ireland et al., 2007). In their book, they think an institution can use business-level strategy, competitive rivalry and competitive dynamics, corporate-level strategy, acquisition and restructuring strategy, international strategy, and cooperative strategy to get higher performance. In financial institution research field, diversified strategy and M&A strategy are mostly used.

### 3.3.1 Diversified Strategy

The research of whether diversified financial institutions perform better than their more concentrated peers is a topic of active research. DeYoung & Roland (2001), Stiroh (2004), and Stiroh & Rumble (2006) all provide detailed reviews of the literature, so this section focuses on the most relevant papers in order to highlight the contributions of the current study. The empirical literature on financial firms has produced mixed evidence as to whether and how increased diversification affects performance (Saunders & Walters, 1994).

Stiroh & Rumble (2006) examine U.S. financial holding companies from 1997 to 2002 and find

2) Dean Mcfarlin. Strong culture can be 'double-edged sword'. October 11, 2002. Dayton Business Journal.

that diversification benefits between financial holding companies are more than offset by increased exposure to non-interest activities, which are quite volatile but not more profitable than lending activities. Wagner (2010) constructs an econometric model which considers investment, asset return, and asset mature. He finds that diversification is also costly because it results in institutions becoming more similar to each other and hence systemic crises becoming more likely.

DeYoung & Roland (2001) construct a degree-of-total-leverage framework to test whether and how shifts in product mix affect earnings volatility at 472 U.S. commercial banks between 1988 and 1995. They find that replacing traditional lending activities with fee-based activities—an ongoing trend that maybe strengthened by recent financial modernization—is associated with both higher revenue volatility and higher total leverage. Gallo et al. (1996) investigate large bank holding companies between 1987 and 1994, and find that high levels of mutual fund activity are associated with increased profitability, but only slightly moderated risk levels.

These studies paint a mixed picture about the effects of diversification strategy on financial institutions performance. Therefore, in order to gain high performance and avoid the failure of diversification strategy, the question that when the diversification strategy could produce a positive effect on performance of financial institutions and when it produces a negative effect is worth more attention.

#### 3.3.2 M&A Strategy

Relative to historical trends, banking industries in a number of countries have been subject to an increased number of mergers and acquisitions. The effects of mergers on performance have been less intensively investigated.

A number of studies compared bank performance, such as the return on assets or return on equity before and after M&A relative to peer groups of banks that did not engage in M&As. Some found improved profitability ratios associated with M&A (Cornett & Tehranian, 1992; Rhoades, 1998; Spindt & Tarhan, 1992), although others found no improvement in these ratios (Akhavein et al., 1997; Linder & Crane, 1993; Pilloff, 1996). Also, Berger & Humphrey (1997) think that although many individual mergers have been quite successful in improving cost performance, many others have worsened their cost ratios or cost efficiency, so that on average there is no significant improvement. Above all, the effects of M&A strategy on financial institution's performance are mixed with success and failure.

### 3.4 Strategy Implementation

#### 3.4.1 Corporate Governance

Most researchers whose research field is corporate governance would expel financial firms in their study, because financial institutions are a special kind of firms. Nevertheless, there are

some researchers studying corporate governance of financial institutions.

*Informational asymmetries.* In financial markets, informational asymmetries are particularly pronounced. Entrepreneurs posses inside information about their own projects for which they seek financing to get profit, but investors don't know this information (Leland & Pyle, 1977). Just due to all kinds of information asymmetries in financial institutions, the outside investors cannot directly observe financial institution's actions, such as loan selection, loan quality, costly monitoring, and costly screening (Kahn & Winton, 2004). Therefore, the adverse selection and moral hazard problems between the financial institution and its investors have been studied extensively (Bolton & Freixas, 2000; Diamond, 1984; Diamond & Rajan, 2001).

*Compensation.* The corporate governance issues on incentive compensation are studied by (Barro & Barro, 1990; Houston & James, 1995; Kato & Long, 2006). Kato & Long (2006) use comprehensive financial and accounting data on China's firms from 1998-2002, augmented by unique data on executive compensation, ownership structure and board characteristics, and find that statistically significant sensitivities and elasticity of annual cash compensation for top executives with respect to shareholder value in China. Barro & Barro (1990) study CEOs of large commercial banks over the period 1982-87 and find that for newly hired CEOs, the elasticity of pay with respect to assets is about one-third; for continuing CEOs, the change in compensation depends on performance, as measured by stock and accounting returns. Houston & James (1995) examine whether executive compensation in banking is structured to promote risk taking and find that, on average, bank CEOs receive less cash compensation, are less likely to participate in a stock option plan, hold fewer stock options, and receive a smaller percentage of their total compensation in the form of options and stock than do CEOs in other industries.

### 3.4.2 Leadership

In the past, some researchers have argued that the actual influence of leaders on organizational outcomes is overrated and romanticized as a result of biased attributions about leaders (Meindl & Ehrlich, 1987). Despite these assertions, however, it is largely recognized and accepted by practitioners and researchers that leadership is important, and research supports the notion that leaders do contribute to key organizational outcomes (Day & Lord, 1988; Kaiser et al., 2008). Identifying the relationship between leadership and organizational outcomes often becomes more difficult because of the manner in which leadership performance is often measured and that organizational outcomes are rarely accounted for (Kaiser et al., 2008). Rather, it largely stems from the ability of administrators to reach and maintain a viable balance among a combination of different factors (Lenz, 1980).

Despite the multitude of leadership definitions, Zaccaro & Klimoski (2001) argued there are several common elements that transcend many available definitions. Specifically, leadership

involves a) processes and proximal outcomes that contribute to the organizational objectives, b) the application of non-routine influence, and c) is contextually defined and caused. Proximal outcomes that leaders could facilitate in the pursuit of achieving organizational objectives could include developing organizational commitment among subordinates. Non-routine influence implies that leaders must have discretion in their actions and that their behavior should differ from influence provided through organizational routines. Finally, leadership needs to be considered with respect to the context in which it is occurring.

## 4 . Further Implications

The challenge for financial institutions today is how to match and align performance measures with business strategy, structures and corporate culture, the type and number of measures to use, and the balance between the merits and costs of introducing these measures. Through above literature review and reality background, implications on performance measurement, research method, high performance and low performance of financial institutions, and financial institutions in turbulent environment are given.

### 4.1 Performance Measurement

Performance is not only means profitability, but also the capability to create long-term profit. Therefore, performance measurement can be divided into financial measurement and non-financial measurement. Financial terms are often used to measure the numerical performance of financial institutions, such as return on asset and return on equity. And non-financial performance measurement is used to measure the capability to create long-term profit. The non-financial terms can be explained by the leadership ability, employee satisfaction, the strategy, and the culture.

However, the non-financial measurement has been a big difficult problem for researchers to solve. For example, it's difficult to measure the leadership ability, because it is not easy to interview the CEO of the larger financial institutions and to evaluate the capability and entrepreneurship of CEO. Importantly, there is no standard to evaluate CEO of financial institutions. It's also difficult to measure the employee satisfaction. It's difficult to implement the questionnaire to investigate the employee satisfaction in financial institutions. Finally, for senior executives there is an important implication.

### 4.2 Research Method

There are some methods to examine what contribute to the performance of financial institutions. Firstly, econometric approach can be used to examine the efficiency of financial institu-

tions, which can be studied from parametric and non-parametric method. Secondly, some empirical analysis can be used to explore the relationship between some factors and performance of financial institutions. Some earlier research on performance of financial institutions used a quantitative model. The analysis typically includes a relatively larger number of financial institutions and the use of a statistical model. And it permits statistical tests that control for various other influences on performance and, as a result, statistically valid generalizations may be made. Despite the virtues of the quantitative methodology, it can't adequately capture industry-specific or firm-specific idiosyncrasies (Rhoades, 1998).

Thirdly, due to the limits of quantitative analysis, qualitative analysis can be used to provide insights into firm (industry) behavior and performance that cannot be captured in a quantitative study because a case study may use a wide range of data and institutional detail from sources that may be unique to a firm, or industry. However, because of the limited number of observations (often only one industry or firm) case studies do not permit statistically valid generalizations. In this way, case study and empirical analysis both can be used to avoid the debate on what account for performance of financial institutions.

### 4.3 High Performance and Low Performance

The first task in evaluating the performance of financial institutions is to separate those that by some standard perform well from those that perform poorly (Berger & Humphrey, 1997). There is some investigation which center upon whether combinations of environment, strategy, and organization structure of high-performance firms differ from combinations associated with low-performance firms (Lenz, 1980). The results show that such combinations differ, both statistically and with respect to their basic character. Therefore, the study on identifying high performance financial institutions and low performance financial institutions and exploring the factors contributing to these outcomes is very useful. The managerial performance can be improved by identifying high performance company and low performance company, and some measures can be taken to encourage the best company while discouraging the latter.

### 4.4 Financial Institutions in Turbulent Environment

In the recent decade, financial institutions face high competitive pressure because of technology innovation, macroeconomic development, globalization, picky customers, deregulation, etc. Especially due to the subprime crisis, many financial institutions face bankruptcy. Under this context, exploring what contribute to success and failure could avoid other financial institutions failures and provide some suggestions for the government policy maker.

## 5 . Conclusion

In this study, it is possible to state that regulation/deregulation, picky consumer, technology, globalization, organizational structure, culture, leadership, diversify strategy, M&A strategy and corporate governance would affect the performance of financial institutions. However, this paper is not able to describe all the factors contributing to performance of financial institutions, and this study just gives the factors according to an interpretive framework which is considered from a strategic management process perspective. This paper just reviews what contribute to the performance of financial institutions, but doesn't put focus on the extreme situation of financial institutions, e.g. the failure and success of them.

### Reference

Akhavein J. D., Berger A. N., & Humphrey D. B. (1997). The effects of megamergers on efficiency and prices: Evidence from a bank profit function. *Review of Industrial Organization*, 12(1), 95-139.

Barro J. R. & Barro R. J. (1990). Pay, performance, and turnover of bank CEOs. *Journal of Labor Economics*, 8(4), 448-481.

Bauer P. W. & Hancock D. (1993). The efficiency of the Federal Reserve in providing check processing services. *Journal of Banking & Finance*, 17(2-3), 287-311.

Berger A. N. & Humphrey D. B. (1997). Efficiency of financial institutions: International survey and directions for future research. *European Journal of Operational Research*, 98(2), 175-212.

Berger A. N., Hunter W. C., & Timme S. G. (1993). The efficiency of financial institutions: A review and preview of research past, present and future. *Journal of Banking & Finance*, 17(2-3), 221-249.

Bolton P. & Freixas X. (2000). Equity, bonds, and bank debt: capital structure and financial market equilibrium under asymmetric information. *Journal of Political Economy*, 108(2), 324-351.

Bonin J. P., Hasan I., & Wachtel P. (2005). Bank performance, efficiency and ownership in transition countries. *Journal of Banking & Finance*, 29(1), 31-53.

Boyd J. H. & Runkle D. E. (1993). Size and performance of banking firms: Testing the predictions of theory. *Journal of Monetary Economics*, 31(1), 47-67.

Brynjolfsson E. & Hitt L. (1995). Information technology as a factor of production: The role of differences among firms. *Economics of Innovation and New technology*, 3(3), 183-200.

Cornett M. M. & Tehranian H. (1992). Changes in corporate performance associated with bank acquisitions. *Journal of Financial Economics*, 31(2), 211-234.

Davis G. F. (2009). The rise and fall of finance and the end of the society of organizations. *Academy of Management Perspectives*, 27-44.

Day D. V. & Lord R. G. (1988). Executive leadership and organizational performance: Suggestions for a new theory and methodology. *Journal of Management*, 14(3), 453-464.

Deal T. E. & Kennedy A. A. (1982). Corporate cultures: The rites and rituals of organizational life: Reading, MA: Addison-Wesley.

Denison D. R. (1984). Bringing corporate culture to the bottom line. *Organizational Dynamics*, 13(2), 4-22.

Denison D. R. & Mishra A. K. (1995). Toward a theory of organizational culture and effectiveness. *Organization Science*, 6(2), 204-223.

DeYoung R. & Hasan I. (1998). The performance of de novo commercial banks: A profit efficiency approach. *Journal of Banking & Finance*, 22(5), 565-587.

DeYoung R. & Roland K. P. (2001). Product mix and earnings volatility at commercial banks: evidence from a degree of total leverage model. *Journal of Financial Intermediation*, 10(1), 54-84.

Diamond D. W. (1984). Financial intermediation and delegated monitoring. *The Review of Economic Studies*, 51(3), 393-414.

Diamond D. W. & Rajan R. G. (2001). Liquidity risk, liquidity creation, and financial fragility: A theory of banking. *Journal of Political Economy*, 109(2), 287-327.

Elyasiani E. & Mehdian S. (1995). The comparative efficiency performance of small and large US commercial banks in the pre-and post-deregulation eras. *Applied Economics*, 27(11), 1069-1080.

Fukuyama H. (1995). Measuring efficiency and productivity growth in Japanese banking: A nonparametric frontier approach. *Applied Financial Economics*, 5(2), 95-107.

Gallo J. G., Apilado V. P., & Kolari J. W. (1996). Commercial bank mutual fund activities: Implications for bank risk and profitability. *Journal of Banking & Finance*, 20(10), 1775-1791.

Gordon G. G. & DiTomaso N. (1992). Predicting corporate performance from organizational culture. *Journal of Management Studies*, 29(6), 783-798.

Grifell-Tatje E. & Lovell C. A. K. (1996). Deregulation and productivity decline: The case of Spanish savings banks. *European Economic Review*, 40(6), 1281-1303.

Harker P. T. & Zenios S. A. (1998). *What drives the performance of financial institutions?* In (pp. 98-21): The Wharton School, University of Pennsylvania.

Harker P. T. & Zenios S. A. (2000). *Performance of financial institutions: Efficiency, innovation, regulation*: Cambridge University Press.

Hatten K., Schendel D., & Cooper A. (1978). A strategic model of the U.S. brewing industry: 1952-1971. *Academy of Management Journal*, 592-610.

Houston J. F. & James C. (1995). CEO compensation and bank risk Is compensation in banking structured to promote risk taking? *Journal of Monetary Economics*, 36(2), 405-431.

Ireland R. D., Hoskisson R. E., & Hitt M. A. (2007). *The management of strategy: Concepts* (8th ed.): South-Western Cengage Learning.

Kahn C. & Winton A. (2004). Moral hazard and optimal subsidiary structure for financial institutions. *The Journal of Finance*, 59(6), 2531-2575.

Kaiser R. B., Hogan R., & Craig S. B. (2008). Leadership and the fate of organizations. *American Psychologist*, 63(2), 96.

Kato T. & Long C. (2006). Executive compensation, firm performance, and corporate governance in China: Evidence from firms listed in the Shanghai and Shenzhen Stock Exchanges. *Economic Development and Cultural Change*, 54(4), 945-983.

Kirchhoff B. (1977). Organization effectiveness measurement and policy research. *Academy of Management Review*, 2, 347-355.

Klein P. & Saidenberg M. R. (1997). Diversification, organization, and efficiency: Evidence from bank holding companies. *Southern Economic Association Meetings, Atlanta, Ga.*

Kotter J. P. & Heskett J. L. (1992). *Corporate culture and performance*: Free Press.

Leland H. E. & Pyle D. H. (1977). Informational asymmetries, financial structure, and financial intermediation. *Journal of Finance*, 371-387.

Lenz R. T. (1980). Environment, strategy, organization structure and performance: Patterns in one industry. *Strategic Management Journal*, 1(3), 209-226.

Linder J. C. & Crane D. B. (1993). Bank mergers: Integration and profitability. *Journal of Financial Services*

*Research*, 7(1), 35-55.

Lozano L. M., Montero E. A., Martin M. C., Villamanan M. A., Berger A. N., & Mester L. J. (1997). Inside the black box: What explains differences in the efficiencies of financial institutions? *Journal of Banking & Finance*, 21(7), 895-947.

Meindl J. R. & Ehrlich S. B. (1987). The romance of leadership and the evaluation of organizational performance. *Academy of Management Journal*, 30(1), 91-109.

O'Sullivan A. & Sheffrin S. M. (2003). *Economics: Principles in action* (pp. 15): Upper Saddle River, New Jersey: Pearson Prentice Hall.

Pilloff S. J. (1996). Performance changes and shareholder wealth creation associated with mergers of publicly traded banking institutions. *Journal of Money, Credit & Banking*, 28(3), 294-310.

Rhoades S. A. (1998). The efficiency effects of bank mergers: An overview of case studies of nine mergers. *Journal of Banking & Finance*, 22(3), 273-291.

Rogers D. (1993). *The future of American banking: managing for change*: McGraw-Hill Companies.

Saunders A. & Walters I. (1994). *Universal banking in the United States: What could we gain? What could we lose?* New York: Oxford University Press.

Spindt P. A. & Tarhan V. (1992). Are there synergies in bank mergers. *Tulane University, New Orleans, LA*.

Stiroh K. J. (2004). Diversification in banking: is noninterest income the answer? *Journal of Money, Credit & Banking*, 36(5), 853-883.

Stiroh K. J. & Rumble A. (2006). The dark side of diversification: The case of US financial holding companies. *Journal of Banking & Finance*, 30(8), 2131-2161.

Swamy P., Barth J. R., Chou R. Y., & Jahera J. S. (1996). Determinants of US commercial bank performance: Regulatory and econometric issues. *Research in Finance*, 14, 117-156.

Thomson J. D. (1967). *Organizations in action*. New York: McGraw-Hill.

Wagner W. (2010). Diversification at financial institutions and systemic crises. *Journal of Financial Intermediation*, In Press, Corrected Proof.

Williams B. (1996). Determinants of the performance of Japanese financial institutions in Australia 1987-1992. *Applied Economics*, 28(1), 1153-1165.

Zaccaro S. J. & Klimoski R. J. (2001). *The nature of organizational leadership: Understanding the performance imperatives confronting today's leaders*. Pfeiffer.

Zaim O. (1995). The effect of financial liberation on the efficiency of Turkish commercial banks. *Applied Financial Economics*, 5, 257-264.