

Providing a model for organizational explanation in the banking industry

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Abstract

The purpose of this research is to identify the dimensions and components of organizational resilience in the Central Asian banking industry. In order to achieve this goal, mixed research method and semi-structured interviews were used. Interviews were conducted with 81 banking industry experts, all of whom had executive records in high organizational positions, and the initial model was identified. The method of analyzing the interviews was theme analysis, in which three stages of coding were done. In the following, using the statistical method of confirmatory factor analysis, the obtained dimensions and components. The results of not studying organizational resilience in the country's banking industry can lead to stagnation and even bankruptcy crises in the country's banks. A crisis that can have destructive effects on the country's economy considering the mutual dependence of the state economy and banks on each other.

It was examined and approved by 73 experts and experts in the field of banking. The results show that in order to create and increase organizational resilience, several factors should be taken into account in the two areas of micro-banking management and macro-banking management in the country.

Keywords: organizational resilience; banking industry; micro banking management; macro banking management; Resilience indicators.

Introduction

Today's world is affected by the decisions that people make in very complex situations with high uncertainty. The chaos resulting from these decisions has caused uncertainty in the phenomena to reach a very high level [7]. In such high-risk conditions, every company and organization it should try to maintain balance and survival by receiving the least negative impact from these phenomena and in the best case, turning these threats into opportunities. Failure to maintain balance and equilibrium in the conditions of the company and organization may lead to the fall of the stock value, jeopardizing the interests and even their bankruptcy [17.]

One of these types of organizations that has both an effective role and a high effectiveness role in tensions and riots is the bank. The very heavy responsibility of the banking system in the market-based economy is not hidden from anyone, and the banking system is always one of the most important components of the country's economy, which determines the growth or stagnation of the economic structure with its activity. Because the capital in banks is the main source of purchasing products and services and the loans granted by them are the source of creating credit for all economic units.

It includes families, businesses, companies and the government. Therefore, the optimal activity of banks and the effective use of marketing tools to achieve their goals, including the exploitation of capital and its equipment, will be very effective on various economic activities and the overall state of the country's economy [17].

As financial and service institutions, banks play a decisive role in the circulation of money and wealth and have a special place in the Asian economy. Banks with the function of financial intermediaries, the role of provision

They are in charge of financial needs for production and commercial units. Banks should be able to attract small capitals on one hand and provide services to production and

industrial units in the form of facilities on the other hand to strengthen them and as a result, production units can play their role in the national economy properly.

Despite the huge developments that have increased competition in the banking industry in recent years, due to the lack of development of financial markets such as the stock market and securities, banks, which are the most important source of financing for economic enterprises, have lost their important role in the economic growth and development of the country. Have still maintained and while playing this key role will only be possible in a stable and efficient banking sector with the possibility of optimally absorbing and allocating the reserves and financial resources of the society [10].

The position of banks in the growth of the country's economy has caused the Western countries and America to impose sanctions against Iranian and Afghan banks, thus restricting their activities in the country's economy.

Face many difficulties. These sanctions, along with the incorrect structure of the banks in the country, have caused Central Asia not to experience a single-digit inflation rate in the past 10 years, and this is despite the fact that only 13 countries in the world have a similar situation to Central Asia and the inflation rate in them is double-digit. This has caused the conditions of banks in Central Asia to be more difficult than ever before. These difficulties put many and varied pressures on the service process and financial activities of banks, and in order to deal with these pressures, banks must strengthen their endurance and resilience so that the crises and pressures created cannot prevent the continuation of banks' activities. The four sources of funding for the Central Asian economy in the past years have been the banking system, the stock market, construction budgets and foreign investment, and banks have been responsible for the main burden of financing economic sectors in recent years, and the vulnerability of banks means the vulnerability of the economy. [30] On the other hand, surveys show that financial crises in advanced countries such as America have led to stagnation in the banking industry in other countries. This means that failure to resist tensions such as financial crises in other countries can also lead to stagnation and even bankruptcy of banks [31].

The results of not studying organizational resilience in the country's banking industry can lead to stagnation and even bankruptcy crises in the country's banks. A crisis that can have destructive effects on the country's economy considering the mutual dependence of the state economy and banks on each other. Identification The dimensions and components of organizational resilience can give bank managers the opportunity to identify Basic points and dimensions and components of resilience, try to increase it in your organization and collection and thus have a coherent and continuous strategy and plan to improve banking conditions to deal with crises and accidents. Considering that Iran's situation is in danger and invasion both in terms of geopolitics and natural geography, and in terms of the manifesto of arrogance and confrontation with capitalist systems, the resilience of organizations, especially banks, is of great priority and importance.

According to the mentioned materials, the research problem is what dimensions and components banks should consider to increase organizational resilience so that they can provide high-quality services and have sufficient resilience against unexpected phenomena, crises and natural disasters. Be up to date

Unexpected events, the life of the organization and consequently banking services will not be endangered? Facial research According to the researcher's investigations, they have investigated this issue from very limited angles and a comprehensive study has not been done in the field of dimensions and components of organizational resilience in the country's banking industry.

Based on this, the aim of this research is to design a resilience model in banking industry. According to the purpose of the research, first, surveys were conducted on the resilience of the banking industry, and then the resilience models in organizations and banks

were examined. Then, interviews were conducted with banking industry experts and the initial model was identified using the experts' opinions with the theme analysis approach. In the following, by using the confirmatory factor analysis technique, some indicators that were less related to the model were removed from it and the final model was presented.

Theoretical foundations and background of the researcher

The first step to explain resilience in the organizational context was taken by Rice and Kaniato in 2003, who defined resilience from an organizational perspective. They believe that endurance or resilience is: "the ability to respond to an unexpected disturbance, such as the effect of a terrorist attack or a natural disaster, as well as recovery to normal operations". However, according to the development of resilience definitions over time, most propositions have only a little change, referring to previous definitions or due to the presentation of theories, and almost all of them follow common features [17] [6] [26]. [25] [31] [13]. Table 1 shows some definitions of resilience in different fields.

Table 1. The concept of resilience based on previous studies

Definition of resilience	Source
The ability of the system to reduce the probability of a shock, control the shock in case of occurrence (sudden reduction of performance) and quick recovery after the shock (restoration of normal performance).	[7]
The ability of societies, their physical, social, political and economic systems, their buildings and settlements and to withstand the risks caused by tensions and pressures that can quickly bounce back, accept future threats and face them.	[9]
It is referred to as the organization's ability to face disturbances in order to maintain the organization's configuration or create a new organization configuration that is more suitable to the new environmental conditions.	[21]
Resilience means tolerance and coping and recovery of the organization after a catastrophic event or a crisis or difficult conditions.	[15]

Resilience in the banking industry: Banks with the function of financial intermediaries, the role of providing financial needs for production units and they are in charge of business. Banks should be able to attract small capitals on one hand and provide services to production and industrial units in the form of facilities on the other hand to strengthen them and as a result, production units can play their role in the national economy properly. Due to the very important role of this industry in production, consumption, investment and other variables and institutions, providing a healthy and resilient banking system is very important and essential to deal with shocks and manage the economy [12].

According to the topics presented, resilience is the system's ability to absorb chaos and reorganize. While undergoing change, it is defined as the system still having the function, structure, maintain the same characteristics and feedbacks" [19]. The term resilience was originally interpreted as the ability of a material system to return to its initial state. This type of resilience emphasizes the first part of Walker's definition, which is the system's ability to return to its initial static state [70], for example, to deal with shocks and maintain what is. Gradually, the dynamic interpretation was proposed, the emphasis of which is the method of the second part of the definition, that is, the ability of the system to reorganize itself (when it undergoes change) [83]. specialized and economy of Central Asia examined that in this case, the choice of the type of interaction of the banking system with the economy is raised, which will be discussed in detail in the following; but from another perspective regarding banks, it can also be said that a bank What kind of bank is Tabavar? Based on the investigations, it is clear that the bank is resilient and has the ability to withstand shocks. These banks have the trust of depositors and investors; therefore, even during periods of tension, they have the ability to receive funds. [8]

The issue of resilience of the banking system can be examined in the framework of the entire system governing the banking network, i.e. the central bank, commercial and specialized banks, and the Central Asian economy, in which case the choice of the type of interaction between the banking system and the economy is raised; But from another point of view regarding banks, it can also be said that what kind of bank is a resilient bank? Based on the investigations, it is clear that the bank is resilient and has the ability to withstand shocks. These banks have the trust of depositors and investors; therefore, even during periods of tension, they have the ability to receive funds [24].

After many countries of the world faced severe banking crises during the last two decades of the 20th century, banking authorities gradually applied capital adequacy, which depends on the composition and size of the bank's asset portfolio, as one of the major risks. This issue has caused capital adequacy to be considered as one of the main resilience indicators of the banking system [18].

In 2015, in his doctoral dissertation, Al-Roub has categorized banking resilience indicators into two general groups of adaptive and planning capabilities [23]. In table 2, a view of Al-Roub's model is presented. Table 2. Bank resilience indicators [26].

Table 2 - Banking resilience indicators

Adaptive capabilities	Planning capabilities
Reducing divisions and boundaries	Planning boards
Internal resources of the organization	Stress reduction exercises
Interest, willingness and involvement of bank employees	Proactive preparation
Knowledge and information leadership	External resources of the organization
Innovation and creativity of employees	Recovery priorities
Decision making and employee discretion	
Monitoring and reporting the status of the organization	

Examining the theoretical foundations in both academic and policy areas shows that the following seven important factors are effective on the resilience of the banking system. These factors include [1:]

1. Diversity: Banking systems with high health have a variety of functions, strategies and assets.

2. Interrelationship and network structure: The type of financial institutions' relationship with each other determines the way of absorbing or spreading incoming shocks.

3. The size of the financial system: the increase in the size of the financial system compared to the GDP can be a bigger threat to transfer the shocks of this sector to the real sector of the economy.

4. Combination of assets: The combination of financial assets (such as the type of claims) and non-financial assets of banks is an important issue that can have a great impact on resilience.

5. Combination of debts: The type of financing of banks from customers as well as other financial institutions, from the point of view of things like maturity and interest rate, has a great impact on the performance of the bank.

6. Complexity and transparency: reducing transparency on the one hand and increasing the complexity of financial instruments and communication of financial institutions can create a lot of hidden risk in the financial system.

7. Leverage ratio: The ratio between a bank's assets and liabilities is one of the most important issues, which is of course based on the post-crisis regulatory attitudes. Resilient banks have special features, such as:

- Liquidity and capital shield: capital provides the conditions that banks can reduce their losses during the period of stress. The role of banks as financial intermediaries makes them vulnerable to liquidity risks, and a lack of liquidity can cause bank failure.

- Profitability: Banks that are not profitable lose the trust of investors and customers, especially in stressful situations. Also, they are not able to build reserves with their accumulated profits.

- Good governance: A resilient bank has a healthy governance structure and respects ethical standards. Here too, depositors and investors trust banks with more precautionary measures during periods of stress. The result of the efforts made in different countries of the world to achieve a set of quantitative criteria to evaluate the resilience of banks, financial intermediaries and other elements of the financial system can be expressed in the form of quantitative criteria representing capital adequacy, the quality of assets and the bank's financial structure, stability and stability of management. , provided profitability, liquidity, operation sensitivity to market risk and other basic criteria [8.]

- Capital Adequacy: Capital adequacy and its availability are the main and determining factors in identifying the ability of banks and financial intermediaries in facing fluctuations and uncertainties affecting balance sheet items; therefore, pay attention to the capital adequacy ratios of different types

It involves significant financial risks, it is quite profitable. Evaluating the amount of reserves considered for doubtful claims is very important and plays a fundamental role in the process of evaluating the capital adequacy of each bank.

- Asset quality and financial structure of the bank: But the reliability of the ratios calculated in connection with the capital adequacy is a function of the credit level of the characteristics related to the quality of the assets and the financial structure of the bank. In fact, in many cases, the emergence of risks related to the inability of any bank or financial intermediary to repay obligations on time is rooted in the decrease in the value of its assets; therefore, it is very important to monitor the quantitative measures of asset quality and financial structure of the bank. A group of experts believe that paying attention to the leverage ratio obtained from the division of the bank's assets to its shareholders' equity can indicate the existing balance of the growth rate of assets in comparison with the growth rate of capital.

- Stability and stability of management: stability and stability of management should be considered the most basic variable affecting the performance of the bank. The truth is that the ability of the board of directors and the bank's CEO in identifying, measuring, monitoring and controlling the risks of the bank's operations, creating efficiency in the operation and also complying with the rules and regulations governing the banking system, can attract public trust in the bank, implying the continuation of the activity and its survival as well. In order to evaluate the stability and sustainability of bank management, several quantitative criteria have been formulated and presented, among these ratios, the ratio of total bank expenses to total bank revenues can be mentioned.

- Return on assets: one of the most common ratios used in measuring bank profitability is the return on assets (the ratio of net profit to the bank's assets). Achieving a clear picture of the stability and durability of the bank's profitability and the range of risks affecting it requires reflection on the sources of creation Profit is like the income of granted facilities, etc.

- Liquidity: In addition to the mentioned cases, monitoring the bank's liquidity is also very important; Because the bank's liquidity level has an effect on its ability to face economic and financial uncertainties has considerable Based on this, it has been claimed that one of the

most sensitive dimensions that has a great effect on the stability of banks is their ability to repay obligations and short-term debts on time. [16]

In 2013, Borman and his colleagues designed the resilience index of the entire economic system in order to measure and measure the ability of developing countries and emerging markets to deal with shocks in the article Centennial Resilience Index (resilience measurement of countries against shocks). This study has shown that with the help of the proposed index, it is possible to identify factors that affect the ability of a large number of developing countries and emerging markets to attract and cope with

Increase with external shocks. The researchers used 52 variables and 10 sets to construct the resilience index of the entire economy. In the collection related to asset quality, they give the base capital ratio, which is the ratio of equity to assets and non-operating loans to total bank loans.

It is considered as one of the appropriate indicators to evaluate the resilience of the monetary and banking system of a country.

The findings of the research show that developing countries and emerging markets have significantly strengthened the resilience of their banking system against external shocks, and in the period from 1997 to 2012, this index has always been on average upward for these countries, and instead for developed countries, this The index has been declining. Borman states in his research that the resilience of a country is a function of various factors. Factors such as governance and the manner of governance of a country as a whole, the power of the institution, especially the institutions that determine the country's financial and economic policies, the state of the banking sector and the state of the country's financial sector in general, the dependence and diversity of the country's exports, free access to the world's financial markets, and so on. [3].

In 2016, Moshiri and Abdulshah estimated the distribution of credit losses in Iran's banking industry using the stress test. The high amount of deferred and doubtful receivables in Iran's banks is an indication of the high amount of credit risk in the banking system. In this study, using the seasonal information of macroeconomic variables and the banking industry during the period of 2013 to the second quarter of 2015, the losses caused by credit risk were estimated using the stress test and the minimum capital.

Banks' requirements are specified under stress and base scenarios. The first step in assessing credit risk is estimating the probability of default. First, using Monte-Carlo simulation, default probabilities are simulated in a one-year time horizon under the base scenario and stress scenarios. Then the portfolio loss distribution is calculated using the values exposed to default and the loss due to default. For this purpose, a hypothetical portfolio is created first, where the default values for each loan are randomly determined with a uniform distribution, and the amount of loss due to default is considered a fixed value. In addition to Wilson's linear model, quantile regressions have also been used to estimate the default probability equation. The results show that the loss distributions for all scenarios are skewed to the right. The amount of loss in 30% quantile regression is very close to Wilson's model, but the amount of loss in 80% and 30% quantile regressions is different from Wilson's model. In fact, Wilson's model overestimates the quotient loss of 0.8 and underestimates the quotient loss of 0.3. [22]

In their research conducted in 2019, Bergland and Makinen determined whether banks learn from the financial crisis by examining the experience of Northern European banks. Using a large panel data set of Scandinavian countries including Finland, Norway and Sweden and European banks for the period 1994-2010, they investigated whether banks can learn from the experience of previous crises of other banks and become resilient against severe financial crisis. The researchers' key findings are that after controlling for banking characteristics and

macroeconomic factors, Northern European banks had more profitability and financial stability than other European banks during the 2008 crisis [4].

Research methodology

In the present research, the mixed research strategy has been used to achieve the research goal. Semi-structured interviews were used to collect the data required for the research. These interviews were conducted with 81 experts in the field of banking at the national level. Among these, 80 interviews were conducted until data saturation was reached and 1 interview was conducted after that. In this way, these people were selected to interview and identify the dimensions and components of the organizational resilience model in the country's banks. The interview with these people was done online by prior appointment and in their office, in the banking institution or outside the workplace. Interviews with people lasted between 8 and 7 hours. The interviews were recorded with the permission of the interviewees so that they can be referred to again if needed. Theme analysis was used to review and analyse the data collected from the interviews. Theme analysis is a method to determine, analyse and express the patterns (themes) in the data. This method at least organizes the data and describes it in detail, but it can go beyond this and interpret different aspects of the research subject [1]. [In this technique, the data is first coded and then the secondary and main concepts are extracted from them. Then the main classes or categories are created from the concepts and the final model is designed based on the classification. In order to measure the reliability of the interviews, from the method Test-retest reliability and intra-subject agreement method were used [13] to calculate the test-retest reliability, two interviews were selected from the coded interviews and re-coded after one week, and the internal retest agreement was calculated to be close to 33%. Two co-researchers were asked to code the two interviews separately and the internal agreement between the researchers' coding and co-coding was calculated as 75% and 74% respectively, which is acceptable and reliable if the agreement is higher than 10%.

Furthermore, in order to confirm the research model, the statistical method of confirmatory factor analysis was used. For this purpose, a questionnaire containing 159 items was designed and after confirming its validity and reliability, it was distributed among the statistical community consisting of managers and banking experts in Central Asia.

Analysis of organizational resilience structure results

In this section, in order to examine the model, first, the dual sub-structures of the model, including micro and macro management, were examined, and the significance and factor load of each of the obvious variables were examined.

It placed. Then, some variables whose relationship significance was not confirmed were removed from the model and the model was examined in general in the second order. In the following, by removing the components that were rejected in the sub-structures and their factor load was found to be ineffective, in this section, the overall structure of organizational resilience consisting of two sub-structures of micro-management and macro-management in the banking sector, which leads to the increase of organizational resilience in banks, is examined. The country becomes, it has been paid.

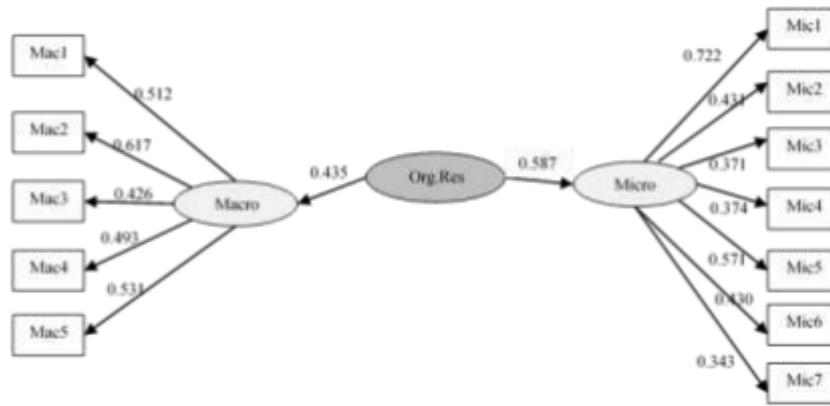


Figure 1 Second order model and resilience components in the country's banking industry

The final model of the second-order factor loadings was designed in Figure 1. Also, the fit indices of the final model are presented in Table 3.

Table 4 - Fit indices of the final model of resilience of the country's banks

Index	K2	RMSEA	GFI	AGFI	CFI	NFI	IFI
Calculated value	1.285	0.082	0.91	0.90	0.90	0.90	0.91
Acceptable level	≤ 3	≤ 0.1	$0.90 \leq$				
Result	+	+	+	+	+	+	+

As indicated, the model generally has adequate fit.

Conclusions and suggestions

In this research, the identification of organizational resilience empowerment in Central Asian banks was done. The results of interviews and investigations showed that a comprehensive model in organizational resilience in the country's banking industry, it should consider two main dimensions. First is the aspect of micro-management of the bank, whose components can usually be managed at the level of each of the country's banks. The components of this dimension are at the enterprise level and include financial management (with 1 variable of liquidity management, capital management, correct management of outstanding claims and risk management), information and communication management, enterprise strategy management, bank supply chain management, human resources management and focusing on monitoring and control and management of change. In this dimension, there is the ability to manage components and variables at the corporate level of the bank.

The second level is related to the macro management of the bank, which is in the field of banking policy. The components and variables of this dimension are beyond the authority of a bank and require management and policy at a level beyond the company level. At this level is the country's banking management, which is responsible for macro-banking management and policy making. The main components of this level are changes in the field of banking business in the country, political variables, control and monitoring policies, variables governance and components related to policymaking and legislation. Based on the obtained results, in order to increase resilience in the country's banking industry, decision-making should be done at two levels. The following suggestions are extracted and presented based on the results of interviews with experts:

1) The managers of the country's banks by controlling bank liquidity management, bank capital management and attracting new banking resources, optimizing the management of outstanding claims using the latest technologies and validating customers and optimal risk management by taking into account the risk level of the activities, in a favourable way for the financial sector of the banks. Manage to increase the ability of banks to deal with crisis situations.

2) Managers should take an effective step in optimizing the circulation of information and communication in banks by using modern technologies and ICT infrastructures so that they can both increase the speed of information circulation and ensure the accuracy of information in order to reduce the possibility of rumours in times of crisis.

3) Managers should design committees for quick decision-making in times of crisis so that, if necessary, decisions can be made quickly and without wasting time.

4) In order to reduce the need for suppliers, managers should diversify their financial resources as much as possible and use different approaches to supply, so that in case of an accident in some sources, the bank does not suffer a crisis and can repair itself quickly.

5) Banks are very careful in attracting and training their top managers and try to choose the right options to steer the bank's affairs. Also, the use of expert banking consultants at the highest levels of the bank can increase the optimization of decision-making among managers to a certain extent.

6) Banks should try to reduce corruption in the system by strengthening supervision and control.

7) Managers should try to change and reduce organizational inertia and change the static nature of banks, because in the event of a crisis, there is a need to change in the shortest time.

8) Central Bank officials should design and develop plans in the field of bank business models that are both derived from the business models of prominent and successful global banks and have the ability to be used in the country.

9) The central bank should provide the basis for the decision-making independence of the banks after testing their maturity level and reduce the strong dependence of the government and the banks on each other as much as possible.

10) Transparency, supervision and control should be increased as much as possible with policy and legislation at different levels.

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