

## Research on the Recognition of Financial Structure

Weijing Feng<sup>1</sup>, Shan Tao<sup>1</sup>

<sup>1</sup>School of Business, Nanjing Normal University, Jiang Su, China.

### Abstract

**This paper gave a recognition of financial structure, which is different from the structure of “bank-based” and “market-based”. Financial structure is determined by the needs of economic and social development. From a historical view, we found that financial structure is always changing from the first to the third industrial-revolution, so financial structure can not be simply defined to satisfy the increasing and diversified financial demands. Many factors should be taken into consideration. The first is regional structure, urban and country, developed and less-developed, open and closed, different degree and proportion of which decide the financial structure of a region; the second is industrial structure, including different types of industry, they have different financial choice, obviously, their financial structure is different; the third is enterprise structure, the different size, growing stage and position in industrial chain of enterprise determine that the financial structure will be different. Therefore, factors of region, industry and enterprise should be considered when the government make guidance policy to promote the economic development.**

### Keywords

**Financial structure, Recognition, Industrial revolution, Region, Industry, Enterprise.**

### 1. Introduction

Research on the relationship between financial structure and economic development based on Goldsmith (1969). He believes that FIR will continue to increase with the economic development but eventually tends to be stable, the position of banks decreases gradually, while the capital market becomes more important, therefore, the financial structure dynamically changes with the level of economic development. His analysis method and its conclusion have led to many follow-up studies. Mainly in two aspects: one is financial structure and economic growth which comprise of bank-based theory, market-based theory, the theory of financial services (Merton&Bodie, 1995; Levine, 1997) and the theory of law and finance (LLSV, 1998). The second is optimal financial structure (Boyd& Smith, 1998; Allen&Gale, 2000; Carlin& Mayer, 2003). Chinese scholar Yifu Lin (2009) puts forward the theory of optimal financial structure. He holds the opinions that the best financial structure is what the real economy need, in order to effectively mobilize funds, allocate funds, reduce systemic risk, and promote the development of the real economy.

We can see from the above studies: first, the optimal financial structure is changing, market's leading role will be enhanced due to economic development; second, different financial structures have different effects on economic development at different stages, which means that the financial structure can be used as an independent financial policy consideration, allowing a country to make an appropriate adjustment in financial policies and institutions along with economic development; third, political, legal origins and the leader will also cause the actual financial structure deviating from the optimal structure, resulting in the loss of economic efficiency and economic benefits. Banks and capital markets were concerned as the main objects of the analysis of financial structure. In fact, the financial structure is not only the

proportion of banks and capital markets and their relative role (It can be called basic structure), regional structure, industry structure, structure of enterprise should also be considered.

(1)Regional structure. Its necessity comes from the heterogeneity of the regional economic development of a country. Special attention should be paid to less-developed areas and rural areas. The mainstream financial structure theory may be incomplete due to its neglect of regional structure.

(2)Industry structure. Different industries have different dependence on banks and capital markets. Labor intensive industries rely more on bank financing, while high-tech industries (similar to the knowledge and technology intensive industries) need capital market financing due to its light assets and cannot meet the requirements of bank mortgage assets; Because of the huge investment scale, the commercial and the public welfare, and the long payback period, the infrastructure industry is more dependent on the bond issuance and policy finance; Capital intensive industries need more long-term loans, equity investments, corporate bonds, and so on.

(3)Structure of enterprise. The scale of enterprises largely effects the basic financial structure. The methods of financing may change from single to multiple and their financing may change from bank loans to diversified models when enterprises grow from small to large, if the level of regional economic development is low and the proportion of small and medium enterprise is high, the banking system becomes more and more important. Along with the improvement of economic development level, the level of enterprise scale structure will change, enterprises will be in different developing stages, so the corresponding financing means, methods and the corresponding structure will change.

It can be seen that the financial structure is affected by the structure of the region, the industry and the enterprise. Therefore, the optimization of the financial structure should take the actual needs of them into account.

The remainder of the paper is structured as follows: Section 2 describes the change of financial structure from a global and historical perspective, Section 3 presents financial structure and economic development from region, industry and enterprise, and Section 4 offers a conclusion.

## **2. Financial Structure Change: A Global and Historical Perspective**

The human society has experienced three industrial revolutions, and each was accompanied by the changes of financial structure. In this section we will find the changes for the need of industrial revolutions on different development stages. In simple words, the first industrial revolution should owe great thanks to the appearance of bank. The second industrial revolution should own great thanks to the combination of banks and capital markets, especially the appearance of bond and stock market. The third industrial revolution should own great thanks to the appearance of the new capital markets.

### **2.1. The Appearance of Bank During the First Industrial Revolution**

The first industrial revolution, a starting point in 1760s, and lasted from 1830s to 1840s. During this time, the human production gradually shifted to the new manufacturing process, the human and animal power were replaced by the machine, and technological revolution replace individual workshop to large-scale factory. The invention and application of machines became the symbol of this era, historians call this era the Age of Machines.

What power drives this change? The emergence of banks has played an active role, acting as a credit intermediary, accumulating funds required for social development, and promoting investment and production construction. This process has also nurtured financial development. The financial needs of the industrial sector and the need for government borrowing contributed

to the financial revolution; the financial revolution, in turn, provided funding for the industrial revolution and promoted the development of the industrial revolution.

Hamilton(1781) argued that banks were the happiest engines that ever were invented for spurring economic growth. Adams (1819) asserted that banks harm peace, tranquility, and even wealth of nations. He observed that the expansion of Scottish trade in the eighteenth century owed something to the establishment of the two public banks. From a historical perspective, Both Bagehot (1873) and Schumpeter (1934) talked about the role of bank intermediaries in promoting economic growth<sup>1</sup>.

The appearance of banks gave big push to the development of economy and society during this period. Not only does it bring in a lot of money needed by business owners, but also gave other supports for the firms and privates, such as deposits, loans, helpful information, payments and so on. At this historical stage, banks became the dominating financial means of the financial system. We named them “dominated structure” of financial system.

## **2.2. A mixture of Bank and Capital Markets During the Second Industrial Revolution**

The second industrial revolution, also known as the second scientific and technological revolution, refers to the industrial revolution from 1870 to 1914. The second industrial revolution followed the first industrial revolution at the end of the 18th century, and spread from Britain to Western Europe and North America. Western Europe (including Britain, Germany, France, the lowland countries and Denmark) and the United States, and Japan after 1870, the industry has been developing rapidly. The second industrial revolution represented by the large-scale application of electricity, the invention of electric light as a symbol.

At the end of the 19th century and the beginning of the 20th century, the United States, on the basis of inheriting the British central bank and commercial banking system, relied on a mature investment banking system to support the United States to complete the second industrial revolution and became the strongest country in the 20th century. The United States took investment banks as the main market-oriented financial system, with a natural capital operation capacity, to achieve the capital of the market flow and effective allocation to support the US economic restructuring and industrial upgrading.

At this stage, limited to the shortcoming of single bank-financing, many constructions and industrial upgrading need much more funds and would be paid back after a long period, this kind of fund demand could not be supplied by single bank due to the risks of long term appropriation of funds. So new financing means appeared. Bank groups and the capital market took the great role this time. Because they could gather funds and share financial risks more broadly. These new growing financing means were accepted by many entrepreneurs and governors, and during this time we called a mixture of banks and markets, in the meantime, the financial structure became more complicated.

## **2.3. New Capital Market During the Third Industrial Revolution**

The third industrial revolution is marked by [deleted] inventions and applications of atomic energy, computers, space technology, and biotechnology. It involves information technology, new energy, new materials technology, biotechnology, aerospace, and marine technology. In many fields, this can be regarded as a revolution in information control technology. The great landmark event is the emergence of the Nasdaq market.

As the world's largest second-board market, NASDAQ of the United States cultivated a large number of world-renowned technology companies. Such as Microsoft, IBM, Apple Computer,

---

<sup>1</sup>Levine, R., N. Loayza and T. Beck. 2000. Financial intermediation and growth: causality and causes. *Journal of Monetary Economics*, 46(1), 43

Intel and so on. The early days of these enterprises characteristics with light assets, high-technology and high-risk. It is difficult to obtain the required funds according to the requirements of banking system risk management. And they can not get funds from the main board market. Just as Schumpeter once said "innovation need abnormal credit", but abnormal credit means higher risk, so a substitute external finance mode appeared to satisfied the financial demand. During this time, innovation and technology changes emerged in an endless stream, and made a big push to the world. Industrial inventions require large injections and long run commitments of capital, market is conducive to scattering the cross period risks in the face of these enterprises in investment process, thus it encourages the enterprises to choose more professional technologies and improves the rate in enterprise technical innovation<sup>2</sup>.

The emergence of NASQ is good example to show demand-oriented for financial development, everything is changing, just like biologists said "the changing is itself", the development and innovation of finance lead to a new financial structure.

#### 2.4. What Is Financial Structure?

Goldsmith's analysis has been criticized in recent years over its shortcomings. However, he did recognize the FIR's limitations when it came to analyzing why systems developed in particular ways, saying that "the study of financial structure involves, of course, more than the classification of financial instruments and of institutions into rather broad and rough categories. There's another thoughts that financial structure is about the mix of financial instruments that bridged the gap between borrower and lender at the optimal level of risk, return, and maturity.

And the majority of economists always described the financial structure as bank-based, or market based, or we can take it as a basic structure, but this classification can not completely describe one country's financial system. As we all know from above, the appearance of finance served for economic development and social progress. Such as money, bank, stock market, bond market, insurance and so on. These existences brought great changes of the world, we can find that the financial function became more and more integrity, while the financial structure became more and more complicated. Let's see money as example, when it first appeared, it was a material object, after that precious metals, paper became the materials for money, and it's function lie not only in value scale, means of circulation, but also in saving and means of payment. So did the bank, not only commercial banks but also central bank, they became the important parts of financial system. While commercial banks can divided into different types: big banks and small banks, state-owned banks and none-state-owned banks, domestic banks and foreign banks. they all perform as their own roles respectively. The central banks can also divided into different types, the diversity of financial existence make the economy and society run smoothly. one of the factors behind Germany's successful postwar recovery was undoubtedly the role of the banking system and its ability to take a long-term view of financing the corporate sector. While the great growth of United States and the United Kingdoms were the role of market system. Actually the financial structure is determined by many factors, why different countries have different financial structure? In our opinions, financial structure is a proportion, which includes financial tools, institutes, functions, also determined by many factors such as region, industry, enterprise, etc. In other words, we can not simply describe the financial structure as "bank-based" or "market-based".

---

<sup>2</sup>Saint-Paul, G. (1992) Technological Choice, Financial Markets and Economic Development. *European Economic Review*, 36, 763-781. [http://dx.doi.org/10.1016/0014-2921\(92\)90056-3](http://dx.doi.org/10.1016/0014-2921(92)90056-3)

### 3. Financial Development and Regional Structure

From a regional perspective, it can be divided into two visual angles: one is the difference of financial development between city and country, the other is the difference of financial development between developed and undeveloped regions.

#### 3.1. Urban and Country

The differences of City and country lie in the following aspects: First, city owns much more essential factors for the economic growth such as human resources, capital and technology, which gather in big cities, people there are high-income, capital is abundant, technology are widely used, so they need much more financial services, these demands promote the development of financial institutes, they are diversity because of the differential demands. While in the countryside, financial demands are limited, because people there are low-income, which leads to a low capital formation, and technology are more difficult to be widely used. From a development of financial service view, in big cities external finance is easier to get than that in the countryside. What's more, financial exclusion has aroused in countryside. Secondly, there are more institutes and firms located in cities, these existences cause much more financial demands, and financial institutes will gather there and offer the financial services, and then became a cluster, gathering will be strengthen, in other words, financial development will be pushed by the economy, in turn, financial development will push the economic development and form a good finance-economy cycle. Theatrically, the view of city and country mainly focuses on the agglomeration and radiation, or we called that Core-periphery theory. The city is the core, the financial structure become Core-periphery financial structure. Meltzer (1969) and Stein (1970) observed that only countries with high per capita incomes can experience rapid growth in financial assets.

#### 3.2. Developed and Undeveloped Regions

The classified criterion of developed and undeveloped regions lies in the economic aspect. A direct appearance can be seen in an economic map, such as South-North difference in the word economic map, and East-Middle-West difference in Chinese economic map. There are many reasons for the difference of both Economic and financial development. Firstly, geography factor. If a region owns a good location, which means it has a good condition of natural geography and human geography, a better natural geography gives better growing surrounding for the plants and animals, human beings and so on, and this kind of regions will attract all the essential elements for economic growth, the economic growth here will be easy and fast. Similarly, human geography here will be better, including regional culture and education, regional scientific and technology, regional information, etc. All these elements are good for economic growth, and they are also good for financial development. Secondly, institutional factors. If a region has better institutional conditions, that means the region owns better regional policies, laws and rules, North (1990) defined institutions as the human constraints of structure political, economic and social interaction. They comprise both formal rules (property rights, constitutions and laws) and informal constraints (unwritten taboos, customs, traditions and codes of conduct). The quality and executive power of regional institutional factors give different explanations for the difference of economic and financial development. Thirdly, historic basement factor. Ragnar Nurkse told us that a country is poor because it is poor, which means economic or financial development will be well done under a better historic basement. This is a normal circumstance, but the history also tells us there were some regions once developed, later went down, while some regions once undeveloped, later went up. In other words, there are possibly some factors which push or hinder the economic and financial development.

### 3.3. Open and Closed Regions

The difference between open and closed regions lies in their opportunities for trade. If trade exists in a region, the related financial demands such as payment and settlement are needed. The financial infrastructure will be constructed in this region, financial talents will also gather there step by step. More and more financial infrastructures are constructed. This is an attraction for more trade activities. In turn, economic and financial development will be promoted. From an institutional perspective, open regions have more freedom than closed regions. Definitely, market there is free, which makes a good condition for the formation of financial markets. So open and closed regions have different financial markets. Kletzer and Bardhan(1987) researched on the link between financial development and trade openness. Countries with a relatively well-developed finance sector are shown to have a comparative advantage in industries and sectors that rely on external finance. Capital flows more easily in open regions. As we all know, capital is the basic element for economic development. Open regions are more likely to attract capital. Why do some countries become more open than others, or open up at some times rather than others. Openness also brings foreign competitors to domestic markets. These are both pressure and motivation for the local economic and financial development. Financial structure is different due to the degree of their openness. Financial structure is more complicated in more open regions. While in a closed region, the financial structure is more simple.

### 3.4. Different Region Has Different Financial Demand

Whatever city and country, developed or undeveloped regions, they all have financial demands, although the demands are different. Generally speaking, in a world economic map, different countries have different financial structures. They are in different development stages and regions, they have different historic starting points, cultures and law origins. Financial structure should be diversified in different time and space. So we could not describe the financial structure as the most optimal, but the financial structure should be optimized to satisfy the development of economy and society. The diversity of financial structure in cities and countries, developed countries and undeveloped countries, or in different development stages is similar to the diversity of the biology, it's the choice of evolution. The fittest will survive, similarly, financial development and innovation need to have this adaptability.

## 4. Financial Development and Industrial Structure

Financial development influences the industrial composition of economies because some industries benefit more than others from financial services. More diverse financial systems with a mix of small and large institutions and a combination of different bank and non-bank financial institutions may be suited to meet the needs of the real economy.

### 4.1. Different Type of Industry and Their Financial Demand

Rajan and Zingales (1998) used industry level data across countries and showed that industries that are naturally heavy users of external finance as measured by the finance intensity of U.S. industries. They benefit disproportionately more from greater financial development compared to other industries. Wurgler (2000) showed that countries with higher levels of financial development increase investments more in growing industries and decrease investment more in declining industries, compared to underdeveloped financial systems.

There do exist different types of industry in real economy, such as labor-intensive industry, capital-intensive industry, knowledge-intensive industry, technology-intensive industry. Financial model is different due to the character of the industry. Labor-intensive industry obviously has lower financial demand than capital-intensive industry, they can be satisfied by their own accumulation which we called internal finance, or borrowing from the bank which

we called external finance. But if the industry is capital-intensive, it's not enough to accumulate by itself. For a wide fund demand, the industry must ask help to the bank, or it should go to the capital market. Stocks and bonds can be issued when the condition is ready. While knowledge-intensive and technology-intensive industry can not get the fund they need, because their material assets are less or unseen. They can not meet the condition for bank credit, nor for issuing the securities. They are risk-related. Banks hesitated to lend money to them. At the same time, the scale of them is small and the return is low at the beginning, what they need is risk-investment. They are high-risk and low-returned at their establishment, but they will be low-risk high-returned on their mature stage. Only the banks or the markets that can bear the risk and endure the period can offer the fund or the fund opportunity. Traditional bank and market will not take this risk. VCs(venture capital ) and Science and technology market(such as NASDAQ) will cater for these knowledge-intensive and technology-intensive industries. Meanwhile such financial services will promote the innovation, push the appliance of the new technology and give a big push to the economic development. In turn, financial development will be strengthened and financial structure will be more complicated to a higher level.

#### **4.2. A Special Industry: Infrastructure Industry**

Why we talk about infrastructure? The infrastructure industry is a special industry. Firstly, it has a financial character of capital-intensive and long-return period. So one or two banks can not meet the fund they needed. Secondly, infrastructure industry involves huge investment and is associated with many other industries. So many countries or local government take it as a pillar of economic development, other industries will be well done if infrastructure industry is good. Since the industry is special, it is important to disclose the financial structure of infrastructure industry. It may need syndicated loans by banks, policy loans by policy-financial institutions, and it may issue securities, such as Medium -long term bonds, admission of private capital. We think the infrastructure industry need a financial group services. In a word, a complicated financial structure is important for the construction of infrastructure, especially in undeveloped regions, the construction of infrastructure is a big push to urbanization and industrialization. More investments will be entered into the growing industries in a region with a basis of well-built infrastructure. During the western development of the United States, the emergence of new financial institutions is a good example. In the past 40 years of reform and openness, China has experienced a great investment in the construction of infrastructure which was dominated by Chinese central and local government. Such kind of financial structure must be leaded and pushed by the government, mainly commercial banks and policy banks are the first form of credits of banks. Once the market mechanism is introduced, bank institutions and none-bank institutions will be the fund resources of the construction. The structure of financial development will get more and more complicated.

#### **4.3. Industrial Structure Decides Financial Structure in A Region**

The structural characteristics of industry are one of the characteristics of regional differences. Patrick (1966) has initiated widespread investigations into the role of financial sector as an engine for economic growth. lack of financial institutions in developing countries is an indication of lack of demand for their services. The development of some regions is dominated by agriculture. The development of other regions is dominated by light and heavy industry, or service industry. There are more detailed divisions within different industries. Just as mentioned above, we can divide the industry into labor-intensive, capital-intensive, knowledge-intensive and technology-intensive, etc. We can also divide the industry into scattered and scaled, hand and machine, internal and external, traditional and emerging. No matter how we divide the industry, it's constant that they have different financial demands, so it is obvious that regions have different financial structure due to their different industry structures. From the three industrial level, if a region is dominated by agriculture, the financial

structure of this region may be very simple. While a region is dominated by second industry and service industry, the financial structure of this region may be very complicated. The complexity of the industrial structure determines the complexity of the financial structure. Cameron (1998) suggested that one reason why the Austrian financial system did not develop ties with industry to the same degree that Germany did was that Austria had no Ruhr Valley; thus it had little or no heavy industrial sector requiring capital on a much greater scale than could be provided by mutual, cooperative, and private banking institutions. Economies that are more focused on trade and commerce are more likely to develop institutions such as long-term financing, letters of credit, bills and acceptances, insurance and commercial banks. Gerschenkron (1962) disclosed that the structure of the financial system was a function of "relative backwardness". Nevertheless, as economies move between phases of growth driven by agriculture, trade, investment, or consumption, the nature of the demand for financial services changes. More sophisticated economies tend to require greater choices, such as for housing finance and insurance services. The British industrial revolution occurred in industries, textiles for example, which did not call for enormous investments (Landes, 1969). Germany, in contrast, was involved in heavy manufacturing and chemicals, both of which required large injections of external capital.

## 5. Financial Development and Enterprise Structure

Hall (2002) identifies two main empirical results: small and start-up firms in research intensive sectors face higher capital costs, and large firms prefer to finance research with internal resources. Demirguc and Maksimovic (2002) use firm level data and a financial planning model to show that more developed financial system as a proxy by larger banking systems and more liquid stock markets allow firms to grow faster than the rates they finance internally.

### 5.1. Enterprises of Different Sizes

Enterprises have different sizes, we can divide them into two types, one is large-sized enterprise, the other is small and medium-sized enterprise. Large-sized enterprises own large scale of assets, extensive connections with financial institutions, and support policies from government. Not only can large enterprises get the loans from banks, but also they can issue securities in the capital market, such as stocks and bonds, sometimes large-sized enterprise can acquire policy-directed loans from bank or no-bank institutes. In a word, large enterprises have advantages on the means of financing than small and medium-sized enterprises. While small and medium-sized enterprises can not easily get the funds needed for their development, the reasons are as follows: low scale of assets, less collaterals for credit, unknown development prospects, information asymmetry between banks and enterprises, and so on. Financial institutes have strict constraints for those small and medium-sized enterprises, which make it more difficult for them to get the loans. Small and medium-sized enterprises face the high cost of acquiring funds, so they turn irregular financial institutes for help. Some enterprises depend on their own accumulation, they can not issue securities we called external finance. So the proportion of enterprise structure decides the structure of financial structure of a region.

### 5.2. Enterprises in Different Stages of Growth

The growing of an enterprise should go through four stages: sprouting, development, maturation and recession. (1)The sprouting-stage enterprises have strong demands for funds for their development during this stage, while they have the characteristic of low-assets and high risks. Regular financial institutes are reluctant to lend money to the enterprises, especially for those small and medium-sized enterprises. At the early stage of development, entrepreneurs mainly depend on their savings for the needed investment funds. (2)The development-stage enterprises can more easily get funds from financial institutes than the

sprouting enterprises, because they have already be in progress of normal production and expanding the market. As the economy develops, banks emerge to facilitate the financing of new investments. (3) The maturation-stage enterprises have a better market position, but there are more competitors which will make a current income reduction in enterprises, although the financial institutes are still willing to provide funds to the enterprises. And they can also acquire funds for development from the capital market, but we should pay much more attention to the financial risks at this period. (4) The recession-stage enterprises face the problem of low-return and higher risks, this time they are difficult to get funds from formal financial institutes or capital markets, they will disappear or quit the market. A conventional wisdom in corporate finance visualizes an enterprise's life-cycle as follows: the enterprise relies mostly on internal assets and venture capitalists (the so-called 'angels') for investment in its early stages; as it matures, financial intermediaries start lending to the enterprise; finally, when the enterprise is mature enough, it raises funds from the market. At last, financial activities stop when the life-cycle is over. So the proportion of different development stages enterprises decides the financial structure of a region.

### 5.3. Enterprises in Different Position of Industrial Chain

Industrial chain is a concept that includes four dimensions: value chain, enterprise chain, supply-demand chain and spatial chain. Every enterprise has his own position in the industrial chain, and the relationships among them may be multiple. In the industrial chain, there are a large number of upstream and downstream relations and exchange of mutual value, upstream enterprises transport products or services to the downstream enterprises, the downstream enterprises feedback information to the upstream enterprises. Some enterprises may dominate the industrial chain. Other enterprises may be in a subordinate position. The enterprises in a dominated position are usually large enterprise and more influential in the market, they are easier to get funds they need for development, while other enterprises are small and medium-sized and usually more difficult to get funds by themselves. But they can take advantage of the position of the industrial chain, get the funds they need with the help of the dominated enterprise, because large-sized enterprises are good support for credit warranty, they can constraint the behavior of small and medium-sized enterprises. Financial institutes can manage the financial risks of small and medium-sized enterprises. These financial institutes here mainly refer to banks. Another important thing is concentration, and concentration in the banking sector imposes a higher cost of lending on firms and households. High concentration can enable banks and enterprises to establish long-term relationships and have a positive impact on industrial development. Therefore, the structure, concentration and status of enterprises in the industrial chain determine the regional financial structure.

## 6. What Financial Structure We Needed?

Financial system structures and cultures evolve over decades and are path-dependent. They cannot be changed overnight, but can be influenced by competition and regulatory policies. The government can develop financial institutions through innovation to increase market competition and the diversity of the financial system.

Banks and capital markets were concerned as the main objects of the analysis of financial structure. In the debate on the relationship between economic performance and financial structure, economists have long discussed the relative merits of bank-based versus market-based financial systems. Germany and Japan's experience to argue that banks are better at mobilizing savings, identifying good investment and exercising corporate control. People with different perspectives believe that the factual experience of the United Kingdom and the United States shows that financial markets are superior to banks in terms of access to information, corporate governance and risk management. Such technological differences could have played

a key role in Britain's historical reliance on market finance and Germany's dependence upon its banking systems (Baliga and Polak, 2004). With the development of economy, therefore, it will demand different mixtures of financial services and hence different mixtures of banks and markets (Boyd and Smith, 1998)

### **6.1. The Financial Structure Is Always Changing**

The development of economy and society need financial services, in the long history we get to know that the form of financial service is always changing, for the change of financial demand. The financial system is complicated, as mentioned above, which is combined with banks, securities, insurance and so on. Step by step. Day after day. Year after year. Financial development has gone through the process of change from small to large in total volume, from simple to complex in structure, from low to high in system, and continuous improvement in functions. The reasons for the change of financial structure lie in the following two aspects: one is demand for financial service, which is related to the development of economy and society. The other is financial supply, which is related to the level of financial technology. Examples from all over the world can verify this conclusion. From a demand perspective, the British industrial revolution, the western development of the United States, reconstruction of Japan and Germany after World War II, these are all important events in the historical process. We can look into them and investigate for the great change of financial service and financial structure. There is no doubt that the change of financial structure must adapt to the real economy and society. From a supply perspective, since the financial demand exists, improving financial supply capacity is important. So the progress of financial technology has made a great contribution. The application of computer and Internet technology speeded up the transformation from traditional finance to modern finance. Financial structure is becoming more and more complicated as financial supply capacity increases.

### **6.2. Region, Industry, and Enterprise Should Be Considered**

We can not simply define financial structure as “bank-based” or “market-based”. Many factors which affect the financial structure should be taken into consideration. In this article we mainly focus on the perspective of region, industry and enterprise. Differences of region, industry and enterprise affect the financial demands actually. Developed countries and regions have better financial structure than undeveloped countries and regions. Industrial structure and enterprise structure do also really affect the demand of financial service and the financial structure. An industrial country has more demands for funds than an agricultural country. A multinational company has larger scale and wider space for financial service than a common company. We can formulate financial policies due to different regions, industries and enterprises. Such policies will be pertinent. The development of regions, industries and enterprises closely connected with financial development. That is why we can not simply define financial structure as “bank-based” or “market-based”, which had been acknowledged by most scholars and their literatures. Although other scholars and literatures emphasized on the idea of “financial service” and “law and finance”. This cognition needs to be changed, or we can call “bank-based” and “market-based” as a basic financial structure. Now the financial structure needed for economic and social development should pay much more attention to the factors of regions, industries and enterprises.

### **6.3. Human Beings Structure**

Differential regions have different people. Firstly, people have a different age structure. Older people prefer material services than younger people. Because they know less about new technology, they make less access to the internet. So most of them can not acquire financial services from internet and by internet, nor can they utilize the mobile phones. If the elderly population is the majority in a region, the demands of high internet or mobile related financial

services will become less. New financial institutions will not appear, such as self-service banks and internet-connected banks. The majority of elderly people can not buy any security and insurance products from internet or by their mobile phones. We also can call this structure prefer traditional models.

Secondly, the risk structure is different. Every person has his own risk performance. Some are risk-preferred. Some are risk-neutral, while others are risk-disgusted. A region will be high-risk if the proportion of risk-preferred people is high. Risk-preferred people like engaging in risky financial transactions. Because high risk will bring them high returns. And the financial system will be in danger and getting more fragility day after day, the regulatory agency will come into being.

Thirdly, family structure. Family has different consist of family members, if a family consist of two parents and a child, it will be definitely different from the family consist of four grandparents, two parents and one or two children. The burden of the family will be heavier if the number of elder people and younger child is high. Only because that they need more family expenditures while own less. So this kind of family need make a plan for their future life, which means that they should plan for their elder family members for aged life, and they should also plan for their younger family members for their education. All these depend on the couple's deposit and their present incomes. It is very important for them to prepare for their family's future high expenditure. They need financial services and products for maintenance and creation of wealth.

#### 6.4. Other Factors

We should never look financial structure only as "basic structure". Many other factors should be considered when we research on financial structure. Both financial service and law origin affect the financial structure, the view are supported by many researchers (Levine,2002). And there are different influential factors lead to different financial structure. Firstly, the information factors. The acquisition and reaction to information are very important for financial development. Market participants are more willing to choose the region with sufficient information. So they can compete with each other in order and regular market. Meanwhile, more financial entities will enter this region and form a large-scale agglomeration. But if a region owns incomplete information, market participants will face higher information cost, which is a barrier to them. They will not enter this region and turn to other regions. Regions where corporations publish relatively comprehensive and accurate financial statements have better developed financial intermediaries than the countries where published information on corporations is less reliable. Secondly, the political factors. The regulations that shape the design and the operations of corporations, credit and securities markets differ vastly from country to country. Recent contributions on corporate governance show that there are large differences in the degree of investor protection across countries and that these differences are correlated with both the development of capital markets and the ownership structure of firms (La Porta, Lopez-de-Silanes, Shleifer and Vishny, 1997, 1998).

Structure is a relative proportion which will be always changing, so the adapted financial structure will satisfy the demands of real economy. But the financial structure may be complicated, and can not be recognized simply. It may take several factors into consideration which will extend our recognition of financial structure.

The optimize of financial structure is to promote the function of financial system, which can fit for the development of economic and social development. The financial structure in the economic system always adapts to the specific economic and social environment. The so-called optimal financial structure is a dynamic evolution process. Financial development itself can find a certain specific type through the selection of numerous individuals in the system. The better

financial structure under the environment, and this financial structure is constantly changing and adjusting to adapt to the new environment.

## References

- [1] Allen, Franklin, and Douglas Gale. 2000. Comparing @nancial systems. Cambridge, MA:MIT Press.
- [2] Bagehot, W., 1873 (1962 Edition). Lombard Street. Richard D. Irwin, Homewood, IL.
- [3] Beck, Thorsten, Ross Levine and Norman Loyaza (2000), "Finance and the Sources ofGrowth," Journal of Financial Economics 58, 1-2, October/November, 261-300.
- [4] Boyd, J.H., Smith, B.D. 1998. —The evolution of debt and equity markets in economic development||. Economic Theory 12, 519-560.
- [5] Demirgüc-Kunt, Asli, and Vojislav Maksimovic (1998), "Law, Finance, and Firm-Growth," Journal of Finance 53(6), December, 2107-2137.
- [6] Greenwood, Jeremy, and BoyanJovanovic(1990), "Financial Development, Growth, and the Distribution of Income,"Journal of Political Economy, XCVIII,1076-1107.
- [7] Goldsmith, R.W., 1969. Financial Structure andDevelopment. YaleUniversity Press,NewHaven, CT.
- [8] Gurley, J., Show, E. (1960), Money in a Theory of Finance. Washington,DC: Brookings.
- [9] Kletzer, K. and P. K. Bardhan (1987). Credit Markets and Patterns of International Trade. Journal of Development Economics. 27 (1–2). pp. 57–70.
- [10] King, R.G., Levine, R., (1993a). Finance and growth: Schumpeter might be right. Quarterly Journal ofEconomics 108, 717-738.
- [11] King, R.G., Levine, R., (1993b). Finance, entrepreneurship, and growth: theory and evidence. Journalof Monetary Economics 32, 513-542.
- [12] La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny(1997), "Legal Determinants of External Finance," Journal of Finance 52(3),1131-1150.
- [13] La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny(1998), "Law and Finance," Journal of Political Economy 107 (6), 1113-1155.
- [14] Levine, R. (1997). "Financial Development and Economic Growth: Views and Agenda." Journal of Economic Literature 35, no. 2: 688–726.
- [15] Levine, R., N. Loayza and T. Beck. 2000. Financial intermediation and growth:causality and causes. Journal of Monetary Economics, 46(1), 43.
- [16] Lin, J.Y., X. Sun, and Y. Jiang. (2009). "Toward a Theory of Optimal Financial Structure." Policy Research Working Paper WPS5038. Washington: World Bank (September).
- [17] McKinnon, R.I. (1973), Money and Capital in Economic Development, Washington,D.C., The Brookings Institution.
- [18] Merton, R.C. and Bodie, Z. (1995): "A Conceptual Framework for Analyzing the Financial Environment," in: Crane, D.B. et al. (eds.), The Global Financial System: A Functional Perspective", Boston, MA: Harvard Business School Press, 3–32.
- [19] Patrick, H., (1966). Financial development and economic growth in underdeveloped countries.Economic Development Cultural Change 14, 174-189.
- [20] Pagano, M., and P. Volpin (2001), "The Political Economy of Finance," Oxford Economic Papers.
- [21] Romer, P.M. (1990), Endogenous technical change. Journal of PoliticalEconomy, 98(1), 71-102.
- [22] Saint-Paul, G. (1992) Technological Choice, Financial Markets and Economic Development. European Economic Review,36, 763-781.
- [23] Schumpeter, J.A., 1934. The Theory of Economic Development, 1912 (translated by Redvers Opie).Harvard University Press, Cambridge, MA.
- [24] Shaw, A. (1973), Financial Deepening in Economic Development.New York: Oxford University Press.
- [25] Williamson, Stephen D. "Costly Monitoring, Financial Intermediation, and Equilibrium Credit Rationing." J. Monetary Econ. 18 (September 1986): 159-79.