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## THE DEVELOPMENT AND EFFECTIVENESS OF FINANCIAL MARKETS

### Introduction

The existence of a developed financial market is essential for the effective functioning of a developed economy. Particular stages in the development of capitalism have led to the creation of suitable financial institutions and instruments. The use of “suitable” is understood here as the response of the financial market to ongoing changes in the relation of prices in the economy, which are the motor for the creation of even more effective institutions servicing the economy.<sup>1</sup> On the basis of a comparative analysis of the financial markets of highly developed countries, there is a gradual retreat from the model solutions found in the range of types of banking systems. The development of financial markets and their continued integration on an international scale is the main reason for this phenomenon. However, in each of these countries the retention of suitable institutional forms, to a lesser or greater extent, and the relation between them in national banking systems has had an influence on the economy. Every economy has its specific characteristics as a result of a number of different factors. Among the most basic factors are the social forces affecting the dynamics of its development as well as the market orientation of acquiring sources of capital. The natural influence of these factors, changing over time with the development of capitalism to the actual

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<sup>1</sup> D.C. North, *Institutions, Institutional Change and Economic Performance*, New York 1990, s. 7.

stage of economic development, leads to the creation of the “optimal” banking system as the main pillar of the financial market in these economies. The term “optimal” means that the given banking system has the ability to satisfy the required economic services and create the right conditions for the functioning of the spheres of the real economy. Its institutional structure is of secondary importance and is derived directly from the operation of real spheres from the point of view of the two-way operation of the financial and non-financial economic spheres. The institutions that create it are not as important for the development of the financial market as are their interdependency. An argument for this assertion might be the analysis of national income in countries where there is a changed model of institutional solutions in their banking system.

There is one more conclusion that can be made from the experience acquired from the series of financial crises. The development of financial markets does not necessarily have to go together with a growth in their effectiveness or the stability of the financial system.

## **1. Concept of the Development of Financial Markets**

It's possible to find more than one attempt to develop a definition of the concept of *financial development*.<sup>2</sup> This concept often appears in finance and economic textbooks, but it is difficult to find a definition of it.

One definition of this process, which is highly developed and presents a fully and unusually precise character, is generally identified with financial development. This was developed by J.D. von Prischke in the form of a collection of concepts based on a definition of financial development. According to this definition, increasing the offer of financial instruments is necessary in order to assure financial development. This takes place when there is a balance maintained between risk and the rate of return for particular instruments. According to Prischke, maintaining this balance is dependent on three factors. The first group are of a technical character and are related to the creation of financial innovations, as well as the consolidation of the universal practice of the emission of financial instruments, and the improvement of these procedures. The second group is

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<sup>2</sup> In view of the particular character that the banking system has on the finance system of a country, the concept of financial development may be identified with the concept of the development of the banking system.

related to extending the date of maturity of financial instruments while at the same time maintaining the interest rate. Finally, the third group rest on the relations of the financial system with the real sphere and draw attention to the continued relationship between the sides of financial transactions as an element stimulating financial development.<sup>3</sup>

Another definition of financial development is more simplified and is based on the theory of transaction costs. This definition was presented in an article by N. Roubini and X. Sala-i-Martin regarding economic growth. They identified financial development with a reduction of costs of transactions in the exchange of non-floating and floating assets.<sup>4</sup> The costs of these transactions occur at the moment of the transfer of the right of ownership or property (related to the instruments of the capital market) and are comprised of the actual cost and time necessary to realize them. In order for both the creditor and the borrower to profit from the fall in transaction costs, an increased volume of transactions is necessary. As the model of the balanced functioning of supply and demand shows, it is only then that the seller profits from the drop in prices and the buyer profits by its growth. As a result of such a definition of financial development it is necessary to accept that its main determinant is effectiveness. These concepts can not be identified because an effective market might have a low level of development; however, a market with a high level of development according to this concept must be characterized by effectiveness.

An ongoing analysis of the changes that are going on in the structure of financial markets in the highly developed countries shows a retreat from the typical model of development in their banking sectors.<sup>5</sup> The main reason for this process is definitely the globalization of financial markets, but another factor, which is not always noticed and has an equally important meaning, is the increasingly common appearance of the spreading symptoms of recession in relation to the open character of national economies and the increasing tempo of economic change. The results of which are the disruption of the natural tempo of institutional evolution in the economy. The blurring in the difference between financial market models is clear mainly with regard to the functioning of international institutions.

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<sup>3</sup> J.D. von Prischke, *Finance at the Frontier: Debt Capacity and the Role of Credit in the Private Economy*, The World Bank, Washington 1991.

<sup>4</sup> N. Roubini, X. Sala-i-Martin, *Financial Repression and Economic Growth*, "Journal of Development Economics" 1992, No. 39.

<sup>5</sup> Speaking of the German-Japanese and the Anglo-American model of banking systems.

Within the scope of operation of national institutions the changes have mostly a functional rather than institutional character.

The lack for the need of credit on a massive scale in the first phase of capitalism means that financial institutions developed slowly. This situation changed during the industrial revolution. The increased need for capital on a massive scale leads to a rapid development of both financial institutions and instruments. It's possible to advance the idea that during this period the economy has a clear impact on the development of financial institutions and not the reverse.

Currently, several economists have tried to indicate the existence of an opposite dependency. According to J.P. Krahen and R.H. Schmidt, the susceptibility of the financial system to crisis and the ease with which it spreads to the markets of other countries is proof that this phenomenon, at least for a short period, has a negative correlation between financial development and economic development.<sup>6</sup> An additional factor weakening economic growth is the consumption by the financial system of savings, which are not transformed into investments, only retained in the unproductive infrastructure of this system.<sup>7</sup>

## 2. Determinants in the Development of Financial Markets

Contemporary financial markets are still subject to the process of development, independent of whether the country is highly developed or if the country is undergoing the process of economic transformation. In highly developed countries the development of financial markets are influenced by the following factors:<sup>8</sup>

- internationalization
- liberalization
- deregulation
- globalization
- consolidation
- advances in information technology and telecommunications
- changes in demand for financial services

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<sup>6</sup> J.P. Krahen, R.H. Schmidt, *Development Finance as Institution Building. A New Approach to Poverty – Oriented Banking*, Westview Press, Boulder–San Francisco–Oxford 1994.

<sup>7</sup> J. Żyrzyński, *System finansowy a gospodarka realna: między służebnością a wyobcowaniem*, „*Ekonomista*” 2006, No. 4, s. 546.

<sup>8</sup> Zob. K. Matthews, J. Thompson, *Ekonomika bankowości*, PWE, Warszawa 2007, pp. 13–31.

The *Internationalization* of financial markets are visible both on a macro and microeconomic scale. This is a result of the free flow of capital as well as the cosmopolitan character of money and effects mainly the banking system. Domestic banking systems in which there is a free market economy are not completely owned by domestic capital. The participation of foreign capital in their assets is varied and forces them, depending on the amount of these assets, to conduct economic policies that take into consideration the interests of a particular group of owners. A second important element that leads to the internationalization of banking systems on the microeconomic level are the foreign branches of national banks. In one market there are a number of banks “representing” various countries. The effects of this situation is the necessity of conducting various economic policies by different branches of the same bank. The assertion that money has no homeland, is confirmed by the decisions of various bank depositors and borrowers. For the former, the most important is security and high interest rates, and for the latter easy access to money at a low cost. Clients are not interested in a bank's country of origin, but is the bank safe and its offers attractive. The third factor is the creation of the European Monetary Union, which is an international financial structure considering the long-term interests of its members. Participation in the Monetary Union has forced its members in an unconditional way to internationalize their banking systems.

Liberalization of financial markets appeared for good after the period of crisis created by the oil shock as well as the collapse of the Bretton Woods<sup>9</sup> system that practically meant the end of the gold system. In the period preceding the crisis the risk of activity in financial institutions, mainly banks, was similar to the risk of conducting economic activity in non-financial branches. The period of the crisis exposed the weakness of precautionary regulations regarding the functioning of institutions creating money. The consequence of this situation was a significant liberalization in the regulations regarding the functioning of banks on financial markets. The concept of liberalization is often replaced by the concept of cross-border competition, defined as a process leading to the full exchange of domestic currency as well as the removal of barriers to the flow of capital between national markets.<sup>10</sup> The effects of this liberalization is above all:

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<sup>9</sup> P. Schaal, *Pieniądz i polityka pieniężna*, PWE, Warszawa 1996, pp. 93–109.

<sup>10</sup> *Bankowość na świecie i w Polsce, stan obecny i tendencje rozwojowe*, ed. L. Oręziak, B. Pieczak, Olympos, Warszawa 2000–2002, s. 20.

- the development of the market of derived instruments, whose purpose is security from risk and speculation with the purpose of producing profit from these instruments,
- a greater freedom in choosing the form of security, which banks have in connection with particular factors defining the risk of a given transaction,
- development of SWAP transactions.

*Deregulation* was a consequence of liberalizing regulations of national governments in connection with the functioning of financial markets. Regulations introduced after the Second World War depended on creating a government umbrella of protection covering banks and bank-like institutions. In relations to the goal of limiting the risk of disturbances in the state system of finance, the costs were too high. They meant limiting the effectiveness of the state financial system as a whole, and were comprised of the following:

- poorly competing financial institutions
- poor offer of tested services
- barriers in the flow of capital.

The main advantage derived from deregulation was the transfer of the cost of protecting the state financial system from the government to the institutions creating the system. As noted earlier, deregulation is a natural result of liberalization, the replacement of regulations with standards.

*Globalization* as a gradual process removing the barriers in the flow of capital began for good in the 80's of the 20<sup>th</sup> century. It depended on the quick integration of up till that time separate national financial markets into one international market. It's possible to argue that globalization was the result of deregulation, which led to an increasing scale of banking operations done abroad. The increase in the reduction of barriers to the flow of capital meant and still means that banks treat foreign markets as an expanded market between other banks, searching for attractive short-term investments. Technical advances in telecommunication means that the cost of the flow of capital has become lower than the cost of transporting goods. It is precisely these advantages created as a result of globalization which have created the demand for further deregulation. In the majority of developing countries the financial sector is as a rule less developed than the market of goods and services. The opening of a countries financial market forces an increase in its competitiveness, and, as a result, the market develops, increasing the quality of services offered by the institutions creating it.

*Consolidation* of banks is a process begun in the United States in the 30's of the 20<sup>th</sup> century. The Crisis which took place in the world economy to a great extent was reflected in the situation of banks. In order to strengthen the position of these institutions, they were allowed in the United States to create branches in other cities.<sup>11</sup> In support of these regulations in the following period of the post war crisis, banks exhibited a strong desire to create a renewed, strong economic structure. The banking system in European countries had a completely different experience in consolidation, which was a natural process of development affected by historical conditions. Consolidation, similar to globalization, in contemporary banking is one of the goals of strategic management, using the effects of scale.<sup>12</sup> In countries undergoing economic transformation, uniting banks, as a way of consolidation, is also a strategy for building an efficient banking system. Unfortunately, the most recent crisis exposed the negative side of this process. Institutions were created as a result that were considered "too big to fail." It gave managers the possibility of conducting legalized gambling based on exposing the institutions managed by them to excessive risk.

*Advances in information technology and telecommunications* are now one of the most essential factors stimulating the development of international financial markets. Rapid access to information is a basis for achieving extraordinary profit in every area of business, including the financial sector. The current technology of sending data means that it is difficult to overtake the competition, unless there is the appearance of the phenomenon of asymmetry of information.<sup>13</sup> In addition, financial institutions have become more susceptible to factors from afar, in the sense of geography. Depending on the degree of economic connections with a given market that is the source of crisis, financial institutions are affected in a short period by various types of risk. The effect of a shrinking market forces these institutions to search for other strategic activities.

Electronic money was also a challenge for the financial markets. Defined as having the value of money encoded on an earlier paid magnetic card that has the

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<sup>11</sup> In 1933 the Banking Act was passed which determined the principles for opening the branches of city banks and also the creation of interstate structures. *Bankowość na świecie i w Polsce – stan obecny i tendencje rozwojowe*, ed. L. Oręziak, Olympus, Warszawa 2001, p. 46.

<sup>12</sup> J. Solarz, *Zarządzanie strategiczne w bankach*, Poltext, Warszawa 1997, pp. 169–179.

<sup>13</sup> Asymmetry information depends on one side in an economic relationship possessing more complete information than the other side.

value of cash.<sup>14</sup> The appearance of this money in the 70's became the basis for the development of electronic banking. In order for the development of electronic banking to be possible, besides the equipping of banking institutions with the appropriate technical infrastructure, it is necessary to fulfill a certain condition of creating the legal basis for the acceptance by the sides concluding the contract for the transfer of information as well as cross-border services. Regulations introduced in Polish banking law regarding the acceptance of electronic signature allows banks to conduct moneyless transactions over the telephone and internet.<sup>15</sup>

*Changes in the demand for financial services* are a result of the changes which have taken place on the financial markets as a result of the earlier noted factors. It's important to differ financial services and the concept of banking services which they include. And while the broadly defined demand for financial services has decidedly grown, in the case of banking services the growth is significantly smaller. This is surely connected with the competition for banks presented by shopping markets and insurance agencies.<sup>16</sup> Observing the contemporary financial services market, the increasing activity of banks in creating a broad assortment of products is noticeable. It's possible to predict that in the future the standard banking institution will be a universal bank. This type of banking institution will be formed as a result of consolidation, in regard to this type of capital – The goal is the achievement of the benefits of scale, in regard to this type of organization – The goal is the creation of a consortium with a wide field of activity.

### 3. The Effectiveness of Financial Markets

It's possible to recognize a financial market as effective when there is an immediate and objective evaluation of information flow and the reflection of this in the price of financial instruments. Effectiveness is also comprised of the following elements:

- the immediate evaluation of disclosed information,

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<sup>14</sup> L. Oręziak, *Rynek finansowy Unii Europejskiej*, Biblioteka Bankowca, Warszawa 1999, pp. 112–115.

<sup>15</sup> This article appeared in the Act Prawo bankowe, August 1997 and also in the Act, O zmianie ustawy..., 23 August 2001. Published in 23 August 2001, DzU 6.10.2001.

<sup>16</sup> J. Casals, *Strategie konkurencyjne w europejskiej bankowości*, Wydawnictwo Naukowe PWN, Warszawa 1997, pp. 245–246.



- a lack in the correlation in the change in size and direction of price in different periods,
- over an extended period the impossibility of achieving average profit as well as institutional or individual investors achieving similar results.<sup>17</sup>

The above definition is one of many which it is possible to find in academic literature. However, almost all of them are related to the allocation of goods in the economy, the result of which is that they are used in the best possible way.<sup>18</sup> In the economy the effective allocation of stock is often identified with the low price of the product or service. In the case of financial institutions, and in particular banks, low costs are not indicative of their effectiveness. It would have to mean the neglect of an essential aspect of financial markets – their stability. The stability of the financial system is treated in every country as a public good which each participant in the economy depends on.<sup>19</sup> This means the necessity of creating and maintaining on the market those institutions and legal regulations, whose goal is to support the stability of the financial system, and consequently generate certain costs. There are also created non-commercial institutions, among which are the central banks, institutions of financial supervision or the system guaranteeing deposits.

The lack of a single definition of effectiveness of the financial market means that its necessary to examine various types. Its possible to speak of effectiveness in the following sense:

- allocation,
- transactional,
- informational.

In the sense of allocation, a market is effective when as a place for seeking capital it assures the flow of necessary funds to subjects that possess the best investment possibilities. In effect it leads to the creation of the highest rate of turnover of investments in the economy.

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<sup>17</sup> T. Berent, *Teoria rynków efektywnych – wyniki badań empirycznych*, „Bank i Kredyt” 1993, No. 8–9, pp. 13–14.

<sup>18</sup> J. Stelmach, B. Brożek, W. Załuski, *Dziesięć wykładów z ekonomii prawa*, Wolters Kluwer Polska, Warszawa 2007, pp. 26–29.

<sup>19</sup> O. Szczepańska, P. Sotomska-Krzysztofik, M. Pawliszyn, A. Pawlikowski, *Instytucjonalne uwarunkowania stabilności finansowej na przykładzie wybranych krajów*, „Materiały i Studia” 2004, No. 173, p. 5.

In the sense of transactional effectiveness, the finance market creates a situation where there are no barriers or delays in realizing transactions and at the lowest cost.

Informational effectiveness of the financial market means, on the other hand, that the price of financial instruments quoted on the market immediately reflect all available information about those instruments.<sup>20</sup>

In determining the effectiveness of particular institutions, quantitative methods are generally used. The most basic are ROA (return on assets) and ROE (return on equity).

$$1. ROA = \frac{\textit{operation profit}}{\textit{total assets}} \times 100\%.$$

$$2. ROE = \frac{\textit{net profit}}{\textit{shareholder's equity}} \times 100\%.$$

Credit Institutions use the following indicators, e.g. OC (overhead costs) or NIM (net interest margin).

$$3. OC = \frac{\textit{cost of operations}}{\textit{results of banking activity correlated with the results of the remaining income and operational costs}}.$$

$$4. NIM = \frac{\textit{net interest}}{\textit{total assets}}.$$

These indicators are not commonly used in assessing the effectiveness of non-banking institutions. An additional indicator results from operational costs regarding a narrow definition of effectiveness as the reduction of costs.<sup>21</sup>

Although it is relatively easy to measure the effectiveness of particular institutions on the financial market, the measurement of effectiveness of the market as a whole has real limits. It is not possible to measure the effectiveness of a market by adding the value of the appropriate indicators of particular institutions of that market. The analysis of the effectiveness of a financial market in opposition to the analysis of a financial institution has a qualitative character.

<sup>20</sup> U. Ziarko-Siwiek, *Ocena efektywności informacyjnej wybranych segmentów rynku finansowego w Polsce*, „Materiały i Studia” 2004, No. 178, pp. 16–17.

<sup>21</sup> P. Gołędzinowski, *Wpływ regulacji systemu bankowego na jego efektywność*, „Materiały i Studia” 2009, No. 235, p. 17.

## **Conclusions**

Financial markets are perhaps the most dynamically developing sector of the economy over the past 50 years in the world. Advances in technology and telecommunications along with other factors means that capital has without doubt become the most mobile factor of production in the free market economy. Individual investors increasingly have a harder time “understanding” the market, where along with financial instruments are also institutions and procedures which they increasingly entrust with their savings. Players on the financial markets have changed their investment strategy. Information has become a good in and of itself and speculation has come to increasingly prevail among investment strategies.

The processes have both their good and bad sides. The development of financial markets are definitely connected with the possibilities of locating assets by both institutional and individual investors, although for the latter there are real economic barriers connected with the cost of transactions in entering the world market. For subjects in the real sphere the development of financial markets means above all a wider range of financial instruments and the possibility of practical refinancing in the whole world.

For financial institutions this means, however, an increase in risk. The internationalization of financial markets means that they are mainly created by transnational financial corporations. The area in which they find sources of risk are as immense as the areas of activities of every branch of a given corporation. Credit institutions are particularly sensitive. Credit risk has a negative character. Regardless of the business cycle, the results of the activities of credit banks may deteriorate. In these conditions the pursuit of increased effectiveness of both institutions and the financial markets may mean a growth in risk and the loss of market stability. Proof of this might be the last financial crisis at the beginning of 2007 with the collapse of speculative banks on the mortgage credit market in the United States.

## **References**

- Bankowość na świecie i w Polsce – stan obecny i tendencje rozwojowe*, ed. L. Oręziak  
Olympus, Warszawa 2001.
- Bankowość na świecie i w Polsce, stan obecny i tendencje rozwojowe*, ed. L. Oręziak,  
B. Pietrzak, Olympus, Warszawa 2000–2002.

- Berent T., *Teoria rynków efektywnych – wyniki badań empirycznych*, „Bank i Kredyt” 1993, No. 8–9.
- Casals J., *Strategie konkurencyjne w europejskiej bankowości*, Wydawnictwo Naukowe PWN, Warszawa 1997.
- Fama E.F., *Efficient Capital Markets: A Review of Empirical Work*, „Journal of Finance” 1997, No. 25 (2).
- Gołędzinowski P., *Wpływ regulacji systemu bankowego na jego efektywność*, „Materiały i Studia” 2009, No. 235.
- Grossman S.J., Stiglitz J.E., *On the Impossibility of Informationally Efficient Markets*, „American Economic Review” 1980, No. 70.
- Krahnhen J.P., Schmidt R.H., *Development Finance as Institution Building. A New Approach to Poverty – Oriented Banking*, Westview Press, Boulder–San Francisco–Oxford 1994.
- Matthews K., Thompson J., *Ekonomika bankowości*, PWE, Warszawa 2007.
- North D.C., *Institutions, Institutional Change and Economic Performance*, New York 1990.
- Oręziak L., *Rynek finansowy Unii Europejskiej*, Biblioteka Bankowca, Warszawa 1999.
- Prischke J.D., *Finance at the Frontier. Debt Capacity and the Role of Credit in the Private Economy*, The World Bank, Washington 1991.
- Roubini N., Sala-i-Martin X., *Financial Represion and Economic Growth*, „Journal of Development Economics” 1992, No. 39.
- Schaal P., *Pieniądz i polityka pieniężna*, PWE, Warszawa 1996.
- Solarz J., *Zarządzanie strategiczne w bankach*, Poltext, Warszawa 1997.
- Stelmach J., Brożek B., Załuski W., *Dziesięć wykładów z ekonomii prawa*, Wolters Kluwer Polska, Warszawa 2007.
- Szczepańska O., Sotomska-Krzysztofik P., Pawliszyn M., Pawlikowski A., *Instytucjonalne uwarunkowania stabilności finansowej na przykładzie wybranych krajów*, „Materiały i Studia” 2004, No. 173.
- Ziarko-Siwiek U., *Ocena efektywności informacyjnej wybranych segmentów rynku finansowego w Polsce*, „Materiały i Studia” 2004, No. 178.
- Żyrzyński J., *System finansowy a gospodarka realna: między służebnością a wyobcowaniem*, „Ekonomista” 2006, No. 4.

**ROZWÓJ A EFEKTYWNOŚĆ RYNKÓW FINANSOWYCH****Streszczenie**

Istnienie rozwiniętego rynku finansowego jest niezbędne dla sprawnego funkcjonowania każdej rozwiniętej gospodarki. Poszczególne fazy rozwoju kapitalizmu wykształciły właściwe sobie instytucje i instrumenty finansowe. Określenie „właściwe” rozumiane jest jako odpowiedź rynku finansowego na aktualne zmiany relacji cenowych w gospodarce, które z kolei są motorem tworzenia coraz bardziej efektywnych instytucji obsługujących podmioty gospodarcze. Swobodne oddziaływanie czynników determinujących rozwój rynków finansowych w czasie przechodzenia od kolejnych form kapitalizmu do aktualnego stadium rozwoju gospodarczego, doprowadziło do ukształtowania się „najlepszego” systemu bankowego jako głównego filaru rynku finansowego w gospodarkach poszczególnych krajów. Określenie „najlepszy” oznacza, że dany system bankowy jest w stanie zaspokoić zapotrzebowanie gospodarki na wszystkie oczekiwane przez niego usługi finansowe, tym samym stwarzając właściwe warunki funkcjonowania sfery realnej gospodarki.

Ostatnie wydarzenia jakie miały miejsce na światowych rynkach finansowych składają jednak do krytycznego spojrzenia na ich funkcjonowanie. Nawracające zjawisko występowania i rozprzestrzeniania się kryzysów finansowych powoduje, że uzasadnione wydaje się zastanowienie nad czynnikami determinującymi ich rozwój. Wraz z rozwojem rynków finansowych zmieniają się również kryteria oceny ich efektywności. Celem niniejszego artykułu jest przybliżenie czytelnikowi właśnie tych zagadnień.

*Tłumaczenie Grażyna Olszewska*

