

# Selected Regulations of Financial Markets after the Great Recession — a Review of Tax Changes

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## Abstract

*The financial market plays an essential function in the modern market economy. This role determines the importance that it has for the proper functioning of economic growth achieved by individual countries. In particular, this relationship was revealed during the Great Recession. In order to limit the negative effects that the financial market abuses has had on the real economy, legislative bodies of many countries in the world have decided to strengthen their supervision and regulation. The aim of the article is to verify the hypothesis stated by H. Minsky about the process of the creation of “thwarting systems” after financial crises. To achieve this, analysis of a review of regulations regarding financial market taxation introduced in various countries has been conducted. The results confirm H. Minsky’s hypothesis. This article presents also the theoretical aspect of the regulation of financial markets and discusses the issue of using tax as a tool for shaping the behavior of entities functioning on that market.*

**Keywords:** financial crisis, financial market regulations, taxation of financial market

## Introduction

Striving for economic growth is obviously one of the most important goals of economic policy conducted by almost all countries in the world. The importance of this goal increases in the case of developing countries for which achieving this goal helps to get citizens out of poverty (Gill et al. 2007, 9–20). As the Great Financial Crisis presented, obtaining stable economic growth is impossible with the lack of stability of the financial sector. That dependence in recent decades was strengthened due to the dynamic development of the financial sector which proceeds globally. Many scientists began to pay attention to the fact that the financial sector begins to take the lead role on the real economy — this phenomenon has been called financialization of the economy (Dembinski 2011). In part, this happened because of the progressive process of liberalization of these markets since the 1970s.<sup>1</sup>

As a result of the latest financial crisis, the effects of which on the real economy were on a scale not seen since the end of World War II, the approach of the legislative and regulatory authorities to the problem of the stability of the financial markets has changed radically. As a result, numerous regulatory proposals have been presented, and a number of legal acts sanctioning the functioning of financial sector institutions have been created. Among them one can point to such legislative solutions as the Dodd-Frank Act in the USA, the CRD IV Regulation of Parliament and the Council of the European Union, which regulates the functioning of a short sale in the EU,<sup>2</sup> increase of guarantees for deposits, regulation of High-Frequency Trading (including in the Federal Republic of Germany), taxes on financial transactions (France and Italy), bank taxes (in the UK) and many others. The purpose of this article is to present the issue of regulation of financial markets and selected post-crisis instruments implemented in order to reduce the size of future crises.

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1. The analysis of the liberation process was conducted by, among others, Kaminsky and Schmukler (2003), and Abiad, Detragiache, and Tressel (2010).

2. See: Regulation (EU) No 236/2012 of the European Parliament and of the Council of 14 March 2012 on short selling and certain aspects of credit default swaps Text with EEA relevance. OJ L 86, 24.3.2012, pp. 1–24.

## 1 The problem of regulation of financial markets

Discussion regarding the impact of financial markets on economic growth has existed for more than 100 years. One of the first economists who drew attention to the relationship existing between the financial market and economic growth were Bagehot (1873, Chapter X) and Schumpeter (Schumpeter 1934, 84–100). According to the first of these, the financial market has a positive effect on technological innovation. Lucas (1988), on the other hand, expressed a different view. In his opinion “the importance of the financial market is definitely overestimated.” In addition, Chandavarkar (1992) pointed out that none of the pioneers of the science of economics has ever indicated finance as a decision factor of economic growth. Referring to the theoretical thoughts of Bagehot and Schumpeter, two more economists, McKinnon (1973, 89–116) and Shaw (1973, 112–114), hypothesized that the liberalization of financial markets should lead to higher economic growth. This theoretical basis stood at the root of the liberalization of financial markets.

The last decades in the history of the global economy were accompanied by the increase in the importance and the liberalization of the regulatory and supervisory standards in financial markets. This was confirmed in the analysis conducted by Kaminsky and Schmukler (Kaminsky and Schmukler 2003). According to the results of this analysis, since the early 1970s, a gradual reduction of the regulatory framework for the functioning of financial markets has occurred. This trend took place in the case of both developed and developing countries, although the authors of the mentioned analysis point out that liberalization processes in the 1980s were temporarily suspended in Latin America.

This growing importance of financial markets is related to, among other things, the collapse of the Bretton Woods system in the 1970s, globalization, and the rapid development of information technology. This situation in which the financial sector gains more importance in relation to the real economy has stimulated discussion in the science of finance about the need for or the lack of regulation and supervision of this dynamically developing sector. In the literature there are two extreme positions regarding the problem.

The impact of regulations on the proper functioning of the financial markets is also related to the efficient market hypothesis (EMH). The EMH concept was created by Fama in the 1960s (Fama et al. 1969). According to this concept, financial markets, which function with “no strings attached,” provide efficient allocation of resources. This directly results from the assumption included in the hypothesis about the perfection and competitiveness of these markets. From the EMH it can be concluded that these markets ensure the achievement of optimum Pareto—i.e., a situation in which it is impossible to improve the status of one entity without worsening the situation of another entity. Conditions that achieve optimum Pareto have been described by Arrow and Debreu (1954). They are the following:

- entities having access to full information
- the existence of only small entities that can not affect the level of prices
- the absence of external effects<sup>3</sup>

Although the modern financial market, in comparison with other markets, seems to be closer to the theoretical ideals, still it does not meet the above-mentioned conditions. The basic market imperfections include, among others, information asymmetry and the presence of external effects.

The occurrence of information asymmetry on the financial markets is highlighted by Spencer (Spencer 2000, 6–10). According to him, financial assets and financial services are examples of goods that according to the classification of products which is made on the basis of information theory, should be classified as so-called credence items. This class of products, in contrary to the other two separate classes (i.e., search goods<sup>4</sup> and experience goods<sup>5</sup>), is characterized by the fact that quality of these products can never be discovered (even ex post). In the case of this type of

3. External effects exist “if the function of benefits or profits of one market participant contains, among others, one variable which depends not on it but on others” (Horodecka 2008, 66).

4. Search goods—the quality of this class of products is known ex-ante (i.e., before buying)

5. Experience goods—the quality of the product becomes obvious after purchasing the product (Akerlof 1970, 488–500).

products there is a significant difference between information held by entities making transactions. Hence, the term *credence* occurred, which means that in case of these products the customer must believe in the judgments and competences of professionals providing goods or services.

Moreover, economists such as Ocampo pointed out that on the financial market there are entities which own better access to information (the information asymmetry phenomenon exists) and the abilities to process them (e.g., investment banks) (Ocampo 2002, 10). This is due to costs, as well as the difficulties of the mentioned processes. As a consequence, it is rational for other entities to “imitate” market decisions of “major players,” which directly results in periods of “irrational optimism or pessimism.”<sup>6</sup>

W. Wagner on the other hand, draws attention to the external effects which occur on the financial market (Wagner 2010, 3). He defines them as effects that are caused by the financial institution, and the costs of their occurrence are transferred to other financial institutions or entities outside the financial sector.<sup>7</sup> If the externalization of costs is limited to the financial sector they are known as *microsystems* results, and when they are beyond this sector (reaching the real economy) they are known as *macrosystems* results (Borio 2013). In addition, according to Wagner, in the case of financial markets one can also mention the so-called *systemic external effects* (Wagner 2010, 2–3). According to Wagner “a systemic externality is then an externality whose impact does not only depend on the institution which poses it but crucially also depends on the state of the financial system at the time the externality is posed.”

The presence of external effects in the case of the financial sector has been widely presented, among others, by authors such as Acharya and Yorulmazer (2008) and Allen and Gale (2000). Among the channels of transmission of external effects, the “agency problem” and the restrictions in granting loans are pointed out. Still a true picture of the negative external effects connected with the functioning of an imperfect financial market has been brought out by the Great Financial Crisis. Many economists as the main cause indicate excessive risk taken by financial institutions (e.g., Brunnermeier 2009; Diamond and Rajan 2009). As indicated in the report of the Bank of England in 2009, it is associated with the so-called *network risk*, that is, with a situation in which financial institutions do not consider in sufficient extent the impact of other financial institutions on their financial situation. This leads to a situation in which part of the risk in the financial system remains “unnoticed” and “unmanaged.”

The notion of negative external effects is related to the “contagion” problem. As noted by Dodd, “contagion is the term established in the wake of the East Asian financial crisis of 1997 . . . to describe the tendency of a financial crisis in one country to adversely affect the financial markets in other, and sometimes seemingly unrelated, economies” (2008, 310). As noted by the mentioned author, the term “contagion” is a substitute for the term “tequila effect” relating to the problem of the spread of the Mexican crisis of 1994. In the context of the problem of financial market regulation, in the definition of contagion presented by Dodd especially important seems to be the phrase “and sometimes seemingly unrelated.” In order to understand it clearly it is important to recall the main channels of contagion of the crisis mentioned in the literature. Authors such as Dornbusch, Park, and Claessens (2000, 179–182) point to the three such channels, namely:

- trade connections between countries
- financial connections
- the existence of herding effects and panic among investors

Thus, the existence of such channels as the financial connections, and the occurrence of herding effects should be taken into account in the construction of the institutional framework governing the functioning of the financial sector.

6. The phrase “irrational exuberance” is formulated by the long-term former head of the US Federal Reserve Bank Alan Greenspan. See: *The Challenge of Central Banking in a Democratic Society*. Remarks by Chairman Alan Greenspan at the Annual Dinner and Francis Boyer Lecture of the American Enterprise Institute for Public Policy Research, Washington, D.C. on December 5, 1996, [at:] <http://www.federalreserve.gov/boarddocs/speeches/19961205.htm>.

7. It should be noted, however, that some economists say that the financial sector can also be a source of positive externalities (Levine 2004, 6–7).

As a result of the Great Financial Crisis, in the literature relating to the theoretical foundations of regulation of financial markets, the concept by Minsky experienced a renaissance (Ferri and Minsky 1991, 2). In his approach to explain the emergence of financial crises, the author distinguishes two types of cycles. The first one is the primary cycle which occurs in every single business cycle. The second type of cycle is a super cycle, which includes basic cycles. What's more, Minsky distinguishes in the economy (as he described it) "thwarting systems"—i.e., the institutions of market systems and their intervention activity, the occurrence of which has to limit the scale of further crises. Among the "thwarting systems" Minsky points out, among others, the regulation of financial markets. Unfortunately, these institutions have eroded in successive basic cycles.<sup>8</sup> This situation leads to the occurrence (within a super cycle) of the financial crisis on the very broad scale against which the economy is not able to protect. In this way, Minsky's theory explains the occurrence and scale of the Great Financial Crisis. In addition, Minsky noted that only such a crisis may result in changes in the system of financial security of the economy. In this way, Minsky's theory explains not only the occurrence of the recent financial crisis, but also explains the wave of changes in the systems which regulate the functioning of the financial sector after the crisis.

## 2 Selected post-crisis regulations of financial markets — tax issues

Considering the regulatory environment after the crisis it is scarcely possible to begin with the changes that have occurred in the tax systems of a large group of countries. Legislative authorities of these countries have decided to introduce an amendment to the existing tax arrangements or the introduction of brand new (sort of innovative) solutions. The aims that guided the state authorities were the following (in the vast majority of countries):

- ensuring that the financial sector will bring an appropriately high financial contribution to the budgetary revenues and the amount of this contribution will result from the impact of the sector on the level of risk existing in the financial market and the entire economy
- increasing the stability of the sector by the increase of the costs of engaging banks (and wider financial institutions) in risky models of financing its operations

The actions of regulatory authorities can therefore be described as an attempt to reduce the negative external effects resulting from the activity of the financial sector. This practical task and attempt to solve the problem of negative external effects by using the tax is justified in the economic theory. The author of the theoretical concept of using tax as a tool for decreasing negative external effects is Pigou (1920, Chapter 2). Hence, this tax is called the Pigovian tax. In his conception, Pigou assumed that as a result of occurrence of negative external effects the mechanism for proper allocation of resources in the economy is disturbed. This is due to the fact that the lack of recognition of costs resulting from external effects in the price of given goods or services "artificially" understates it, and thus increases the demand for it. In this situation, it becomes relatively cheaper as compared to goods in the case of which such effects do not occur. Therefore it causes the specific consequences for the entire economy. According to the concept of Pigou, the task of the state in this case is internalisation of earlier externalized costs. This means the imposition of a sufficiently high public levy on goods in the case when there are "artificially" low prices. This action is intended to prevent misallocation of scarce resources.

In the concept of the Pigovian tax an extremely important issue is the proper calibration of the amount of public levy imposed on a particular good. The fiscal load should not exceed the amount of externalized costs (resulting from negative external effects). Otherwise, there will be unjustified disruption of market functioning.

The theoretical concept of Pigou did not refer directly to the activities of the financial sector. The first author who advocated the introduction of levies charged to operations of the financial sector was Keynes (1936, 160). He postulated in the 1930s that "the introduction of a substantial government transfer tax on all transactions might prove the most serviceable reform available, with a view to mitigating the predominance of speculation over enterprise in the United States."

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8. An example is here the abolition of the Glass-Steagall Act of 1933 in 1999.

The one who continued the concept of Keynes was Tobin, who is the author of the most popular concept of a tax on financial transactions (i.e., the Tobin tax). The specific characteristics of this tax was cut down to transactions on the foreign exchange market (Tobin 1978). In his later works Tobin drew attention to the possibility of using tax also in the case of transactions in the domestic market of financial instruments (Tobin 1996, 654). According to Tobin, this “sand in the wheels” of the market, has led to the transfer of investors’ attention towards the long-term foundations by reducing short-termism.<sup>9</sup>

In the IMF study “Taxing finance” the following three types of taxes associated with the financial market are indicated:

- a financial stability contribution (FSC)—a tax paid by financial institutions depending on the size and structure of the balance held
- a financial transaction tax (FTT)—the tax actually borne on the value of financial transactions
- a financial activities tax (FAT)—applied to the sum of an institution’s profits and remunerations

In addition, in the mentioned publication the authors suggest the possibility of reforming the existing tax structures on corporate income. As part of legal solutions functioning in most countries, interest on borrowed capital is deductible income while dividends paid of equity are not. Such a situation creates a tendency for companies to finance through debt, which can lead to excessive risk. Another possible change in the taxation of financial markets are reforms of capital gains tax.

Considering the changes in the tax systems of individual countries, it is worth paying attention to a number of those who have decided to introduce a tribute type FSC. The first country to take such a step, which introduced this tribute, was Sweden in 2009. Subsequently, its activities have been replicated in a large number of European countries, including in Austria, Belgium, Cyprus, Finland, France, the Netherlands, Latvia, Germany, Poland, Portugal, Romania, Slovakia, Slovenia, Hungary and the United Kingdom.

FSC-type tributes in the indicated countries differ in several respects. Firstly, in some countries, income from FSC provides direct income to the state budget (e.g., in the United Kingdom, France, and the Netherlands). In other countries it is a source of income for the specially created funds whose aim is a possible absorbing of the cost of future crises. Still other countries have two types of FSC, that is, those that constitute income of the state budget, and those that finance the earmarked funds (e.g., Belgium). Furthermore, Latvia adopted a rule that initially the FSC would be a source of budget revenue, then revenue from the FSC will finance the newly established stabilization fund.<sup>10</sup>

In addition, the FSC functioning in different countries differ on issues such as:

- temporariness or permanency of tax (a tax in Finland will have a temporary character)
- the application of a specific rate for balance sheet items resulting from the use of derivative instruments (such special rates exist — e.g., in Germany)
- method of determining the tax rate (in the UK the rate is determined directly by the legislative authority, while in Poland the law only indicates the maximum levels of a prudential fee rate, and its size within prescribed limits is defined by the Bank Guarantee Fund)
- possibility of classifying the FSC as a deductible expense in CIT
- taking into account the timeliness (if the commitment has a short or long-term character) of balance sheet items in shaping tax rates (e.g., the Netherlands liabilities are subject to a lower tax rate)
- mainstreaming lending to the real sector of the economy when calculating the size of the tax burden (FSC model allowing reduction of the amount of tax liability due to lending to non-financial companies functioned in Belgium until 2014 as part of the Annual Tax on Credit Institutions)

9. An interesting modification of the Tobin tax was introduced by Spahn, who proposed two tax rates depending on the scale of speculation on the market (Spahn 1995, 30–36).

10. In the legislative act establishing the bank levy it is indicated that until 31 January 2013 the Latvian authorities should look into the possibility of creating a special fund, which would affect funds from the levy instead of being directly state budget income.

Another kind of tax applied as a result of the financial crisis is the FTT (financial transaction tax), which is a tax levied on financial transactions. When analyzing post-crisis changes regarding the FTT it should be noted that this tax before the crisis occurred in the case of the tax system of a large group of countries, although it should be noted that this tax may occur in the form in which it applies on an organized market, or if it concerns only transactions outside the market. Historically, the FTT for transactions on the organized market was in force in countries such as Germany (the so-called *Börsenumsatzsteuer* expired in 1991), Poland, Greece, Finland, Austria, Sweden, and China. However, in a moment of crisis, this tax was present in the tax systems of such countries as the United Kingdom, Ireland and Belgium. In addition, some countries have used the tax on transactions outside the organized market before the crisis. This tax was used by the following countries: United Kingdom (stamp duty), Poland (tax on civil law transactions), Finland (transfer tax) and Austria (*Kapitalverkehrsteuergesetz*).

The financial crisis has changed the approach of regulatory authorities to the concept of the FTT which apparently was reflected in the proposal of the European Commission, according to which in the EU supranational tax on financial transactions could be introduced.<sup>11</sup> Work is still underway on this project. It is already known that the group of countries which have decided to introduce such a tribute has shrunk to just 11 countries. Proposed by the European Commission tax rates are 0,1% of the transaction value for the stock market and bonds and 0,01% for the derivatives market.<sup>12</sup>

The ongoing for several years yet fruitless discussions on a Europe-wide tax resulted in individual decisions concerning the implementation of the FTT in some countries. France took such a step under President Holland in August 2012. The tax introduced by France burdens transactions on financial instruments such as shares and CDs on debts of other countries. In addition, in the case of the stock market the tax is valid only for transactions which are traded shares of companies having their headquarters in France, whose capitalization at the beginning of the fiscal year exceeded 1 billion euros. All transactions on these securities are taxable. In the context of the French FTT it is also worth mentioning the significant problem associated with the use of this type of tax in practice. This problem was also highlighted in the analysis of the IMF, and so the tax “should be levied as widely as possible” (Gottlieb, Impavido, and Ivanova 2012, 45–46). Due to the fact that the French FTT includes a plurality of exemptions, and in particular allows market makers to avoid the tax, it has become easy to avoid. The scale of this phenomenon is indicated by the ratio of the amounts planned and carried out under the FTT budget revenues, which reached 40% in the first year of functioning.

Another country that has decided to introduce the FTT was Italy. The Italian tax covered transactions involving the transfer of ownership:

- stocks of companies having their head offices in Italy and high-frequency trading of these shares
- shares in institutions of collective investment
- securities representing the above mentioned financial instruments irrespective of the place of issue

Subsequently, on September 2, 2013 the scope of taxable FTT transactions has been extended to derivatives on securities included in the first phase of implementation. What is extremely important is that all transactions on the indicated (in 2 phases) financial instruments irrespective of the place of the transaction and the place of registration of the headquarters of the entities participating in the indicated transaction have been subject to the FTT.

In addition, the Italian version of the FTT is interesting because of its use in the differentiation of tax rates considering whether the taxable transaction took place on the regulated market or MTF, or on the OTC market. In the first case, the tax rate is 0,1% of transaction value. In contrast, OTC transactions are taxed at 0,2% of transaction value. In 2013, these rates were once increased and amounted respectively to 0,12% and 0,22%.

11. See: Proposal for a Council Directive of 28 September 2011 on a common system of financial transaction tax and amending Directive 2008/7/EC [COM(2011) 594 final – Not published in the Official Journal].

12. [In the journal European practice of number notation is followed — for example, 36 333,33 (European style) = 36 333.33 (Canadian style) = 36,333.33 (US and British style). — Ed.]

The next country that introduced the FTT was Hungary (in 2012). In the case of Hungary, the tax adopted in 2012 does not include securities trading, but only other transactions of a financial nature. Tax from securities trading is to be introduced on the first day of the year following the year during which the implementation of a common FTT at European level will take place.<sup>13</sup>

The FTT introduced in Brazil in 2009 differs significantly compared to financial transaction taxes introduced in European countries after the crisis. The Brazilian tribute differs from other taxes mainly of the aim of its establishment. In 2009 Brazil imposed 2 per cent tax on foreign portfolio investments (Wheatley and Beattie 2009). The aim was mainly to limit the appreciation of the Brazilian real, which, among other things, as a result of unconventional actions of the Federal Reserve of the USA, has gained, since the beginning of the year, already about 36% against the dollar. That's when Montega, Brazil's finance minister, announced the outbreak of the global currency war.

In addition to taxes such as the FTT and the FSC, in the state tax instruments there have appeared also tools regulating the size of bonuses paid in the financial sector. An example of such a levy was applicable in the United Kingdom in the period from December 9, 2009 to April 5, 2010 as the Bank Payroll Tax. The aim of this tax was to reduce the scale of these bonuses. Bonuses amounting to GBP 25 000 per employee were exempt from this tax. Exceeding this threshold meant that the surplus will be taxed at 50%. The state budget due to the Bank Payroll Tax was enriched in 2010 by approximately 3,5 billion GBP (0,23% of the then GDP). Another country that by using the tax tried to limit the practice of excessive bonuses is the Netherlands. In this case, the bonus restriction mechanism was integrated into the bank tax. If the president of the taxpayer receives variable remuneration (depending on the achievement of certain results or the occurrence of defined events) representing more than 100% (for the years 2012 and 2013) or 25% (in later years) of his fixed salary, the basic tax rate is multiplied by a value of 1,1.

## Conclusions

The financial crisis of recent years, also known as the Great Recession, resulted in violent suppression of economic processes occurring in the real economy. Its result was also a burden on taxpayers for expenditures to rescue financial institutions. According to the report of the European Commission, the total commitments made by EU Member States to support the financial sector are estimated at around 4,6 trillion euros.<sup>14</sup> Such a situation, according to the hypothesis by Minsky, resulted in the rebirth of pressure on the creation of an appropriate regulatory framework to organize the functioning of financial markets. Actions of states are intended to create "thwarting systems" (i.e., the market system institutions the presence of which is to limit the scale of further crises). The analysis conducted here, in the form of a review, confirms Minsky's hypothesis. An important tool in market regulation became tax solutions. The article presents selected taxes that on the one hand had to limit the adverse effects of institutions operating on the financial market, and on the other hand ensured their adequate contribution to the costs of the crisis. As a result, in the tax systems of a large group of countries there appeared bank taxes, taxes on financial transactions and taxes which respond to prevailing bonus systems in financial institutions. Still there is a debate on an EU-wide financial transaction tax. The planned date of its introduction is the beginning of 2016, while it should be mentioned that its implementation has repeatedly been postponed.

Undoubtedly, the issue of proper regulation of financial markets is extremely difficult to achieve in practice. It results from the complex structure of modern financial markets, mobility of capital flows, the importance of these markets for the proper functioning of the real economy and their continuous evolution. This places high demands on regulatory authorities, the fulfillment of which may determine further stable economic growth of individual countries.

13. See: Hungarian Financial Transaction Tax. 4 December 2013, presentation prepared by Hajnalka Nikolich-Bor, [a:] [http://www.citibank.com/transactionservices/home/about\\_us/online\\_academy/docs/hungary\\_fin\\_update.pdf](http://www.citibank.com/transactionservices/home/about_us/online_academy/docs/hungary_fin_update.pdf).

14. See: Commission Staff Working Paper. Executive Summary of the Impact Assessment Accompanying the Document Proposal for a Regulation of the European Parliament and the Council on Prudential Requirements for Credit Institutions and Investment Firms COM(2011) 452 final, SEC(2011) 949 final. Brussels, 20.7.2011, SEC(2011) 950 final, page 1. Not all of them were used by financial institutions.

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