# Financial sustainability of a globalised economy in the context of the mechanism of the spread of crisis

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**Abstract**

*Financial sustainability of an open economy is a very current and complex issue. In today's global conditions the flow of streams of capital, people, labour, goods, materials, etc. are controlled in a very small degree by countries and its direction depends on exogenous factors. Such conditions allow the free transfer of economic processes within the globalised economy. These processes can generate desirable, positive effects or undesirable, negative effects to the country's economy. Under these circumstances it is important for the internal economy, and the financial system, to possess the ability to resist the destabilizing processes, especially during their particular intensity during a crisis. Given the fact that the initial crisis processes spread through financial markets, and primarily affect the financial system, it's resistance to destabilisation is the most important security buffer for the real economy to maintain growth. Therefore, the sustainability of the financial system in an open economy during a crisis is a crucial factor for the stability of the whole economy. This article discusses the role of the financial system of an economy in absorption of the external crisis processes. Furthermore, in the article the author analyses the specific course of an economic crisis phenomenon in the global conditions. Correct identification of the development of the crisis is crucial for building the economy's resilience to the crisis effects.*

**Keywords:** crisis, crisis life cycle, financial sustainability, safety network, financial system, contagion of crisis, transmission of crisis

## Introduction

The financial system of an economy plays an essential role in providing the environment for economic growth. Its condition is especially important in open economies, where the inflow and outflow of capital, goods, resources etc. is very limited. In the context of financial sustainability, the time of crisis is the most challenging. Crisis as an economic phenomenon is very complex and multidimensional, however its progress allows the identification of characteristic stages from the perspective of the mechanism of spreading, dynamics and its effects.

The science of economics and the business practice are limited in effective forecasting of the future developments in the economy, especially when it comes to the extreme states: "*booms and*

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*busts"*. This weakness in predicting disrupts the decision-making processes that affect the taken positions against the future developments. As it is difficult to determine the moment of the beginning of a crisis in the future, the development of the phenomenon can be described in stages that are common for all the crises. This also indicates, that in general the dynamics of the crises uses analogous mechanisms of its development. The similarities allow preparatory tools that would help withstand the potential crisis processes.

This article discusses the role of the financial system of an economy in the absorption of the external crisis processes. Furthermore, in the article the author analyses the specific course of an economic crisis phenomenon in the global conditions. Correct identification of the development of the crisis is crucial for building the economy's resilience to the crisis effects.

The aim of the article is to define the role of the sustainability of the financial system in absorbing the external crisis processes. The paper is a result of the previous studies. The research was performed in the field of the economic theory in the area of business cycles and economic crisis. Furthermore, it was supplemented with a thorough analysis of the course of the recent world crisis 2007 − in respect to the fluctuation of economic indices and confronted with the study of the effectiveness of regulations.

The current conditions of open economies give opportunities, but also carry threats for operation of entities. Each crisis impulse may materialise risks in different spheres of the entire global economy, often not related to the initial source causally, functionally or geographically. The importance and significance of this matter were the motivation to start the research.

## 1. The dynamics of an economic crisis in the global economy

The global economy is a system of interconnected vessels, consisting of national economies. Under the conditions of this system any imbalances are moved throughout the whole arrangement. The impulses that affect the equilibrium create particular risks, that spread all through, and as phenomena are dynamic and spontaneous, therefore difficult to predict. Each impulse may indeed materialise risks in different spheres of the entire global economy, often not related to the initial source causally, functionally or geographically.

The concept of an economic crisis has been very widely discussed and analysed in the scientific literature. Table 1 presents an overview of the views represented by different theories regarding the causes of a crisis and the proposed anti-crisis policies.

**Table 1. An overview of selected views regarding economic crises in the context of the theory of business cycles.**

| School | Causes of the crisis | Anti-crisis policy |
|---|---|---|
| Mercantilism: T. Mun, D. Hume | The quantity of money affects changes of real product | Supporting foreign trade |
| Physiocrats: F. Quesnay | Regulation of trade by the state is an obstacle to economic growth | Laissez faire, as a policy leading especially to the development of agriculture |
| Clasics: A. Smith, D. Ricardo | State intervention | Free market |
| T. Malthus | Insufficient consumption | Increasing consumption by persons not producing (teachers, officials, landowners) |
| J. Mill | Oversupply, due to the limitation of credit as a result of pessimistic expectations of economic circles | Wait for prices adjust |
| K. Marks | Technological cycle, disproportionality crises, long-term decline in the rate of profit | Moving away from capitalism to socialism, then communism |
| Marginalists | Decreasing marginal productivity | Lower wages |
| M. Kalecki | Policy of balancing the budget under pressure from “industry leaders” during the boom | Policy of expansion of state spending |
| A. Marshall | Excessive credit expansion during the boom | Control of credit during the boom, insurance against the risk during the recession |
| J.M. Keynes | Insufficient aggregate demand (demand shock) | Stimulating aggregate demand through expansive monetary and fiscal policy, expenditure growth |
| Post-keynesians | Changes in investments | Adjusting the demand (incomes policy) |
| Monetarists | Excessive growth in money supply | Passive stabilization policy, development of monetary aggregates |
| Neo-classics | Unexpected, too restrictive monetary policy | Stable, credible monetary policy |
| School of the political business cycle | Nationwide elections | The introduction of a floating exchange rate |
| School of real business cycle | Supply shocks (mainly technological) through investments; slowdown of productivity growth | Lack of stabilization policy |
| New Keynesian school | Supply and demand shocks (mainly), recessions are intensified by the stiffness of prices and wages, and risk aversion | Stimulating demand through monetary policy, eliminating stiffness |
| Austrian school | State intervention to improve the situation by (excessive) credit expansion (“artificial prosperity”) | No intervention, leaving an economy itself, counteracting the crisis in the boom period |

Source: Authors concept based on Piech (2002, pp. 107-108).

The cyclical nature of economic activity is a phenomenon, which is very well identified, widely investigated and ultimately is inevitable (Knopp, 2014, pp. 5-42). The greater the amplitude of fluctuations of the dynamics of the economic activity, the more challenging it is for the business entities to maintain sustainability. Hence it is the duty of the state institutions to act anti-cyclically, reducing the amplitude of the cycle. Furthermore, it is crucial for the governors of the state to create regulations that would enable the resistance of the economy to the volatility of the dynamics of economic activities and processes. This is especially important for the resistance of an open economy subject to the influence of the crisis processes.

The mechanism of transmission of crisis shocks has more complex dynamics than the traditional course of the business cycle. The economic crisis can be compared with a break in a dam. Both phenomenon consist of individual phases that differ from each other in many respects i.e. by its destabilising potential, dynamics of the course and scope of the effects.

**Table 2. Reference of phenomena associated with disaster of a break the water dam and the development of the economic crisis.**

| Stage | Break in a dam | Economic crisis |
|---|---|---|
| 1. Cumulation | The weakening of the structure or a small leak | Pumping of economic bubble |
| 2. Outbreak | Breach in the dam, bursting of water | Bursting of the bubble |
| 3. Chaos | Dynamic outburst of water and flooding of the environment in a chaotic manner | Contagion of crisis |
| 4. Equalization | Water loses its dynamics while flooding further areas searching for new balance level | Transmission of crisis |
| 5. Mitigation | Formation of a new static system of land and water reservoirs | The new, post-crisis reality |

Source: Author's concept.

Due to the distinct course of the phenomena during the various stages of the crisis, when building an effective strategy of neutralisation, adaptation and prevention, it is crucial to determine the current phase of the crisis. This includes creating a set of specific tools for each phase of the crisis tailored to its potential and dynamics. A similar concept is used in marketing to determine the market potential of a product through its life cycle. The introduction of the life cycle of the crisis allows readily identifiable changes and phases of this phenomenon and enables the measurement of its potential, existing tensions and crisis-factors at different times.

## 2. Contagion and transmission mechanism of the spread of a crisis

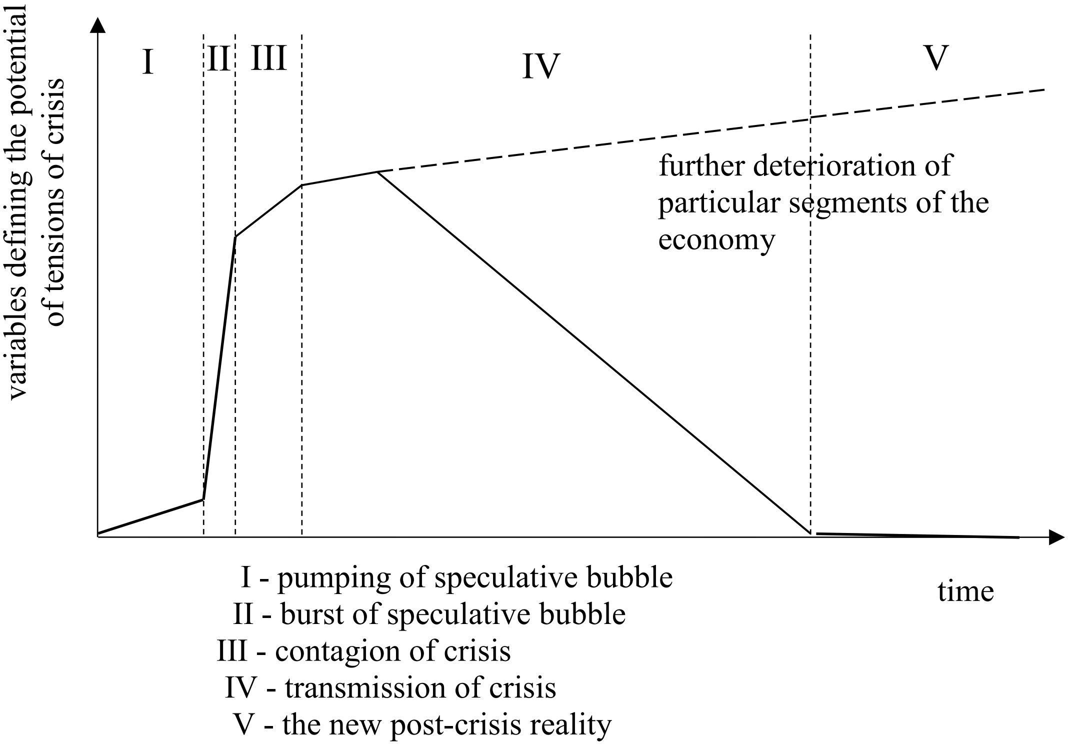
The concept of a crisis development has been presented by Hyman Minsky, and it comprises of 5 stages: displacement, boom, overtrading, revulsion and tranquillity (Minsky, 1982, pp. 13-39). The transfer mechanism of the crisis shocks often seems to be referred as the transmission mechanism, as well as the contagion effect. Both terms are often used interchangeably to describe the undesirable consequences in the economy. It is however noteworthy that the two concepts accentuate the various relations that can be differentiated by three main criteria (Nosek and Pietrzak, 2009, pp. 84-85):

- relations and links, that allow the transfer of crisis phenomena ie. channels of transmission or contagion,
- dynamics of the transfer of crisis,
- the size of the phenomenon understood as territorial range.

Due to the aim and subject of this article the analysis of the process of initiation of the crisis has been omitted and only the further stages of the crisis life cycle related to the mechanism of its spread have been parsed. Contagion mechanism is considered to be the first. Before the currency crisis in Thailand in 1997 the term “contagion” usually referred to the spread of a medical disease. The course of the development of the crises, which started in a relatively small market, but spread throughout East Asia, Russia, Brazil and even North America and Europe triggered the widespread use of the new meaning for the term contagion (Claessens and Forbes, 2001, p. 3).

This phenomenon of contagion, or the development of the crisis in this phase is not dependent on the state of the real economies. This phase takes place relatively soon after the incident that initiates the crisis (i.e. a burst of a speculative bubble). The transfer of the crisis factors between the national economies occurs dynamically spreading mainly through the financial markets (Dornbusch *et al*. 2000, pp. 177–197). Within the markets the effect of contagion is stimulated by the modern communications technology that allows immediate flow of information. Infection occurs through the launch of a domino effect. The outbreak of the crisis materialises various risks in many areas of the economy that initiate further, destructive changes in the interrelated and dependent spheres. Depending on the internal conditions, the course of this phase of the crisis may be more or less severe to the individual economies, but especially can affect the stability of the financial sectors. The degree of destruction and the scale of adverse effects in the phase of contagion are subject to a sort of resistance of the financial system associated with the ability to absorb such shocks, which is supported by safety network institutions (Komorowski, 2015, pp. 23-30). This resistance, understood as stability and sustainability of the system in the situation of a crisis means that the condition of the system, regulations and operation of the safety network would prevent the domino effect from happening, so that materialisation of risk associated with individual entities would not result in the materialisation of the systemic risk.

**Figure 1. The stages of the life cycle of crisis triggered by a burst of a speculative bubble**




Source: Author's concept

Transmission of the crisis is the fourth stage of the evolution of the crisis. This process takes place after a certain time interval from the moment of the beginning of crisis, when the transfer of the crisis factors already lost its initial momentum. The transmission takes place through two channels: long-term capital flows and trade links. They can therefore be referred to as the direct economic relations between national economies. This mechanism is evident in the evolution of the main macroeconomic indicators. The processes of adaptation to the changing environment are expressed by a decrease in trade dynamics, reduced production, a decrease in investment, rising unemployment, etc. In comparison with the mechanism of contagion, transmission takes much longer time. During this phase, the tensions in the entire system of connected vessels become equalised towards finding a new equilibrium. As a consequence, even countries that have proven to be resilient to the crisis in the phase of contagion may be vulnerable to the transmission mechanism. Furthermore, some of the segments of economy deteriorate further during this phase; therefore the new equilibrium point for the post era may be different.

Figure 1 illustrates the life cycle of the economic crisis triggered by a burst of a speculative bubble. During the first stage the crisis factors dynamically accumulate. It is a process of the so-called pumping of a speculative bubble. The second stage is the explosion of the crisis caused by the bursting of this bubble (Komorowski, 2011, pp. 409-422). To clarify, a crisis can also be triggered by other phenomena, not only a speculative bubble. It’s the case of an incident, understood in the broad sense, which would generate a cascading materialisation of risks.

The effects of contagion and transmission can lead to different situations and affect national economies individually. A stable financial system and certain conditions in the real economy can provide the power to defend from a material and significant effect of shocks during the stage of crisis contagion. The next stage of transmission however is slower, but virtually inevitable in the conditions of openness of economies (Komorowski, 2014, pp. 249-261). It is therefore crucial for the financial sustainability and economy development to manage the processes adequately during the two stages, however this process can be very challenging in the conditions of global, open economy.

## 3. The role of the financial system of an open economy in maintaining the financial sustainability during a crisis

Nowadays it is common to speak about the economy as a unified global system. It's the cells - the open economies of individual countries - that in most cases have abandoned the administrative control of the flows of goods and services, thereby lost the opportunity to influence the processes of global nature. This means that in times of prosperity there are no limitations to the expansive processes of trade, but in difficult times, it is not possible to isolate the impact of negative external processes. Under these conditions, growth becomes increasingly dependent on the interaction between economies (Brodzicki, 2006, p. 4 and further). Consequently, the phenomena of recovery and crisis are put in the international context (Kindleberger, 1999, pp. 209, 213).

In an open economy, the international market and the exogenous determinants are, by the nature of things, primary to the internal factors, and interact more strongly on the internal situation. In terms of global interdependence, the interaction between domestic supply and demand and the impact of regulatory tools can be seriously distorted. Conducting operations across national borders creates difficulties in their control and adequate risk assessment of these processes (Komorowski, 2010, pp. 248-251). Thus, globalisation as an inevitable and irreversible phenomenon poses both opportunities and risks (Robertson, 2000, p. 8 and following). However, it appears that the balance of these phenomena is more on the side of its positive features (Kołodko, 2001, p. 191).

In the conditions of globalised economies and the specific dynamics of a crisis phenomenon, it is the financial system that is mostly exposed to the destructive exogenous processes. Most importantly the stable functioning of a financial system provides financial sustainability of an economy. This means that by fulfilling its functions, the financial system provides the flow of money and capital within the entities in the economy. Those streams are necessary for them to function, therefore the sustainability of the performance of the functions of the financial system are the condition for economic development.

The main functions of a financial system are (NBP website):

- monetary – the financial system provides money to non-financial entities and enables it to circulate in the economy,
- capital-redistributive - allowing free flow of money from those who have it available to those who need it,
- control - full control over cash flows, in particular over assets invested, borrowed and redistributed in the past.

Any disturbance in the implementation of these functions leads to negative effects in the real economy. And it is the period of a crisis when an accumulation of destructive processes has the highest impact on financial sustainability of an economy. It is therefore crucial for the economy to maintain the sustainability of the financial system, especially during a time of crisis, to prevent the destructive processes to hit the real economy. Given this fact, the stability of the financial sector can be treated as a safety buffer of the economy.

## 4. Financial sustainability as a crucial factor of sustainability of an economy

The financial system that covers the economic relations should also be seen in the context of the public duties of the state, in which its construction and smooth operation is the subject of public trust. Meeting the high safety standards of financial transactions requires, firstly, to ensure the safety of financial processes determining the security of business transactions in the functioning of the economy and, secondly, to consider the fact that the financial sector entities almost exclusively invest the money entrusted to them, which requires proper public oversight (Żukowski and Żukowska, 2009, p.483).

It is therefore in the public interest to preserve the stability and sustainability of the financial system and in particular the efficiency of the markets (Zaleska, 2001, pp. 203-212). The social cost of the collapse of even one bank can be very diverse and difficult to estimate, but also very dangerous economically (Jaworski, 1999, p. 36). For this reason, in most developed economies in the world, despite being free-market economies, the financial system is subjected to public supervision via the so-called ‘safety networks’, so that a set of institutions and regulations ensure financial stability and protect the interests of market participants that use the services of financial intermediaries, as well as the institutions responsible for monitoring compliance with these regulations (Iwanicz-Drozdowska, 2008, p. 23; Szczepańska *et al*. 2004, pp. 9-20).

It is said that it is today's regulations that cause tomorrow's crisis. In this context, it is the wise regulation that builds the resistance of the financial system against a crisis and supervision that maintains it. It is therefore the functioning of the safety network that is one of the determinants of the sustainability of an economy in the crisis conditions.

In relation to the presented mechanisms of the spread of the crisis in the global economy and the role of the financial system in maintaining sustainability of an economy, the presented model fits into the idea of a 5-stage collapse of a country (Orlov, 2013, pp. 14-15):

- stage 1: financial collapse: faith in "business as usual" is lost,
- stage 2: commercial collapse: faith that "the market shall provide" is lost,
- stage 3: political collapse: faith that "the government will take care of you" is lost.
- stage 4: social collapse: faith that "your people will take care of you" is lost
- stage 5: cultural collapse: faith in the goodness of humanity is lost.

According to this idea, the collapse of a country is initiated by a collapse of finance. That leads financial institutions to become insolvent, savings are wiped out and access to capital is lost. Second stage is the commercial collapse that causes money to devalue and/or become scarce. Furthermore, during this phase commodities become hoarded, import and retail chains break down.

The first two stages of the concept, which are of an economic nature, are similar in characteristics to the mechanisms of crisis contagion and transmission presented in this article. This highlights that the economical side of today's reality is of highest importance in relation to life's comfort and stability. Economic collapse can lead to further problems of political and sociological nature. The last stage is the collapse of culture, as the ultimate failure. That is why the most important thing is not to start the process of a collapse through maintaining the economies and the financial systems resistant to the crisis factors.

## Summary

Financial sustainability of an open economy is a modern day complex issue. In today's global conditions the flow of streams of capital, people, labour, goods, materials, etc. are controlled in a very small degree by countries and its direction most often depends on exogenous factors. Such conditions allow the free transfer of economic processes within the globalised economy. These processes can generate desirable, positive effects or undesirable, negative effects to the country's economy. Under these circumstances it is important for the internal economy, and the financial system, to possess the ability to resist the destabilising processes, especially during their particular intensity during a crisis.

Crisis, as an economic phenomenon, has its characteristic stages in terms of its life cycle: process triggering the crisis i.e. burst of a speculative bubble, contagion of crisis and transmission of crisis. The identification of the stages allows the building of an optimal strategy to work against the destructive exogenous processes and maintain internal sustainability.

Given the fact that the initial crisis processes spread through financial markets, and primarily affect the financial system, it's resistance to destabilization is the most important security buffer for the real economy to maintain stability. Therefore, the sustainability of the financial system in an open economy during a crisis is a crucial factor for the stability of the whole economy. It is the role of the safety network to maintain the stability of the financial system in any moment of the business cycle, even in the time of crisis, so consequently the proper functioning of the set of regulations and supervision institutions is a factor for financial sustainability of a country.

**Acknowledgements:** The results of this research were presented at the 1st SCIENVIR International Conference "Scientific Convergence and Interdisciplinarity in EU Environmental Research", in Iasi (Romania), on 15th – 17th of June, 2017 (http://scienvir.uaic.ro/).

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