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FINANCIAL INSTABILITY AND ITS INTERRELATION WITH THE CURRENT STAGE OF GLOBAL ECONOMIC DEVELOPMENT

The article analyzes a number of approaches developed by foreign scientists to the interpretation of financial instability and key factors that give rise to this phenomenon. The interrelation between financial instability and the global financial crisis has been examined, determining the factors of their combination. Gaps in the functioning of current financial architecture are established and elements in reconstruction of a stable financial system are offered.

Keywords: financial instability; financial system; sustainable economic growth; financial intermediary; financial crisis; risk transformation.

JEL Classification: F30.

Діана В. Черкезюк

ФІНАНСОВА НЕСТАБІЛЬНІСТЬ ТА ЇЇ ВЗАЄМОЗВ'ЯЗОК З СУЧАСНИМ ЕТАПОМ РОЗВИТКУ ГЛОБАЛЬНОЇ ЕКОНОМІКИ

У статті проаналізовано ряд підходів зарубіжних науковців до трактування поняття «фінансова нестабільність» та основних чинників, що призводять до виникнення такого явища. Досліджено взаємозв'язок між фінансовою нестабільністю та світовою фінансовою кризою, висвітлено детермінуючі чинники їх поєднання. Встановлено прогалини у функціонуванні сучасної фінансової архітектури та запропоновано елементи для відтворення стабільної фінансової системи.

Ключові слова: фінансова нестабільність; фінансова система; стале економічне зростання; фінансове посередництво; фінансова криза; трансформація ризиків.

Рис. 1. Табл. 1. Літ. 17.

Диана В. Черкезюк

ФИНАНСОВАЯ НЕСТАБИЛЬНОСТЬ И ЕЕ ВЗАИМОСВЯЗЬ С СОВРЕМЕННЫМ ЭТАПОМ РАЗВИТИЯ ГЛОБАЛЬНОЙ ЭКОНОМИКИ

В статье проанализирован ряд подходов зарубежных ученых к трактовке понятия «финансовая нестабильность» и основных факторов, приводящих к возникновению такого явления. Исследована взаимосвязь между финансовой нестабильностью и мировым финансовым кризисом, выявлены детерминирующие факторы их сочетания. Установлены пробелы в функционировании современной финансовой архитектуры и предложены элементы для воссоздания стабильной финансовой системы.

Ключевые слова: финансовая нестабильность; финансовая система; устойчивый экономический рост; финансовое посредничество; финансовый кризис; трансформация рисков.

Problem setting. Global recession, financial instability, world economic imbalances, and financial distortions — all these terms have already become buzzwords in academia as well as among practitioners in the field of finance, state and local governance, representatives of international organizations, and wide public. Recent trends in the development of global financial relations, especially in the view of the world financial crisis of 2007/2009 have raised a lot of questions on the initial causes for recent turbulent events and their consequences. One of the issues that attracted par-

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ticular attention of researchers is the way how finance influences the whole economic system.

This is not a new problem that appeared all of a sudden. It can be traced back to the period of the Great Depression of the 1930s when a wave of financial turbulence covered the world leading to catastrophic consequences in the form of deep economic downturn. J.M. Keynes (1936) appeared to be an economic guru of those times giving description of the most obvious causes of the crises and therefore revealing the underlying inability of markets to be efficiently self-regulated. Nowadays in the view of current state of affairs at the world financial markets we can observe the return of Keynes name in many recent publications.

Recent research and publications analysis. G. Argitis (2003) analyzes the channels through which finance contributes to instability mostly basing his papers on the works of the last century prominent economists – J. Keynes (1936), M. Kalecki (1954), K. Marx (1978), H. Minsky et al. (1993). I. Fischer (1933) with his classic debt-deflation theory, C. Kindleberger (1978) with his description of self-sustaining disequilibrating processes, and M. Wolfson (2000) by presenting a compilation of data on the emergence of financial relations conducive to financial instability – all made their contribution to making the issue clearer. M. Obstfeld, K. Rogoff (2009), and L.R. Wray (2011) provided the analysis of more recent events and their consequences in the context of global imbalances and the financial crisis. H. Minsky et al. (1993) is best known for his works on financial instability in its narrow sense.

The research objective. However, despite a considerable number of publications on the issue the problem of global financial instability, its intrinsic causes, consequences, and most possible ways of combating them remain open. Therefore, the main goals of this article are as follows:

- to provide a clear definition of financial instability in the context of global economic imbalances;
- to analyze the relationship between real economy and financial system;
- to explore the financial instability hypothesis developed by Minsky in relation to the recent world financial crisis;
- to outline the most possible ways of combating the current state of affairs in the world financial system in order to overcome global economic imbalances and financial instability and turn to worldwide sustainable development.

Key research findings. Much of the problem related to the timely detection of the first signals of financial instability and obvious deviations of the financial system from its normal state refers to the fact that there is no clear definition of the term "financial stability" and the components it includes. Therefore, before analyzing financial instability, let us have a look at the components of a stable financial system which demonstrates smooth and sound functioning of its participants (Figure 1). 5 elements are included as the components of a healthy financial system which best depicts its structural composition.

Financial stability reflects the ability of the financial system to consistently supply credit intermediation and payment services in order to provide support for real economy. It assumes that the core elements of the financial system, namely financial intermediaries, markets and market infrastructures, are capable of withstanding shocks, thereby reducing the likelihood of disruptions in the financial intermediation

process which are severe enough to significantly impair the allocation of savings to profitable investment instruments.

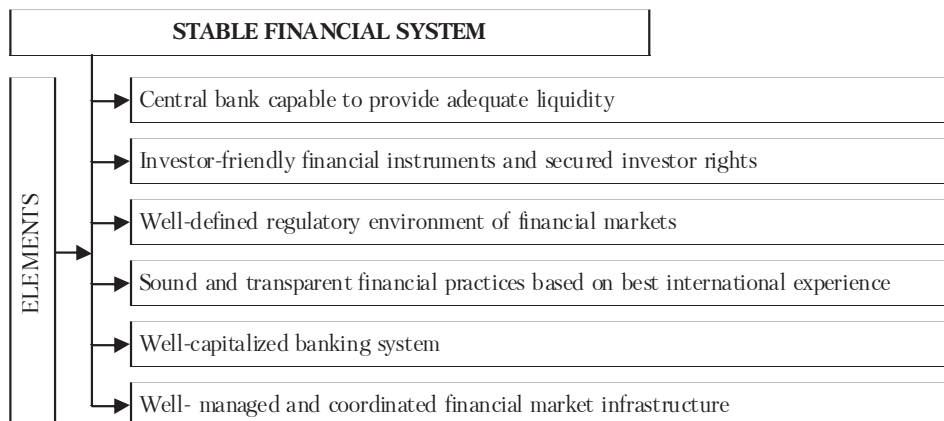


Figure 1. Elements of a stable financial system, developed by the author

On the contrary, financial instability occurs when problems (or concerns about potential problems) within institutions, markets, payments systems, or the financial system in general significantly impair the supply of credit intermediation services — so as to substantially impact the expected path of real economic activity.

To make it clearer, financial instability comprises 3 core elements:

- 1) impairment of intermediation which assumes the inability of financial system to provide efficient and smooth transfer of resources from savers to investors;
- 2) inability to assess and price financial risks reasonably and accurately;
- 3) inability of the financial system to comfortably absorb financial and real economic surprises and shocks.

Before performing a thorough analysis of the above listed characteristics of financial instability let us go deeper into the definition of this term which arose from the researches undertaken by famous economists.

A number of possible causes for financial instability as well as the definition of the term have been offered by various researches. One of the widespread explanations is a "speculative mania" in which investors tend to develop unrealistic expectations of profits to be made, borrowing heavily to finance purchases of assets and driving their prices to absurd levels. As a consequence, prices collapse when mania finally ends leading to numerous bankruptcies (Kindleberger, 1978).

Some of the explanations of financial instability are based on the income-debt relation. For example, G. Argitis (2003) argues that functioning and stability of the macrosystem depend on finance's income and on the decisions taken by financial capitalists regarding consumption, savings and lending. He distinguishes 3 fundamental problems in capitalism caused by a rise in financial profits, namely income redistribution, deficient demand, and financial instability. Bringing together Keynes', Minsky's and Marx's approaches to understanding the impact which monetary and financial systems have on industrial performance and market economy functioning in the context of uncertain and changeable environment G. Argitis (2003) builds a general framework to analyze the financial aspects of capitalist instability and crisis with-

in an institutional and sociopolitical structure which emphasizes conflicting actions and practices between the social groups involved in the processes of production and distribution. The industry-finance relation integrates finance to a general theory of growth and instability of the capitalist economy through the financial structure of the production process. The funds needed by industrial capitalists in order to acquire control over capital assets are obtained by a variety of financial instruments available at financial markets. Those include bank loans, debt securities, mortgages, equities etc., which create commitment to pay money in the future.

The economic structure and the relation between industrial and financial system have a major role to play in financial arrangements between participants and the way their interests are determined. Uncertainty, risk, contracts and economic interests form the framework in which lending and borrowing are used to finance investment, the ownership of capital assets and capital accumulation (Argitis, 2003).

Therefore, debt develops complex economic relations between the financial system and real economy. According to G. Argitis (2003), in the capitalist economy the relation between investment decisions, investment financing, expected profits and their distribution determine the potentiality for economic and financial instability and crisis. Table 1 demonstrates the quick rise of the amount of total debt compared to GDP which is seen to be one of the root causes which led to the financial crisis in 2007. Real economy experiencing slower growth, gave rise to financial explosion as capital sought to "leverage" its way out of the problem by expanding debt and gaining speculative profits (Foster & Magdoff, 2008).

Table 1. US debt and GDP, trln USD

			Debt by sector			
	GDP	Total debt	Household	Financial firms	Non-financial business	Government (local, state, federal), other
1970	1.0	1.5	0.5	0.1	0.5	0.4
1980	2.7	4.5	1.4	0.6	1.5	1.1
1990	5.8	13.5	3.6	2.6	3.7	3.5
2000	9.8	26.3	7.0	8.1	6.6	4.6
2007	14.02	50.9	13.7	16.2	10.8	10.2
2008	14.29	53.35	13.7	17.08	11.65	10.92
2009	13.97	53.25	13.4	15.68	11.29	12.88
2010	14.5	53.62	13.05	14.48	11.42	17.67
2011	15.08	54.68	12.86	14.04	11.96	15.82
2012	15.68	56.44	12.81	13.91	12.72	17

Source: Distribution of Gross Domestic Product, Total Credit Market Borrowing and Lending from www.federalreserve.gov.

According to H. Minsky (1986), instability originates in the very financial institutions that make capitalism possible. Minsky's financial instability hypothesis is a theory of the impact of debt on system behavior and the manner in which debt is validated. In contrast to the Orthodox quantity theory of money, the financial instability hypothesis considers banking as a separate profit-seeking activity. Like all entrepreneurs, bankers are aware that innovation assures profits. Thus, bankers (in a general sense including all financial intermediaries, such as brokers, dealers etc.) are merchants of debt who strive to introduce innovations into the assets they acquire and the liabilities they market (Minsky et al., 1993). Moreover, we can observe that due to massive innovations and the emergence of quasi-banking institutions that could avoid

proper financial regulation and oversight traditional banking became unprofitable in the 1980s due to competition from mutual funds which in their turn gave rise to extensive securitization.

Following J. Keynes (1936), H. Minsky (1986) saw debt as part of a dynamic system that would necessarily evolve over time. He recognized that this dynamism injected uncertainty into economic calculations.

Developing Minsky's (1986) approach M. Wolfson (2000) added other factors while constructing his own model of financial instability and its relation to financial crisis, taking into account such factors as current international developments, capital inflows that increase financial fragility, foreign financing of deregulated domestic speculative markets, overcapacity in export markets, capital outflows leading to collapsing currencies, and restrictive macroeconomic policy oriented on boosting international investor confidence. M. Wolfson (2000) viewed modern policies and strategies of neoliberalism, contributing the factors to financial instability.

The cyclicity of economy which assumes periods of economic booms followed by financial instability years can be viewed as a continual process in which cyclical development is a result of the dual role of investment when investment is not only produced but also producing (Kalecki, 1954). M. Kalecki also connected business fluctuations with credit inflation as well as the financing of investments from bank deposits as a special type of inflation.

In order to better understand the meaning of the term financial instability and analyze its coherence with financial crisis, let us have a more precise look at the core elements of financial instability mentioned earlier in the article.

Impairment of intermediation. Financial intermediation is a pillar for the functioning of modern economic system, fulfilling the critical role of matching borrowers and lenders, creating opportunities for higher potential returns. Financial intermediaries provide a risk transformation function where firms with opportunities for higher potential returns obtain funds from investors and depositors looking for shorter-term, safer investments. Thus, financial intermediation is a vital service for a well-functioning economy, allowing the funds from many depositors to be pooled and channeled to riskier and longer-term investment projects that support real economic activity. Disruption of intermediation can have significant macroeconomic consequences. K. Rogoff wrote that recoveries from crises in which financial intermediation has been badly disrupted can take much longer, than recoveries from crises in which intermediation has not been impacted (Obsfeld & Rogoff, 2009). Therefore, we may conclude that impairment of intermediation always relates to financial instability which requires the introduction of serious long-term measures to overcome its harmful consequences for the functioning of the entire economic system.

A part of this problem is a deviated distribution of financial assets between traditional banks and other quasi-banking institutions. It is revealed through the decline of banking and the relative increase of other portions of the financial system. The most influential change has been the rise of "managed money", which includes pension funds, sovereign wealth funds, hedge funds, university endowments, mutual funds, and other similar pools of managed money (Wray, 2011).

Inability to assess and price financial risks reasonably accurately. A financial intermediary must have expertise in identifying creditworthy investment opportunities,

monitoring investments, and obtaining benefits from diversification. In normal times, financial intermediary can provide depositors or investors access to their funds with little or no notice, because intermediary draws its funds from a diversified set of depositors (with varied financial needs) who are unlikely – again, in normal economic times – to all demand their funds at the same time. In times of economic turbulence when the financial system is spanned to the level close to a bursting bubble market participants usually lose control over adequate assessment of investment projects for which money are directed.

Another part of this problem was a number of pseudo-scientific asset allocation models which spawn a seam of securitized and structured innovations designed to provide just the right combination of risk and return. For example, the modern portfolio theory invented by H. Markowitz (1959) and the Modigliani-Miller theorem were useful to commercial interests because they provided investment managers with irreproachably sound techniques to assemble optimal investment portfolios. Yet the correspondence of the theories with reality was rather limited. Other quantitative models for assessing risk/return correlation which followed were far from reality. All of them were based on the assumption that prices are distributed normally and extreme events are very unlikely to happen. Therefore, it was logical that quantitative fund managers were the first into the financial crisis in 2007.

The repercussions of such events are so that nowadays participants of investment processes have to perform their activities amid uncertainty which also adds to destabilization. Uncertainty faced by companies can lead them to postpone investment. Investing in new projects typically involves fixed installation costs, so companies value the option of delaying investment decisions until uncertainty about the viability of a project has been resolved. Heightened uncertainty is likely to raise the value of this "wait and see" option and therefore depress investment spending temporarily (Dixit & Pindyck, 1994).

Inability of the financial system to comfortably absorb financial and real economic surprises and shocks. While analyzing this element of financial instability let us turn back to the financial instability hypothesis developed by H. Minsky et al. (1993). One of its important dimensions is the categorization of debtors in a given economy into 3 groups, according to the nature of financing they use. These are hedge financing units, speculative, and Ponzi units.

Hedge financing units are those which can fulfill all of their contractual payment obligations by their cash flows: the greater is the weight of equity financing in the liability structure, the greater is the likelihood that the unit is a hedge financing unit.

Speculative finance units are the units whose income can cover interest payments but not the principal amount. Such units need to roll over their liabilities (e.g., issue new debt to meet commitments on maturing debt). Governments with floating debts, corporations with floating issues of commercial papers, and banks are typically hedge units.

For Ponzi units, cash flows from operations are not sufficient to fulfill either the repayment of principle amount of debt or the interest due on outstanding debts. Their only option is to mortgage their future finances by borrowing still further, hoping for a rise in the value of the assets they purchased with borrowed money. A Ponzi unit lowers the margin of safety that it offers the holders of its debts.

It can be shown that if hedge financing dominates, then the economy may well be an equilibrium seeking and containing system. In contrast, the greater is the weight of speculative and Ponzi finance, the greater is the likelihood that the economy is a deviation amplifying system (Minsky et al., 1993).

During a speculative boom, H. Minsky believed, the number of hedge borrowers decline, while the number of speculative and Ponzi borrowers grows. Hedge borrowers begin lending to speculative and Ponzi borrowers. The asset at the center of the boom – real estate (as it was in 2007, for example) – rises in price, prompting all borrowers to take on even more debt. As the amount of unserviceable debt balloons, the system becomes ever more ripe for financial disaster.

When pyramids of debt start to crumble and credit dries up, otherwise healthy financial institutions, corporations, and consumers may find themselves short of cash, unable to pay their debts without selling off their assets at very low prices. As more and more people rush to sell their assets, the prices of those assets spiral downwards, creating a cycle of falling prices and fire sales. As the level of aggregate demand falls below the supply of goods, the economy suffers from price deflation which was successfully described by I. Fischer (1933) in his theory on "debt deflation".

While distinguishing two financial regimes – one that is consistent and stable (hedge financing) and another that subjects the whole economy to instability (speculative and Ponzi finance) – H. Minsky et al. (1993) insisted that even stability is destabilizing due to endogenous processes which tend to move even a stable system towards fragility.

The recent global economic crises and current financial instability are natural outcomes of all the processes described above. The era of money manager capitalism with little and improper regulation or supervision of financial institutions is coming to its end. Sole reliance on self-supervision of markets and personal responsibility is no longer possible. We see an obvious need to return to a more sensible model, with enhanced oversight of financial institutions and with a financial structure that promotes stability and sustainable economic growth rather than speculation.

While creating a framework of possible measures to fight the financial instability we shall go back to the developed structure of elements which constitutes stable financial system (Figure 1):

1. The central bank is a core element of a financial system. In order to provide its smooth and reliable functioning the main goal of the central bank shall be to protect the stability of money supply therefore guaranteeing an appropriate level of liquidity.

2. The activity of financial engineers who tend to develop increasingly esoteric and opaque financial instruments shall be carefully monitored. All types of instruments shall be clear and transparent for potential investors.

3. Financial market regulators shall provide adequate level of supervision for all financial institutions setting effective capital requirements and monitoring the compliance of those institutions.

4. The adoption of sound financial practices has its sources in the previous item. As long as markets generate perverse incentives for excess risk, regulators are called upon to equalize such risk levels by setting clear rules to be followed by all the participants of the system.

Conclusions. Current state of the world financial architecture demonstrates serious deviations from its normal functioning which resulted in a set of local and national crises around the globe and the global financial crisis of 2007–2009 which led to the reiterating the meaning of the stable world economy and determining the factors which could bring it back to sustainable development.

Bearing this in mind, the main point of this article was an attempt to analyze and determine the meaning of the stable financial system, describing its core elements. The aim was to identify what lies in the root of the problem which led to global imbalances and the age of global financial instability.

Having analyzed the approaches to the determination of the term "financial instability" offered by prominent economists and researchers the following results were obtained:

- financial instability originates in the very financial institutions that make capitalism possible;
- deviated distribution of financial assets between traditional banks and other quasi-banking institutions with no adequate supervision and regulation contributed to the process of destabilizing the system;
- different speed of growth in financial sector and real economy led to system imbalances;
- exaggerated development of innovative financial products and instruments serves the interests of limited groups of money managers.

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Стаття надійшла до редакції 12.02.2014.