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CRISES IN THE GLOBALIZED INTERNATIONAL FINANCIAL SYSTEM

Theses of the PhD Dissertation

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Supportive signature of the Thesis Advisor

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1. Objectives of the research

The objective of the PhD dissertation is to explore the mutual interaction between financial crises and globalization, as well as the role of the international financial institutions in the formation of crises and also in their management. The aim of writing the dissertation is to compare lessons existing so far, and to determine whether the current practice and difficulties of crisis management would evolve in new crisis management techniques, with particular regards to globalization processes, and in this context, to the field of financial regulation. The essay would like to give an overview about the crises of the globalized international financial system, the theory and applied practices of crisis management, as well as about the potential directions for future development of the international financial architecture. To this end, the purpose of the research is to review the crisis theories and to-date practices of crisis management starting from the Great Depression of 1929–1933 through the significant crisis periods of the 20th century arriving to the current worldwide crisis emerged in 2007, which could provide proper lessons to the formation of the future financial system and to the design of the institutional framework of crisis management. The Author would also like to examine the processes from a special perspective to establish what the correlation is between the unprecedented expansion of globalization and the increasing prevalence of financial crises. The goal of the research is to test the following hypotheses:

H1/A. The crisis of 2007–2009 was neither a local nor a traditional crisis, but an economic crisis of a novel type.

Considering the experiences of the local crises of the United States starting from the 1970s and of the Southeast Asian regional crisis of years 1997–1998, the problem setting of the first hypothesis refers to the question whether the economic crisis that emerged in 2007 shall be qualified as a regional crisis, similarly to the prior ones, or rather beyond those as a global crisis of a new type, whereas the global integration of financial markets played a decisive role in its formation. In the frame of this hypothesis it should be investigated whether former crises had occurred with attributes comparable to the financial crisis of 2007–2009 that could be regarded as presages to the current crisis, or did we monitor an unprecedented course of actions with the escalation of the turmoil in the US mortgage market. This partial hypothesis is regarded as confirmed if distinct features can be identified in the formation as well as development of the crisis of 2007–2009, which show significantly different processes compared to prior crises.

H1/B. It is a common feature of the crises that all crises can be considered as informational crises.

As part of the second partial hypothesis, the Author would like to assess whether that position could be sustained that the categorizations of the economic crises in the literature only emphasize different aspects of the same phenomenon, or there are indeed different types of economic crises. Are there common features of the formation of crises, based on which a common crisis model could be established synthetizing the various categories?

H2. The global crisis of 2007–2009 brought about novelties in the crisis theories and in crisis management also.

The subject matter of the second hypothesis is whether similarities can be observed during the current crisis to the crisis management of the Great Depression of 1929–1933 and of the Southeast Asian crisis of 1997–1998. Were there any differences in the responses to the crisis between the European Union and the United States of America? Did the function of international financial institutions or national governments change in the crisis management? The hypothesis is verified in case distinct mechanisms can be identified in the crisis management also, which are fundamentally different to the previous ones.

H3. The solution of the systemic problems necessitates the implementation of a coordinated regulation.

A question related to this hypothesis is whether the spread of deregulation, liberalization and globalization that can be observed from the 1970s, contribute to the development of the global crisis of 2007–2009. Based on the experiences related to the problems of the global financial system, could the operational efficiency of this system be improved by separate (sovereign) national management of these system-level problems, or the proper solution of these problems requires the development of a coordinated regulation? Is such a convergence currently in progress either on a global or on a regional scale? Along with the freedom of international capital movements and the existence of global interdependencies, does it become necessary to waive the sovereignty of national governments, even in part? The Author considers the third hypothesis as confirmed in case it is attestable that the efficient management of the systemic problems of the global financial system on a national state level can be ruled out, and thus a global organizational-regulatory solution is inevitable.

H4. The applied practice of crisis management is not in line with the requirements of sustainability.

In the framework of this hypothesis, the Author would like to investigate whether the combination of national and international responses to the global financial-economic crisis of 2007–2009 – that is, the prevailing practices of crisis management – were in line with the requirements of a sustainable global economic and financial system. Were there sustainable and non-sustainable elements and steps of the management of the crisis started in 2007? Is the currently existing international financial architecture sustainable? Is it justified to increase the level of involvement of the developing countries in the decision making process of the international financial organizational system? This hypothesis is supported if it is demonstrable that the prevailing crisis management of the 2007–2009 crisis showed non-sustainable characteristics.

H5. Cooperation with national governments plays a significant role in the crisis management of multinational companies.

The fifth hypothesis relates to the cooperation between the multinational companies and the national governments. It is part of the inquiry to determine if the implementation of the crisis management strategy of multinational companies that were greatly affected by the crisis can be independent from the national governments of the countries of their locations, or their relationship with national government plays a key role in the implementation of those strategies. Is this interaction between multinational firms and national governments unidirectional, or is it rather characterized by a mutual interdependence and cooperation? Influenced by the international financial-economic crisis, what unprecedented functions did the national governments assume in the crisis management of multinational companies? Due to their global operations, were multinational companies affected by the economic downturn similarly to sovereign states, also did they dispose of similar tools for crisis management? Was it typical for governments to actively participate in the crisis management of the companies troubled due to the economic crisis, even in terms of ownership? The last hypothesis can be regarded as verified in case – through the inspection of the actual case study – it is confirmed that the cooperation between multinational companies and national governments in the crisis management was successful.

2. Content and methods of the research

Due to its topic, the dissertation is primarily a theoretical, macroeconomic level research, but it also concerns practical questions. With the presentation of the theoretical and empirical background, the essay primarily constitutes a comparative analytical inquiry elaborating to-date experiences, which covers two levels:

1. Global level, examination of great economic regions: a review of the crisis management of the United States and of the European Union, drafting potential directions of future development.
2. A case study covering a selected multinational company.

Following the theoretical nature of the research, it is mainly based on *secondary research* with regards to finding, analysis and adaptation of the sources published since the outbreak of the crisis, which establishes the core of the essay, supplemented by the examination of data series related to international financial processes. Besides secondary information, the research of the case study related to a multinational company is partially based on *primary research*, which targets to get to know the role of the national governments in the crisis management, through the example of a specific large corporation, to evaluate its effectiveness, and to explore its further potentials.

The aim of the Author is to systematize and present the relevant knowledge released so far relative to the financial globalization and to the formation of crises in a novel way, and to establish new and novel correlations and findings based on his studies, which give the scientific results of the dissertation.

3. Results of the research

3.1. Theses of the research

H1/A. *From a conventional aspect*, the economic crisis started in 2007 can be considered *as a global crisis of a new type*, which was preluded by the Southeast Asian crisis of 1997–1998, which was the first regional financial globalization crisis. Indeed, the first main wave of financial globalization matured by the second half of the 1990s, which resulted in huge capital inflows towards the Asian “Little Tigers”. With the halt of the capital inflow and its turn to outflow, the Thai economy ended up in a currency crisis, and contaminated other countries in the region. However, this downturn stayed at regional level, and did not spread to other parts of the world, so it did not affect either Europe or the US. On the contrary, the crisis of 2007 occurred as a global crisis of a new type, which differs also from the crises of the Unites States observed from the 1970s. As a summary, we can state that the novelty of the crisis was marked by the fact that, as a *special mixture of local, national and global* *problems*, *it showed signs of different crisis types simultaneously*, within which distinct features can be identified.

The turmoil of the US housing market, as well as the losses recorded by the related very extensive (multiplayer) mortgage loan market constituted a *local problem*. Deregulation, which fostered the spread of less transparent and hence high risk financial innovations and irresponsible credit placements, caused a *national level problem*. The worldwide linkage of financial markets, parallel to the currently prevailing high level of liberalization of capital movements, can be identified as a *global problem*.

The outbreak of the crisis was significantly facilitated by *deregulation, that is, the reduction of the level of financial regulation*, which started back in the 1970s. In this respect, the novelty of the mortgage market crisis lay primarily with the usage of high risk and low transparency financial instruments that became popular as a consequence of deregulation. In the course of the downturn that started in 2007, financial innovations showed a much more widespread penetration compared to previous crises, especially related to the application of the devices of originate-and-distribute models with multiple re-packaging. By hiding the original cash flows, securitization of loans increased information asymmetry and moral hazard. After multiple re-packaging steps, the final investor had only a minimal oversight over the performance of the underlying portfolio and its potential risks. The indebtedness of the household sector constituted another key factor in the inception of the crisis, unlike any prior downturns. In the years before the crisis, the ratio of loans of the so-called subprime borrowers run up steeply within the portfolio of US consumer mortgage loans, which represented a segment of particularly high risk in the mortgage market. The slowing property price increase and further its decline – along with the rising default rates – gave the spark that outburst the mortgage crisis originating from the subprime market.

The inception of the crisis was preceded by an expansive period starting from the 2000s, which built up various economic and financial problems. Within the crisis of a new type, overproduction and financial crises, liquidity and debt crises as well as a global structural crisis materialized in the same time. The formation of a typical asset price bubble, coupled with over-lending paved the way to the *overproduction crisis*. The development of the bubble could be observed in the boom of the American property market that was hallmarked by the acceleration of the property price increase index from the end of 1990s until 2005. Though, the property bubble had to collapse sooner or later. During the outbreak of the overproduction crisis, we could identify the degradation of this overvalued price level with the plummeting property prices. *Financial crisis* was a direct consequence of this process, since the mortgage loan defaults caused huge losses to the financial (banking) sector, and to the other intermediary institutions present on that market. In the course of the *liquidity crisis* noted also in the history of current crisis, we could observe the "drying up" of markets; trading transactions could hardly be effected in the money and capital markets. On the other hand, instead of causing lack of liquidity, *confidence crisis* made the redistribution of liquidity impossible: not having faith in the credit viability of their partners, market actors were reluctant to provide lending to each other. *Debt crisis* occurs when the internal or external government debt becomes unsustainable, which characterized many countries. Besides all these, bank crises surrounded by general confidence crises as well as sovereign and currency crises emerged in many economies, too. *Bank crises* lead to the closure, merger or government supported bailout and assistance of financial institutions. *Sovereign crises* resulted in the default of national states (Greece, Cyprus), and we have also witnessed the *currency crisis* of the euro, the European common money. The existence of a *global structural crisis* is justified by imbalances in the balance of payments that are outstanding on a long-term, without automatic adjustment processes.

The novel character of the crisis is also confirmed by the fact that, unlike previous ones, the recession in 2007 did not originate from one of the developing countries but from the United States of America which is considered as the most advanced economy in the world. After the local mortgage market downturn, the crisis spread to other parts of the world extremely quickly. The main reason for this was the unprecedentedly high level of interlinkages that evolved in the financial globalization, whereas US played a central role. Especially, financial institutions with global exposures represented channels of contagion, which recorded a high ratio of risky subprime securitized loans among their assets.

H1/B. *The common feature of crises is the informational crisis.* Based on the review of the inception and characteristics of economic crises, it can be determined that *the fundamental basis of all crises is the informational asymmetry* and the uncertainty of expectations for the future, which are supplemented by the interlinkages of financial markets due to globalization and liberalization. According to this, the "common crisis model" can be defined as an informational crisis, which can further be categorized from one hand based on what the lack of information relates to (causal side), and from the other hand, based on which area the downturn materializes (symptomatic side). Causes of the crises can be overproduction, asset price bubble or loss of confidence, while based on form of appearance, we can differentiate, among others, oil crises, property crises, currency crises or sovereign debt crises. In the course of investigating the current economic crisis, the appreciation of informational aspect is explained by the boom of technology and communication. In spite of the different features, in terms of information asymmetry, the categorizations of the economic crises in the literature, that is, the *crisis models only emphasize the different aspects of the same phenomenon, and there is indeed one single type of economic crisis.*

H2. The current crisis *brought about many novelties also in the crisis theories*, and *partially resulted in a return to the Keynesian type crisis management that was dominant until the 1970s*. Financial globalization and strengthening of deregulation played a primary role in the outburst of the crisis started in 2007. The crisis was characterized by the widespread usage of complex and less transparent financial instruments, the worldwide concentration of financial markets, the high leverage of financial institutions, as well as by the central role of the household sector. The situation was worsened by the fact that, besides the government, also household and corporate sectors are highly indebted in most of the countries of the world, therefore, lacking sufficient savings, households could not finance the government borrowing. Consequently, international funding becomes necessary. During current crisis, variations could be observed with regards to the significance of the financial sector in the outburst of the crisis and also to the inception of the property bubble. In this process, the spread of securitization model had a significance, along with the shadow banking system built on it. These items contributed to the hiding of (systemic) lending risks and to the intensification of information asymmetries. All these factors necessitated crisis management tools different from prior ones. Accordingly, crisis management concentrated on various specific areas, depending on the actors' consideration on the primary cause of the crisis. Thus, the typical policy tools used by national governments comprised of liquidity increasing measures (liquidity crisis), bank bailout packages (banking and confidence crises), as well as of state incentives provided to real economy (real economy crisis).

The crisis management of both the United States and the European Union partially differs from the policy applied in prior crisis periods. It meant a change that, contrary to previous crises, governments assumed a significant role in overcoming the downturn of 2007–2009, which was a precedent only in case of New Deal program in a response to the 1929–1933

Great Depression. Among others, crisis management policies consisted of state incentives provided by national governments primarily to real economy and banking sector. In the course of the Southeast Asian crisis management of 1997–1998, International Monetary Fund and World Bank played a key function in the restructuring of the financial sector, while national governments did not participate in that. This feature can be regarded as an intensification of the Keynesian type crisis management policies using state (fiscal) intervention, and thus, as a return to the Keynesian principles. It is also a divergence from the antecedents that formerly the role of the financial sector was not highlighted, while today the measures increasing the money supply to stimulate economy and to manage the crisis clearly represent a qualitative change towards monetary policy. In fact, policies increasing public sector spending similarly to New Deal resulted in growing indebtedness of the government sector, therefore, they soon reached their limits. By comparison, currently applied monetary policies (quantitative easing, bond purchase programs) aimed to stimulate economy denote a qualitative change towards the emphasis of the crisis management role of the monetary policy. In addition, the need for regulation of the financial system is also unprecedentedly high that had never been typical before.

It is no doubt that in the crisis management, the function of international institutions changed too. Earlier it was not as typical to involve the financial and private sectors to an extent that materialized in present instance, for example in case of the Greek debt haircut. In addition, the international crisis management function of IMF was also reinforced as the co-funder of various bailout packages.

Despite the similarities, we could identify regional specific differences in the crisis management of the United States and of the European Union. From one hand, these variations arose from the different models of financial intermediation (market-based or bank-based financing), and from the other hand, they are explained by the different scale of community budgets. Federal Reserve started to transform its monetary policy tools already in the fall of 2007 in a response to the mortgage market issues emerging in the United States, while the European Central Bank started lower its base rates as well as to widen the spectrum of its tools only after the collapse of Lehman Brothers, once the turmoil had been transferred to Europe. The Fed tried to treat the mortgage market primarily by its asset purchases lowering the long term yields. Though, the ECB and the European System of Central Banks faced a more complex situation as a consequence of the euro crisis, and they rather sought to ensure the liquidity of banks by providing loans on longer and longer term.

In the same time, both central banks were forced to use so-called nonconventional tools (quantitative easing), since they could not effectively manage the disturbances of the monetary transmission system with the conventional elements of their monetary policy toolbox. In the course of the crisis, most central banks effected general liquidity increases, facilitating the credit placements of the banking sector and to restore the operation of the financial intermediary system. In supplement to the previous secured assets, they started to accept unsecured assets into their portfolios as well, and they provided loans to banks on longer terms, too. The application of these measures was generally successful: these programs enhanced the status of real economy, and economic recession would have been ever bigger in case those measures had not been put in place.

The United States, despite its being the central area of the outbreak of the downturn, could emerge the crisis earlier than the European Union. The reason for this is the fact that the European Union already struggled with structural problems before the inception of the current crisis, that to-date are still not solved satisfactorily. Those problems include the sovereign debt crisis, lack of fiscal transfers due to small community budget, and also the sub-optimal currency zone formed by the euro area. Hence, additionally to the sustenance of the viability of member states, the crisis management within the European Union aimed also at maintaining the stability of the euro. This objective was supported by the various rescue packages provided to the individual states. The financial crisis also highlighted the weaknesses of the proliferated European regulatory framework. In order to handle these issues, the new European financial supervisory system was designed based on the recommendations of a group of professionals presided by Jacques de Larosière. In line with plans, the new supervisory authorities started their work in 2011, however, recognizing the special risks of the euro zone, the implementation of the European Banking Authority was already designed by the summer of 2012, constituting the next step in the European banking supervisory cooperation. The banking union would also serve to deepen fiscal integration: financial institutions brought under a single supervision would be bailed out from a common fund, reducing the burden of national governments and their taxpayers.

H3. *The solution of the systemic problems necessitates the implementation of a coordinated regulation.* The present day international financial system struggles with such *system level problems* like deregulation, liberalization and globalization, which interact and in the same time reinforce each other. *Deregulation*, that is the reduction of regulations related to financial and capital markets contributed to the dramatic spread of such risky and less transparent financial innovations like securitization or the usage of derivative instruments. As a consequence, risk sensitivity also increased. *Liberalization* targets to demolish any barriers to cross-border capital movements, which gained momentum from the 1970s, not least influenced by the "Washington Consensus" offered-dictated as a sole recipe by the International Monetary Fund. Because of *globalization*, the connection points between financial and capital markets multiplied, which was accompanied by an increasing interdependence. Through financial connections, global capital movements enabled a quick contagion of crises to other countries. As a consequence, the effectiveness of those mechanisms that could prevent the spread of crises was reduced to the minimum.

Along with the liberty of international capital movements, the existence of global interlinkages necessitates *the partial waiver of the sovereignty of national governments*. No nation state can follow an economic policy completely independent from others, since such actions could easily trigger the "punishment" of international capital markets in the form of capital flight, attack against its currency or the reluctance of providing further funding. Therefore, it becomes inevitable to coordinate (converge) economic policies not only on a regional, but rather increasingly on a global scale. To improve the operational efficiency of the international financial system, it is *insufficient to solve these systemic problems on a standalone basis*, but *a coordinated regulation needs to be established* to handle them. This statement is also supported by the existence of the impossible trinity (or trilemma) of economy policy, according to which a central bank any time can choose to implement only two out of the free international capital flows, fixed exchange rate and independent monetary policy, while it has to renounce the third one. Since the freedom of international capital flows is more or less a standard, we can assume that central banks refrain from any measures that would restrict it, and shall maintain full capital market openness. This case, their policy choice gets limited to maintain a fixed exchange rate regime and an independent monetary policy. Though, maintaining a fixed exchange rate puts a huge burden on the monetary policy, since it has to neutralize the exchange rate appreciating/depreciating effects of the international capital flows constantly. This vulnerability results in the loss of independence of monetary policy. This is an especially important factor in case of the European Union, in particular of the countries participating in or heading to the euro zone, whereas exchange rates cannot be used at all as monetary policy tools at nation state level, and also in case of those economies that intend to keep the rate of their national currencies at a pre-defined level, whether implicitly or explicitly declared. Similar “trilemma” exists in the area of global policy. According to this trilemma, democratic political decision making process, complete integration into world economy and independent nation state cannot be attained simultaneously.

Regulatory arbitrage, which can be utilized by multinational companies on a global scale, also supports the need for a coordinated regulation, both in the financial and real sectors. The release of any more permissive legislation results in regulatory arbitrage that can be taken advantage at a worldwide level. Since there are no effective legal measures to prevent global capital flows, regulatory arbitrage can successfully be exploited by multinationals in the course of their decisions on capital allocation. In the same time, the gradual takeover of Based capital accords denotes a convergence process in this field.

The Keynesian type crisis management measures of the crisis of 2007–2009 apparently reinforced the role of national governments, at least on a temporary basis. Compared to prior periods, governments had a much more extensive involvement in crisis management, which can be regarded as a strengthening of national sovereignty and a divergence from the contemporary mainstream liberalization trend. Today, the effects of the crisis are so strong that the function of national economic control increased compared to the period before the crisis (e.g. bailout packages). In spite of these, no significant retreat from the principles of globalization and liberalization is on the agenda. It can though be decided on longer term what new equilibrium of powers will be developed between the tendencies of globalization and national governance.

With regards to the international financial architecture, it seems that nowadays there is a higher willingness for a change compared to the “small” (regional) crises of past decades. In case of earlier crises that emerged from developing countries, the main objective was to prevent them spilling over to advanced countries, while now contrarily, developed economies formed the core area of the crisis, hence the prevention of the escalation of downturns was the main aspect. Regarding the institutional system of the global financial governance, we can observe some strengthening of the function of the G20 against the influence of IMF, while substantive changes have not materialized in this area so far. The process to transform the power relations takes places without central coordination. A big question of the near future of the international financial architecture concerns which institution and by what effectiveness could coordinate this field, considering the interests of both the Unites States as the current leading power of the world and also of the emerging countries like China and India.

H4. *The applied practice of crisis management is not in line with the requirements of sustainability.* The base requirement of a sustainable financial system is to fulfil the needs of current generation without impairing the opportunities of future generations. Besides economic considerations, the Triple Bottom Line approach of sustainability incorporates social and ecological aspects as well, which are all closely interrelated with each other. Accordingly, in addition to economic crisis management, we can talk about social and ecological crisis management, too. However, these two latter dimensions have rather been neglected in the course of crisis management, mostly because of the lack of funding. Of the three sustainability dimensions, the crisis reinforced the economical aspect, which is demonstrated by the implementation and further development of crisis management mechanisms. In terms of the social aspect, only the poorest layers of the population were provided assistance, while environmental protection clearly took a back seat. Nevertheless, sustainability cannot be achieved without considering the aspects of these two dimensions in the same time.

The interdependence originating from globalization increased the probability of the spillover of crises, therefore, it made the world economy more vulnerable to depression: on international level, both capital inflows and capital flights can be effected within some moments, thus, a downturn in any economy can quickly pull other countries into trouble as well. Vulnerability is also increased by the existence of global asset portfolios of financial institutions. As an effect, the effectiveness of those mechanisms that could prevent the spillover of crises (the contagions) deteriorated to a minimum. Firstly, the Southeast Asian crisis of 1997–1998 highlighted the fact that financial globalization brought about such processes that may lead to financial crises.

The group of national and international responses given to the international financial-economic crisis of 2007–2009 shows that *the prevailing practice of crisis management is not in line with the sustainability criteria of a global economic and financial architecture*.

The most *protracted crisis management* was observed within the member states of the European Union, which was made more difficult by the euro zone crisis, besides the sovereign and financial crises. This is primarily due to sovereign indebtedness, which resulted in funding problems in some of the member countries following the international financial crisis. Many member states had already high outstanding debt and other structural problems before the outbreak of the crisis. The depreciation of the euro constitutes only a consequence of these trends. Based on all these, it can be determined that the European

Union was more severely affected by the crisis than the United States of America, which formed its starting point. Developing countries (especially China and India) were less affected by the crisis due to their higher-than-average economic growth rates.

With regards to sustainability, *state incentives* provided by the public sector in the European Union during the crisis *were excessive*, in the direction of both the real and financial sectors. The fiscal balances deteriorated (e.g. France, Italy, Greece), and the repayment of debts will put extra burden on future generations to come. This effect is partially counter balanced by the establishment of the stability mechanism and fund (ESM/EFSF), which are certainly steps taken in the direction of sustainability. There was a move towards the reinforcement of banking regulations with the implementation of the European Banking Authority. Both the euro zone crisis of 2012 as well as the Greek crisis of 2014–2015 demonstrates that these measures have not lived up to the expectations yet.

In the crisis management of the European countries, we could identify two periods that can be evaluated differently also in terms of sustainability. The first reactions between 2008 and 2010 were mostly similar in case of the member states, and they primarily aimed to prevent the economic downturn by means of traditional stimuli (demand-side incentives, unique bank rescue actions). In most countries, these programs were accompanied by a deficit growth of about 0.1–0.5 per cent of GDP. Nevertheless, the effect of these steps prevailed *only on short term*, and they could not induce substantive economic growth on longer term. The measures of the first step thus could not be regarded as sustainable, which is also justified by the fact that fiscal resources were depleted by the end of 2010. From 2011, crisis management strategies were already affected by the costs of former actions, and it was also a compelling condition to ensure financial stability. In this period, the euro zone debt crisis became more and more severe, hence, the proper equilibrium between the economic stimulus and stability objectives had to be found. The *enhancement of control over financial and economic processes* serves the purposes of sustainability, together with the implementation of an early warning system (e.g. European Systemic Risk Council). Due to the nature of this system, its effectiveness can only be judged on long term.

The current international financial system – as a consequence of the cross-border integration of financial markets – *cannot prevent* rapid international capital movements (capital flight) that can create severe damages in the economy of the given country, and cannot avoid destabilizing speculation. The *base criterion of a sustainable system is* to prevent these, while providing for efficient international allocation of capital. This is supplemented by the fact that international currency reserves create a dead load of about 12-13 thousand billion dollars withdrawn from circulation, that deteriorate the sustainability of this system. By increasing stability and strengthening global confidence, part of these reserves could be returned to the circulation of the economy, and could be used to finance developmental objectives. Besides this, emerging countries are still way too underrepresented in the international financial institutions and decision making process, which is disproportionate to their economic weight and population. Based on the above, their *higher involvement is justifiable*.

H5. *Cooperation with national governments plays a significant role in the crisis management of multinational companies.* The possibilities of multinational or transnational companies *widened* following the elimination of barriers to trade: their profit maximization and loss minimization are achieved on an international level, thus, their control over production and distribution also covers multiple economies. Possessing significant capitalizations, they can get countries or regions compete on a global scale in order to archive profits. As key drivers of globalization, multinational companies *have significant influence* over those economies that are related to their operations, be them either the locations of their management headquarters or manufacturing sites, or even the markets of their products. This dependence is rather *mutual* in many aspects: national governments support the localization and sustenance of local operations of multinationals by means of incentives and other benefits, and in many countries they provided rescue packages to them in the course of the crisis. In the advanced countries, *lobbying activities* of labor unions also counteract the downsizing of capacities.

Out of their global operations, the *economic downturn affected multinational companies similarly* to nation states, and they could give similar responses to overcome the negative tendencies resulted by the crisis. Such effects comprised of the lack of sufficient funding and fall of revenues, to which the answers on short term could be to provide the live-saving corporate funding, while on long term, changes in corporate structure and investment strategy should be effected, and the operations had to be made more efficient.

In this process, the implementation of crisis management strategies of multinational companies that were severely affected by the crisis *cannot be separated* from the national governments of their operational locations. Cooperation with *national governments always played a significant role* in the achievement of their strategies. As a consequence of the international financial-economic crisis, national governments had a function different from previous periods in the crisis management of the multinational companies primarily in terms of *funding*. This materialized both in the provision of corporate funding and in stimulating the demand side, for example by the introduction of car scrappage programs.

General Motors underwent a significant transformation during the crisis, whose turning point was hallmarked by the bankruptcy proceedings that happened in June 2009, however, the auto maker had struggled with many problems already in the preceding period. In fact, new car sales already dropped from 2005 onwards, which resulted in a suboptimal production structure in the auto industry that is generally facing overcapacities. These items considerably undermined the liquidity position of the company. State involvement was also justified by a more than one million American jobs that depended on the further functioning of GM. After the bankruptcy proceedings, General Motors was reorganized with the ownership participation of the United States Treasury, and it could establish a much more competitive cost structure due to its portfolio rationalization. The measures comprised of the reduction of the number of brands, consolidation of manufacturing capacities and also organizational changes that jointly contributed to the attainment of a lower cost level, and its long term sustainability. Therefore, *active government participation* was inevitable to render the operation more efficient. The success of the reorganization is confirmed by the profitable operations of the last five fiscal years (2010–2014) in a row, as well as by the complete repayment of government loans and ownership, which was also done in case of the other two auto makers Chrysler and Ford.

Parallel to the increase of the participation of national governments, multinational companies still have a notable influence. The development program adopted on the G20 summit in Brisbane in 2014 could establish *a new step in the cooperation* between multinational companies and national governments. By this program, G20 member states aimed to increase the world GDP growth rate by 2.1 percentage points by 2018. This economic growth would be attained in state coordination, primarily by the launch of infrastructural investment projects, which would raise the global GDP by about 2 billion US dollars, and would create millions of new workplaces. The projects would be funded by budgetary resources of the governments and by funds originating from international banks.

3.2. New and novel scientific results

1. The dissertation demonstrates the knowledge related to financial globalization and formation of crises in a *novel systematization*. This novel approach highlights the role of the systemic problems (globalization, deregulation and liberalization), and in this

context, it draws up potential steps forward in terms of the design of the future global financial governance, and also related to the further development of the economic-political and financial cooperation of the European Union.

2. Besides the traditional approach, the dissertation also evaluates the new characteristics of the crisis of years 2007–2009 according to on a *new (common) crisis model* created and analyzed by the Author that is based on information asymmetry. It compares the experiences of the crisis and crisis management of the current and of the Southeast Asian crisis of 1997–1998, and demonstrates the alterations in the functions of international organizations and national governments in a *novel viewpoint*.
3. The *assessment* of the prevailing crisis management *measures from the perspective of sustainability*, and also the establishment of the *criteria* of a sustainable financial system constitute *new scientific results* of the thesis, with special regards to a more balanced distribution of international currency reserves and to the management of the public debt accumulated in the European countries.
4. The *elaboration of the case study* related to the role of the state participation in the crisis management of the General Motors group also forms a *new scientific result*. The related case study concludes that a more close cooperation becomes necessary between multinational companies and national governments to eliminate the negative effects of the crisis to a more complete extent, and to explore new opportunities of cooperation.

4. Conclusions and recommendations

The world economic crisis of 2007–2009 that was characterized as the first global financial crisis brought about novelties in many aspects in the thinking of economics. Based on the experience of the elapsed period, we can that say we have witnessed the biggest worldwide downturn since the Great Depression of 1929–1933. Contrary to the crises of the period between 1980 and 2000, the current crisis did not originate from emerging countries, but from the United States of America that is considered as the most advanced economy in the world, and then spilled over to other countries. The financial side of the crisis started with problems in the US (subprime) mortgage market, however, these processes gave only the final push to the collapse of financial system that had already been vulnerable. In fact, parallel to the collapse of the mortgage market, many other factors also contributed to the formation of the crisis and later to its escalation as well. Such factors included the presence of global payment imbalances, accumulation of sovereign debts, as well as the worldwide interlinkage of financial markets, especially in addition to the widespread doctrines of economic liberalization and deregulation. A special scope of problems was represented by the crisis of the euro as the common currency of the European Union. Hence, the crisis showed signs of several crisis types, such as of the financial asset price “bubbles”, liquidity, and sovereign and debt crises in the same time. Corresponding to this, the responses of the various parties (governments, international organizations as well as financial institutions) involved in the crisis management materialized in numerous aspects, and focused on different areas. Such areas were for example the sovereign bailout packages (EU-Greece), restoring the liquidity and confidence in the financial markets (Fed, ECB), furthermore, assistance provided to the real economy (demand stimulation, workplace retention support). The experience of past years shows that these Keynesian type crisis management policies were basically successful, however, they rather provided symptomatic cure only, and could not solve the original underlying – systemic – problems.

The situation of the European Union throughout the crisis was special from many aspects. Banks of the member states of the EU did not possess significant exposures to the “toxic” assets of the US subprime mortgage market, hence the spillover of the crisis through this transmission channel materialized in a limited form only. Several member states of the EU already faced problems primarily in terms of indebtedness and growth potential, well before the outbreak of the crisis in the US mortgage market. The common currency zone, established by the creation of the euro, which was not supplemented by a fiscal integration, played a key role in this process. Hence, those fiscal transfers that could have played a balancing role in case of asymmetric shocks, could not be implemented. By having a common currency and a uniform monetary policy, the available policy tools of the national governments were restricted to the fiscal area. The room for maneuver of the public finances was also confined by the set of community rules, such as the Maastricht criteria, or the provisions of the Stability and Growth Pact. Thus, the future of the European Union could definitively lie along the direction of further enhancement of the integration, by a “forward escape” to a fiscal union, and by the strengthening of the financial regulations. The establishment of a fiscal union would require a substantially higher community budget minimum of 15-20 per cent of the gross domestic product, similarly to that of the United States, compared to the current ratio of 1 per cent of the GDP. According to the opinion of the author, the first inevitable step of this process could be to elevate certain social service systems (social security, unemployment benefits and pension funds) to community level, which could be followed by the standardization of (turnover and income) tax schemes. The community budget would be supported by a central issuance of euro bonds at the level of the monetary union, along with the adequate management of moral hazards. The common issuance of euro bonds is not envisaged to cover the sovereign fiscal deficits of the member states, but to provide financing for the “European budget”. To maintain the integration, it will therefore be indispensable to increase the solidarity among the nations, as well as the requisite political will to set up the fiscal union. According to a less ambitious – and politically more viable considering current conditions – plan of the fiscal cooperation, fiscal authorities of the member states would assume the objective of ensuring the soundness of public finances, by setting of fiscal indicators. In order to prevent the failure of this process due to the resistance of the nation-states and let it function effectively, adequate incentives need to be created to the member states, so that they should consider fiscal discipline as a common (political and economic) interest.

Almost all sectors of real economy were negatively affected by the economic crisis, but most severe damages were perhaps caused to the automotive industry which was based on a credit-financed demand in a significant portion. The auto industry traditionally requires high capital investments, in which economies of scale play a major role. Therefore, production capacities can hardly adjust to excessive fluctuations in demand. The drop of sales hence resulted in under-utilized vehicle factories. Ultimately, it was the lack of proper adaptation that brought all “Detroit Three” automakers (General Motors, Ford and Chrysler) close to bankruptcy by 2008-2009. Government assistance played a significant role in the crisis management of these companies, especially from the side of the government of the United States. Of the above global automakers, the Author investigated General Motors more closely, which in Europe is present with its brand Opel/Vauxhall.

In the summer of 2009, General Motors underwent a proceeding under Chapter 11 of the US bankruptcy code that enabled the company to get rid of a number of its liabilities, and to be reorganized with the support of the United States Treasury. In short term, the crisis management of the Group focused mainly on ensuring the life-saving financing, but on the longer term – besides organizational changes – we could observe alterations in the investment strategy as well. These steps materialized both in terms of marketing and sales, as well as in the consolidation of production capacities. Besides the reduction of the number of brands eliminating their internal concurrence, the product development moved towards the global product platforms, which allowed for the efficient and flexible utilization of global manufacturing footprint, hence ultimately, the exploitation of the benefits of economies of scale. From the results of the last five fiscal years, it is apparent that the reorganization of General Motors was successful, and from year 2010 onwards, the Group continuously reported profitable operations on a global level.

Based on a review of the crisis management of the General Motors Group, we can state that the mutual cooperation with national governments plays a major role in the crisis management of multinational companies: besides their influence on national economies, governments usually provide incentives for the localization and further domestic investments of these companies planning on a global scale. As a result of the international financial crisis, governments played a different role compared to past evidence mainly in the field of financing, which manifested in lending activities as well as in acquisitions of ownership, both in the manufacturing industry and in the financial sector.

The crisis highlighted that the belief in the omnipotence of free market policies (also known as the "market fundamentalism") is insufficient by itself: the market forces alone are inadequate to avoid and manage the crisis; therefore, regulatory intervention is unavoidable. It can be taken for granted that the treatment of system-level problems cannot sufficiently prevail at the level of nation-states. True global solutions are necessary to the challenges of the global market. As a consequence of this, a realistic move forward could be the global harmonization of financial regulation, in which the consultation process between nation states and the role of consensus will significantly be appreciated. The "New Global Financial Architecture" cannot function without the involvement of the developing countries at a much wider scale than what we can observe today, especially of China, which currently already represents a significant economic force, firstly in financing role, but later on, after the liberalization capital controls, it could also assume a regulatory role. The big question of the future of the international financial system is in which institutional structure this architecture could be implemented: whether current institutions (IMF, World Bank, G20, BIS) would significantly transform and change their functions, or rather new and independent global organizations would be formed that take better account of the economic weight of those countries. A third – interim – way would be to establish regional organizations, among which the necessary coordination of economic policies and financial regulations could be achieved. Tendencies of our time show an increasing probability of the realization of this third way. It is in the great responsibility of the decision makers that these organizations shall not serve the fragmented regionalism of an impoverishing "race to bottom", but a re-balanced multilateralism, that is associated with a substantial economic cooperation. Such a worldwide harmonized financial system could flexibly adjust to the shifts in economic forces, and could in the same time mitigate the systemic risks on a global scale. Requirements of sustainability cannot be ignored when designing the future international financial system, either. Hence, those mechanisms should be enacted which are capable of securing efficient capital allocations, while avoiding destabilizing speculations and capital flights, in the same time not impairing any possibilities of future generations. The aim is to avoid contagion crises by the stricter control on financial activities and capital movements. In this process, enhancing the stability of the international financial system and increasing market confidence would represent a major step forward, which could be supplemented by the partial release of international currency reserves, which are at present withdrawn from circulation, to achieve development programs in the real economy. In this case, security would be provided by a higher degree of regulation and international coordination.

Surveying the history of the evolution of financial globalization we can come to the conclusion that no retreat from globalization will take place, and the termination of market economy model will not occur, either. Similarly, we cannot expect a significant reduction in the role of financial innovations, nor the abandoning of the principles of liberalization. This is demonstrated by the survival of securitization model as well as by the solidification of the economic policy guidelines of "Washington Consensus", which is still promoted by the International Monetary Fund, and determines its conditional lending policy. In the same time, we can expect a growing importance of cultures different from the current Western culture, which had previously dominated. Such – Eastern – cultures represent a less individualistic economic picture of man that is different from prior concepts.

The establishment of the new financial governance is work in process. One of the greatest lessons learned from the crisis in fact proves the need for stronger prudential regulation. The formation of the new organizational scheme is not an easy job, whether this proceeds with the renewal of current Bretton Woods institutions or with the replacement of those institutions by brand new organizations. General criteria of the new international financial system are flexibility, stability as well as predictability. We ought to have the faith that in the course of the establishment of the new global financial government, the international community learns from its own mistakes, and it recognizes that only the cooperation, thus the substantial coordination of economic policies and regulations could lead us forward.

5. Publications related to the topic of the thesis

Foreign language articles and papers

1. Bartakovics, Gábor (2011). *Outsourcing Among Multinational Companies*. Second International Conference for PhD Candidates, Economics, Management and Tourism. South-West University of Neofit-Rilski. Bulgaria. (pp. 44-49). ISSN 1314-3557

Hungarian language articles and papers

1. Bartakovics, Gábor (2013). *Fenntarthatósági számvitel*. „Felelős társadalom - Fenntartható gazdaság" Nemzetközi Tudományos Konferencia. Nyugat-magyarországi Egyetem, Közgazdaságtudományi Kar. Sopron, 2013. november. (pp. 666-682). ISBN 978-963-334-144-5
2. Bartakovics, Gábor (2012). *Állami támogatások az autóiparban - Az Európai Bizottság vizsgálatainak tükrében*. „Munkahelyteremtés - Hatékonyság - Innováció" Nemzetközi Tudományos Konferencia. Nyugat-magyarországi Egyetem, Közgazdaságtudományi Kar. Sopron, 2012. november. (pp. 284-299). ISBN 978-963-359-000-3
3. Bartakovics, Gábor–Sávay, Balázs (2012). *Kína az új világbankár?* „Tehetség és kreativitás a tudományban" Nemzetközi Tudományos Konferencia. Tanulmánykötet. Nyugat-magyarországi Egyetem, Közgazdaságtudományi Kar. Sopron, 2012. május. (pp. 387-404). ISBN 978-963-9883-92-5
4. Bartakovics, Gábor (2011). *A válság reálgazdasági hatása a multinacionális vállalatok szemszögéből*. „Változó környezet – Innovatív stratégiák" Nemzetközi Tudományos Konferencia. Nyugat-magyarországi Egyetem, Közgazdaságtudományi Kar. Sopron, 2011. november. (pp. 1062-1075). ISBN 978-963-9883-87-1
5. Bartakovics, Gábor (2011). *Az Egyesült Államok és az Európai Unió pénzpiaci szabályozásának összehasonlítása a gazdasági válság kialakulására tekintettel*. Gazdaság és Társadalom. 2011/Különszám. Sopron. (pp. 42-61). ISSN 0865-7823

Other selected publications

1. Bartakovics, Gábor (2005). *Az olajár-változás pénzügyi hatásainak vizsgálata az 1970-es évektől napjainkig*. XXVII. Országos Tudományos Diákköri Konferencia, Közgazdaságtudományi Szekció. Sopron

The full Publication List of the Author is available in the Library of Hungarian Scientific Works (MTMT): https://vm.mtmt.hu//search/slist.php?lang=0&AuthorID=10031558