Gábor Gyura and Anikó Szombati: Systemic risk in focus – New directions of financial supervision at home and abroad*

Stronger, more efficient control of the financial system can primarily be ensured by strengthening macro-prudential supervisory activities focusing on the risks of the financial system as a whole. This may be facilitated, first of all, by closer cooperation between central banks and supervisory authorities, as well as by broadening the powers and intervention opportunities of these authorities. The European Systemic Risk Board (ESRB) and the European System of Financial Supervisors (ESFS) are being established in the European Union in order to apply these principles in practice. Similarly to several other countries, Hungary is also planning to reform its supervisory system: according to the plans, both the central bank and the supervisory authority will have more powerful tools at their disposal, and a Financial Stability Council will be established to harmonise the activities of the national authorities more closely.

INTRODUCTION

The majority of international analyses examining the lessons of the crisis since the summer of 2007 emphasise that the institutions responsible for systemic risks all around the world did not intervene in due course, i.e. when risks started to build up. Studying the background of the causes, the question of what hindered the authorities in taking the necessary steps arises. Were they not aware of the magnitude of the risks? Did they lack the proper tools? Or did they fear that potentially unilateral supervisory tightening measures – concerning only the given country – would entail unreasonably large growth sacrifices?

Oversight of the smooth operation of the financial system is basically the responsibility of the central banks. This is because major difficulties in the financial system, i.e. in the financial markets, the financial infrastructure or at the financial institutions, may – in addition to weakening the efficiency of monetary transmission – be accompanied by material losses of the real economy. Therefore, in order to avoid this, central banks monitor the operation of the entire financial system continuously, and – relying on the standard instruments of central banks – ensure its continuous liquidity, while also playing a significant role in the operation of the infrastructure. Their 'lender of last resort' function also serves the purpose of avoiding a confidence crisis spreading across the entire intermediary system, by providing a 'quick fix' for temporary liquidity problems.

The risks leading to the outbreak of the present crisis were mostly known individually, since each had been identified years before in international central bank and other analyses. The impact analysis of the interaction between the various risk types or that of their simultaneous emergence, i.e. an examination of the system as a whole (macro-prudential analysis), however, did not take place or was inadequate. Unaware of the actual magnitude of the threat, public policy decision-makers felt no urgent need to take risk-mitigating measures. Naturally, there were also very strong counter-arguments proposed by the financial institutions against any active intervention. The "approved" instrument of preventing the build-up of risks was reliance on the advanced risk measurement of market participants and increasingly sophisticated risk management techniques, such as – for example – spreading risks through securitisation. In addition, the authorities responsible for regulation were too concerned about economic growth to seriously contemplate curbing risks and the accompanying restrictions.

However, the events following the summer of 2007 proved that – even if players appeared to be sound individually – risks might emerge at the level of the financial system, which may jeopardise the stability of the entire system. The most obvious example of this in Hungary is retail foreign currency lending.

Although it will take a long time to recover fully from the current crisis, the foundations for an institutional system capable of preventing the next, equally devastating crisis should be established now, during the period of critical atmosphere. The common conclusion of crisis analyses is that one of the most imperative steps is to strengthen the framework for macro-prudential analyses and interventions.

* The views expressed in this article are those of the author(s) and do not necessarily reflect the offical view ot the Magyar Nemzeti Bank.

Table 1

Comparison of the macro- and micro-prudential perspectives

	Macro-prudential	Micro-prudential
Proximate objective	Limit financial system-wide distress	Limit distress of individual institutions
Ultimate objective	Avoidance of output (GDP) costs	Consumer (investor/depositor) protection
Characterisation of risk	(Partially) endogenous	Exogenous
Correlation and common exposures across institutions	Important	Irrelevant
Calibration of prudential controls	In terms of system-wide risks: "top-down"	In terms of risks of individual institutions: "bottom-up"

Source: Borio, C. (2006).

While in each country the main responsibility of identifying and managing the individual, institution-level risks *(micro-prudential analysis)* lies with the financial supervision, systemic risk-level analyses and evaluations covering the entire system belong rather to the scope of the central banks' responsibility *(macro-prudential analysis)*. Table 1 below illustrates the differences between the two approaches.

MONITORING SYSTEMIC RISKS

Macro-prudential analyses should essentially address two dimensions of systemic risks (EFC Working Group, 2009). First of all, they should examine the distribution of risks among sectors, i.e. the type and magnitude of risks affecting the main sub-units of the intermediary system at that point of time. In this regard, common or correlated exposures amplifying each other should be identified, and when they reach a critical level, markets and regulators should both be alerted.

There is, however, also another dimension of systemic risks which so far has received less attention, i.e. the so-called time dimension. Analyses of this nature inspect the evolution of systemic risks over time and the way the behaviour of the system's participants amplifies these risks. Namely, procyclical behaviour by the system's institutions may considerably amplify the impact of real economic cycles, thereby generating severe real economic damages both in periods of recovery and recession. Analysis of the cyclical character of financial intermediation and publication of the result should essentially serve three main objectives:

– Assistance should be provided to markets in properly assessing the dynamics of the evolution of systemic risks and the stage of such evolution at a certain point of time.

– Mechanisms that drive individual players to the optimal solutions at systemic level, i.e. to the dampening of cyclical fluctuations, must be found.

– It must be achieved that systemic risk considerations are taken into account both in supervisory and regulatory activities.

SYSTEMIC RISK INTERVENTION OPPORTUNITIES

But how can a central bank make a stand for its position and what kind of mechanisms can serve to mitigate systemic risks? One of the main lessons of the crisis is that no proper intervention instrument was available for the financial stability tasks of those central banks that do not supervise individual institutions. Thus, the question arises whether the other existing central bank instruments – such as interest rate policy as a monetary policy instrument – should be used for financial stability objectives, or whether these central banks should be equipped with new instruments.

According to a recently published IMF analysis, monetary policy must indeed internalise financial stability considerations, which essentially can be done in three ways. Financial stability as a goal complementing the objective of price stability could be included in the ultimate goals of monetary policy. Another solution is that the range of indices – considered for the achievement of interim goals – be expanded to include variables such trends in asset prices or credit market developments. A third option is that the time horizon of realising interim goals be extended. The latter would encourage decision-makers to also take account of the longer processes influencing the operation of the financial system (Nier, E. W, 2009). Herein the author – while analysing the lessons of the crisis – comes to the conclusion that both the efficiency of monetary policy and the quality of supervision can be improved, if the supervisory function is exercised by the central bank. According to the arguments for this solution, monetary policy may be facilitated by the more detailed information available about all sub-units of the financial system, while the quality of supervision may be positively influenced by the experience obtained by the central bank about the markets and the operation of the infrastructure, and the undoubted interest in the minimisation of resorting to the final lender.

In another group of analyses, the new challenge and task for the central banks is primarily seen in dampening the cyclical impacts. The proposed new instruments are also connected to this range of issues. Modification of the loan-to-value ratio in parallel with movements in the economic cycle could be a relatively simple instrument (Brunnermeier et al., 2009), where tightening may compensate for overvalued collaterals and the easing of lending conditions. On the other hand, in a recessionary environment relaxation of this ratio may boost a recovery.

According to further proposals which are still being formulated (Tucker, 2009), in order to curb procyclical behaviour, central banks should stipulate higher risk weights than those set out in the capital regulation for the asset groups deemed risky. In an opposite case, in the descending phase of the cycle, along the same lines of logic, relief measures could also be implemented. Thus the central banks, similarly to the supervision's discretionary power referred to as Pillar 2 in the Basel capital accord, would have the opportunity to override – at a banking system level, and based on the condition of the whole financial system – the capital requirements of certain exposure types in order to reduce cyclical impacts.

The idea has also arisen that the central bank's existing, liquidity crisis management powers should be enlarged with more general crisis management tools. In order to retain confidence in the integrity of the system, it may be necessary to take over control of certain banks – the ones with considerable amounts of deposits or which are important due to their active market relations – if the operability of the bank in question is jeopardised. This so-called early intervention tool may, in theory, fall under the competence of several authorities, but due to the potential role of the supervisory authority in the development of the situation, the empowering of an independent player, i.e. the central bank, with these crisis management authorities may be a logical step. In this case, the central bank would be authorised to intervene to find new owners for the still viable parts of the bank in order to prevent the potential damage arising from the possible protracted impairment of the credit institution concerned. With this, the central bank could ensure that services are maintained with the least possible uncertainties to the most possible – essentially insured – depositors, in addition to minimising the costs of a potential bank bailout burden for the taxpayers.

Opponents of the previous innovative proposals share the view that central banks should stick to sending strong signals. Risk-mitigating intervention is the task of the regulatory and supervisory institutions. At the same time, this approach also provides a new instrument for strengthening the voice of the central bank: application of the "act or explain" mechanism in the central bank's communication, previously only familiar as a micro-prudential supervisory instrument. In addition to publishing the results of their risk assessment, central banks would supplement them with action proposals addressed to the regulatory and supervisory authorities, which should either follow those or provide a reasonable explanation for rejecting them.

CHANGES AT THE EUROPEAN LEVEL

In its proposals regarding the structural transformation of the European Union's financial supervision, the expert group led by Jacques de Larosière also pointed out that too much attention was being paid to the examination of individual institutions in the EU as well (De Larosière et al., 2009). The horizon must be expanded: more attention should be paid to the risks outside the banking sector and those arising from the interaction between certain sectors, and to the macroeconomic contexts, the procyclical impacts and the sources of threats from outside Europe. However, not only the approaches need to be changed, as structural and organisational modifications also need to be made at both European and member state levels.

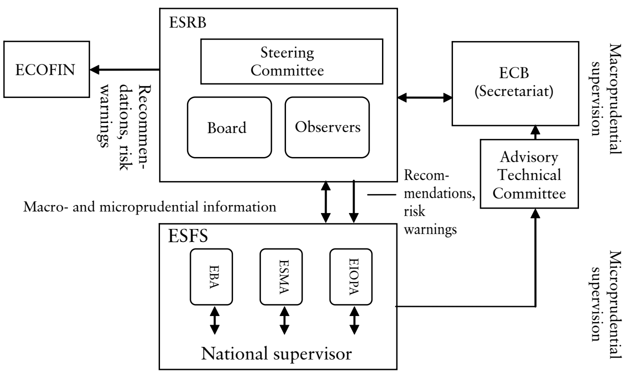
Although the proposal to transfer the supervision of international financial groups to Community level was raised again as a reform option and received support from Hungary as well, due to the fiscal dimension of supervision and crisis management, no transformation of this magnitude will take place, for lack of Community resources available for this purpose. Nevertheless, the financial supervision is still becoming "more international". Pursuant to the conclusions of the European Council, the new two-level (macro- and micro-prudential) European supervision system (Chart 1) proposed by the de Larosière report will be set up in 2010.

This entails the establishment of the European Systemic Risk Board (ESRB), the main role of which will be to reveal the systemic risks jeopardising the financial stability of the EU. Central banks will play a dominant role on the board, but the member states' supervisory authorities will be also represented, without voting rights.[1] The ESRB will not have its own, direct intervention instruments to forestall identified macro-prudential risks. Instead, it will draw attention to sources of threats and, when appropriate, it will put forward specific proposals, as required, to ECOFIN, the member states or supervisory authorities for the mitigation of risks. While these proposals will not be legally binding, the "addressees" will be expected to provide an explanation if they fail to implement the proposed actions (the so-called "act or explain" mechanism).

In addition to this, there will be changes in the field of micro-prudential supervision as well: the European System of Financial Supervisors (ESFS) will be established with a mandate to provide a framework for closer cooperation among national supervisions. The existing European supervisory committees – whose role is currently limited to consultation and coordination – will become authorities (European Supervisory Authorities, ESA), and will be primarily responsible for the standardisation of member states' regulations and supervisory practices, as well as for facilitating cooperation among the national supervisions. Supervision of financial markets and individual institutions, however, will fundamentally remain a national responsibility.

Chart 1

Proposed new European supervisory structure



Source: European Commission.

CHANGES AT THE NATIONAL LEVEL

In parallel with the Community-level changes, structural changes all around the world, and thus also in the member states of the European Union, have occurred and more are expected to take place in the near future. Although the reasons underlying the specific supervisory changes vary (national experiences of the present crisis, legal specifics, conflicting professional and political considerations, etc.), the strengthening of the macro-prudential orientation appears to be a clear trend. Several of the aforementioned possible, systemic-risk mitigating changes appear in the existing national plans. The reform trends known so far can be divided up into at least three directions.

Several nations are strengthening and institutionalising coordination among the authorities responsible for financial stability. In the United Kingdom – according to the government's plan – a Council for Financial Stability would be set up with the participation of the HM Treasury, the Bank of England and the FSA, which would regularly review systemic risks, consider intervention measures and – especially upon the occurrence of material risks – would represent a forum for quick, coordinated authority intervention. In Belgium, in the transitory period preceding the integration of the supervision into the central bank, the establishment of the Systemic Risk Committee is planned with the representation of the central bank and the supervisory authority. In the United States, the government's proposals include the establishment of the Financial Services Oversight Council (FSOC). Headed by the Treasury Department, the task of the body – formed of representatives of the Federal Reserve (FED) and the various sectors' supervisory authorities – would be to identify systemic risks, regulatory shortcomings and institutions of systemic importance.

Furthermore, several countries are planning to transfer micro-prudential supervision to the central bank, thereby practically "circumventing" the problem of coordination between the micro- and macro-prudential supervision. In Ireland, micro-prudential supervision, which from 2003 until

[1] Membership of ESRB will be rather large. Apart from the chairman and the deputy chairman, the chairman of the 27 central banks, the chairman of ECB, one member of the European Commission and the chairmen of three European supervisory authorities will be also members. In addition to this, a supervisory authority representative from each of the 27 member states, as well as the chairman of EFC will be non-voting members. Accordingly, in order to ensure the smooth operation of the institution with such an extremly number of members, a select decision preparation board of 9 people, a so-called "Steering committee" is also established, the members of which will only include the chairman and deputy chairman of ESRB, five central bank chairmen, three European authorities, the chairman of EFC and a Commission representative. The secretarial functions will be performed by ECB, but a so-called "Advisory Technical Committee" will be also set up, which will cooperate in specific issues, falling outside the competence of the ECB secretariat.

now has been practically a fully autonomous branch within the central bank, will be integrated in the unit responsible for system stability. At the time of writing this article, the governments in Belgium and Germany had already passed decisions on integration, in the area of supervision of all financial sectors in the former, and in the area of banking supervision in the latter.

The third amendment direction taking shape is the "installation" of such independent, quasi-regulatory intervention instruments at the central banks that may be used for achieving macro-prudential goals. According to the US plans, mentioned above, the FED would be responsible for the specifically macro-prudential focused supervision of institutions important in terms of systemic risks, and the central bank would also stipulate more stringent requirements (e.g. liquidity, leverage) for these institutions, and – in crisis situations – it could stabilise the system on its own by taking over the control of the institution. In the Czech Republic, the new intervention instrument of the Czech National Bank (CNB) – also responsible for supervision – has already been approved. In situations jeopardising financial stability, the CNB may prohibit or restrict risky activities for a limited – maximum 180-day – period, or may grant exemptions from certain legal requirements.

In the United Kingdom as well, several proposals were made to provide the central bank – similar to the interest rate in monetary policy – with a macro-prudential policy instrument of its own, the main objective of which would be the mitigation of pro-cyclical impacts. Potential instruments of this type which have been contemplated so far include increasing/lowering capital requirements, changing the LTV ratio and dynamic provisioning. Although the reform plans of the government published in June do not include this type of new policy instrument, related analyses are being conducted in the Bank of England and their proposals will be submitted for public consultation soon. In addition, based on a new law adopted in the beginning of 2009 the Bank of England was provided with new, extremely powerful instruments for managing potentially severe operational or solvency problems of banks of systemic importance: thus it may sell the credit institution concerned even against the will of the owners, or transfer its assets and liabilities to a publicly owned "bridge bank".

HUNGARIAN PLANS

In order to expand the modest range of instruments available to prevent the build-up of risks, to determine clear responsibilities necessary for the efficient management of the potential financial crises, and to accelerate the supervisory authority's decision-making mechanism, the Hungarian government also decided to review the supervisory and financial stability framework. Having considered a number of possible alternatives, the government put forward a bill to the Parliament which is aimed at providing both the Hungarian Financial Supervisory Authority (HFSA) and the MNB with more efficient tools, while at the same time strengthening the coordination between micro- and macro-prudential supervisions.[2]

The bill defines the role of the various authorities – i.e. the Ministry of Finance (MoF), the HFSA and the MNB – in financial supervision and regulation, as well as the related scopes of responsibilities. This partly implies new directions, and partly intends to clarify existing roles.

The MoF is responsible for regulation of financial markets and the implementation of the financial policy framework of the government's economic strategy. The HFSA will continue to focus on the stability and prudent operation of *individual* institutions, but the exploration and mitigation of activities and risks jeopardising certain *sectors* will also receive more attention. The HFSA will retain its right to take measures against the individual institutions, and at the very worst, intervene in their operation. (One must recall that the shortcomings or potential insolvency of a complex or large institution may jeopardise the entire financial system.) The central bank assumes the primary responsibility for detecting the risks jeopardising the stability of the entire financial system, which the law also intends to make more explicit.

The three authorities can only take joint responsibility for safeguarding the stability of the financial system. The most important forum of cooperation between the supervisory and regulatory authorities will be a new body, the Financial Stability Council[3] (FSC), established for the strategic control of the HFSA, where all three parties will be represented. The establishment of the FSC means – amongst other things – that the central bank's macro-prudential considerations may be represented in the supervision's

[2] Prior to completion of this article the Parliament had not yet adopted the law, and thus we only describe the expected planned changes deemed most relevant in terms of our topics.

[3] In fact, the FSC was established as an enhancement of the Financial Stability Committee – operating since 2005 – with the involvement of the MNB, the Ministry of Finances and the HFSA. The former body was merely a consultative, rather than a decision-making forum, and its activity was based not on a legal act, but only on the MoU between the three authorities.

Table 2

Planned new supervisory, financial stability structure

	Government/MoF	HFSA	Central bank	Financial Stability Council
Ultimate goal	**maintenance of financial stability**			
Institutional goal, task	• ensuring undisturbed economic development, adherence to the general government balance stipulated by the Parliament • regulation of the money, capital and insurance markets	• ensuring the undisturbed and prudent operation of financial organisations and markets • consumer protection	• ensuring the undisturbed development of the economy under long-term price stability • identification of systemic risks	**• ensuring the coordination among the institutions responsible for financial stability** **• development of the financial supervisory strategy**
Tools	• preparation of bills • enactment of regulations • utilisation of general government resources	**• issuance of binding regulations (?)** **• temporary measures in the case of acute systemic risks (?)** • supervisory recommendations, circulars, ICAAP-SREP dialogue • inspection, taking measures, imposing penalties	**• proposals for legislation** **• temporary measures in the case of acute systemic risks (?)** • lender of last resort	**• proposals for legislation**

Source: MNB.

Note: Planned changes are printed in bold.

activity more effectively, thus – for example – in the determination of the inspection target areas or the content of HFSA's recommendations. Since the dividing line between the individual, sectoral and system level risks is not always clear, the FSC will also serve the coordination of the two authorities' risk analyses.

The bill would also provide MNB itself with new powers to prevent the rapid build-up of systemic risks which it identifies. On the one hand, through predefined rules or procedures, the bill would ensure that the central bank's systemic risk warnings are followed by regulatory reaction. According to the bill, if – in the interest of preserving financial stability – the MNB proposes codification of laws to the government or the HFSA, they will have to provide a detailed explanation in the case of rejection, as is the case with the recommendations of the European Systemic Risk Board described above. (The FSC would also be provided with a similar – i.e. "strengthened" by mandatory explanation – right of recommendation.)

On the other hand, if risks build up rapidly, the MNB would have the opportunity to intervene directly as well, and could restrict, prohibit or make subject to conditions certain activities or products for a limited time (maximum 120 days).[4] The MNB could act in this manner if a certain activity or product impacts a large number of institutions, consumers or investors, and the aggregated risk would jeopardise the stability of the entire financial system. This, so-called forward-looking intervention authority would facilitate the containment of risks already in the phase of their build-up for fear that certain financial institutions become unable to operate or larger groups of consumers or investors suffer severe losses. Naturally, even with the use of such instruments, only legislation with unlimited time scope could provide a long-term solution, which could be initiated by the MNB at the competent authority, i.e. at the Ministry of Finance or the HFSA.

CONCLUSIONS

The crisis has made it clear at the global level that stronger attention must be paid to systemic risks as part of financial supervision. Not only the individual risk types on their own are relevant, as the interactions and identification of trends which intensify each other also need to be investigated. In addition, more attention than previously needs to be paid to the cyclical movements of risks, so that overheated as well as severe recessionary situations, which also impact the performance of the real economy, can be avoided.

Progress should be made not only in the identification of systemic risks, but the administrative instruments and procedures – facilitating the prevention of threats – must also be enhanced and improved. In this latter area, there are a larger number of unresolved issues.

[4] When this article was being written, it had not yet been decided whether this right will be granted to the HFSA or the MNB. Based on a motion for amendment, submitted to the original bill, the HFSA would be the authority that could restrict or prohibit the activities or products representing systemic risks, subject to informing the MNB in advance and prior consultation with the FSC. Similarly, when submitting the manuscript, it was still unsure whether or not the HFSA will be vested with the power to issue binding regulations.

First of all, the mechanisms ensuring the provision of proper responses by the authorities to identified risks must be created. This, as the case may be, could be supervisory or regulatory intervention. Since the organisational structure of central bank, and the regulatory and supervisory functions varies from country to country, it can be stated generally that coordination among organisations responsible for systemic risks must be strengthened.

The situation, when the source of the risk is a clearly identifiable institution that is important in terms of systemic risk, requires a special approach. The crisis has also demonstrated that instruments need to be developed to ensure that such institutions only rarely, if ever, find themselves in a liquidation situation, but on the other hand, owners cannot abuse their special situation and that their extreme risk taking is not left without consequences. In this area, the European Commission recently launched a communication with the aim of developing a common European framework for the resolution of international banking groups, however – in addition to the Community regulation – the strengthening of the instruments would be necessary at national level as well.

Apart from the operation of the national crisis management authorities, the success of the newly established two-tier European supervisory system in the supervision of large international financial groups' activity is a key issue. For the time being, it is not yet clear whether the institutions to be set up during 2010 will have adequate influence on the activity of the national regulatory and supervisory authorities, and whether in the case of problems that may affect several member states, coordination will be more successful than it was in 2008 and 2009.

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