

# Magyar Nemzeti Bank Research Evaluation Report 2008

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## I. INTRODUCTION

The Magyar Nemzeti Bank (MNB) (National Bank of Hungary) invited two external evaluators – Dr. László Halpern of Institute of Economics, Hungarian Academy of Sciences and Dr. Loretta J. Mester of the Federal Reserve Bank of Philadelphia – to review the research activities of the MNB. This seems like a sensible time to do such a review. Recently, the MNB decided to form a separate Research Department, initially staffed with some of the staff members in the former Economic Analysis and Research Department and with some external hires, including Ákos Valentinyi, from the University of Southampton, who became head of the new Research Department at the beginning of March 2008. Also, the MNB expects to at some point become a member of the Eurosystem and seeks to contribute to the monetary and economic policymaking of the Eurosystem once it becomes a member. The MNB has stated that a “high-quality research function is essential to its achieving this objective.”<sup>1</sup> Moreover, it seeks to have a significant impact not only nationally, but also internationally. The MNB has also stated that it “aims at developing the research skills that meet high international standards and produce frontier research.”

The evaluators were commissioned to assess the scientific quality of the MNB’s research output as a whole and the relevance of the research activities from the point of view of the strategic goals of the MNB. They were also asked to make recommendations for improving the research performance of the MNB. The research activities of the following departments were considered: Economic Analysis and Research Department, Financial Stability Department, and the Financial Analysis Department. The Terms of Reference of the evaluation are given in Appendix 1. László Halpern and Loretta J. Mester visited the MNB on February 27-28, 2008. The evaluation is based on examination of the research output, as well as interviews with MNB staff conducted by the evaluators on their visit. Appendix 2 lists the MNB staff consulted.

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<sup>1</sup> Evaluation of the research activities of the Magyar Nemzeti Bank, Terms of Reference, October 2007.

## **II. RESEARCH AT THE MAGYAR NEMZETI BANK: AN EVALUATION**

### **A. Objectives and Purpose of Research**

Economic research within a central bank plays a number of important roles. It forms a firm foundation upon which to make sound monetary policy and financial stability decisions by providing high-quality economic theory, models, and tools of analysis. Current analysis of the latest economic data helps guide monetary policy by informing policymakers about the current stance of economic growth relative to potential and of inflation relative to target. But longer-term, academic-style economic research provides the theoretical and empirical models upon which to assess the stance of monetary policy and the dynamics of the monetary policy transmission mechanism to the economy. Similarly, models of financial markets and intermediaries provide a way to assess the likelihood of financial market disruptions and guide financial stability policy decisions. Thus, it is important to distinguish between applied research and longer-term, academic-style research. In the former, economists apply known tools to study economic policy questions. In the latter, economists are pushing forward the frontier of economic research, discovering new models or methods or new results based on sound economic models and empirics. While it is useful to have both in a central bank, it is the longer term, academic-style research that forms the firm basis for policy analysis.

Without this research basis, it is impossible to make sound policy, especially given the lags with which monetary policy affects the economy. As policy is always implemented in an environment of uncertainty, it is important to identify where additional knowledge might be needed. Because the economy is dynamic and economic research is advancing, it is important for central banks to be continually learning. That means central bank research should be forward looking. It should not focus only on projects directly relevant to current policy issues; central banks should undertake research on projects that may not necessarily apply to today's most important issue but that might apply to tomorrow's. The research staff at a central bank must have the necessary skills to be able to respond to the issues raised by both current and future policymakers at the bank.

Economic analysis has frequently played a central role in determining policy, especially over the longer run. For example, economic research showing there was no exploitable systematic tradeoff between inflation and unemployment was instrumental in allowing the Federal Reserve to tame the high inflation of the late 1970s and early 1980s. In the second half of the 1990s in the U.S., understanding productivity growth became a very important policy issue. But at first it was not obvious that the U.S. was in the midst of an acceleration in productivity growth, and it was not clear what the implications of that acceleration, once it was recognized, were for monetary policy. Simple economic models would not have predicted the strong demand-side impact of the productivity acceleration, but more complicated models that allowed for an asymmetric impact on prices and wages were able to illuminate the disinflationary effect of the acceleration in productivity growth. These examples show that long-term economic research, and not only current economic analysis, plays an important role in implementing sound policy. Indeed, the current disruptions in financial markets call out for further research so that sound strategies for dealing with these problems can be implemented. Thus, research is an important ingredient in central banking and one to which the central bank should devote resources.

Research also provides another important benefit to central banks – it allows the central bank to attract high-quality staff. A stimulating, well-functioning research environment can attract top economists who otherwise would be attracted to academia, to the private sector, or to other central banks. Once at the central bank, they can apply their knowledge and skills to important policy issues. One way to attract these economists is to provide them with time and resources to produce research that is publishable in the top journals. By screening the economists during the hiring process to ensure they are working on issues relevant to central banking, the bank can then allow the economists some autonomy in setting their own research agendas. By being engaged in the economics profession, these central bank economists produce a positive externality – they educate other (non-central-bank) economists about policy-relevant economic issues and stimulate further research from academia and other research economists on topics of interest to the central bank.

Sound research also helps raise the profile of the central bank. By raising the bank's visibility and increasing the regard with which the bank is held by the economics profession worldwide, the bank will be able to expand its role in the policy debate. This is particularly important for the MNB as it contemplates joining the Eurosystem.

To obtain these benefits, the standards by which research at the MNB is judged must be the standards used to judge economic research in the economics profession, that is, the MNB's research must pass the market test. Those standards are increasingly the standards of top academic institutions and a number of central banks have chosen those standards as the way to evaluate their own research activities. In particular, external publication in top-ranked economic and finance journals and citations of the articles are important measures of the success of the research initiatives undertaken at the MNB. Invitations to external conferences and seminars are another measure of the impact and engagement of MNB research staff in the profession.<sup>2</sup>

### **B. The Organization of Research at the MNB**

The Board members to whom we spoke (Governor András Simor, Deputy Governor Ferenc Karvalits, and Deputy Governor Júlia Király) are supportive of the research functions at the MNB. They are relatively new to the MNB. It seemed to us, that the new management understands the role research can play as the basis for sound policy decisions and for raising the MNB's credibility in policy debates. The Governor also expressed a willingness to expend the necessary resources in support of research and to improve interaction between researchers and the top management of the MNB so that the researchers will be exposed to important policy-relevant issues. The governing body believes one measure of research success is if it transforms the monetary policy and financial stability discussions within the European System of Central Banks thereby enhancing the MNB's reputation.

Until now, research has been spread across three departments: Economic Analysis and Research, Financial Analysis, and Financial Stability. The researchers within Financial Analysis and Financial

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<sup>2</sup> Appendices 3, 4, and 5 detail the external conference presentations by Bank staff during 2004-2007.

Stability focus on applied research, which is mainly demand driven, i.e., requested by the governing body. It is policy-relevant work, whose goal is to help the departments carry out their operational work. There are five applied researchers in the Financial Analysis Department and five applied researchers in the Financial Stability Department.<sup>3</sup> Within the Economic Analysis and Research Department there are 33 economists, of which 6 belong to the Research Group. Some of these economists do applied research; some are working on an economic forecasting model; the Research Group is focused on longer-term research. The applied research projects across the three departments may be written up as articles that appear in the MNB's Working Paper series, Occasional Paper series, or in the MNB's *Bulletin*, or as internal memos to senior management. Currently and going forward there is no intention on the part of the departments for these applied papers to seek publication in external academic journals. The final product will continue to be the MNB's own series or internal memos. However, the researchers have been successful in getting some of these papers onto conference programs, and going forward, the MNB might consider encouraging the applied researchers to submit some of these papers to journals for outside publication. For example, the applied research group within the Financial Analysis Department has been developing an expertise in market microstructure. Given the staff is necessarily small, taking advantage of areas in which it has already developed some expertise might be a good strategy for gaining recognition. The MNB might consider encouraging these researchers, in particular, to try to publish their work in outside refereed journals.

In addition to the applied research projects, a group of researchers within the Economic Analysis and Research Department is constructing a dynamic stochastic general equilibrium (DSGE) model of the Hungarian economy that will be used for monetary policy purposes. While there may be publishable research papers that grow out of what the researchers learn in building this model, that is not the aim of the project, nor should publishable research be the measure of the project's success. Success for this project will be determined by its value in helping formulate sound monetary policy.

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<sup>3</sup> See Appendix 5 and information from MNB.

At the beginning of March 2008, the Economic Analysis and Research Department was split into two parts. Economic Analysis will continue to house the applied researchers and modelers, and do the operational work in support of the monetary policy function (e.g., forecasting, current economic analysis, inflation report, etc.) The new Research Department will house the researchers who focus on longer-term research, which also supports the policy mission of the MNB. Five of the six economists currently in the Research Group within the Economic Analysis and Research Department (now called the Economic Analysis Department) will move into the new Research Department. The MNB has hired Ákos Valentinyi to head the new Research Department. Our discussions with Ákos suggest he will be a strong leader for the group. The aim is to expand the group to about 10 Ph.D. economists over the next five years. This is ambitious given the difficulties facing MNB in hiring (discussed below), but it is necessary to get the staff size up to this critical mass. Having enough staff so that researchers can travel to present at conferences and to give seminars without disrupting the work of the group is essential.

Although different central banks arrange their research activities in different ways (e.g., some have separate research and economics departments and others do not), the external review committee endorses the formation of this separate department at the MNB at this time, as we believe it will raise the probability that the MNB will achieve its research goals. Note that such a structural change is often a difficult transition for the people undergoing the change. It is incumbent upon the leaders of both departments to recognize that such a transition can be difficult and to work together to ensure it is as smooth as it can be.

The new Research Department is where the academic-style research of the MNB will be housed. The department will focus on research that is publishable in international academic journals. This is the correct aim. Not only does the refereeing process improve the research, but journal publications have been the measure adopted by the economics profession to judge economic research. The MNB has developed a point scheme for ranking journals to measure output quality. While there is necessarily some arbitrariness to any such ranking, it will be a valuable tool as the Department, especially as it establishes itself, because it will help send the right signal about the new Department's goals. The Department



should also explore other ways of ranking journals, including impact factors. They might also begin to keep track of publication citations as a measure of the Department's impact. It will take some time for the researchers to build up their research agendas so that they will generate a stream of output. It is important that management understand research is a risky endeavor – there are more misses than hits – and that it takes time for research projects to bear fruit. Neither management nor the researchers themselves should be discouraged not to see a lot of early results. The researchers themselves should not be discouraged either. Most articles are rejected the first time they are submitted; good research takes perseverance. In addition to journal publications, the Department will want to keep track of various measures of engagement in the economics profession, including conference and seminar presentations, invitations to referee articles, and service on conference program committees. The MNB has already begun collecting such data.

How research projects are chosen by Bank staff is a very important issue as the MNB establishes its new Research Department and maintains its applied research groups within Economic Analysis, Financial Analysis, and Financial Stability. Two approaches could be used – top-down or bottom-up – and the method chosen should be driven by the type of research being done. By “top-down” we mean senior management assigning research projects to staff. This approach would seem to be more appropriate for applied research projects that are shorter-term and are intended to provide an answer to a particular question. By “bottom-up” we mean researchers choosing the projects on which they want to work and having some autonomy over their research agendas. This model seems to provide the best results in terms of longer-term research, so we encourage the MNB to pursue this model for the longer-term research to be pursued by researchers in the new Research Department. It is important for researchers to have the time to build up a research agenda rather than go from one project to another unrelated project. This is not to say that the central bank should be a think tank – the research agendas need to be relevant to central banking. Also, researchers might benefit from mentoring from either senior management or senior visiting researchers from outside the MNB to help them develop ideas. This will be particularly true as the new Research Department works to establish itself. Moreover, this does not

mean that senior management cannot ask researchers to work on particular projects every so often. But the model should be one in which Research Department researchers are expected to develop and progress on their own agendas. High-quality research comes from the pursuit of an active research agenda that builds on prior work and expands knowledge.

### C. Journal Publications, Working Papers, Occasional Papers, *Bulletin* Articles

Here we confine ourselves to discussing the research publications of the MNB, including Working Papers, Occasional Papers, and *Bulletin* articles. We do not discuss the policy communications of the MNB, e.g., the Inflation Report, the Financial Stability Report, the Conference Report, and Statements of the Monetary Council.

The MNB staff is currently publishing papers in foreign and refereed journals. The list the MNB provided us with indicates that 7 staff members in the Economic Analysis and Research Department published 18 articles in foreign, refereed journals from 2001 to 2008 to date. A handful of these are in top-tier field or second-tier general purpose journals (e.g., *Journal of Labor Economics*; *Review of Economics and Dynamics*; *Canadian Journal of Economics*; and *Journal of Money, Credit, and Banking*). The others are in lower quality journals. Of these 18 articles, 12 are in journals that have Thomson ISI Web of Knowledge Journal Citation Reports (JCR) Impact Factors for 2006.<sup>4</sup> The average journal impact factor of these 12 articles is 0.726. This compares to an impact factor of 1.879 for the *American Economic Review*.<sup>5</sup> The number of MNB publications over the 7-year period weighted by impact factor is 8.715, and the number of *American Economic Review*-equivalent articles is 7.34, or about 1.0 per year.

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<sup>4</sup>A journal's impact factor helps to measure the relative scientific importance of a journal. As explained by Thomson ISI: "The journal impact factor is a measure of the frequency with which the average article in a journal has been cited in a particular year. The impact factor helps in evaluating a journal's relative importance, especially when you compare it to others in the same field. The impact factor is calculated by dividing the number of citations in the current year of articles published in the two previous years by the total number of articles published in the two previous years." For example, a journal's impact factor in 2006 equals the number of citations in 2006 of papers published in 2004 and 2005 divided by the number of papers published in 2004 and 2005.

<sup>5</sup>Of the economics and finance journals with JCR rankings in 2006, the *Quarterly Journal of Economics* has the highest impact factor, at 3.938.

To put these numbers into perspective, based on data presented in an external review of the European Central Bank undertaken in 2003,<sup>6</sup> the number of *American Economic Review*-equivalent papers published by staff in the ECB's Directorate General Research Department over the 2000-2003 period averaged 3.7 per year, and the number of *American Economic Review*-equivalent papers published by staff in the ECB's Directorate General Economics Department over the 2000-2003 period averaged 1.7 per year.

That MNB staff have been able to get research published in foreign, refereed journals before the creation of a dedicated Research Department indicates that the staff is talented. The MNB's task now is to try to increase the number of papers published in higher-quality refereed journals. This will help establish the reputation of the MNB so that it can participate in the policy debates within the European System of Central Banks, and enhance monetary and financial markets policy analysis. This goal should be the focal point of the new Research Department.

In discussing research output with the applied researchers it became clear that for these researchers and their management, Working Papers are an end product. Thus, the fact that there are no publications in foreign, refereed journals on the lists of publications provided to us by the Financial Analysis Department and Financial Stability Department, should not be a surprise. There was no desire on either the part of the researchers or senior management to try to get the applied research published in academic journals. (Although, as we note above, the fact that some of these papers have been accepted onto conference programs suggest that some may have the potential, with more work, to be developed into longer-term research papers that warrant publication in academic journals.) Given the intention of much of this work to be shorter, more focused applications, this makes sense – i.e. this is not the type of work that would be appropriate for publication in refereed journals (note, this is not a comment on its quality). But then in this case, it would be better to publish this work in series that is separate from the Working Paper series, which in most institutions (both academia and central banks), are intended as

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<sup>6</sup> Goodfriend, Marvin, Reiner König, and Rafael Repullo, "External Evaluation of the Economic Research Activities of the European Central Bank," February 2004.

inputs into the final output of journal publication. Working Papers should be viewed as a necessary ingredient in producing publishable research; they are an important way to disseminate new ideas to colleagues and to garner useful feedback thereby yielding higher quality work that will ultimately be published in journals. Working papers are intermediate outputs; the final output comes after the paper is improved enough to merit publication in a high-quality refereed journal. The MNB is putting work not intended for publication into the Working Paper series, but a long list of Working Papers that never get published might be taken erroneously as a negative signal on the quality of the work. We would recommend that shorter-term applied research be published as Occasional Papers and the distinction between final work and work in progress be articulated.

The MNB publishes a large number of Occasional Papers on a large variety of topics in different lengths and formats. According to information about the Occasional Paper series on the MNB's external website, publications in the Occasional Papers series "...contain the results of analysis and research work conducted at the NBH. Their purpose is to encourage readers to present their comments, which may be useful for the authors in further research."<sup>7</sup> That mission does not contradict the fact that these papers are considered to be final products and are typically not going to be submitted for publication elsewhere. Note that the number of titles is significantly larger than that of Working Papers, more than two-thirds of these papers are written in Hungarian, and the length typically exceeds 40 pages. This means that the Occasional Papers series represents a major source of written communication of analytical and applied research results to the Hungarian-speaking audience. Many of the Occasional Papers combine a literature survey with some assessment of the Hungarian economy based on an analytical framework used to arrive at policy conclusions. Others disseminate basic technical knowledge relevant to issues in central banking, combined with a detailed description of analytical tools and frameworks used for forecasting and modeling. Thus, the Occasional Papers are a valuable output of the MNB. However, because they are final products, and not "work-in-progress" as working papers are, and because these papers are not

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<sup>7</sup> See the webpage: [http://english.mnb.hu/Engine.aspx?page=mnben\\_muhelytanulmanyok&ContentID=3061](http://english.mnb.hu/Engine.aspx?page=mnben_muhelytanulmanyok&ContentID=3061).

subject to the market test of the journal submission/refereeing process, it becomes the MNB's responsibility to ensure that these papers meet or exceed a given, chosen quality level. The MNB might want to consider the editorial process for these papers to see if any changes should be made. Note, we are not suggesting that these papers should be forced to have a common format or length, nor that the average paper in the series is below par. We are recommending only that there be some editorial standards with respect to quality that are consistently applied.

Some of the staff have published papers in the MNB *Bulletin*. These papers are intended to be readable and to cover topics of general economic interest. There are several reasons a central bank wants to communicate important economic ideas to the public. For one thing, it helps monetary policy effectiveness if the central bank is perceived to be credible and competent. Many central banks publish such a bulletin. But the skill and time it takes to turn technical articles into accessible articles should not be underestimated. While we think this is a worthwhile pursuit, we also think it may be best to keep the researchers in the new Research Department focused on establishing their research agendas, at least to begin with. Over time as the Department and researchers mature, they may be asked to contribute to the *Bulletin*. In the meantime, the *Bulletin* might be an outlet for some of the applied analyses that will not get wider dissemination via journal articles.

### **III. LOOKING TO THE FUTURE**

#### **A. Human Capital Accumulation**

It has been difficult to attract Ph.D. economists to the MNB. Salaries at the ECB outpace those at the MNB in real terms. The MNB has focused on trying to attract Hungarians back who have been abroad and now want to return. This strategy should continue. It will also be important to attract non-Hungarians since the supply of Hungarian economists is not large. The joint positions with the Central European University (CEU) seem to be working well and seem to have attracted staff who might not otherwise have considered the MNB. The MNB should encourage cooperation between the CEU and the

Institute of Economics, Hungarian Academy of Sciences.<sup>8</sup> It should also work to foster relationships with other Central Banks in central Europe. The MNB should strive to be the center of economic thought in the region. Organizing joint seminars and conferences is one way to start.

One issue is the use of Hungarian in many MNB documents and emails. To the extent that the MNB hires non-Hungarians it might want to try to do more of its correspondence in both Hungarian and English so that the non-Hungarian staff would feel more a part of the institution.

We were told that the salary at the ECB was considerably higher than the salary at the MNB. This salary differential needs to be addressed. The MNB has lost staff to the ECB. Moreover, there is a potential morale issue for researchers who may visit the ECB but then return to the MNB and be expected to perform similar work for significantly less pay (cost-of-living adjusted). The lower pay may be partially offset by higher potential personal impact on policymaking and better access to professionally stimulating tasks, but only marginally so.

As the Research Department grows, it might be able to offer sabbaticals to its researchers to visit universities abroad. This could be structured as in U.S. universities, with the MNB paying part of the researcher's salary and the researcher obligated to return to the MNB. The Ph.D. researchers and modelers in the other departments might also be given sabbaticals to the Research Department or to universities. Note, these sabbaticals must be sufficiently long (at least 6 months) to be worthwhile. (We were told that while a sabbatical program exists, it is rarely used because it is difficult to get senior management to approve release for more than one month because of work loads.)

The applied researchers in Financial Analysis, Financial Stability, and Economic Analysis usually have master degrees. Financial Stability has had some difficulties with retention. Staff may leave to go to the private sector or to get their PhDs. Some of the staff expressed the view that they would become too specialized if they stayed at the MNB too long. The MNB might consider establishing a more definite job ladder for staff so that they could retain more experienced staff. This might entail a job rotation for

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<sup>8</sup> Loretta Mester suggested closer cooperation with the Institute. Since he is affiliated with the Institute, László Halpern recused himself from this recommendation to avoid any appearance of a conflict of interest.

select individuals so that they would be exposed to other research areas of the MNB. The MNB might also consider sponsoring the most promising staff for PhDs. This would be under the understanding that the sponsored staff would return to the MNB after completing their degrees. While there would be some staff that would fail to return, this still might be a cost-effective experiment given the difficulties in hiring PhDs.

Our discussions with the applied researchers suggested that there were a very large number of projects being undertaken. This is also confirmed by the large number and variety of Occasional Papers being written. Given the many demands on a relatively small staff, the MNB senior management should consider reducing the number of projects it is expecting the staff to complete. If researchers had more time to devote to each project, this might result in higher quality work and yield new insights.

Many researchers talked about the large number of meetings that take place in the MNB. It wasn't clear whether staff members were expected to attend these meetings or whether management was trying to make staff feel more involved by inviting them to these meetings. Management should take a careful look at this. Some meetings they will want staff to attend; others will be optional. Management must convey this information to staff.

Senior researchers mentioned the uneven distribution and sometimes high burden of mentoring activities across departments. Senior researchers (both those doing academic, long-term research and those doing applied research) should be responsible for providing some mentoring to their junior colleagues. However, mentoring duties should be assigned taking into account the senior researchers' research time and not only be demand-driven. That is, senior researchers must know when they are "on-duty" for such mentoring. Note, also, that some of the mentoring could be outsourced or done in cooperation with CEU, as was done with econometrics in the Economic Analysis and Research Department.

### **B. The Role of the Research Department in the MNB's Operational Duties**

A particularly important issue facing the MNB is the role the new Research Department will play in policy discussions, and most immediately, in the help the researchers will provide to the modelers who

will remain in the Economic Analysis Department. The Head of the Economic Analysis Department believes that the researchers have contributed to the modeling process and is concerned about losing that resource as the department splits. However, the modeling staff told us they were less concerned about this, as they did not feel the contribution had been as significant. Whatever the case is for this particular project, it is important that the two departments find ways to work well together. The Economic Analysis Department will gain the expertise of the researchers from the Research Department, but the Research Department also gains by exposing the researchers to policy issues. This type of exposure is important for several reasons. It allows for synergies between the shorter run policy issues and longer-run research, and provides a way for the longer-run research to have an impact on the policymaking process, which results in better policymaking. Also, it makes the supply-driven research model sustainable. That is, it is best to have researchers select their own research agendas. By exposing the researchers to policy, they will learn what issues are relevant and this can help when they begin formulating their agendas. Also, by having researchers involved in policy to some extent, they are able to demonstrate their value to senior management in a concrete way. It is important that the Research Department not be a think tank or become isolated from the rest of the MNB. This would be unsustainable over the long run. Thus, the researchers in the Research Department should have some responsibilities for policy and/or applied work.

At the same time that it is important for the Research Department to be involved in some way in policy, it is extremely important that this work be structured in a way that it doesn't interfere with the time needed to do long-term research. In particular, the amount of time to do research needs to be sufficient and this must be time that is uninterrupted. (Having 50 percent of your time to do research but not knowing from day-to-day whether it will be a research day or not is not conducive to doing good research.) Thus, the policy duties must be predictable and known well in advance, so that the researchers can plan around these duties. Given conference and seminar schedules, it is important that researchers know far in advance when they will need to be at the MNB for policy and when they can travel to participate in conferences and seminar.



Our understanding is the Head of Economic Analysis and the Head of Research are drawing up a working agreement. This is to be encouraged.

Another way of fostering cooperation and exposure to policy is to consider sabbaticals from the Research Department to the other operational areas of the MNB. This should be considered only after the Research Department is well established. Another possibility is for applied researchers to go on sabbatical to the Research Department. As mentioned above, to be productive, such sabbaticals need to be of sufficient length (6 months or longer), so that a project can be established.

Research Department staff also should have ongoing access to the MNB's top management and interactions with Monetary Council members. Governors and Deputy Governors should set aside time to discuss the staff's research. This might take the form of a quarterly research roundtable. Not only will the researchers benefit from knowing what issues are on the minds of the policymakers, but the policymakers will benefit by knowing what research is being conducted at the MNB. This research can influence their speeches and their policymaking.

### **C. The Research Environment at the MNB**

In general, the staff members we interviewed were generally satisfied with the research environment of the MNB. They thought there was sufficient funding to travel to conferences and seminars, and valued this activity. We found three issues that could be addressed to improve the environment. First, while the computing environment generally offers sufficiently powerful computing, the system is very locked down for security reasons. In particular, staff members are not permitted to connect micro drives to their machines, which makes it difficult to bring files to and from the MNB. It is also difficult to remotely access the MNB's computing environment, which is disruptive to the research mission since research is not a 9 to 5 job. Computing is an essential tool for research. We believe the MNB should explore solutions used by other central banks, which have similar security issues.

Researchers currently do not have research assistants to help them with data work or other calculations. While RAs are less important in theoretical work, they can help improve efficiency and accuracy of empirical work. The MNB should consider supplying an RA to the Research Department to

help the researchers. In our view it would be a good investment. The RAs may eventually go on to earn their Ph.D.s and then return to the MNB as researchers.

Hiring permanent Ph.D. researchers should be given highest priority, but in the meantime, establishing a visitors program in which more experienced researchers visit the MNB would be valuable. It would provide a valuable way to expose the junior researchers and modelers at the MNB to more senior colleagues. (Apparently this does not always occur – we were told that some of the modelers were unaware that Frank Smets visited the MNB in 2006.) Interaction between MNB staff and visitors is also a good way to emphasize to the profession that the MNB is serious about raising the quality of its research activities.

#### **IV. RECOMMENDATIONS**

Our review of the MNB leads us to offer several recommendations, many of which we have discussed above but repeat here.

1. Researchers within the new Research Department should be given large portions of uninterrupted time to work on their research agendas. Senior management should encourage researchers to explore topics of interest to the central bank, but researchers should have a good deal of autonomy in selecting their research agendas. Senior management and decisionmakers should meet with the researchers periodically to get an update on research projects and to give the researchers some insight into important policy issues.
2. Researchers in the new Research Department must be given the clear message that the department values long-term, academic-style research and compensation should be tied to performance. Senior management must recognize that long-term research takes time to accomplish. New Ph.D.s should be evaluated based on their research progress, and while they may have only Working Papers initially, they should be expected to follow some of these papers through to publication in academic journals. Researchers should also be expected to be engaged

in the economics profession, i.e., presenting their work at conferences and seminars, refereeing papers, serving on program committees.

3. The managements of the new Research Department and the Economic Analysis Department should strive to develop a healthy working relationship between their departments so that synergies between research and policy analysis can be captured. It is beneficial for the MNB if researchers are involved in the modeling work carried on in the Economic Analysis Department. The researchers benefit by getting exposure to an important policy project of the MNB, and the modelers benefit from the researchers expertise. The management should ensure that the amount of time devoted by the researchers to this project is appropriate.

4. It will be particularly important as the new Research Department is established that applied researchers in the other departments not feel disenfranchised or disadvantaged. Senior management of the MNB should explain the importance of this applied research work to the MNB's policy mission, and reward superior performance in the applied research areas.

5. The senior management should consider reducing the very large number of applied research projects the applied researchers are expected to complete. This would perhaps yield fewer but higher quality work, which would benefit the MNB in the long run. The MNB should ensure consistent application of standards to the Occasional Paper series. The MNB already has identified market microstructure as an area in which it has expertise compared to other European central banks. It might consider whether there are other areas in which it has a comparative advantage and shift resources to these research areas.

6. Hiring will be difficult, but significant resources should be expended to add some experienced Ph.D. economists to the staff. One or two key hires can be a catalyst for more. The hiring of the new research director is an excellent start.

7. It takes significant resources to build a successful research mission. At the same time, the central bank must not be profligate as it is working for the public weal. To get a better understanding of the costs involved in building a research department, the MNB might want to

query other central banks. This will give them some idea about what they need to add to the budget and also whether the MNB is using its budget dollars efficiently compared to other central banks.

8. A well-crafted visitors' program can bring expertise to the MNB and expose junior researchers to more senior professional colleagues. This is particularly important when the MNB is in the building phase of its research activities. The fact that Budapest is an interesting but less traveled city is a potential attractor.

9. Working papers should be considered intermediate inputs into journal publications. Applied research is also important to the work of the MNB. It should be published in a separate series so that the public will understand that these are finished products and not working papers that did not achieve publication. This would send the wrong signal about the quality of these papers.

10. Computing and external contact are crucial for doing high-quality research, yet several staff members mentioned that the current computing system is so locked down that it is an impediment to getting work done. In particular, it needs to be easier to bring electronic files to the MNB and to access the MNB research computers remotely. Other central banks have struggled with the balance of security and research needs. Some have solved it by developing a separate research network. This might be worth exploring. The MNB should try to improve the researchers' web presences by giving them individual web pages.

11. Currently, researchers do not have research assistants. RAs have become part of the standard package for researchers at central banks. The MNB should consider hiring one to start with, and as the staff of researchers grows, the MNB may want to add another.

## **V. CONCLUDING REMARKS**

In conclusion, we feel senior management is committed to raising the performance of the research activities of the MNB. With the establishment of a new Research Department and the hiring of a distinguished research director, this should be an exciting time at the MNB. The goal is to increase the

quantity and quality of the research output, thereby achieving better policy analysis, and the MNB's stature in the monetary policy debates in Europe. We believe the MNB can accomplish this. It will need to increase the size of its Research Department along the lines planned – an increase from 5 to 10 Ph.D. economists within the next 5 years. It will need to ensure that the researchers are given sufficient research time and support to devote to establishing their research agendas. At the same time, the Research Department should not be isolated from the rest of the MNB. Researchers should have the opportunity to meet with senior management of the MNB so that they are exposed to relevant policy issues. Researchers should also be expected to make some contribution to the modeling efforts of the MNB and to provide some mentoring to the applied researchers on their projects.

## Appendix 1

### Terms of Reference for the Evaluation of the Research Activities of the Magyar Nemzeti Bank (the National Bank of Hungary) (October 29, 2007)

#### 1. Purpose of Evaluation

In few years time the Magyar Nemzeti Bank becomes the member of the Eurosystem of European Central Bank. The Bank strategic objective is to contribute constructively to the formation of monetary and economic policy of Eurosystem once it becomes its member. The Bank's view is that high-quality research function is essential to achieve this objective. The research activities of the Magyar Nemzeti Bank should enable the Bank to have a significant impact not only nationally, but also at the international level. To achieve these objectives, the Bank aims at developing research skills that meet high international standards and produce frontier research.

To aid the further development of research at the Magyar Nemzeti Bank the management of the Bank has invited two external experts to evaluate the research activities of the Bank. The evaluation should provide assessment of the quality of the Bank's research output, and the relevance of the research activities for the above strategic goals of the Bank. The evaluators shall conduct their work freely and objectively, and make recommendations for improving the research performance of the Bank.

#### 2. The Evaluators

The Magyar Nemzeti Bank invited László Halpern (Institute of Economics, Hungarian Academy of Sciences) and Loretta Mester (Federal Reserve Bank of Philadelphia).

#### 3. The scope of the evaluation

The evaluation will cover all of the economic research activities of the Magyar Nemzeti Bank, irrespective of the department in which the activity takes place. Therefore the evaluators should consider the following departments:

- Economics and Research Department
- Financial Stability Department
- Financial Analysis Department

#### 4. Information base for the evaluation

The evaluation should be based on examination of the research output and on interview with Bank staff. In addition to the published research output, the evaluators will have access to internal reports which are relevant to the evaluation of research quality. The evaluators requested to visit the Magyar Nemzeti Bank to gather information needed for the evaluation. During the visits, the evaluators will be introduced to unpublished research of the Bank, and research output which is available only in Hungarian.

The evaluators shall treat all information, which comes to their knowledge in the course of the evaluation and not available to the general public, confidentially. They shall not at any time use information or material not available to the general public for the purpose of furthering a private interest of any other person or entity. They will act with appropriate propriety and discretion and will refrain from making any public statement concerning their duties without the prior approval

of the Magyar Nemzeti Bank. They will also be bound by this obligation after the end of the evaluation.

#### **5. The evaluation report**

The evaluation report should be presented to the to the Governor and the Deputy Governors of the Magyar Nemzeti Bank by 1 March 2008. [Deadline reset to 31 March 2008 by email from Péter Benczúr on 8 November 2007.] The reports will be the property of the Magyar Nemzeti Bank and the evaluators undertake not to disclose any part of their reports without the permission of the Magyar Nemzeti Bank. The Magyar Nemzeti Bank will have the right to publish the reports, or parts of them, as it sees appropriate. The evaluators may choose to submit a joint report if they wish.

#### **6. Fees and other financial terms**

(Intentionally omitted)

## Appendix 2

### People Interviewed by the External Evaluation Committee

András Simor, Governor

Ferenc Karvalits, Deputy Governor

Júlia Király, Deputy Governor

Ákos Valentinyi, Incoming Head of the Research Department

Ágnes Csermely, Head of the Economic Analysis Department

András Kármán, Head of Financial Analysis Department

Márton Nagy, Deputy Head of the Financial Stability Department

Áron Gereben, Head of the Applied Research Group within the Financial Analysis Department

Marianna Endrész, Head of the Applied Research Group within the Financial Stability Department

Zoltán Jakab, Senior Member of the Economic Analysis Department

Alessia Campolmi, Member of the Research Department

Anna Naszódi, Member of the Research Department

Ádám Reiff, Member of the Research Department

Szilárd Benk, Member of the Modeling Group within the Economic Analysis Department

Áron Horváth, Member of the Modeling Group within the Economic Analysis Department

Henrik Kucsera, Member of the Modeling Group within the Economic Analysis Department

Katalin Szilágyi, Member of the Modeling Group within the Economic Analysis Department

Viktor Várpalotai, Member of the Modeling Group within the Economic Analysis Department

Csaba Csávás, Member of the Applied Research Group within the Financial Analysis Department

Norbert Kiss, Member of the Applied Research Group within the Financial Analysis Department

Klára Pintér, Member of the Applied Research Group within the Financial Analysis Department

Zoltán Reppa, Member of the Applied Research Group within the Financial Analysis Department

Katalin Bodnár, Member of the Applied Research Group within the Financial Stability Department

Dániel Holló, Member of the Applied Research Group within the Financial Stability Department

Bálint Tamási, Member of the Applied Research Group within the Financial Stability Department

Zoltán Vásáry, Member of the Applied Research Group within the Financial Stability Department



## Appendix 3

## Research Activities of the Economic Analysis and Research Staff

## Research Activities of the Economic Analysis and Research Staff

Publications Author	Title	Type	Outlet	Year	
<b>International Journals</b>					
Peter Benczur (with Attila Ratfai)	Economic Fluctuations in Central and Eastern Europe. The Facts.	journal article	Applied Economics, accepted subject to minor revision.	2008	Research unit
Szilárd Benk (with M Gillman and M Kejak)	Money Velocity in an Endogenous Growth Business Cycle with Credit Shocks	journal article	Journal of Money, Credit and Banking (forthcoming)	2008	
Gabor Vadas (with Gabor Kiss)	Filling The Gap - An International Comparison of The Cyclical Adjustment of Budget Balances	Published paper	Comparative Economic Studies, Volume 49, Issue 2	2007	
Gabor Vadas (with Gergely Kiss)	The Role of the Housing Market in Monetary Transmission - Evidence from Hungary	Published paper	European Journal of Housing Policy, Volume 7, Issue 3	2007	
Istvan Konya	Optimal Immigration and Cultural Assimilation	journal article	Journal of Labor Economics	2007	Research unit
Istvan Konya (with Hiroshi Ohashi)	International Consumption Patterns among High-income Countries: Evidence from the OECD data	journal article	Review of International Economics	2007	Research unit
Peter Benczur (with Emin Muradov and Attila Ratfai)	Cyclical Fluctuations in CIS Economies	journal article	Journal of Business Cycle Measurement and Analysis	2007	Research unit
Attila Csajbók (with András Rezessy)	"Hungary's Eurozone Entry Date: What do the Markets Think and What If They Change Their Minds?"	Published paper	Contemporary Economic Policy, Vol. 24, No. 3, July 2006	2006	
Istvan Konya	Modeling Cultural Barriers in International Trade	journal article	Review of International Economics	2006	Research unit
Peter Benczur (with Andras Simon and Viktor Varpalotai)	Social Costs of Consumer Impatience in Hungary	journal article	Journal of Policy Modeling	2006	Research unit
Viktor Várpalotai (with Peter Benczúr and András Simon)	Social Costs of Consumer Impatience in Hungary	journal article	Journal of Policy Modeling	2006	
Peter Benczur	Information revelation, liquidity shocks, the volatility and the level of bond spreads	journal article	Economica	2005	Research unit
Szilárd Benk (with M Gillman and M Kejak)	Credit Shocks in the Financial Deregulatory Era. Not the Usual Suspects	journal article	Review of Economic Dynamics	2005	

## Research Activities of the Economic Analysis and Research Staff

### Publications

Author	Title	Type	Outlet	Year	Research unit
Istvan Konya	Minorities and Majorities: A Dynamic Model of Assimilation	journal article	Canadian Journal of Economics	2005	Research unit
Szilárd Benk (with M Gillman and M Kejak)	A Comparison of Exchange Economies within a Monetary Business Cycle	journal article	Manchester School	2005	
Csilla Horvath	Computing the levels of the impulse response functions of a log-transformed VAR system	journal article	International Journal of Forecasting	2004	Research unit
Gabor Vadas	Modeling Households' Savings and Dwellings Investment - A Portfolio Choice Approach	Published paper	International Real Estate Review, Volume 7, Number 1	2004	
Mihály András Kovács (with Zoltán Jakab and András Oszlay)	How Far Has Trade Integration Advanced? An Analysis of the Actual and Potential Trade of Three Central and Eastern European Countries"	journal article	Journal of Comparative Economics	2001	
<b>Hungarian Journals</b>					
Áron Horváth	Survey of the Real Estate Price Augmentation	Published paper	Hungarian refereed journal: Külgazdasági Szemle	2007	
Mihály András Kovács	What does Monetary Policy do in the Inflation Targeting System?	journal article	Hungarian Journal of Economics (Közgazdasági Szemle)	2007	
Peter Benczur	Behavioral responses to taxation – a literature survey; in Hungarian	journal article	Közgazdasági Szemle	2007	Research unit
Gabor Vadas (with Gergely Kiss)	The Role of the Housing Market in Monetary Transmission ("A lakáspiac szerepe a monetáris transzmisszióban")	Published paper	Hungarian Journal of Economics (Közgazdasági Szemle LIII évf., 2006 május )	2006	
Mihály András Kovács (with Zoltán Jakab and Gergely Kiss)	What have we learned? The Role of Central Bank Forecasts in the First Five Year of Inflation Targeting	journal article	Hungarian Journal of Economics (Közgazdasági Szemle)	2006	
Viktor Várpalotai	How far should we foresee?	article	Világgazdaság	2006	
Viktor Várpalotai	Time-varying fractional lag and its estimation ("Idoben változó valós rendű eltolás és becslése")	journal article	Hungarian Statistical Review	2006	
Viktor Várpalotai	Optimal horizon of inflation targeting in Hungary ("Az inflációs cél követésének optimális horizontja Magyarországon")	journal article	Hungarian Journal of Economics (Közgazdasági Szemle)	2006	
Viktor Várpalotai (with Zoltán Jakab and Balázs Vonnák)	What could monetary policy affect? ("Mire hat a monetáris politika?")	article	Világgazdaság	2006	

### Research Activities of the Economic Analysis and Research Staff

Publications						
Author	Title	Type	Outlet	Year		
Zoltan Jakab (with Gergely Kiss and Mihály András Kovács)	„Mit tanultunk"	journal article	Közgazdasági Szemle	2006		
Anna Naszodi	What is the effect of the band shift on the exchange rate? ("A sáveltolás árfolyamhatásának vizsgálata opciós modell keretei között")	Published paper	Hungarian Journal of Economics (Közgazdasági Szemle)	2005	Research unit	
Anna Naszodi (with Csilla Horváth and Judit Krekó)	Interest rate pass-through in Hungary" ("Kamatátgyűrűzés Magyarországon")	Published paper	Hungarian Journal of Economics (Közgazdasági Szemle)	2005	Research unit	
Gabor Vadas (with Gabor Kiss)	Be on your guard! Cyclical Adjusted Budget Deficit ("Légy résen - Az államháztartási egyenleg ciklikus igazításának buktatói")	Published paper	Hungarian Journal of Economics (Közgazdasági Szemle LII évf., 2005 február )	2005		
Istvan Konya (with Peter Benczur)	Nominális növekedés egy kis, nyitott gazdaságban [Nominal Growth in a Small Open Economy]	journal article	Hungarian Journal of Economics (Közgazdasági Szemle)	2005	Research unit	
Péter Bauer (with Erika Földesi)	Seasonal Adjustment	Published paper	KSH Methodological Papers in Statistics (Statisztikai módszertani füzetek)	2005		
Anna Naszodi (with Csilla Horváth and Judit Krekó)	How do changes in central bank rate affect commercial banks' rates?" ("Hogyan hat a jegybanki kamat változása a kereskedelmi banki kamatokra?")	Published paper	Hungarian Journal of Banking (Hitelintézeti Szemle)	2004	Research unit	
Péter Bauer (with Erika Földesi)	The harmonisation of the practice of seasonal adjustment in the Hungarian Central Statistical Office	journal article	Hungarian Statistical Review	2004		
Peter Benczur	Real Effects of Nominal shocks: a 2-sector Dynamic Model with Slow Capital Adjustment and Money-in-the-utility; in Hungarian	journal article	Közgazdasági Szemle	2004	Research unit	
Gábor Vadas	Beyond Macro Variables: Consumer Confidence Index and Household Expenditure in Hungary ("Túl a makrováltozókon: a lakossági bizalmi index és a magyar háztartások fogyasztási kiadásai")	Published paper	Hungarian Statistical Review (Statisztikai Szemle, 81. évfolyam, 2003. 3. szám)	2003		
Viktor Várpalotai	Disinflation Simulations with a Disaggregated Output Gap Based Model ("Dezinflációs számítások dezaggregált kibocsátási résekre alapozó makromodellel")	journal article	Hungarian Journal of Economics (Közgazdasági Szemle)	2003		

### Research Activities of the Economic Analysis and Research Staff

#### Publications

Author	Title	Type	Outlet	Year	Research unit
Péter Benczúr	The behavior of the nominal exchange rate at the beginning of disinflations; in Hungarian	journal article	Közgazdasági Szemle	2002	Research unit
Viktor Várpalotai	Numerical method to backcast economic data ("Numerikus módszer gazdasági adatok visszabecslésére")	journal article	Hungarian Journal of Economics (Közgazdasági Szemle)	2002	
Viktor Várpalotai (with András Simon)	Debt, risk and precaution ("Eladósodás, kockázat és óvatosság")	journal article	Hungarian Journal of Economics (Közgazdasági Szemle)	2001	
Ádám Reiff - András Sugár - Éva Surányi	Productive Efficiency in the Hungarian Industry	journal article	Hungarian Statistical Review	2002	
Gábor Pula - Ádám Reiff	The Role of Domestic Business Surveys in Short-Term Forecasting the Hungarian Manufacturing	journal article	Hungarian Statistical Review	2003	

#### Books

Zoltan Jakab	„Monetary Transmission in Hungary”	Book		2007	
Viktor Várpalotai	Disaggregated econometric models to forecast inflation in Hungary	book chapter	Exchange rates and Macroeconomics dynamics, Palgrave	2006	
Viktor Várpalotai (with Zoltán Jakab and Balázs Vonnák)	How does monetary policy affect aggregate demand? A multimodel approach for Hungary	book chapter	Monetary Transmission in Hungary	2006	
Balázs Világi	Dual Inflation and the Real Exchange Rate in New Open Economy Macroeconomics	Collected Volume Article	NBER ISOM	2005	Research unit
Attila Csajbók	“Monetary and Exchange Rate Strategies in Hungary on the Way to the Euro”	book chapter	in: De Sousa, L. V. – B. Van Arle (eds): The Euroarea and the New Member States, New York, Palgrave Macmillan, 2004	2004	
Viktor Várpalotai (with Peter Benczúr and András Simon)	Evaluating macroeconomic strategies with a calibrated model.	book chapter	65th Anniversary Conference Proceedings of the Institute of Economics	2004	
Mihály András Kovács	Disentangling the Balassa Samuelson Effect in CEC5 countries	book chapter	Monetary Strategies for Joining the Euro (EE)	2003	
Viktor Várpalotai (with András Simon)	Precaution, Optimal External Debt and Fully Non-Ricardian Behaviour	book chapter	Macromodels 2001	2001	

## Research Activities of the Economic Analysis and Research Staff

Publications Author	Title	Type	Outlet	Year	
<b>Non-MNB Working Papers</b>					
Anna Naszodi	Are the Exchange Rates of EMU Candidate Countries Anchored by their Expected Euro Locking Rates?	Working Paper	Focus on European Economic Integration 1/2007 Vienna: Oesterreichische Nationalbank.	2007	Research unit
Szilárd Benk (with G. Rünstler and others)	Short-term forecasting of GDP using large datasets: a pseudo real-time forecast evaluation exercise	working paper	ECB Occasional papers (forthcoming)	2007	
Balázs Világi	Deviations from Interest Rate Parity in Small Open Economies: A Quantitative-Theoretical Investigation	Working Paper	HAS-IE	2005	Research unit
Peter Benczur (with Cosmin Ilut)	Determinants of Spreads on Sovereign Bank Loans: The Role of Credit History	Working Paper	CEU WP	2005	Research unit
Peter Benczur	The Composition of Sovereign Debt: A Description	Working Paper	CEU WP	2003	Research unit
Peter Benczur	Identifying Sovereign Bond	Working Paper	CEU WP	2001	Research unit
<b>MNB Bulletin Articles</b>					
Peter Gabriel (with Klara Pinter)	Whom should we believe? Information content of the yield curve and analysts' expectations	MNB Bulletin	MNB Bulletin	2006	
Peter Gabriel (with Adam Reiff)	The effect of the change in VAT rates on the consumer price index	MNB Bulletin	MNB Bulletin	2006	
<b>MNB Working Papers</b>					
Ádám Reiff	Firm-Level Adjustment Costs and Aggregate Investment Dynamics: Estimation on Hungarian Data	working paper	MNB Working paper (forthcoming)	forthcoming	
Anna Naszodi	Are the Exchange Rates of EMU Candidate Countries Anchored by their Expected Euro Locking Rates?	Working Paper	MNB Working Paper	2008	Research unit
Balázs Vonnák	The Hungarian Monetary Transmission Mechanism: an Assessment	working paper	MNB working paper	2007	
Istvan Konya (with Peter Benczur)	Convergence, capital accumulation and the nominal exchange rate	working paper	MNB Working Paper 2007/2	2007	Research unit
Szilárd Benk (with M Gillman and M Kejak)	Money Velocity in an Endogenous Growth Business Cycle with Credit	working paper	MNB, Working Paper	2007	

### Research Activities of the Economic Analysis and Research Staff

Publications Author	Title	Type	Outlet	Year	
	Shocks				
Anna Naszodi (with Csilla Horváth and Judit Krekó)	Is there a bank lending channel in Hungary? Evidence from bank panel data	Working Paper	MNB Working Paper	2006	Research unit
Gergely Kiss - Márton Nagy - Balázs Vonnák	Credit Growth in Central and Eastern Europe: Convergence or Boom?	working paper	MNB working paper	2006	
Peter Gabriel (with Klara Pinter)	The effect of the MNB's communication on financial markets	Working Paper	MNB Working Paper	2006	
Viktor Várpalotai (with Zoltán Jakab and Balázs Vonnák)	How does monetary policy affect aggregate demand? A multimodel approach for Hungary	working paper	MNB Working Paper	2006	
Zoltán Jakab M. - Viktor Várpalotai - Balázs Vonnák	How does monetary policy affect aggregate demand? A multimodel approach for Hungary	working paper	MNB working paper	2006	
Balázs Vonnák	Estimating the Effect of Hungarian Monetary Policy within a Structural VAR Framework	working paper	MNB working paper	2005	
Gabor Vadas (with Gabor Kiss)	Mind the Gap - International Comparison of Cyclical Adjustment of the Budget	Working Paper	MNB Working Paper No. 2005/4	2005	
Gabor Vadas (with Zsolt Darvas)	A New Method for Combining Detrending Techniques with Application to Business Cycle Synchronization of the New EU Members	Working Paper	MNB Working Paper No. 2005/5	2005	
Viktor Várpalotai	Optimal horizon of inflation targeting in Hungary ("Az inflációs cél követésének optimális horizontja Magyarországon")	working paper	MNB Working Paper	2005	
Anna Naszodi	Target Zone Rearrangements and Exchange Rate Behavior in an Options-Based Model	Working Paper	MNB Working Paper	2004	Research unit
Anna Naszodi (with Csilla Horváth and Judit Krekó)	Interest rate pass-through: the case of Hungary	Working Paper	MNB Working Paper	2004	Research unit
Gabor Vadas (with Gabor Kiss)	Mind the Gap - Watch the Ways of Cyclical Adjustment of Budget Balance	Working Paper	MNB Working Paper No. 2004/7	2004	
Viktor Várpalotai (with Peter Benczúr and András Simon)	Analyzing Fiscal Policy and Growth with a Calibrated Macro Model	working paper	MNB Working Paper	2004	
Gabor Vadas (with Zsolt Darvas)	Univariate Potential Output Estimations for Hungary	Working Paper	MNB Working Paper No. 2003/8	2003	
Mihály András Kovács (with Zoltán Jakab)	Determinants of the Exchange Rates Pass-through in Hungary	working paper	MNB Working Paper Series	2003	
Viktor Várpalotai	Disaggregated Cost Pass-Through Based Econometric Inflation-Forecasting Model	working paper	MNB Working Paper	2003	

### Research Activities of the Economic Analysis and Research Staff

Publications Author	Title	Type	Outlet	Year	
	for Hungary				
Viktor Várpalotai	Disinflation Simulations with a Disaggregated Output Gap Based Model	working paper	MNB Working Paper	2003	
Viktor Várpalotai	Numerical Method for Estimating GDP Data for Hungary	working paper	MNB Working Paper	2003	
Zoltan Jakab (with Mihály András Kovács)	„Explaining the Exchange Rate Pass-Through in Hungary: Simulations with the NIGEM Model”, coauthor: , Working Paper Series of the Magyar Nemzeti Bank, 2003/5	Working Paper	MNB WP 2003/5	2003	
Mihály András Kovács (with Zoltán Jakab)	Hungary in the NIGEM Model	working paper	NBH Working Paper Series	2002	
Peter Benczur (with Andras Simon and Viktor Varpalotai)	Disinflation Simulations with a Small Model of an Open Economy	Working Paper	MNB WP 2002/4	2002	Research unit
<b>NMB Occasional Papers</b>					
Gabor Vadas	Wealth Portfolio of Hungarian Households - Urban legends and Facts	MNB, Occasional Papers	MNB Occasional Paper No. 68.	2007	
Gyozo Eppich	Three methods to estimate the whitening-related distortion of the wage statistics	MNB, Occasional Papers	MNB, Occasional Papers No 66	2007	
Szilárd Benk (with Z. M. Jakab, M. A. Kovács, B. Párkányi, Z. Reppa and G. Vadas)	The Hungarian Quarterly Projection Model (NEM)	working paper	MNB, Occasional Paper	2006	
Gabor Vadas (with Benk, Sz., Jakab, M.Z., Kovács, M.A, Párkányi, B., Reppa,Z)	The Hungarian Quarterly Projection Model (NEM)	MNB, Occasional Papers	MNB Occasional Paper No. 60.	2006	
Máté Barnabás Tóth (with Cecilia Hornok and Zoltán Jakab)	Adjustment of global imbalances: Illustrative scenarios for Hungary	MNB, Occasional Papers	MNB, Occasional Paper 59.	2006	
Zoltan Jakab (with Ágnes Horváth, Gábor P. Kiss and Balázs Párkányi)	Myths and Maths: Macroeconomic Effects of Fiscal Adjustments in Hungary	MNB, Occasional Papers	Magyar Nemzeti Bank Occasional papers 52. 2006	2006	
Zoltan Jakab (with Cecilia Hornok and Máté Barnabás Tóth)	„Adjustment of global imbalances: Illustrative scenarios for Hungary”	MNB, Occasional Papers	Magyar Nemzeti Bank Occasional Papers 59. 2006	2006	
Zoltan Jakab (with Mihály András Kovács, Balázs Párkányi, Zoltán Reppa and Gábor Vadas)	„The Hungarian Quarterly Projection Model (N.E.M.)”	MNB, Occasional Papers	Magyar Nemzeti Bank, Magyar Nemzeti Bank Occasional papers 60. 2006	2006	

## Research Activities of the Economic Analysis and Research Staff

<b>Publications</b>					
<b>Author</b>	<b>Title</b>	<b>Type</b>	<b>Outlet</b>	<b>Year</b>	
Zoltan Jakab (with Viktor Várpalotai and Balázs Vonnák)	How does monetary policy affect aggregate demand? A multimodel approach for Hungary”	MNB, Occasional Papers	Magyar Nemzeti Bank Working Papers 2006/4	2006	
Gabor Vadas (with Benk,Sz. and Jakab, M.Z., )	Potential Output Estimations for Hungary: A Survey of Different Approaches	MNB, Occasional Papers	MNB Occasional Paper No. 43.	2005	
Szilárd Benk (with Z. M. Jakab and G. Vadas)	Potential Output Estimations for Hungary: A Survey of Different Approaches	MNB, Occasional Papers	MNB, Occasional Paper	2005	
Zoltan Jakab (with Szilárd Benk and Gábor Vadas)	„Potential Output Estimations for Hungary: A Survey of Different Approaches”	MNB, Occasional Papers	Magyar Nemzeti Bank, Occasional Papers 43. 2005.	2005	
Anna Naszodi (with András Bethlendi)	Preferential treatment of small and medium-sized enterprises	MNB, Occasional Papers	in “Studies On The Potential Impacts Of The New Basel Capital Accord”, MNB, Occasional Papers	2003	Research unit
Balázs Világi	The Optimal Euro Conversion Rate in a Stochastic Dynamic General Equilibrium Model	MNB, Occasional Papers	MNB WP 2003/11	2003	Research unit
Peter Gabriel (with Csaba Balogh)	The Interbank Money Market Past and Future Trends	MNB, Occasional Papers	MNB, Occasional Papers	2003	
Gábor Pula - Ádám Reiff	Can Business Confidence Indicators Be Useful to Predict Short-Term Industrial Growth in Hungary?	MNB, Occasional Papers	MNB Occasional Paper 2002	2002	
<b>MNB Background Series Papers</b>					
Mihály András Kovács	How does the Exchange Rate affects the economy? Some lessons from the 1995 Stabilisation Package		NBH Background Series (in Hungarian)	2005	
Gabor Vadas (with Gergely Kiss)	The Role of the Housing Market in Monetary Transmission	MNB Background Studies	MNB Background Studies No. 2005/3	2005	
Judit Krekó - Balázs Vonnák	Inflation expectations of professional forecasters in Hungary	working paper	MNB Background Studies	2003	
Zoltan Jakab (with Mihály András Kovács)	„Hungary in the NIGEM model”, coauthor: Working Paper Series of the Magyar Nemzeti Bank, 2002/3	Working Paper	MNB WP 2002/3	2002	
Mihály András Kovács	Equilibrium exchange rate in Hungary		NBH Background Series (in Hungarian)	2001	



## Research Activities of the Economic Analysis and Research Staff

### Conference/seminar presentations

Speaker	Title	Occasion	Year	Research unit
Anna Naszodi	Is there a bank lending channel in Hungary? Evidence from bank panel data	22st Meeting of the European Economic Association, Budapest	2007	Research unit
Anna Naszodi	Is there a bank lending channel in Hungary? Evidence from bank panel data	59th East Jour Fixe on 'Monetary Transmission in Central and Eastern European Countries', Vienna.	2006	Research unit
Anna Naszodi	Filtering the market expectation concerning the Euro-locking rate	21st Meeting of the European Economic Association, Vienna	2006	Research unit
Anna Naszodi	Filtering the market expectation concerning the Euro-locking rate	Thirteenth International Conference on 'Forecasting Financial Markets', Aix-en-Provence.	2006	Research unit
Anna Naszodi	Filtering the market expectation concerning the Euro-locking rate	XIth Spring Meeting of Young Economists (SMYE), Seville.	2006	Research unit
Anna Naszodi	Target zone rearrangements and exchange rate behavior in an options-based model	Twelfth International Conference on 'Forecasting Financial Markets', Marseille.	2005	Research unit
Anna Naszodi	Target zone rearrangements and exchange rate behavior in an options-based model	Xth Spring Meeting of Young Economists (SMYE), Geneva	2005	Research unit
Anna Naszodi	Target zone rearrangements and exchange rate behavior in an options-based model	AEA Conference on Exchange Rates, Luxembourg.	2005	Research unit
Anna Naszodi	Interest rate pass-through: the case of Hungary	Third Macroeconomic Policy Research Workshop on Monetary Transmission in the New and Old Members of the EU, Budapest.	2004	Research unit
Alessia Campolmi	Oil price shocks: demand vs supply in a two-country model	4th Annual Vienna Macro Workshop on Current Topics in Macroeconomic Theory at IHS, Vienna	2007	Research unit
Alessia Campolmi	Oil price shocks: demand vs supply in a two-country model	ASSET Annual Meeting, Padova	2007	Research unit
Alessia Campolmi	Labour market institutions and cross-country inflation volatility in the EMU	6th Macroeconomic Policy Research Workshop at MNB, Budapest	2007	Research unit
Gabor Vadas	Uncertainty and Real-time Estimation of Cyclically Adjusted Budget Balance	Second meeting of the Network of public finance economists in public administration, Brussels	2007	
Gabor Vadas	Fill the Gap - Measurement of The Cyclical Effect on The Budget	8th Banca d'Italia Workshop on Public Finance Fiscal Indicators, Perugia	2006	
Gabor Vadas	Mind the gap - International Comparison of Cyclical Adjustment	Fiscal Policy and the Road to Euro, Warsaw	2005	
Gabor Vadas	A New Method for Combining Detrending Techniques with Application to Business Cycle Synchronization of the New EU Members	EcoMod 2005, International Conference on Policy Modelling, Istanbul	2005	
Gabor Vadas	Modelling Households' Savings and Dwellings Investment - a Portfolio Choice Approach	Econometrics of Emerging Countries, Applied Econometrics Association, Toledo	2003	

## Research Activities of the Economic Analysis and Research Staff

### Conference/seminar presentations

Speaker	Title	Occasion	Year	
Gabor Vadas	Univariate Estimation of Hungarian Potential GDP	ADATEF Multilateral Seminar on Output Gap & Structural Fiscal Balance, Paris	2003	
Szilárd Benk	Depression, War, Stagflation, and Moderation: the Effect of Money and Credit on Output and Velocity in an Endogenous Growth Business Cycle	XII. Spring Meeting of Young Economists	2007	
Szilárd Benk	Credit Shocks in the Financial Deregulatory Era. Not the Usual Suspects	North American Winter Meeting of the Econometric Society, Philadelphia	2005	
Szilárd Benk	A Comparison of Exchange Economies within a Monetary Business Cycle	Annual Conference of the Royal Economic Society, Nottingham	2005	
Szilárd Benk	Credit Schocks in a Monetary Business Cycle	21st Symposium on Banking and Monetary Economics, Nice	2004	
Ádám Reiff	Firm-Level Adjustment Costs and Aggregate Investment Dynamics	MNB Macroeconomic Policy Research Workshop, Budapest, October 2006	2006	
Ádám Reiff	Costs of investment	Econometric Society Winter Meeting, Torino, November 2006	2006	
Ádám Reiff	Frequency and Size of Price Changes in Hungary - Evidence from Micro Data	Inflation Persistence Network Follow-up Meeting, Frankfurt, March 2007	2007	Research unit
Ádám Reiff	Estimating the Extent of Price Stickiness in Hungary: A Hazard-Based Approach	Macro Workshop on Pricing, Rimini, May 2007	2007	Research unit
Péter Karádi	Asymmetries in Price Developments: Some Micro Data Evidence	Summer Workshop of the Hungarian Academy of Sciences, Budapest, August 2007	2007	Research unit
Ádám Reiff	Estimating the Extent of Price Stickiness in Hungary: A Hazard-Based Approach	EEA-ESEM Conference, Budapest, August 2007	2007	Research unit
Ádám Reiff	Asymmetries in Price Developments: Some Micro Data Evidence	Workshop of the Hungarian Economic Association, Budapest, December 2007	2007	Research unit
Zsuzsanna Zsibók	Regional Characteristics of Price Setting and Inflation in Hungary: a Micro-Level Analysis	Workshop of the Hungarian Economic Association, Budapest, December 2007	2007	Research unit
Ádám Reiff	Asymmetries in Price Developments: Some Micro Data Evidence	Atiner conference, Athens, August 2008 (paper accepted)	2008	Research unit
Balázs Vonnák	Estimating the Effect of Hungarian Monetary Policy within a Structural VAR Framework	22nd Symposium on Banking and Monetary Economics, 16 and 17 June 2005, Strasbourg	2005	
Kiss Gergely	Credit Growth in Central and Eastern Europe: Convergence or Boom?	Consumption and Credit in Countries with Developing Credit Markets, 16-17 June 2005, Florence	2005	
Istvan Konya	Endogenous Mobility, Human Capital and Trade	EEA-ESEM (Budapest 2007)	2007	Research unit

## Research Activities of the Economic Analysis and Research Staff

### Conference/seminar presentations

Speaker	Title	Occasion	Year	Research unit
Istvan Konya	Convergence, capital accumulation and the nominal exchange rate	Budapest Economic Seminar Series (2006)	2006	Research unit
Istvan Konya	Economic Development, Trade Patterns, and Exchange Rates	4th Macroeconomic Policy Research Workshop (Budapest 2005), 10th International Conference on Macroeconomic Analysis and International Finance (Rethymno 2006), EEA-ESEM (Vienna, 2006)	2006	Research unit
Istvan Konya	International Consumption Patterns among High-income Countries: Evidence from the OECD data	European Economic Association (Amsterdam 2005), International Trade & Finance Association (Istanbul 2005)	2005	Research unit
Áron Horváth	Recent Developments in the Hungarian Housing Market; A Model with Quality Differential	Workshop of the Hungarian Economic Association, Budapest, December 2007	2007	
Attila Csajbók	"Hungary's Eurozone Entry Date: What do the Markets Think and What If They Change Their Minds?"	Western Economic Association (WEA) Annual Conference, Vancouver, 2004	2004	
Attila Csajbók	"Hungary's Eurozone Entry Date: What do the Markets Think and What If They Change Their Minds?"	Deutsche Bank - ECB Research Conference, Frankfurt, 2003	2003	
Attila Csajbók	"FEER Enough? Hungary's Euro Area Entry and the Equilibrium Real Exchange Rate"	ECB Research Conference, Frankfurt, 2002	2002	
Attila Csajbók	"The Equilibrium Real Exchange Rate in Hungary: Results from Alternative Approaches"	ECB Research Conference, Frankfurt, 2003	2003	
Viktor Várpalotai	Time-varying fractional lag	OeNB Friday Seminar Series	2007	
Viktor Várpalotai	Time-varying fractional lag	LINK 2007 Conference, Beijing	2007	
Viktor Várpalotai	Time-varying fractional lag	ECOMOD 2007, Sao Paolo, (paper accepted)	2007	
Viktor Várpalotai	Time-varying fractional lag	XIIth Spring Meeting of Young Economists (SMYE), Hamburg, (paper accepted)	2007	
Viktor Várpalotai	Time-varying fractional lag	Atiner conference, Athens, (paper accepted)	2007	
Viktor Várpalotai	Are old and new EU member countries' cycles getting more synchronized? Proposing a time varying lag method for analysing time varying cyclical co-movements among economic data	5th Annual Conference of the European Economics and Finance Society, Crete	2006	
Viktor Várpalotai	Are old and new EU member countries' cycles getting more synchronized? Proposing a time varying lag method for analysing time varying cyclical co-movements among economic data	EcoMod2005 International conference on policy modelling, Istanbul	2005	

## Research Activities of the Economic Analysis and Research Staff

### Conference/seminar presentations

Speaker	Title	Occasion	Year	
Viktor Várpalotai	Does high Debt cause a loss in Growth performance in catching-up economies? Evaluating macroeconomic strategies with a calibrated model	4th Annual Conference of the European Economics and Finance Society on "Economic and Financial Issues in an Enlarged Europe", Coimbra	2005	
Viktor Várpalotai	Disaggregated Cost Pass-Through Based Econometric Inflation-Forecasting Model for Hungary	Applied Econometric Association Exchange Rate Econometrics, Luxemburg	2005	
Viktor Várpalotai	Evaluating Macroeconomic Strategies with a Calibrated Model	65th Anniversary conference of the Institute of Economics, Zagreb	2004	
Viktor Várpalotai	Disinflation Simulation with Disaggregated Output Gap Model for Hungary	International Conference on Policy Modeling - EcoMod2004, Paris	2004	
Viktor Várpalotai	Precaution, Optimal External Debt and Fully non-Ricardian Behaviour	Applied Econometric Association ECONOMETRICS OF EMERGING COUNTRIES 82th International Conference, Toledo	2003	
Viktor Várpalotai	Disinflation Simulation with Disaggregated Output Gap Model for Hungary	58th European Meeting of the Econometric Society. Stockholm	2003	
Viktor Várpalotai	Disaggregated Cost Pass-Through Based Econometric Inflation-Forecasting Model for Hungary	International Conference on Policy Modeling - EcoMod2003, Istanbul	2003	
Viktor Várpalotai	Disaggregated Cost Based Consumer Price Inflation-Forecasting Model	7th Spring Meeting of Young Economists, Lowen, 2003. április	2003	
Viktor Várpalotai	Optimal Indebtedness of a Small Open Economy with Precautionary Behaviour	6th Spring Meeting of Young Economists, Copenhage	2001	
Peter Benczur	“Determinants of Spreads on Sovereign Bank Loans: The Role of Credit History”	CREI-CEPR Conference on Sovereign Risk (Barcelona, 2007), EEA (Budapest 2007), ASSA Meeting (Chicago, 2007), 3rd Workshop on Emerging Markets (Bank of Spain, 2005)	2005	Research unit
Peter Benczur	“Nominal growth in a small open economy”:	St. Louis Fed (2007), EEA (Vienna 2006), Economic Growth and Development Conference (Budapest, 2004)	2004	Research unit
Peter Benczur	“Real effects of nominal exchange rate shocks”:	SED (Budapest, 2005), ESEM (Madrid, 2004), ECOMOD (Paris, 2004)	2004	Research unit
Peter Benczur	“The transmission of Eurozone Shocks to Central and Eastern European Countries”	EEA (Amsterdam, 2005)	2005	Research unit

**Research Activities of the Economic Analysis and Research Staff**

**Conference/seminar presentations**

<b>Speaker</b>	<b>Title</b>	<b>Occasion</b>	<b>Year</b>	
Peter Benczur	“Economic Fluctuations in Central and Eastern Europe. The Facts”	Latin-American Meeting of the Econometric Society (Chile, 2004), EEA (Madrid, 2004), Economic, Econometric and Cross-Disciplinary Aspects of European Union Enlargement (Florence, 2004), Euro Area Business Cycle Network EABCN) Workshop on Business Cycle and Acceding Countries (Vienna, 2004)	2004	Research unit
Peter Benczur	“The behavior of the nominal exchange rate at the beginning of disinflations”	8th Conference on Macroeconomic Analysis and International Finance (Crete, 2004), Conference on Exchange Rates (Applied Econometrics Association, Marseilles, 2003), Summer Symposium for Central Bank Researchers (Gerzensee, 2002)	2002	Research unit
Peter Benczur	“Inflation Dynamics in Small Macromodels”	6th OENB-BUBA Research Workshop (Vienna, 2002)	2002	Research unit
Peter Benczur	“Identifying Sovereign Bond Risks”	Winter Meeting of the Econometric Society (Berlin, 2002), EEA (Lausanne, 2001)	2002	Research unit

### Research Activities of the Economic Analysis and Research Staff

#### International research cooperation

Name	Topic	Foreign institution	Year	
Anna Naszodi (with András Fülöp)	Estimating the risk premia from option prices	CREST and ESSEC Business School	2007-	Research unit
Gabor Vadas (with Nathalie Girouard)	Uncertainty and Real-time Estimation of Cyclically Adjusted Budget Balance	OECD	2007-	
Szilárd Benk	Short Term Forecast Comparison Exercise	ECB and other NCB-s	2006-2007	
Szilárd Benk	Wage Dynamics Network	ECB and other NCB-s	2007-2008	
Istvan Konya	Wage Dynamics Network	ECB and other NCB-s	2007-2008	Research unit
Peter Benczur	RTN application: New Economics of Exchange rates (failed in second round)	UPF, Bocconi, CEPR, LBS, Lausanne,...	2003-2005	Research unit
Peter Benczur, Istvan Konya, Balazs Vilagi	RTN and then ESF application: Macroeconomics of Global Imbalances	UPF, EUI, Munich, LBS, IE-HAS,...	2006	Research unit

### Research Activities of the Economic Analysis and Research Staff

#### Research visits

Name	Topic	Institution	Time	
Anna Naszodi	The Exchange rate stabilizing effect of the prospect of EMU entry (as a CEU exchange student)	University of Toronto	2005.09-2005.12	Research unit
Mihály András Kovács	Developing the Hungarian Block of NIGEM World Model	NIESR, London	2000.06-2000.07	
Mihály András Kovács	Developing the Hungarian Quarterly projection Model	ECB	2003.07-2003.10	
Peter Benczur	Sovereign lending	ECB (data collection and contact)	2007. 08. 1-2.	Research unit
Peter Benczur	Jean Monnet fellowship	EUI	2008. 01-06.	Research unit
Balázs Világi	DSGE modeling	ECB	three times recently	Research unit

### Research Activities of the Economic Analysis and Research Staff

#### MNB Research Visitors

<b>Name</b>	<b>Institution</b>	<b>Topic</b>	<b>Time</b>	
Péter Karádi	New York University	Pricing	Summer 2007	Research unit
Zsuzsanna Zsibók	University of Pécs	Pricing	Summer 2007	Research unit
Bálint Herczeg	University of Debrecen	Pricing	Summer 2007	Research unit
Mirco Tonin	IIES	Minimum wage and tax evasion	Summer 2006	Research unit
Andras Fulop	ESSEC	financial econometrics	Summer 2007	Research unit
Balazs Szentes	Chicago	sovereign borrowing	Summer 2007	Research unit
Zoltan Wolf	Tinbergen Institute	firm level productivity	Summer 2007	Research unit
Judit Temesvary	Cornell	bank sector competition	Summer 2007	Research unit
Zsombor Cseres-Gergely	CEU and HAS-IE	Labor market flows	Summer 2006	Research unit
Nurbek Jenish	CEU	Dollarization	Summer 2006	Research unit
Bela Szemely	Duke	Trade and industry dynamics	Summer 2006	Research unit
Cosmin Ilut	Northwestern	Sovereign debt	Summer 2005	Research unit
Balazs Egert	OeNB	Monetary transmission in new EU states	Summer 2005	Research unit
Peter Kondor	LSE	Liquidity holes	Summer 2005	Research unit
Krisztina Molnar	UPF	Adaptive learning	Summer 2005	Research unit
Adam Reiff	CEU	Investment behavior	Summer 2005	Research unit
Andrei Sirtchenko	Iowa	FOMC decisions	Summer 2004	Research unit
Julia Lendvai	Namur	Hungarian Phillips curve	Summer 2004	Research unit
Elod Takats	Princeton	Layoffs and incentives	Summer 2004	Research unit
Szilard Benk	CEU	Open economy and the financial sector	Summer 2004	Research unit

## Research Activities of the Economic Analysis and Research Staff

### Other research activities

Name	Activity	Time	
Anna Naszodi	Refereeing for Hungarian Journal of Economics (Közgazdasági Szemle)	many times	Research unit
Anna Naszodi	Book review on R.J. Sweeney: Foreign Exchange Markets, in Journal of Banking and Finance, 2007	2007	Research unit
Alessia Campolmi	Refereeing for Journal of International Money and Finance	1	Research unit
Alessia Campolmi	Teaching (graduate macro): CEU	2007-	Research unit
Gabor Vadas	Refereeing for Hungarian Journal of Economics (Közgazdasági Szemle)	1	
Gabor Vadas	Refereeing for Hungarian Statistical Review (Statisztikai Szemle)	1	
Balázs Vonnák	Refereeing for Hungarian Journal of Economics (Közgazdasági Szemle)	1	
Istvan Konya	Refereeing for European Economic Review, Journal of International Economics, Journal of Public Economic Theory, Scandinavian Journal of Economics, Regional Science and Urban Economics, Journal of Economic Geography, Economics Bulletin, The Berkeley Journals in Economics, Journal of Economics, Journal of Economic Behavior and Organization, Review of Urban and Regional Development Studies, Közgazdasági Szemle	many times	Research unit
Istvan Konya	Editor, MNB Working Paper Series		Research unit
Istvan Konya	Teaching (graduate macro, development): CEU, recurring visitor	2004-	Research unit
Istvan Konya	Expert Evaluator for the European Commission (FP7)	2007	Research unit
Istvan Konya	Hungarian Economic Society: founding member	2007	Research unit
Viktor Várpalotai	Refereeing for Hungarian Journal of Economics (Közgazdasági Szemle)	many times	
Viktor Várpalotai	Refereeing for Hungarian Statistical Review (Statisztikai Szemle)	many times	
Viktor Várpalotai	Teaching (undergraduate econometrics): Corvinus University of Budapest	2004-	
Péter Bauer	Refereeing for Hungarian Statistical Review (Statisztikai Szemle)	2	
Peter Benczur	conference program committee: International Economic Association 2005; EEA 2007, 2008; Hungarian Economic Society 2007; Applied Econometric Society Labor Conference 2006; Comparative Analysis of Enterprise Data 2008		Research unit
Peter Benczur	refereeing: Közgazdasági Szemle, Acta Oeconomica, Comparative Economic Studies, Economica, European Economic Review, Review of World Economy, Applied Economics, World Bank Global Development Network Research Competition evaluation, Czech National Bank WP	2004-7	Research unit
Peter Benczur	Teaching (graduate international, public economics, international finance): CEU, part time	2002-	Research unit
Peter Benczur	phd committees: Gergely Csorba (CEU, main advisor), Zoltan Schepp (University of Pecs, external member), Katalin Polgar (Corvinus, interim and final committee member), Eszter Szabo-Bakos (Corvinus, final committee member)		Research unit
Peter Benczur	phd advising: Anna Naszodi (CEU; recently taken over by Laszlo Matyas), Nurbek Jenish (CEU), Dora Benedek (CEU)		Research unit
Peter Benczur	research grants: RTN (the role of liquidity in financial markets, 2001-2), RTN (CEE business cycles, 2003-4), CEU research grants (CEE fluctuations 2004, firm level growth 2007-8)		Research unit
Peter Benczur	Hungarian Economic Society: founding member, Council member (2007-8)	2007	Research unit



## Appendix 4

### Research Activity of the MNB's Financial Analysis Department, 2004-2007

#### Overview

Research at the MNB's Financial Analysis department can be characterised as *applied* research. Its primary purpose is to develop and enhance the "tools" available for the department's regular, day-to-day work, and/or to give deeper insight into policy-relevant issues. The academic recognition of our research, such as acceptance at conferences, or journal publications, are encouraged, but are neither considered to be the main objective of the research work, nor are part of the explicit performance evaluation.

The department has a dedicated research unit with 5 people, whose primary focus is financial markets research. The other units of the department are also providing research-type output, mainly in the fields of fiscal policy and sustainability, external balance, monetary operations, market structure, the financial position of the different sectors of the economy, monetary aggregates, etc.

#### 1. List of publications

*MNB Occasional papers (in English):*

Norbert Kiss M., 2004. "[The Effects of Macroeconomic News on Money Markets](#)," MNB Occasional Papers 2004/30, Magyar Nemzeti Bank (The Central Bank of Hungary).

Szilárd Erhart, 2005. "[Driving factors behind O/N interbank interest rates – the Hungarian experiences](#)," MNB Occasional Papers 2005/34, Magyar Nemzeti Bank (The Central Bank of Hungary).

Áron Gereben & Klára Pintér, 2005. "[Implied volatility of foreign exchange options: is it worth tracking?](#)," MNB Occasional Papers 2005/39, Magyar Nemzeti Bank (The Central Bank of Hungary).

Áron Gereben & György Gyomai & Norbert Kiss M., 2005. "[The microstructure approach to exchange rates: a survey from a central bank's viewpoint](#)," MNB Occasional Papers 2005/42, Magyar Nemzeti Bank (The Central Bank of Hungary).

Csaba Csávás & Szilárd Erhart, 2005. "[Are Hungarian financial markets liquid enough? The theory and practice of FX and government securities market liquidity](#)," MNB Occasional Papers 2005/44, Magyar Nemzeti Bank (The Central Bank of Hungary).

*MNB Working papers (in English):*

Áron Gereben & György Gyomai & Norbert Kiss M., 2006. "[Customer order flow, information and liquidity on the Hungarian foreign exchange market](#)," MNB Working Papers 2006/8, Magyar Nemzeti Bank (The Central Bank of Hungary).

Péter Gábor & Klára Pintér, 2006. "[The effect of the MNB's communication on financial markets](#)," MNB Working Papers 2006/9, Magyar Nemzeti Bank (The Central Bank of Hungary).

## Research Activity of the MNB's Financial Analysis Department, 2004-2007, continued

### *MNB Bulletin articles (in English):*

Csaba Csávás & Lóránt Varga, 2006. "[Main characteristics of non-residents' trading on the foreign exchange and government bond markets](#)," MNB Bulletin, Magyar Nemzeti Bank (The Central Bank of Hungary), vol. 1(1), pages 13-20, June.

Áron Gereben & Norbert Kiss M., 2006. "[A brief overview of the characteristics of interbank forint/euro trading](#)," MNB Bulletin, Magyar Nemzeti Bank (The Central Bank of Hungary), vol. 1(2), pages 21-26, December.

Péter Gábrriel & Klára Pintér, 2006. "[Whom should we believe? Information content of the yield curve and analysts' expectations](#)," MNB Bulletin, Magyar Nemzeti Bank (The Central Bank of Hungary), vol. 1(2), pages 6-13, December.

András Komáromi, 2007. "[The effect of the monetary base on money supply - Does the quantity of central bank money carry any information?](#)," MNB Bulletin, Magyar Nemzeti Bank (The Central Bank of Hungary), vol. 2(1), pages 31-37, June.

Norbert Kiss M. & Klára Pintér, 2007. "[How do macroeconomic announcements and FX market transactions affect exchange rates?](#)," MNB Bulletin, Magyar Nemzeti Bank (The Central Bank of Hungary), vol. 2(1), pages 22-30, June.

Anna Delikát, 2007. "[Role of financial markets in monetary policy](#)," MNB Bulletin, Magyar Nemzeti Bank (The Central Bank of Hungary), vol. 2(2), pages 16-22, November.

### *Publications in Hungarian only (MNB Műhelytanulmányok, MNB Tanulmányok, Közgazdasági Szemle):*

Kondrát Zsolt & Wenhardt Tamás, 2004, "[Magyarország helyzete nemzetközi összehasonlításban a Gazdasági és Monetáris Unió konvergenciakritériumainak teljesítésében 2003 végén](#)" (*The assessment of Hungary's path to fulfill the convergence criteria for the EMU at the end of 2003 against an international backdrop*), MNB Műhelytanulmányok 29.

Pintér Klára & Wenhardt Tamás, 2004, "[A jegybanki kamatdöntések előrejelezhetősége és hatása a hozamokra](#)" (*The predictability and market impact of policy rate decisions*), MNB Műhelytanulmányok 31.

Kóczán Gergely & Mihálovits Zsolt, 2004, "[Magas tőkeáttételű szereplők szerepe és hatása a devizapiacokon](#)" (*The role and impact of highly leveraged institutions on foreign exchange markets*), MNB Műhelytanulmányok 33.

Csávás Csaba & Gereben Áron, 2005, "[Hagyományos és egzotikus opciók a Magyar devizapiacokon](#)" (*Plain vanilla and exotic options on the Hungarian foreign exchange markets*), MNB Műhelytanulmányok 35.

Kiss M. Norbert, 2005, "[A jegybanki devizapiaci intervenció hatékonysága. Nemzetközi tapasztalatok és elméleti megfontolások](#)" (*The efficiency of central bank intervention: theory and international evidence*), Közgazdasági Szemle, LII. évf. 11. sz., 846–872.

## Research Activity of the MNB's Financial Analysis Department, 2004-2007, continued

Czeti Tamás & Hoffmann Mihály, 2006, “[A magyar államadósság dinamikája: elemzés és szimulációk](#)” (*The dynamics of government debt in Hungary: analysis and simulations*), MNB-tanulmányok 50.

Antal Judit, 2006, “[Külső adósságdinamika](#)”, (*The dynamics of external debt*), MNBtanulmányok 50.

Csávás Csaba & Kóczán Gergely & Varga Lóránt, 2006, “[A főbb hazai pénzügyi piacok meghatározó szereplői és jellemző kereskedési stratégiái](#)”, (*The main participants of the key financial markets in Hungary, and their typical trading strategies*), MNB-tanulmányok 54.

Gereben Áron & Kiss M. Norbert, 2006, “[A bankközi forint/euro kereskedés jellemzői nagyfrekvenciás adatok alapján](#)” (*The properties of the interbank forint/euro trading: a high frequency analysis*), MNB-tanulmányok 58.

Csávás Csaba & Varga Lóránt & Balogh Csaba, 2007, “[A forint kamatswappiac jellemzői és a swapszpredek mozgatórugói](#)” (*The properties of the forint interest rate swap market and the determinants of swap spreads*) MNB-tanulmányok 64.

### Other publications:

Gábor Kiss, 2007 “[One-off and off-budget items: an alternative approach](#)” in Temporary measures and off-budget activities, paper presented at the MNB Public Finance Workshop.

Gábor Kiss (ed.), 2007, [Temporary measures and off-budget activities](#), (Proceedings of the MNB Public Finance Workshop).

Áron Gereben, 2007, “[Book Review: Elements of the Euro Area - Integrating Financial Markets, by J. Berg, M. Grande, F.P. Mongelli](#),” *Journal of Banking and Finance*, 31 (12), p.3907-3908, Dec 2007.

Áron Gereben, 2008, “The use of the microstructure approach to foreign exchange markets in a central bank”, in Liebscher, Christl, Mooslechner, Ritzberger-Grünwald (eds) *Currency and Competitiveness*, Edward Elgar, 2008, forthcoming.

## 2. Conference presentations

Presenter: Csávás, Csaba

Title: Measuring the liquidity of FX and government paper markets

Event: [Financial Economics for Central Banks](#) (London, UK, 15-26 May 2006, organised by the Centre for Central Banking Studies, Bank of England)

Presenter: Kiss M., Norbert

Title: Customer Order Flow, Information and Liquidity on the Hungarian Foreign Exchange Market

Event: [Forecasting Financial Markets 2006](#) (Aix-en-Provence, France, 31 May, 1 and 2 June 2006)

Presenter: Gereben, Áron

Title: Customer Order Flow, Information and Liquidity on the Hungarian Foreign Exchange Market

Event: [Bank of Canada - Norges Bank Workshop on the Microstructure of Foreign Exchange and Equity Markets](#) (Ottawa, Canada, 20 and 21 October 2006, organised by the Bank of Canada and the Norges Bank)

### **Research Activity of the MNB's Financial Analysis Department, 2004-2007, continued**

Presenter: Kiss, Gábor

Title: PPPs: Managing Fiscal Risks (discussion)

Event: [International Seminar on Strengthening Public Investment and Managing Fiscal Risks from Public-Private Partnerships](#) (organized by the International Monetary Fund; Hungarian Ministry of Finance; International Center for Economic Growth—European Center, Budapest, Hungary; March 7–8, 2007)

Presenter: Gereben, Áron

Title: Discussion of “Taxes on Tax-Exempt Bonds” by Andrew Ang

Event: [High Frequency Dynamics and Bond Markets](#) (Cambridge, UK, 20 and 21 April 2007, organised by the Judge Business School, University of Cambridge)

Presenter: Csávás, Csaba

Title: Estimating Risk-Neutral Density Functions from EUR/HUF Currency Options and Testing their Forecasting Ability

Event: [Forecasting Financial Markets 2007](#) (Aix-en-Provence, France, 30-31 May and 1 June 2007)

Presenter: Kiss Gábor

Title: One-off and off-budget items: an alternative approach

Event: [Temporary measures and off-budget activities, MNB Public Finance Workshop](#), Budapest, 22nd June, 2007

Presenter: Gereben, Áron

Title: The use of the microstructure approach to foreign exchange markets in a central bank

Event: [Conference on European Economic Integration 2007: Currency and Competitiveness](#) (Vienna, Austria, 19 and 20 November 2007, organised by the Oesterreichische Nationalbank)

Presenter: Kiss M., Norbert

Title: Macroeconomic announcements, communication and order flow on the Hungarian foreign exchange market

Event: [Magyar Közgazdaságtudományi Egyesület Annual Conference 2007](#) (Budapest, Hungary, 19 and 20 December 2007, organized by MKE and Magyar Nemzeti Bank)

### **3. Joint research projects with other institutions**

We have a joint project within the ESCB on developing comparable measures of tax burden. The head of the team is Gábor Kiss. In the first phase (2007) the team consisted of Hungary, Poland and Slovakia. In the second phase (2008) Italy and Germany join the group, but further countries are also encouraged to participate.

We are in the phase of initial discussion of a potential joint research programme with the Department of Financial Economics at Ghent University, Belgium. One of our former visiting researcher Michael Frömmel, is working there at the moment, and he approached us recently.

### **4. Research visits in other institutions by MNB/Financial Analysis staff**

None.

## **Research Activity of the MNB's Financial Analysis Department, 2004-2007, continued**

### **5. Visiting researchers**

Summer 2005: [András Fülöp](#) (PhD Student, University of Toronto/Rotman School of Management.)

Summer 2006: [Michael Frömmel](#) (Assistant Professor, Department of Economics, Leibniz Universität Hannover)

### **6. Conferences, workshops organised by us**

[Financial markets workshop](#) (in Hungarian, Magyar Nemzeti Bank, 8<sup>th</sup> December 2006)

[Temporary measures and off-budget activities](#) (MNB Public Finance Workshop, Budapest, 22<sup>nd</sup> June, 2007)

[3rd Annual Central Bank Workshop on the Microstructure of Financial Markets](#) (Magyar Nemzeti Bank, Budapest, Hungary, 14<sup>th</sup> -15<sup>th</sup> September, 2007)

*Contact: Áron Gereben, Deputy Head of Financial Analysis ([gerebena@mnbb.hu](mailto:gerebena@mnbb.hu))*

## Appendix 5

## Research Activities of Financial Stability Department

Research Activities of Financial Stability Department			
Publications			
	in English	only in Hungarian	link on the internet
Non-MNB Publications			
		Zsámboki Balázs [2007]: A banki szabályozás rendszerszintu következményei, in: A magyar jogrendszer átalakulása 1985/1990-2005, Jog, Rendszerváltozás, EU-csatlakozás, Gondolat-ELTE ÁJK, Budapest	
		Bethlendi András – Bodnár Katalin (2005): A hazai hitelpiac strukturális változása. A Hitelezési felmérés tapasztalatai. Hitelintézeti Szemle 2005. június	
	Dániel Holló - Márton Nagy: Bank Efficiency in the Enlarged European Union; in: The banking system in emerging economies: how much progress has been made? BIS Papers No 28, 2006	<a href="http://www.bis.org/publ/bppdf/bispap28m.pdf">www.bis.org/publ/bppdf/bispap28m.pdf</a>	
	Bethlendi, A. – Kiss, G. (2004): „Housing Finance in Hungary”, Part II and Chapter 2. in Housing Finance Markets in Transition Economies, Trends and challenges. OECD Publishing.		
		Bethlendi András (2007): A hazai bankok hitelezési-veszteségelszámolásának vizsgálata. Közgazdasági Szemle LIV.évf., 2007. január.	
	Varsanyi, Zoltan, 2007. "Rating philosophies: some clarifications," MPRA Paper 1660, University Library of Munich, Germany.		
	Zoltan, Varsanyi, 2007. "Reconsidering the logit: the risk of individual names," MPRA Paper 3658, University Library of Munich, Germany.		

<b>Research Activities of Financial Stability Department</b>			
<b>Publications</b>			
	<b>in English</b>	<b>only in Hungarian</b>	<b>link on the internet</b>
	Varsanyi, Zoltan, 2006. "The Basel II IRB approach revisited: do we use the correct model?," MPRA Paper 1244, University Library of Munich, Germany.		
		Mérol Katalin (2003)A gazdasági növekedés és a pénzügyi közvetítés mélysége, Közgazdasági Szemle, július-augusztus	
		Mérol Katalin (2004) :A banki szabályozás fejlődésének nemzetközi tendenciái, Külgazdaság, november	
	Mérol, K- Vigh Mikle, Sz. (2003) "The Financial Market in Hungary", In: Bancni Vestnik Special Issue, Financial Markets and Non-Banking Intermediaries in Transition Countries, Vol. 52. No.7-8,		
	Mérol Katalin (2004) "Financial Depth and Economic Growth – The Case of Hungary, the Czech Republic and Poland", Acta Oeconomica, Vol. 54.(3)		
	Király,J-Mérol,K (2004) "Basel Scepticism-From a Hungarian Perspective" In: The New Basel Capital Accord, edited by Benton E.Gup, Greenwood Publishing Group		
	WP 2008/ Marianna Valentinyi-Endrész - Zoltán Vásáry: Macro stress testing with industry specific bankruptcy models (in press)		
	WP 2007/1. József Molnár–Márton Nagy–Csilla Horváth: A Structural Empirical Analysis of Retail Banking Competition: the Case of Hungary		<a href="#">WP 2007/1. József Molnár–Márton Nagy–Csilla Horváth: A Structural Empirical Analysis of Retail Banking Competition: the Case of Hungary</a>
<b>MNB Bulletin Articles</b>			
	2007. december		

<b>Research Activities of Financial Stability Department</b>			
<b>Publications</b>			
	<b>in English</b>	<b>only in Hungarian</b>	<b>link on the internet</b>
	Dániel Holló: Household indebtedness and financial stability: Reasons to be afraid?		
	Lívía Sánta: The role of central banks in crisis management – how do financial crisis simulation exercises help?		
	Balázs Zsámboki: Impacts of financial regulation on the cyclicity of banks' capital requirements and on financial stability		
	<i>2007. június</i>		
	How resilient are Hungarian banks to liquidity shocks? (by Tamás Balás and Csaba Móré)		
	<i>2006. december</i>		
	Reform of the Hungarian corporate insolvency regulation and its financial stability aspects (by Dr. Valéria Széplaki)		
	<i>2006. június</i>		
	Survey evidence on the exchange rate exposure of Hungarian SMEs by Katalin Bodnár		
	Analysis of banking system efficiency in the European Union by Dániel Holló and Márton Nagy		
<b>MNB Working Papers</b>			
	WP 2006/11 Zoltán Varsányi: Pillar I treatment of concentrations in the banking book - a multifactor approach		<a href="#">WP 2006/11 Zoltán Varsányi: Pillar I treatment of concentrations in the banking book - a multifactor approach</a>



<b>Research Activities of Financial Stability Department</b>			
<b>Publications</b>			
	<b>in English</b>	<b>only in Hungarian</b>	<b>link on the internet</b>
	WP 2006/10. Gergely Kiss–Márton Nagy–Balázs Vonnák: Credit Growth in Central and Eastern Europe: Convergence or Boom?		<a href="#">WP 2006/10. Gergely Kiss–Márton Nagy–Balázs Vonnák: Credit Growth in Central and Eastern Europe: Convergence or Boom?</a>
	WP 2006/3. Dániel Holló - Márton Nagy: Bank Efficiency in the Enlarged European Union		<a href="#">WP 2006/3. Dániel Holló - Márton Nagy: Bank Efficiency in the Enlarged European Union</a>
	WP2004/11 Marianna Valentinyi-Endrész: Structural breaks and financial risk management		<a href="#">WP2004/11 Marianna Valentinyi-Endrész: Structural breaks and financial risk management</a>
	WP 2004/10 Ágnes Lublóy: Systemic Risk Implications of the Hungarian Interbank Market		<a href="#">WP 2004/10 Ágnes Lublóy: Systemic Risk Implications of the Hungarian Interbank Market</a>
	WP 2004/9 Csaba Móré - Márton Nagy: Competition in the Hungarian Banking Market		<a href="#">WP 2004/9 Csaba Móré - Márton Nagy: Competition in the Hungarian Banking Market</a>
	WP 2003/12 >Csaba Móré - Márton Nagy: Relationship between Market Structure and Bank Performance: Empirical Evidence for Central and Eastern Europe		<a href="#">WP 2003/12 &gt;Csaba Móré - Márton Nagy: Relationship between Market Structure and Bank Performance: Empirical Evidence for Central and Eastern Europe</a>
	WP 2003/10 Katalin Méro-Marianna Endrész Valentinyi: The Role of Foreign Banks in Five Central and Eastern European Countries,		<a href="#">WP 2003/10 Katalin Méro-Marianna Endrész Valentinyi: The Role of Foreign Banks in Five Central and Eastern European Countries</a>

<b>Research Activities of Financial Stability Department</b>			
<b>MNB Occasional Papers</b>			
	<b>in English</b>	<b>only in Hungarian</b>	<b>link on the internet</b>
	OP 70. Dániel Holló–Mónika Papp: Assessing household credit risk: evidence from a household survey		
	MT 69. Balás Tamás–Móré Csaba: Liquidity risk at the Hungarian banking sector	MT 69. Balás Tamás–Móré Csaba: Likviditási kockázat a magyar bankrendszerben	
	OP 67. Balázs Zsámboki: Basel II and financial stability: An investigation of sensitivity and cyclicity of capital requirements based on QIS 5		
	OP 57. Ágnes Lubláy: Topology of the Hungarian large-value transfer system		
	MT 56 András Bethlendi: Provisioning at the Hungarian banks	MT 56. Bethlendi András: A hazai bankok hitelezésiveszteség-elszámolásának vizsgálata	
		MT 53 Bodnár Katalin : A hazai kis- és középvállalatok árfolyamkitettsége, devizahitelezésük pénzügyi stabilitási kockázatai Egy kérdoíves felmérés eredményei	
		MT 48 dr. Czajlik István-Szalay György: A magánnyugdíjpénztárak működése és szabályozása	
		MT 47 Póra András - Dr. Széplaki Valéria: Hitelbiztosítékok hazai szabályozása, különös tekintettel a CRD elvárásaira	
		MT 36 Papp Mónika: A jelzáloglevél alapú finanszírozás helyzete Magyarországon pénzügyi stabilitási szempontból	
	OP 2003/27> Studies On The Potential Impacts Of The New Basel Capital Accord		
		Fischer Éva- Sánta Livia: Bankcsoportkockázat kezelése a magyar bankrendszerben (2003)	
<b>MBN Background Studies</b>			
	BS 2005/2 András Bethlend- Tamás Czeti - Judit Krekó - Márton Nagy - Dániel Palotai: Driving forces behind private sector foreign currency lending in Hungary		

## Research Activities of Financial Stability Department

### Conference Presentations

Name	Presentation's title	Event	Date
Marianna Valentinyi-Endrész	Macro drivers of credit risk	CCBS Expert Forum, London	2006
	Macro stress testing with industry-specific bankruptcy models	CCBS Expert Forum, London	2007
Katalin Bodnár	Credit risk modeling at MNB	Sinaia, Romania - workshop	2007
	Survey evidence on the exchange rate exposure of the Hungarian SMEs	6th Emerging Markets Workshop, Vienna, OeNB	2007
Zoltán Vásáry	Financial Stability and the macro environment	FS workshop, Bratislava	2007
Dániel Holló	Assesing household credit risk	FS workshop, Bratislava	2007
		ADETEF French-Hungarian Economic Seminar, Budapest	2007
Marton Nagy	Bank Efficiency in the Enlarged European Union	Journal of Banking and Finance 30th Anniversary Conference, Beijing	2007
	Bank Efficiency in the Enlarged European Union	International Finance Symposium, Marmara Univerisity, Istanbul	2007
	Relationship between Market Structure and Bank Performance: Empirical Evidence for Central and Eastern Europe	OENB, Olga Radzyner Winner Workshop, Vienna	2005
Gyula Tóth	Market risk stress testing at MNB	CCBS-CB of Turkey workshop on Fin.Stab.	2005?
Kálmán Tamás (Fischer Éva)	Hungarian financial crisis simulation exercises - central banking perspective	High level conference on "Simulating financial instability"	2007
Fischer Éva	Systemic crises –When LoLR is appropriate?	Norges Bank Workshop	2006
Katalin Méro- Marianna Valentinyi-Endrész	FDI in the Banking sector	UNCTAD/DITE Workshop on FDI in Services in Central and Eastern Europe: Trends, Impact and Government Policies, Budapest	2004
Balázs Zsámboki	The Challenges of Financial Integration for Transition Countries	Conference on Financial Integration and Its Implication, Federal Reserve Bank of Atlanta, USA,	29-30 Nov 2007
	Foreign currency lending - Trends and risks in CEE countries	Workshop on the risks of foreign currency lending, Magyar Nemzeti Bank	16 October 2006
	Impact of Foreign Ownership on the Banking Sector: the Hungarian Experience	OECD conference: Enterprise Development and Investment Climate in Ukraine, Kiev	13 June 2006
	Influence of Central Banks on the Stability and Development of Financial Systems in Transition Economies. Hungary - case study	National Bank of Poland, Warsaw	8 October 2004

## Research Activities of Financial Stability Department

### Joint Projects

Name	Title of project	Date	Participants
Marianna Valentinyi-Endrész	Credit risk modelling of EU banks	2006-2007	Task Force on Stress Testing at ECB
Fischer Éva	Reccomendations for crisis management	2005-2006	Joint BSC/CEBS Task Force on Crisis Management
Fischer Éva	An analytical framework for assessing the systemic implications of a financial crisis	2006-2007	BSC Task Force on Crisis Management

## Research Activities of Financial Stability Department

### Research Visits

None

## Research Activities of Financial Stability Department

### Research Visitors at PS

Name	Project	Date
Ágnes Lublóy	see publications	2004 and 2006
József Molnár	Analysis of advertising and competition in the Hungarian banking sector	2007
József Molnár	see publication	2006
Artashes Karapetyan	Information sharing in the Hungarian credit market	2007
Bogdan Stacescu		