

Bank of Finland Research Evaluation Report 2004

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I. INTRODUCTION

The Bank of Finland invited three external evaluators — Professor Philip Lane of Trinity College Dublin, Dr. Loretta J. Mester of the Federal Reserve Bank of Philadelphia, and Professor Juuso Välimäki of the Helsinki School of Economics — to review the research activities of the Bank of Finland. This seems like a sensible time to do such a review. The last external review occurred about 5 years ago, in 1999. As of July 2004, the Bank of Finland has a new Governor, Mr. Erkki Liikanen. Also, Dr. Juha Tarkka, head of the Research Department, will be taking on another assignment in December 2004.

The Bank of Finland states that it “aims to be an active and constructive member or the European System of Central Banks” and that “developing a high-quality research function is seen as essential for achieving this objective.” The evaluators were commissioned to assess the scientific quality of the Bank’s research output as a whole and the relevance of the research activities from the point of view of the strategic goals of the Bank. The research activities of the following departments were considered: Research Department, Economics Department, Financial Markets Department, and Bank of Finland Institute for Economies in Transition (BOFIT). The Terms of Reference of the evaluation are given in Appendix 1. Loretta J. Mester and Juuso Välimäki visited the Bank on September 28-29, 2004. Philip Lane and Juuso Välimäki visited the Bank on October 15 2004. The evaluation is based on examination of the research output, as well as interviews with Bank staff conducted by the evaluators on their visits. Appendix 2 lists the Bank staff consulted.

II. BANK OF FINLAND RESEARCH: AN EVALUATION

A. Objectives and Purpose of Research at the Bank of Finland

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 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. Without this research basis, it is very difficult 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 but 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 a productivity acceleration, 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 dis-inflationary 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. Thus, it 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. Once at the central bank, they can apply their knowledge and skills to important policy issues and bring new ways of thinking about policy questions to the central bank. In return, these economists are given the 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 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. A reputation for high-quality research will enhance the ability of the Bank of Finland to play an important role in policy decisions within the European System of Central Banks and within the community of central banks around the world.

To obtain these benefits, the standards by which research at the Bank of Finland is judged must be the standards used to judge economic research in the economics profession, that is, the Bank of Finland's research must pass the market test. Those standards are increasingly the standards of top academic institutions. 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 Bank. Invitations to external conferences and seminars are another measure of the impact and engagement of Bank of Finland research staff in the profession.¹

Below we suggest some changes in the way research is structured at the Bank of Finland that we believe will allow the Bank to better meet its goals.

¹ Appendix 3 details the external conference presentations by Bank staff during 1999-2004. This appendix is not publically available.

B. The Organization of Research at the Bank

The Board members to whom we spoke (Governor Erkki Liikanen and Dr. Sinikka Salo) are supportive of the research functions at the Bank. They understand the role research and strong publications play in raising the Bank of Finland's credibility in policy debates and the importance of high-quality research in formulating sound policy decisions. They believe one measure of research success is if it transforms the monetary policy discussions within the European Central Bank System.

The Research Department has a very small permanent research staff of only four people: the department head; a staff member in charge of each of two research programs; and an advisor to the Board. In the current arrangement, economists from the Economics and Financial Markets Departments (the policy departments) can apply for a six-month assignment to work on a research project (sometimes this is extended to one year or occasionally more). The policy has been to recruit four person-years from policy departments but this quota includes not only Ph.D.s but also those with Licentiate, who likely find it difficult to produce research that is ultimately publishable in high-quality journals. Even this quota has not always been completely filled. In addition, there have been typically 2 to 3 person years of people with Master's degree working on their theses. Over the past 5 years, 1999-2003, on average only 1.38 Ph.D. person-years have been seconded to the Research Department. In addition there are about 4 to 5 man-years of external visitors to the department.

Table 1. Project researchers seconded to the Research Department from other Bank of Finland departments, person-years

| | 1999 | 2000 | 2001 | 2002 | 2003 | Average |
|-------------|-------------|-------------|-------------|-------------|-------------|----------------|
| Ph.D.s | 1.25 | 0.50 | 2.13 | 1.33 | 1.67 | 1.38 |
| Licentiates | 0.92 | 3.42 | 2.08 | 2.08 | 2.00 | 2.10 |
| M.Science | 3.27 | 2.42 | 3.33 | 2.33 | 2.08 | 2.67 |
| Total | 5.33 | 6.33 | 7.54 | 5.75 | 5.75 | 6.14 |

Which particular projects and economists are chosen from the Policy Departments to visit the Research Department is determined by management in the Policy Departments (Economics or Financial Markets) and the Research Department. A clear benefit of this structure is that it allows for synergies between the policy work of the Bank and the research projects. This is not just a potential benefit, as researchers told us that their research has benefited by seeing the real world issues that policymakers need to deal with. And management in the Economics Department believes they end up with better modeling and policy advice because economists are motivated by the reward of visiting the Research Department. Another benefit of the structure is that it gives the researchers undivided time to devote to research work. Such undivided time is an essential component of successful research, since it removes distractions and gives the researcher time to focus on deep problems.

The Research Department also has preferences — it wants projects that fit into the research programs of the Bank. When the Bank adopted its research policy memorandum in November 1996, it delineated two research programs managed by the Research Department: Developing the Modeling of Monetary Policy, and the Future of the Financial Services Sector. The rationale was to choose programs in which the Bank believed it had a comparative advantage relative to other central banks in the European

System of Central Banks. This likely was a good strategy at the time, since it got the Bank of Finland on the map in terms of research output.

Finally, the Bank devotes significant resources to the training of its staff and the promotion of new research techniques. It has collaborated with the CEPR in the organization of several academic conferences. Its May 2004 training workshop on *Inflation Dynamics in General Equilibrium Macro Models* is widely recognized as a significant contribution to the cross-ESCB dissemination of cutting-edge modeling innovations.

Having outlined the current organization of research activity at the Bank, we next turn to an evaluation of its research output during the last 5 years.

C. Journal Publications

The Bank of Finland has responded to recommendations in the report of the last external review that was conducted in 1999. Since the last external review, the number of papers published in foreign and refereed journals has increased. One of the Bank of Finland's jobs now must be to try to increase the number of papers published in higher-quality refereed journals. Such publications will enhance the reputation of the Bank of Finland, which will help it achieve its goal of being an influential player within the European System of Central Banks. Better publications indicate higher-quality research, which will enable better monetary and financial markets policy analysis.

The Bank of Finland produces a large number of working papers and papers published in the Bank's own publications (these are analyzed in the following subsection). These papers are a necessary ingredient in producing publishable research. Working papers are an important way to disseminate new ideas to colleagues.

Economists submit their working papers to conferences and seminar programs, and by presenting their work at these venues, they receive useful feedback, which improves the papers. But it should be recognized that these working papers are intermediate outputs. The final output comes after the paper is improved enough to merit publication in a high-quality refereed journal.

Here we discuss the Bank's foreign (i.e., non-Finnish) publications since the last review in 1999, since it is publications in refereed journals that serve as a good metric with which to evaluate the quality of the Bank's research.² Table 1 indicates the number of external publications for the years 1999-2003.

Table 1. Bank of Finland Publications, 1999-2003

| | 1999 | 2000 | 2001 | 2002 | 2003 | Average 1999-2003 |
|---|-------------|-------------|-------------|-------------|-------------|------------------------------|
| Books and other monographs | 1 | 6 | 13 | 11 | 15 | 9.2 |
| Articles in Finnish publications | 35 | 34 | 30 | 22 | 32 | 30.6 |
| Articles in foreign publications | 32 | 37 | 34 | 39 | 40 | 36.4 |
| Of these, in refereed journals | 13 | 16 | 11 | 19 | 22 | 16.2 |
| Project researchers with Ph.D.s from other BOF departments seconded to Research, person-years | 1.25 | 0.5 | 2.125 | 1.3333 | 1.6667 | 1.375 |

As shown in the table, the Bank has been successful in increasing the number of foreign publications, and more important, the number of publications in refereed journals,

² Note, no Finnish publications are in the *Journal Citation Reports* list of journals compiled by Thomson Institute for Scientific Information.

as was recommended in the previous external review. In the 5 years 1999-2003, the annual number of refereed publications has increased from 13 articles to 22 articles.³ The number of refereed publications has averaged about 16 per year over the past 5 years. In terms of quantity of published papers, this is an adequate level of output considering that the number of Bank staff with Ph.D.s is quite small. The number of Ph.D.-level staff from outside departments that have been seconded to the Research Department over 1999-2003 has averaged 1.375 person-years per year. The number of permanent staff in Research with Ph.D.s has averaged 4 person-years per year, and the number in BOFIT has averaged 2 person-years per year. Thus, Ph.D.-level staff producing research has averaged about 7.375 person-years per year. In other words, one could consider the research units of the Bank of Finland as having a staff size of about 7 to 8 Ph.Ds.⁴ Thus, refereed journal publications have averaged around 2 papers per person-year over the past 5 years.

But not all refereed publications are equal. The scientific quality of the publications varies across journals, and unfortunately, many of the Bank of Finland publications have been in refereed journals that are not highly ranked. To measure quality of research output, we used three different ranking methods.

³ All of these papers had at least one Bank of Finland permanent staff member as a co-author.

⁴ Although, as we will argue below, we believe the organization of the research activities at the Bank of Finland results in less and lower quality research than that which could be achieved by a research department with 7 or 8 permanent Ph.D. economists.

Table 2. Quality of Bank of Finland Publications in Refereed Journals, 1999-2003

| | | Total, 1999-2003 | Average, 1999-2003 |
|---|--|-------------------------|---------------------------|
| Bank of Finland publications in foreign refereed journals | | 81 | 16.2 |
| JCR rankings | No. of articles in JCR journals | 30 | 6 |
| | No. of articles in JCR journals weighted by impact factor | 13.11 | 2.62 |
| | No. of <i>European Economic Review</i> -equivalent articles | 14.41 | 2.88 |
| Kalaitzidakis, Mamunueas, and Stengos ranking (column 5 of their Table 1) | No. of articles in jrnl ranked by Kalaitzidakis, Mamunueas, and Stengos | 23 | 4.6 |
| | No. of articles in jrnl ranked by Kalaitzidakis, Mamunueas, and Stengos, weighted by ranking | 132.46 | 26.47 |
| | No. of <i>European Economic Review</i> -equivalent articles | 5.57 | 1.11 |
| New York Fed Rankings | No. of articles in jrnl ranked by NY Fed | 24 | 4.8 |
| | No. of articles in jrnl ranked by NY Fed weighted ranking | 1700 | 340 |
| | No. of <i>European Economic Review</i> -equivalent articles | 8.5 | 1.7 |

The first method counts Bank of Finland publications over the period 1999-2003 in scientific journals included in the *Journal of Citation Reports* (JCR) edited by Thomson Institute for Scientific Information (ThomsonISI). This method ignores publications in non-JCR journals because their quality is typically below that of JCR journals and they are not widely read. Of the 81 articles published by Bank of Finland staff in foreign refereed journals over 1999-2003, only 30 (37%) were in JCR-ranked journals. JCR-ranked journals vary in quality as well. One way to measure the quality of a journal is by its so-called *impact factor*. As explained by ThomsonISI: “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 1999 equals the number of citations in 1999 of papers published in 1997 and 1998 divided by the number of papers published in 1997 and 1998.

Bank of Finland staff published 30 papers over the 1999-2003 period in 27 different JCR journals. For each of these 27 journals we calculated the average impact factor for the journal over 1999-2003. These average impact factors ranged from 0.872 for *Journal of Public Economics* to 0.1156 for *Emerging Markets Finance and Trade* (which was called *Russian and East European Finance and Trade* before 2003). In comparison, the average impact factor for the *European Economic Review (EER)* was 0.9092. Weighting the Bank of Finland publications in the JCR set of journals by the journal impact factors and normalizing by the *European Economic Review's* impact factor gives the number of *EER*-equivalent papers, which is a measure of the number of quality-adjusted publications. The Bank of Finland's research output from 1999-2003 was 14.4 *EER*-equivalent papers, or about 2.9 per year. Note, this is considerably lower than the 16.2 unadjusted publications per year. Also note that the average impact factor for Bank of Finland publications was 0.44 (calculated for the JCR-ranked publications), which is less than half of the impact factor for the *EER*.

To put these numbers into perspective, an external review of the European Central Bank undertaken in 2003 (Goodfriend et al., 2004) found that, based on the JCR impact

factors, the number of *EER*-equivalent papers published by staff in the ECB's Directorate General Research Department over the 2000-2003 period averaged 8.1 per year, and their average quality was slightly higher than the *EER*, and the number of *EER*-equivalent papers published by staff in the ECB's Directorate General Economics Department over the 2000-2003 period averaged 3.6 per year and their average quality was about half of the *EER*.

To check the robustness of our numbers, we applied two other journal ranking systems. The first alternative method is developed in Kalaitzidakis et al (2003). This system (here after called KMS) ranks journals by citations received in 1998 of articles published in 1994-1998 excluding self-citations and adjusted for the size of the journal and its impact on the economics profession.⁵ (The adjustment for size is made because larger journals publish more articles and so may garner a more than proportionate number of citations. The adjustment for impact is made because an article may be cited in non-economics articles, and it is the impact on the economics profession (i.e., citations in economics journals) that is considered more worthwhile to economists.) The KMS system normalizes the *American Economic Review* at 100.

Bank of Finland staff published 23 papers over the 1999-2003 period in 20 different journals ranked by KMS. For each of these 20 journals, we calculated the average KMS ranking for the journal over 1999-2003. These average KMS rankings ranged from 20.98 for *Journal of Business and Economics Statistics* to 0.08 for *Problems in Economic Transition*. In comparison, the average KMS ranking for the *European Economic Review (EER)* was 23.76. Weighting the Bank of Finland publications by the

⁵ These rankings are given in column 5 of Table 1 in their paper.

KMS rankings and normalizing by the *European Economic Review's* KMS ranking indicates that the Bank of Finland's research output from 1999-2003 was 5.6 *EER*-equivalent papers, or about 1.1 per year. Note, this is lower than the results for the JCR impact factors, since fewer of the journals in which Bank of Finland staff published were ranked by KMS than are in the JCR list of journals.

Our second alternative method is the ranking system developed by the Federal Reserve Bank of New York. Journals fall into 1 of 5 categories, which receive different point values corresponding to their quality: 400 for the top 8 economics and finance journals; 200; 100; 75; or 25. Bank of Finland staff published 24 papers over the 1999-2003 period in 21 different journals ranked by the NY Fed. None of these publications were in 400 level journals, but two were in 200 level journals (one article in the *Journal of Public Economics* and one in the *Journal of Money, Credit, and Banking*). The NY Fed rankings categorize the *European Economic Review* as a 200-level journal. Weighting the Bank of Finland publications by the NY Fed rankings and normalizing by the *European Economic Review's* NY Fed ranking indicates that the Bank of Finland's research output from 1999-2003 was 8.5 *EER*-equivalent papers, or about 1.7 per year.

Thus, the three journal ranking schemes give the same general result. While the Bank of Finland has increased the number of papers published in refereed journals, the quality of these papers is not that high.⁶ For example, the ECB is producing a greater number of higher-quality publications. The ECB has a larger staff devoted to research, which helps explain the result. Nonetheless, if the Bank of Finland expects to increase its

⁶ Jondeau and Pagès (2003) compare research output across the various national central banks in the ESCB and find a similar pattern: while the raw output of the Bank of Finland is impressive relative to that of other national central banks, its ranking falls once a quality adjustment is implemented.

visibility with the European System of Central Banks and achieve its objective of becoming a contributor to the policy debates within the ESCB, it is important for the Bank of Finland to increase the quality of its research output. This probably means devoting more staff and more staff time to economic research. Below we will give some recommendations that we believe will allow the Bank to increase the quality and quantity of its research. In particular, we believe that Bank of Finland staff must be given more time and more encouragement to produce research that is publishable in high-quality journals. A reorganization of the Research Department will most likely help in this endeavor.

D. Discussion Papers

The Bank of Finland publishes internally a large number of discussion papers, surveys, and reports that serve different purposes. Of most direct relevance to an exercise in evaluating the research output from an academic point of view are Bank of Finland discussion papers (“Red Devils”) and BOFIT discussion papers. It is our understanding that all research that originates from the Research Department appears as a BOF discussion paper. Research done in BOFIT appears as a BOFIT discussion paper. Hence, by evaluating the quality of these two discussion paper series, we get a good picture of the overall quality of the academic research at the Bank of Finland.

It is perhaps worth making a point here about the reason for performing such a quality check of the discussion papers. We are convinced that publication in high-quality peer-refereed journals is the only means of ultimately verifying the quality of research. It is also the only means of signaling the quality to the community outside the Bank of Finland. But the discussion papers are the intermediate output from which refereed

publications derive. In evaluating the discussion papers, we are not trying to second guess the journal evaluation process. Instead, we seek to assess whether a better publication record would be feasible with the same discussion papers but using a different strategy to get the research published.

Again, our interest is in the years since the last evaluation in 1999. The volume of discussion papers even in this 5-year period makes it impossible for us to assess each paper individually. We decided to concentrate on the last two years in these series, since papers written during 2003 and 2004 are unlikely to have yet been published externally. By surveying these two years and comparing our assessment of the overall quality of the papers to the publication record from the previous years, we should be able to detect any trends in the quality of the output. Since not all discussion papers from the earlier years were published, we also randomly checked some of the unpublished ones to see if the fact of not being published could be attributed to lack of follow-through rather than lack of quality.

We conclude that the overall standard of the papers in the Bank of Finland's discussion paper series is professional. In our reading of the papers from 2003 and 2004, we did not detect any marked differences in comparison to the publication outcomes of the previous years. Hence, we would expect many of the papers to be published in some refereed journals, but again relatively few making it to journals of a high international stature. Also the papers sampled from previous years did not give us cause to believe that a more aggressive publication strategy would have resulted in more publications in high-quality refereed journals.

We also read a sample of BOFIT discussion papers written in the period under evaluation. The standard in this series is also professional, and it is again our conclusion that there do not seem to be discrepancies between the eventual publication record of the working papers and our subjective assessment of the quality of the papers.

It is, thus, our assessment that the eventual publication record since 1999 gives a fair description of the overall quality of academic research conducted at the Bank of Finland during those years. There may be cases where more attention to choosing the publication outlets and having more time devoted to the process of submitting and revising a paper could have resulted in an improvement in the publication outcome. These certainly are important ingredients in getting high-quality publications, but they are necessary, not sufficient, conditions. The quality of the research must merit such publication. In our view, the discussion papers of the Bank of Finland have not been underplaced in journals. That is, if staff had had more time to submit and revise their work this might have had a marginal positive impact on the quality of the ultimate publication, but it is unlikely to have had had a significant effect.

The second type of papers produced at the Bank of Finland (such as the signed articles in the Bank of Finland Bulletin) can be described as either internal policy memorandums or surveys and reports mainly intended for the outside community. It is our view that this output reflects the needs and goals of the policy and communications function at the Bank of Finland and is hence best left outside the scope of an evaluation that concentrates on research.

III. LOOKING TO THE FUTURE

A. Human Capital Accumulation and Relations with Academic Units

A significant proportion of resources in the Research Department is currently devoted to the supervision of Ph.D. dissertations. This seems to be a reflection of the typical career path in the Bank of Finland by which employees enter after completing their Master's degrees. The academically oriented employees may then get a chance to write their Ph.D. dissertation during a stay in the Research Department.

In our view, this approach runs the risk of confusing research with human capital accumulation. While it is clear that the final version of an acceptable Ph.D. dissertation is a genuine research output, it is our view that this output is achieved at quite high a price in terms of its impact on the current organization of the Research Department. The main research supervisors have very little time to devote to their own research, and given that they are the only permanent staff members in addition to the head of department, we consider this a big loss for the research potential of the Bank.

We understand that, in the context of the Finnish job market for economists, the Bank must be active in employing candidates with Master's degrees. Given that many of the potential applicants want to pursue Ph.D. studies, the Bank should accommodate

these studies in some form. However, it is not clear to us that the current choice of relying mostly on in-house training is the optimal solution to the question of how to do this. It might be a good idea to rely more on the university sector for Ph.D. training and supervision. In addition to the savings in terms of the research supervisors' time and effort, this would also allow students to get a broader perspective of economic studies and avoid problems of inbreeding.

At the moment, Finnish universities do not have strong macroeconomic groups. This has been stated as one of the main reasons for Ph.D. supervision internally. We do not think that these two possibilities are the only solutions to addressing the needs of the Bank. For instance, the Bank of Italy has been successful in sending its employees to top universities in the U.S. to complete Ph.D. dissertations in the relevant fields. The Bank of Finland could also benefit from adopting such an approach with regard to its new recruits.

The 6-month visits to the Research Department are viewed as sabbatical periods by some of the staff members we interviewed. This is again consistent with the view of the Research Department being part of a human capital management operation. While we have nothing against arranging sabbatical leaves for current staff members, it is not clear that this is optimally done within the Research Department. It seems likely that visits to other institutions (other central banks, ECB, or academic institutions) might serve this purpose better.

While we think that it is important for the Bank to secure its supply of employees with Ph.D. dissertations, it is our view that the functioning of the Research Department

would be improved if it could concentrate more on research output and less on the accumulation of human capital.

Given the size of the Bank and given that most of the Bank's new employees are likely to be Finnish nationals in the foreseeable future, the external relations with the universities in Finland (and particularly in Helsinki) are of great importance.⁸ It seems to us that the relationship with the Economics Departments at the University of Helsinki and the Helsinki School of Economics has been strong. In fact, the Bank has employed some of the professors in those departments as external consultants on a regular basis.

However, a couple of changes in the academic structure in Helsinki might be worth taking into account at the Bank. The new research unit, the Helsinki Center of Economic Research (HECER), which spans the Economics departments of the University of Helsinki, the Helsinki School of Economics (HSE), and the Swedish School of Economics (SSE), seems to be a natural partner for the Bank of Finland. Currently, the Bank has established an exchange program with the Research Unit of Economic Structures and Growth of the University of Helsinki. It is not clear to us why this cooperation should not be expanded to the larger community of HECER. It is also not

⁸ Up to now, the universities have not had to expand into macro because they are able to produce macro Ph.D.s using Bank of Finland staff as dissertation supervisors. If the Bank of Finland cut back on its Ph.D. support, the universities might begin hiring professors in macro. However, this would not solve the problem immediately. Another possible solution would be for the Bank of Finland to begin hiring in the European Ph.D. market. We received various opinions on whether this would be feasible — some felt that the Bank would be able to attract researchers to Finland, especially since the Bank is part of the European System of Central Banks. Others were more skeptical. Things are a bit better in the financial markets area. Here the Finnish universities are producing strong microeconomists who would be able to apply their skills to issues of interest to the Bank of Finland's Financial Markets Department.

clear why there isn't more cooperation between the Bank of Finland and the Finance Departments of HSE and SSE.

B. Role of the Research Department in the Bank's Operational Duties

The permanent members of the Research Department are actively engaged in the Bank's operational duties, in terms of contributing to the Bank's preparation for meetings of the ECB's governing council and the various inter-bank committees of the ESCB and its communication of the ECB's monetary strategy to the domestic Finnish audience. The head of department plays a particularly important role in contributing to these operational activities. If the permanent staff in the Research Department were expanded (as we recommend below), an important task is to ensure that the Research Department provides the appropriate level of support for the Bank's operational duties. We make a recommendation on that front later in this report.

IV. IMPROVING THE RESEARCH ENVIRONMENT AT THE BANK: A DIAGNOSIS

Four aspects of the current structure seem problematic: the limited amount of time dedicated to research projects; the limited set of topics that constitute the Bank's research programs; the current role played by visitors and consultants; and the dependence of success on a very knowledgeable head of the Research Department.

Six months is far too short to complete most research papers, let alone allow time for seminar and conference presentations, submission to journals, revisions in response to referees' comments, and eventual publication in journals. In the current structure, researchers return to their home departments after six months (or sometimes a year) and resume full operational duties, limiting their ability to persevere in getting their research

published. In addition, high-quality publications do not appear to be formally recognized in terms of promotion criteria or other incentives.

Also, the Bank's two research programs encompass only a narrow part of the interests of central banks. For example, in the current structure, research on labor markets is being conducted in the Economics Department, as evidenced by the discussion papers being published. However, such work would not qualify for secondment of an economist to the Research Department to pursue the topic in more depth. Given that there are clearly economists at the Bank with the skills and interests to take on other relevant central bank topics (e.g., productivity, price stability, labor markets), it would seem a missed opportunity not to foster such work. Also, by not allowing the researchers to have more autonomy over their research agendas, the current structure limits innovation and creativity. Much of economic research involves exploring dead-ends before a successful path is found. This type of exploration is quite difficult under the current structure of the Bank of Finland's research activities. Researchers currently are not given time to pursue a research agenda. High-quality research comes from the pursuit of an agenda that builds on prior projects and in which knowledge continually expands.

In our interviews with the members of staff at the Economics and Financial Markets Departments, respectively, we got a very different view of how cooperation with the Research Department was perceived. The secondment of researchers from the policy departments to the Research Department appears to involve fairly complicated negotiations between departments. Since the policy departments are losing staff to the Research Department, they need to see the value of the research project from the policy

perspective. This tends to favor research projects that are very applied and that have a short-term focus. While the members of the Economics Department were largely satisfied with the current arrangements, members of the Financial Markets Department were openly questioning the usefulness of the Research Department.

As was noted earlier, the Research Department has had two research programs during the period of evaluation: “Developing the Modeling of Monetary Policy” in macroeconomics; and ”The Future of the Financial Services Sector” in finance and microeconomics.

The first project is centered on building quantitative models for prediction purposes, and as such, it is directly relevant to the policy work of the Economics Department. The research program on modeling and the level of cooperation between the Economics Department and Research Department appear to be quite satisfactory. Economists on loan from Economics to Research were able to develop a new dynamic general equilibrium model for forecasting. Much progress has been made on the model, but more work will be needed before the model can be used for policy analysis.

The collaboration between the Financial Markets Department and the Research Department has been somewhat less successful, partly because the Financial Markets Department is not convinced of the value of the Future of the Financial Services Sector research program and would prefer to see research completed on financial stability models.

This second program has been less structured even though it is clearly intended to cover topics that are of interest to the Financial Markets Department. This program has not generated any concrete benefits to the Financial Markets Department, and, as a result,

the cooperation between the Financial Markets and Research Departments has not been as smooth as it could have been. In fact, members of the FM department wanted to see a relatively greater allocation of research effort to financial stability models.

It seems to us that some of the problems between the Research Department and Financial Markets Department could be avoided if the agenda for the Research Department allowed for a broader set of topics for research conducted there: it is our view that the set of topics for research in the Research Department should be opened up considerably.

It was also suggested to us by members of the FM department that the requirement of giving up economists to the Research Department can be a burden to the FM department. If research staff were mainly permanently attached to the Research Department, the perception that the Research Department is causing shortages in the policy departments will not arise and this will be beneficial to promoting cooperation between the departments.

In addition to its own staff, the Bank of Finland also calls on external visitors and consultants to contribute to its research programs. Building links with external researchers is a sensible strategy, especially in view of the limited number of full-time researchers at the Bank. However, it seems to us that the Bank could obtain a greater return on its visitor program if it redirected its efforts toward attracting higher-quality and more senior external visitors and consultants who could play a greater advisory role in driving the Bank's research program.

Under the visitors program as currently structured, visitors must typically commit to spending several months in residence at the Bank of Finland, thereby excluding a

potentially useful pool of external contributors who cannot meet this time requirement. Significant benefits might be obtained by offering shorter-term contracts that might attract well-networked senior researchers who could offer a broader perspective and provide mentoring services to the Bank's research staff.

The success to date of the research programs at the Bank owe considerably to the skills of the head of Research Department, Juha Tarkka. He appears to have a wide knowledge of the fields being researched at the Bank and is able, with his two program heads, to make sound evaluations of which proposals are likely to result in successful research projects.

Indeed, the current structure would seem to be too dependent on the broad economic knowledge of the department head. As economics has broadened into new areas, economists have generally specialized more and more. Even if the Bank were not to expand the topics in which it is interested in producing research, it is likely to become increasingly more difficult over time to find the type of generalist who could head a department with the existing structure of the Bank of Finland's Research Department. Allowing researchers more autonomy for their agendas and using the refereeing process of external academic journals to evaluate the research are much more likely to yield better results.

In contrast to the organization of research in the Research Department, BOFIT has permanent staff members who divide their time between longer-term research on transition economics and current analysis of transition economies, some staff spending more of their time on one or the other. The unit has been able to produce a sizable volume of research that is being published in journals specializing in transition

economics. (BOFIT's success is noteworthy, but it should also be recognized that transition economics is a narrow field. So publishing in the area would presumably be easier than publishing in high-quality macro and finance journals. Note also that the impact factors of the transition economics journals are generally low.) In BOFIT, researchers have more autonomy over their agendas as long as they focus on transition economies. The Institute recently lost one staff member who wanted to spend some of his time researching other issues (namely, public economics).

V. RECOMMENDATIONS

The question now is how to restructure the research activities to preserve the synergies between policy making and research but at the same time allow higher-quality research to be completed. Several steps should be taken to achieve this outcome.

1. Hire more Ph.D.-level economists as permanent staff in the Research Department. This would ensure that more resources were devoted to the pursuit of publishable research and underscore Bank management's resolve to increase the quality and visibility of the Bank's research. It would obviate the sometimes lengthy negotiations that currently occur between the policy departments and Research over secondment assignments. Thus, we feel adding permanent staff in Research is preferable to merely extending the length of time devoted to research projects from 6 months to 24 months or more for economists lent to Research from the policy departments. Permanent staff would be given time to devote to research, and since research would be their main focus, they could also be given proper incentives to produce research. (The Swedish Central Bank has recently abandoned a model similar to the Bank of Finland's model and has expanded the Research Department with permanent staff.)

2. Create a career path for successful researchers within the Bank. Staff members were unsure whether publications in good journals would result in any direct benefit for their careers. At the same time, as more staff is hired into the Research Department, the possibility of creating new senior positions within the department should be considered. Successful researchers could be promoted, e.g., to the rank of senior economist, which could have an equal status to heads of offices in the other departments.

3. To achieve the synergies between research and policy, reverse the secondment.. That is, allow researchers (who on on permanent staff in the Research Department) to spend 6-month stints in the policy departments so that they can see the issues facing policymakers. This will help to create a sustainable link between research and operational duties of the Bank.

4. Expand research programs to encompass more of the issues of interest to central banks and allow researchers more control of their research agendas. Substitute the refereeing process of external journals for some of the tight internal oversight of research, as experts in the fields are typically the arbiters at the journals. This allows the researchers to have more “ownership” over their research, which generally results in more perseverance and better outcomes.

5. Devote more resources to allowing economists to travel to conferences and seminars to present their research. Having the comments of their colleagues will improve the research, and visibility of the papers will increase the likelihood of publication. Also, the visibility of the Bank of Finland will be enhanced. As is increasingly common at other central banks, it is also desirable to create research web pages for each economist at the Bank of Finland.

6. Reform the terms and conditions of the visitor program in the direction of attracting more senior and higher-quality visitors and consultants

7. Staff members we spoke with were generally happy with the research assistance offered by the Bank. They were less happy with the computing resources, saying that the current computing environment is an impediment to doing research. (This complaint is heard in many central banks.) Because of security concerns, the Bank of Finland's computer system is a very closed system. This makes it difficult for researchers to share files and e-mails with their colleagues outside the Bank. Given the increasing importance of computing for doing quality economic research, this problem needs to be addressed sooner rather than later.

8. We do not recommend at this time combining the Research Department with the two policy departments, either by creating a single department with three divisions (research, economics, and financial markets), each with permanent staff, or by changing the job description of the Ph.D. economists in the policy departments so that half of their time is devoted to research and the rest to policy work (similar to the Federal Reserve Bank model). In this model, it is very important for department management to have strong convictions about the importance of protecting economists' research time and ensuring they get large, uninterrupted periods of time (not just days here and there) to devote to their research agendas. We feel this is too large a step at this time for the Bank of Finland to take, and it could jeopardize the increased research activity the Bank has achieved over the past 5 years.

9. We also do not recommend combining the Research Department and BOFIT at this time. The research projects and interests of the two departments are quite

disparate. Instead, we believe that reformulating Research along the lines of BOFIT – i.e., hiring permanent research staff – is the appropriate step to take at this time.

10. Within BOFIT, allow researchers to spend some of their time on research outside the main focus of the Institute, namely transition economies, as this field is quite narrow making hiring and retention potentially difficult.

VI. CONCLUDING REMARKS

In conclusion, we feel the Bank of Finland has made good progress in the past 5 years by increasing research output and putting more emphasis on research as a means to achieving better policy analysis and of increasing the Bank of Finland's influence in the policy debates within the European System of Central Banks. The task now is to increase the quality of the Bank's research output. We believe that this can be accomplished by expanding the Ph.D.-level permanent staff in the Research Department, expanding the set of research programs to encompass more issues relevant to central banking, and allowing the staff to have more autonomy over their research agendas. To preserve the synergies between research and policy work, we recommend reversing the secondment. Rather than policy staff visiting the Research Department for stints of 6 months or longer, we recommend that the permanent staff in Research visit the Policy Departments for 6-month stints every so often to see first hand the issues facing policy makers.

VII. REFERENCES

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Kalaitzidakis, Pantelic, Theofanis P. Mamuneas, and Thanasis Stengos, “Rankings of Academic Journals and Institutions in Economics,” University of Guelph, June 2003.

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Appendix 1

Evaluation of the research activities of the Bank of Finland: Terms of reference

(Proposal approved by the Board of Management on May 12, 2004)

1. Purpose of the evaluation

The Bank of Finland aims to be an active and constructive member of the European System of Central Banks. Developing a high-quality research function is seen as essential for achieving this objective. Bank of Finland's research function should enable the bank to make a significant impact not only nationally, but also at the European and international level. Bank's expertise should cover the most important strategic aspects of central banking and monetary policy, focusing on certain key priorities

In particular, the Bank aims at possessing cutting-edge skills meeting international standards in the focal areas of monetary policy analysis, financial market research and in the knowledge of emerging markets important to the country, especially the Russian economy.

To facilitate the achievement of these strategic objectives, the Board of Management of the Bank of Finland has decided to ask for an external evaluation of the research activities of the Bank. The purpose of this evaluation is to provide an objective basis for developing the research function of the Bank further. In particular, the evaluation should yield an assessment of:

- The scientific quality of the Bank's research output as a whole
- The relevance of the research activities from the point of view of the strategic goals of the Bank

The evaluators shall conduct their work freely and objectively and shall render impartial judgment and make recommendations for improving the research performance of the Bank of Finland to the best of their professional abilities.

2 The evaluators

The bank has invited three experts Prof. Philip Lane (Trinity College Dublin), Dr. Loretta Mester (Federal Reserve Bank of Philadelphia), and Prof. Juuso Välimäki (Helsinki School of Economics) to do the evaluation.

3 The scope of the evaluation

The evaluation will cover all of the economic research activities of the Bank of Finland, irrespective of the department or unit in which the work takes place. Hence, the evaluators should consider the scientific quality and relevance of research done at the following departments:

- The Research Department
- The Bank of Finland Institute for Economies in Transition
- The Economics Department
- The Financial Markets Department

4 Information base for the evaluation

The evaluation should be based on a broad examination of the research output, as well as interviews with Bank staff. As the Bank has not especially emphasised submission of research for outside publication, citation records will not be a reliable source for the evaluation of research quality.

In addition to all published research reports, which are mostly in English, the evaluators will have free access to internal reports which are relevant to the evaluation of research quality. The evaluators are requested to visit the Bank of Finland in order to obtain the information needed for the evaluation. During the visits, the officials of the Bank of Finland will introduce the evaluators also to unpublished research in their respective departments, as well as to research which is originally reported in Finnish.

The evaluators undertake to maintain secrecy on all confidential matters coming to their knowledge in the course of the exercise and 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 Bank of Finland. They will also be bound by these obligations after the end of the evaluation.

5 The evaluation report

The evaluation reports should be presented to the Board of Management of the Bank of Finland by the end of the year 2004. The reports will be property of the Bank of Finland and the evaluators undertake not to disclose any part of their reports without the permission of the Bank of Finland. The Bank of Finland 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.

Appendix 2**People interviewed by the external evaluation committee**

Erkki Liikanen, Governor

Sinikka Salo, Member of the Board of Governors

Juha Tarkka, Head of the Research Department

Pekka Sutela, Head of the Institute for Economies in Transition (BOFIT)

Antti Suvanto, Head of the Economics Department

Heikki Koskenkylä, Head of the Financial Markets Department

Esa Jokivuolle, Financial Markets Department project supervisor

Kari Korhonen, Head of Payment Systems Division, Financial Markets Department

Kimmo Virolainen, Head of Market Structures Division, Financial Markets Department

Jouko Vilmunen, Supervisor, Research Department

Ville Mälkönen, Project Researcher, Research Department

Juha Kilponen, Economist, Economics Department

Iikka Korhonen, Senior Economist, Institute for Economies in Transition (BOFIT)

Kaisa-Liisa Nordman, Planning Specialist, Organization and Management Development