
Assessment of the Bundesbank Research Centre

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Introduction

This report reviews the effectiveness of the Bundesbank's Research Centre. In particular, the Bundesbank asked the authors of the report to examine the coverage and appropriateness of the research topics investigated by the Centre, the quality of the research and the adequacy of the Centre's infrastructure and organisation for achieving its objectives.

In spring and summer of 2011, the three assessors held a series of meetings with groups of individual researchers, with the Director and Deputy Directors of the Centre, with managers of the three Bundesbank departments that contribute staff to the Research Centre and with board members of the Bundesbank including the President. Appendix A lists the people interviewed and provides the programme for the meetings.

Below, we describe in Section 1 how the Research Centre works and in Section 2 provide recommendations on how it might be improved. The findings reported are the independent views of the assessors alone.

1. How does the Research Centre work?

1.1 Strategy

The Bundesbank's Research Centre aims to act as an intermediary between the Bundesbank's policy-related activities and rigorous academic analysis. In the Bundesbank's words, "The work of the Research Centre is designed to provide support in the form of research input to those Bundesbank departments whose work is more strongly shaped by policy, especially on matters relating to monetary policy and the associated economic analysis, financial stability, and issues of banking supervision and regulation."¹

Research should (i) generate new theoretical insights that can be put to practical purpose in Bundesbank policy, and (ii) supply instruments, tools and concepts applicable to the areas of responsibility of the Bundesbank and of Euro System Central Banks (ESCB) more generally.

Consistent with this, Research Centre "staff take an active part in the academic debate (inside and outside the ESCB)" and some should aim to "be in a position to publish in leading journals of the relevant specialist fields (monetary economy, banks, financial stability)."

"To fulfil these tasks, the Research Centre is to provide the best possible infrastructure. The Research Centre is to promote the exchange of ideas and cooperation between economists and assist in communicating its own research findings to the public at large, thus enhancing the Bundesbank's reputation."

The Research Centre's objectives may be compared to those of similar central and multi-lateral bank research units. Characteristic of all such research units is an attempt to balance the competing goals

¹ Bundesbank internal document, "Development and current structure of the Bundesbank Research Centre: A brief overview".

of achieving high quality academic research and generating analysis directly useful to the policy divisions of these institutions.

The likelihood of successfully achieving these objectives is influenced in opposite directions by choices that may be made. Specifically, providing researchers with uninterrupted time to complete projects and with a large degree of discretion in choosing topics is likely to enhance their ability to complete high quality research and to secure its publication in leading journals. However, this may not be conducive to contributing to practical policy-making or influencing the rigour of policy analysis.

1.2 Organisation

The Bundesbank formed the Economic Research Centre in 2000, merging the Econometric Model Division of the Economics Department with a Research Group comprising a small number of staff temporarily assigned to research projects from the Economics Department.

In 2005, analysts from the Banking and Financial Supervision Department were for the first time allocated to the Centre which was renamed the Research Centre. In 2009, the Financial Stability Department was founded and members of staff from this department were assigned to the Research Centre.

The Research Centre currently comprises (i) permanent researchers and (ii) staff members from three contributing Bundesbank departments who rotate into the Centre for periods of (usually) six months. Some members of staff are “rotated in” for multiple six month stints.

Table 1: Staff in the research centre (Full-time equivalent, in months)

Year	2008	2009	2010
Permanent members	132	143	147
Rotating members	147	103	135

Note that the data in Table 1 and Table 2 below are not readily comparable. Table 1 reflects for the period 2008-2010 the effective use of research members (in FTEs in months) whereas Table 2 (for 2011) gives the number of research positions that the research centre is entitled to according to the table of the organisation. Discrepancies do for instance arise if policy departments do enrol fewer rotating researchers into the Research Centre than the scheduled capacity as given by Table 2.

Figures on the number of months of Research Centre work contributed by full-time and rotating members are shown in Table 1. The figures suggest time contributions of 11 to 12 full-time equivalent researchers coming from the permanent centre members and 9 to 12 full-time equivalent researchers come from staff rotated into the centre. The contribution of the rotating members is in fact somewhat less, however, because rotating members are also occupied with operational work from their home departments while they work in the centre.

The Research Centre is managed by its Director and two deputies. The Centre is formally organised into three sections: (i) Economics, (ii) Financial Stability and (iii) Banking Regulation and Supervision, corresponding to the three Bundesbank departments that contribute rotating members to the Centre, see Table 2. Table 2 also shows that within each section research is organised in informal so called research groups of which there are 8 in total, see also section 1.3.

The Centre Director reports directly to the President of the Bundesbank (who is also the Bundesbank Board member responsible for the Economics Department). The Director personally manages the Economics section of the centre. The two Deputy Directors of the Research Centre are members respectively of the Financial Stability and Banking Regulation and Supervision Departments and manage the Centre sections directly relevant for their respective home departments.

Table 2: Structure of the Research Centre in 2011

Economics	Financial stability	Banking regulation and supervision
Research groups: Money and monetary policy Public finance General equilibrium models Corporate and household finance International integration Forecasting	Research group: Macro-prudential risk	Research group: Micro-prudential risk and supervision
Staff: 14.5 permanent researchers 9 rotating researchers 1.5 research assistants	Staff: 2 permanent researchers 8 rotating researchers	Staff: 2 permanent researchers 7 rotating researchers

The organisational structure of the Research Centre is thus depicted in Table 2. The numbers of staff shown in the figure are those pertaining at 2011. As may be observed, the two sections involved in financial and banking research rely to a high extent on rotating researchers, especially the sections engaged in financial research. It is to be noted that the staff in all three research sections have also some administrative duties. In the economic research section for instance researchers have responsibilities including administration of the visitors’ programme and work on datasets and models developed for operational purposes.

1.3 Research environment

The centre is partly a “virtual” department within the Bundesbank in the sense that, while permanent members are physically located together in designated groups of offices and report to the Director of the Centre, rotating members continue to work in their home departments, do not change locations while they are assigned to the centre and continue to report to their departmental line managers.

The fact that at any given time, half of those occupied with research in the Centre are rotated in from the Bank’s policy departments is a key feature of the Bundesbank’s approach. The guiding notion of this system appears to be twofold: first, to promote or secure policy-oriented research

and, second, to keep the operational and policy departments interested in applying research tools. As a rule, rotation from ordinary work to research is for six months though this may be prolonged to nine months on demand by the researcher.

Departments decide who among their staff is permitted to rotate into the Centre; the research director has no say. The staff on rotation can be asked by their home department to do policy work instead of the assigned research if there is an urgent policy need.

Researchers in the Centre collaborate within eight informal research groups (the research “families”); see again Table 2. Each research group meets whenever convenient to discuss the work in progress of its members and twice a year to reconsider the joint research agenda.

The following research fields are addressed: money and monetary policy; interactions of public finances; dynamic stochastic general equilibrium models; corporate finance, household finance and monetary policy; international integration; forecasting and early warning; financial stability and macro-prudential regulation; banking regulation and supervision). As the names of the research groups indicate, the topics chosen cover a broad range of issues of monetary policy, financial stability and supervision.

The research programme of the Centre is reviewed annually. In the main, the topics are chosen in a bottom up fashion. Permanent as well as rotating researchers develop project proposals. The proposals are first discussed within one of the eight informal research groups (the research “families”). If a proposal receives backing, it will be presented to a joint meeting of the three sections of the Centre. The research director and the heads of the three sections also have a say but the research topics are to a considerable extent generated by the three policy departments.

Researchers receive advice on their projects from outsiders. Specifically, the Centre has hired a number of academics (“research professors”) who provide concrete advice to researchers on demand. Joint work with the research professors is encouraged by the Centre.

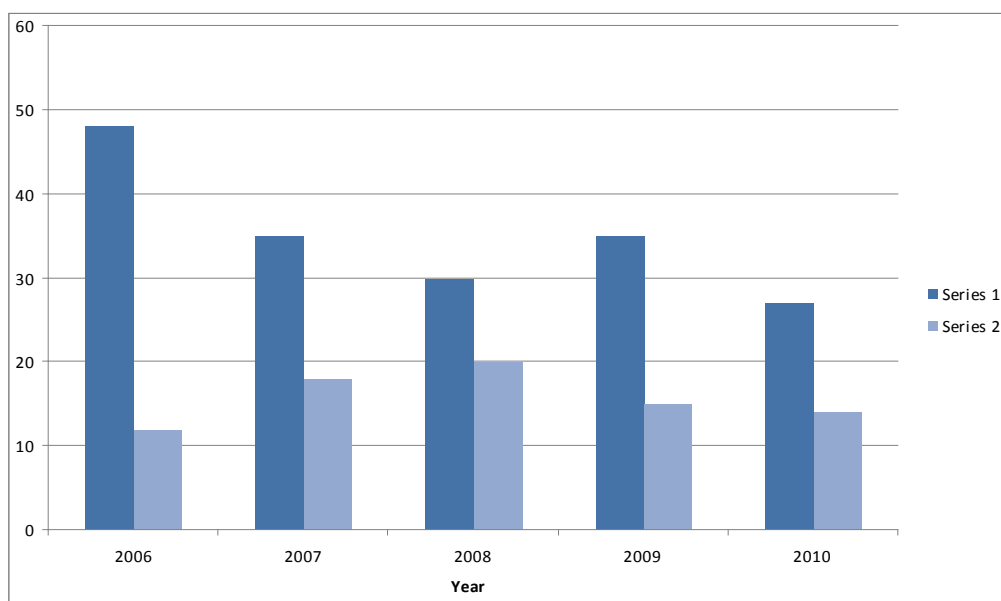
1.4 Governance

As described above, the Research Centre Director reports to the President of the Bundesbank who is also directly responsible for the Economics Department. The two Deputy Heads of the Centre are members of the two departments other than the Economics Department that contribute rotating members to the Centre.

Each autumn, the Centre’s research programme for the coming calendar year is agreed and written up in an Annual Plan. Each spring, the outputs of the previous year’s research activity are described in an Annual Report.

Decisions on the topics addressed by the Centre are strongly influenced by the three departments contributing rotating members. In these departments, relatively “bottom up” processes are followed by which individual researchers suggest topics after discussions with managers and senior department staff. The Director of the Research Centre participates in the determination of the research programme for the three participating departments, writes up the overall annual research plan, and has the lead in suggesting which research groups should be established to begin with.

Figure 1: Numbers of Discussion Papers for Economics (Series 1) and Finance (Series 2)



Source: data provided by Research Centre of the Bundesbank

The annual research plan and research report are presented at biannual meetings of a Research Council made up of a group of around six external academics. The Council meets for half a day during which either the Annual Plan (at the winter meeting) or the Annual Report (at the spring meeting) is presented. In addition, Centre staff briefly present current research papers and receive comments from Council members.

1.5 Research output of the Centre

The Centre produces two discussion paper series: the first is entitled Economic Studies and the second Banking and Financial Studies. There is some overlap in that a few papers in the first series treat topics that could be viewed as financial such as loan supply or banking and sovereign risk.

Over time, the number of discussion papers has fluctuated. In some of the recent crisis years, output has been significantly lower as fewer staff members have been rotated into the Centre and those rotated have been occupied to a greater extent with policy work. Overall, and keeping in mind that the sample period is inevitably rather short, some downward trend is apparent in the histogram shown in Figure 1, with a total of 60 discussion papers in 2006 falling to 41 in 2010.

If one strips out discussion papers completed by external visitors or presented at Bundesbank conferences but not written by Bundesbank staff, the reduction is less substantial but there is still a fall from 2006 to 2010 from 45 to 32 (see Figure 2).

Figure 2: Numbers of Discussion Papers by Visitors and Bank Staff

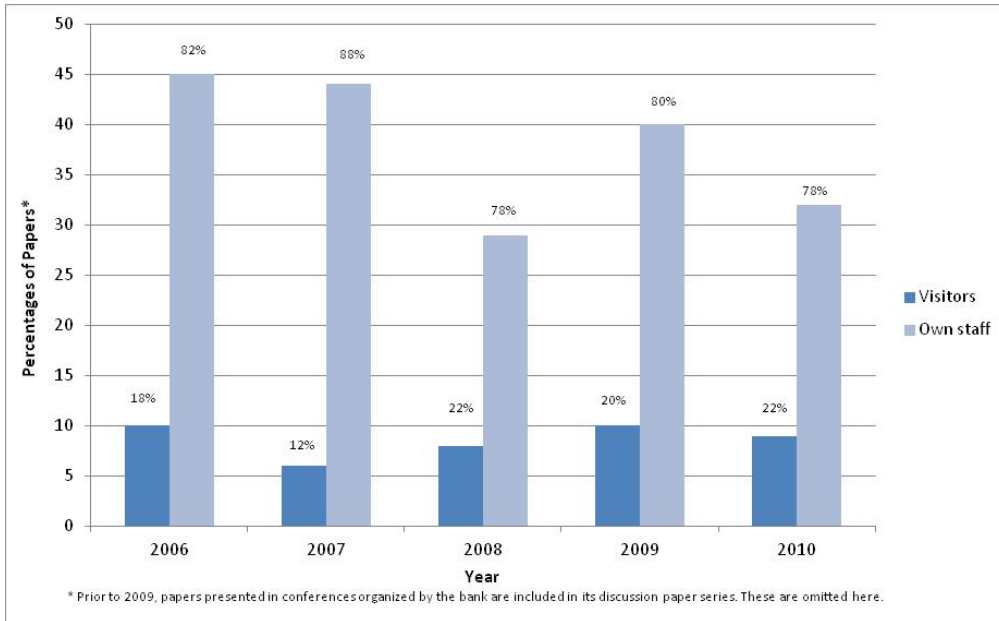
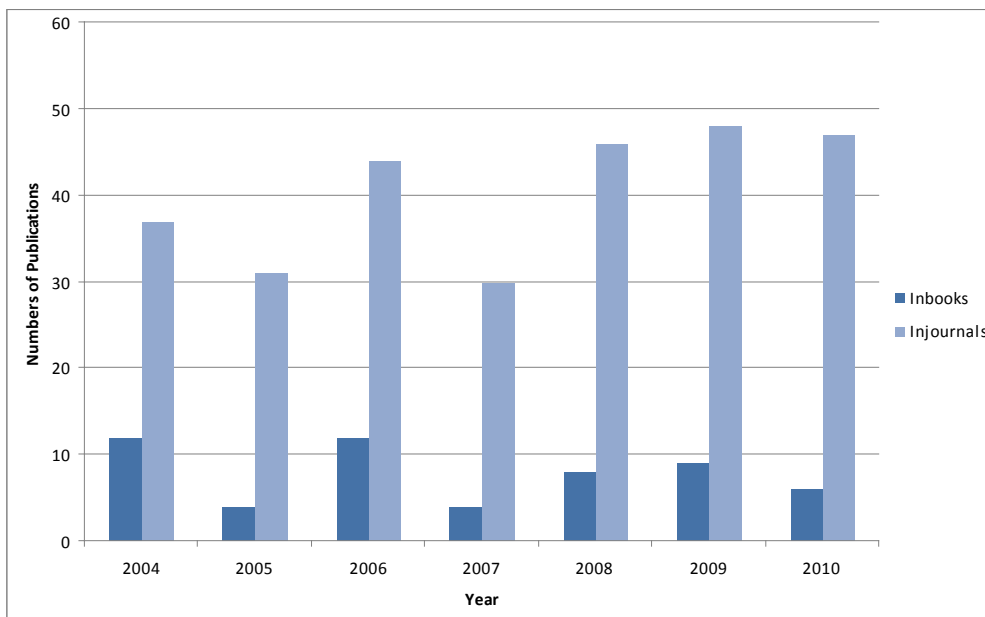


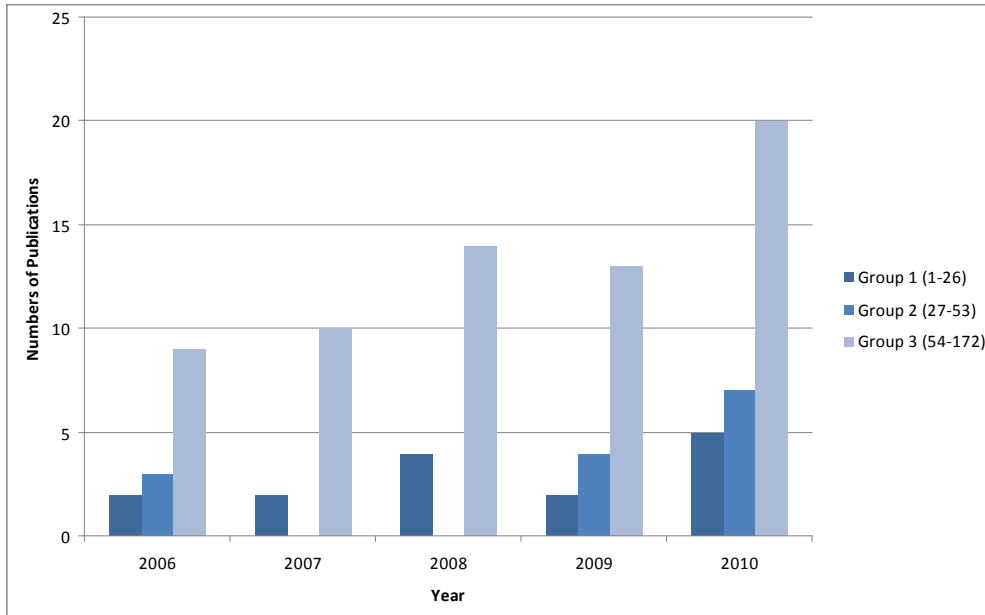
Figure 3: Numbers of Publications in Books and Journals



Source for Figures 3 and 4: data provided by Research Centre of the Bundesbank

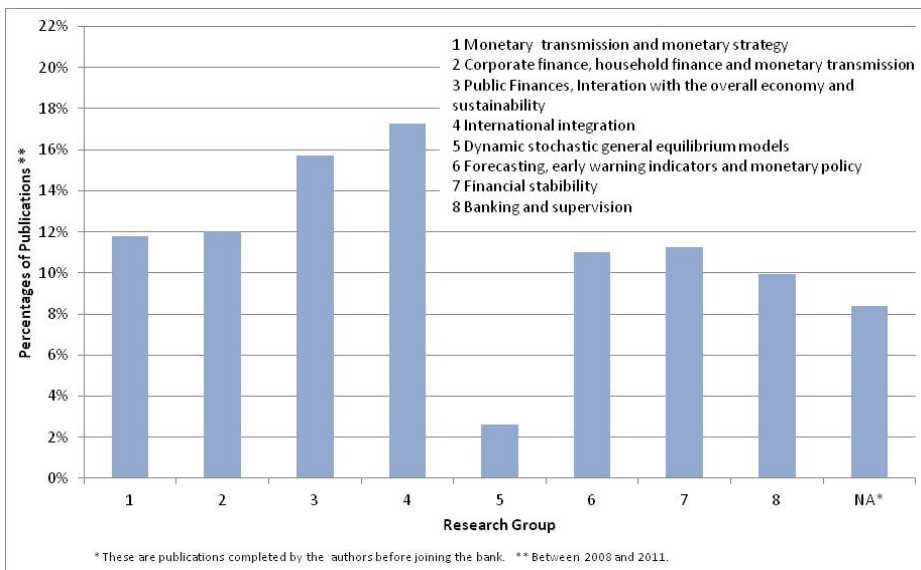
The reduction in the number of discussion papers undoubtedly reflects a temporary shift of resources away from research that started with the financial crisis of 2008, but it may also be a consequence of increased focus on the quality of research output and a greater demand on staff that they publish their research in refereed journals. Figure 3 shows the number of journal and book publications over the 2006 to 2010 period. Journal publications appear to have risen in absolute numbers and as a fraction of overall publications.

Figure 4: Publications by Journal Group



Source: data provided by Research Centre of the Bundesbank

Figure 5: Publications in Journals and Books by Research Group (2008-2011)



Source: assessors' own calculations

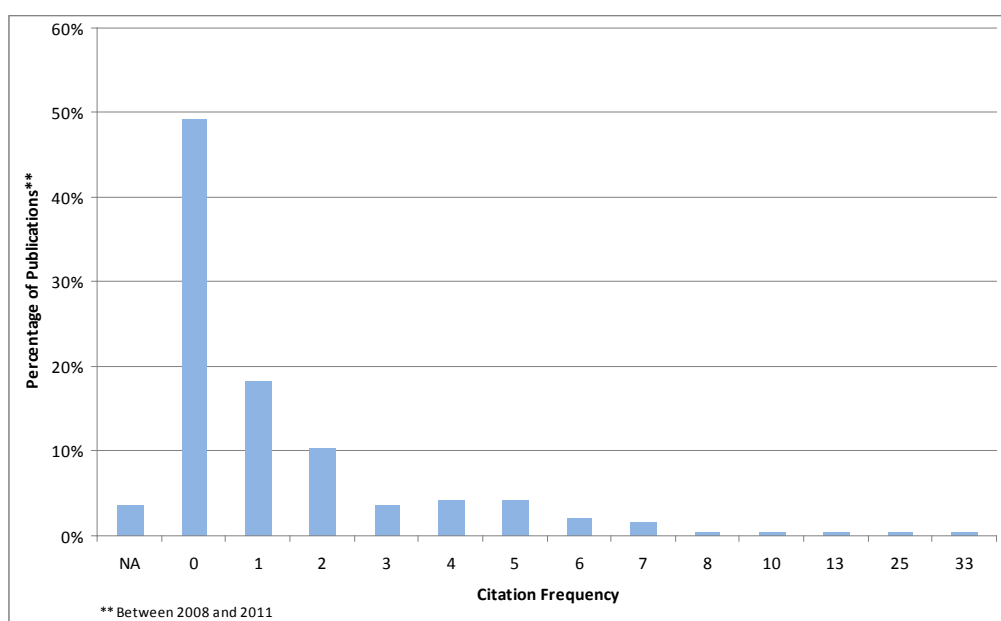
For internal assessment of publications, the Bundesbank categorises journals into three groups. The first numbered 1-26 represents leading journals. The second category including those ranked from 27 to 53 represents the second category. The third category comprises those ranked 54 to 172. Figure 4 shows the frequency of publications by year for each of these three journal groups. The figure suggests a progressive if gradual increase in publication numbers in the three journal categories.

Figure 5 shows the number of publications in academic journals and books for each of the 8 informal research groups (shown in Table 2) for the period 2008-2011. Clearly, most of the publications have been completed by researchers in the Economics section of the Centre. This may reflect the fact that the two finance sections have only recently been built up. It could also be a consequence of the fact

that most permanent Centre staff are members of the economics section while the finance sections largely rely on rotating researchers. At the same time, there is some heterogeneity among researchers when it comes to publications and a few rotating researchers outperform the average permanent researcher.

In addition to the research output data, as summarized by Figures 1 to 3, which show the number of discussion papers and journal and book publications, we have analysed the impact of the research produced by the Centre by examining citations. Using information available on Google Scholar™ and Web of Science, we have carried out a citation analysis for the journal and book publications of Research Centre researchers for the period 2008-2011.

Figure 6: Google Scholar Citations of the Research Centre’s journal and book publications, 2008-2011



NA denotes publications done by the authors before they joined the Bundesbank.

Source: assessors’ own calculations

Figure 6 shows citation frequencies for the Research Centre’s journal and book publications. The figures are obtained by searching for citations using Google Scholar™ for each Research Centre publication in the period 2008 to 2011. Every citation has then been checked and verified to ensure that it represents a genuine citation. (While more comprehensive than some other sources, Google Scholar™ produces many apparent citations that do not constitute genuine citations. Very careful checking is therefore required.)

Figure 6 indicates that only half of the journal and book publications have been cited by other authors. About 28 percent have been quoted one or two times while about four percent have been quoted ten times or more. (Appendix B provides further information on the citation and impact analysis.)

These citation scores are considerably lower when we use Web of Science (where only ISI journal citations to other ISI journals are taken into account). This may reflect lags in the inclusion of citations in Web of Science and the fact that we are examining recent publications. In addition, (see

Appendix B), we looked at the distribution of journal publications by the impact factor of the journals.

Overall, and taking into account the lack of a direct comparator, it is our view that the citation scores are low. This may partly be explained by the fact that the sample period is short and, in the field of economics, it takes time for journal publications to be cited. Nevertheless, similar recent citation or impact analyses for the research of other central banks indicate that the citation or impact scores of the Bundesbank research output could be improved upon.²

1.6 Other outputs of the Centre

In addition to research, the Centre generates several other outputs.

First, the Centre has developed a set of economic and financial databases which may be used by Bundesbank or external researchers for research purposes. The creation of these datasets frequently involves participation in data consortia involving other European central bank or governmental bodies and coordinated by the European Central Bank.

Important examples of such data bases include a comprehensive German real time data base on macroeconomic time series GERDA, a Europe-wide survey of household finances, and a German microeconomic database with information on firms. Work on these databases represents a substantial undertaking for the Centre. Typically, the equivalent of approximately 4 full-time permanent Centre staff time is occupied in database preparation.

Second, the Centre assists other Bundesbank departments, most notably the Economics Department, in the development and enhancement of economic models used in forecasting or policy analysis. Typically, these models go through a life cycle of development within the Centre and are then adopted and maintained within the Economics Department. Permanent members of the Centre assist the Economics Department on a continuing basis in enhancing and modifying the models. Examples of such recent model attempts include the Bank's own DSGE model, or the Bank's involvement in the macro-financial linkages modelling by the ECB.

Third, the Centre operates a visitor program. Visitors are selected through a relatively informal process of application by and invitation to academics working in areas of interest to the Bundesbank. Some visiting researchers work with Centre staff on joint projects. Other visitors come to the Bundesbank to engage in research that makes use of one of the several datasets that the Centre maintains.

As a rule, around 60 visitors per year (and 10-20 interns) are invited to perform research work in the Centre. On average, 40 percent of the visitors are from outside Germany. As regards status, about half of the visitors are assistant professors, one third comprises full or associated professors, and one sixth belongs to financial institutions.

² See for instance Table 1 in the ECB's external research evaluation report or Table 2 for the Dutch central bank's research evaluation report (both reports were handed to us by the Bundesbank)

Fourth, the Centre organises several academic conferences each year. The main two such events each year consist of a conference on an economic subject in the spring and a conference on a banking or financial stability subject in the autumn. The conferences are frequently organised jointly with a university or an outside research institute. In this case, the Bundesbank typically hosts the event at its Eltville conference centre and works jointly with the external organisers in devising the programme.

In addition, the Centre organises workshops and events to further stimulate the use of its datasets. Both the conferences and workshops are viewed as providing a service to the academic and financial community as well as a means of encouraging links between staff and outside researchers.

2. How could the Research Centre work better?

2.1 Quality of research

The Centre has made significant strides in boosting research quality. In particular, substantial efforts have been made to recruit a body of well-qualified young PhD economists, and the Centre managers have placed greater emphasis on publication in international refereed journals. The quality of conferences organised by the Bundesbank and the involvement in external networks have been boosted to enhance the research environment. These changes have had an impact on the numbers of publications in leading academic journals, perhaps the single most revealing indicator of research quality.

We would note that even if one adopts a narrow view of the objectives of engaging in research, namely boosting competence and informing policy with high quality analysis, aiming to produce academic publications is important since the editorial and refereeing processes significantly raise the bar by requiring rigour and clarity.

So even though progress has been made, we believe that further steps should be taken to increase research quality. The number of journal publications has risen but rates of citation remain somewhat disappointing. Low citation rates could reflect the fact that researchers are still targeting second tier journals. While these journals in many cases publish good quality, specialised research, they have a relatively lower impact factor. Or they could reflect the fact that the choice of research topics is relatively narrow and unambitious.

We pick up in sections below several broad issues namely (i) organisation (in particular, the rotation approach the Bundesbank follows), (ii) the involvement of external researchers through the Research Council and the visitors' program, (iii) the non-research outputs (namely conferences, datasets and policy model building) and (iv) the processes used in identifying research topics. All these four issues are directly or indirectly important for the goal to further increase research quality in our view.

Before turning below to issues (i)-(iv), we start by making the following recommendations for how the Centre could be reinforced with a view to boosting research quality.

- a When the opportunity arises, without necessarily changing the current structure of the Centre, the Bundesbank should consider appointing a senior academic to a leadership position within the Centre. In this, it would be emulating the approach of other central

banks and multilateral organisations that have recruited experienced academic researchers to play leading roles within their research functions. Taking this approach would signal to outsiders the emphasis the bank places on research and high quality analysis and would facilitate recruitment of excellent junior staff. The experience of the person appointed would also be valuable in assisting the bank in its further development of its research functions.

- b Incentivising research economists is a significant challenge but is crucial if they are to be induced both to stay in the bank and to produce high quality research. Incentives could be created directly by bonuses or indirectly by recognising success in publications in promotion decisions. The bank may consider adopting a rule that a bonus will be provided if a rotating researcher is ready to put extra-effort into turning a working paper into a high quality product acceptable to a leading journal.

2.2 Rotation

The main rationale of rotation is to enhance the technical expertise of Bundesbank staff engaged in policy work. The day to day work of Bundesbank staff pursuing careers in the operational and policy departments is likely to be enhanced in that they will be exposed to the latest developments in relevant scientific techniques.

Rotation could also be viewed as a reward for good work in the policy area, providing staff who perform well with opportunities to explore research topics that interest them. Finally, the possibility of rotation into the Research Centre could attract highly qualified recruits, in particular with doctorates, who are attracted to a career that combines policy with research.

These objectives would in part be met by rotations that just result in working papers. The additional effort needed to secure journal publication requires other justifications such as objectives to enhance the Bundesbank's reputation for expertise and to contribute to the body of knowledge on topics relevant for the Bundesbank's work as a monetary and regulatory institution.

A potential drawback of the rotation system is that it could make it difficult for the staff involved to achieve the focus on research necessary to tackle research topics rigorously and accomplish fully satisfactory analyses. It is therefore important for the bank to strike an appropriate balance between permanent and rotating Centre members. Particular attention in this regard might be paid to the balance for the financial research sections where almost all researchers are rotating.

In the recent crisis period, the operation of the rotation system by the Bundesbank has made it difficult for rotating researchers to achieve their research objectives. Rotating researchers, particularly those from the departments with financial responsibility, have been asked to complete the majority of their normal policy workload as well as engaging in a research project through the Centre. While having benefits in encouraging interaction between policy and research activities, the practice of rotation has significant disadvantages that should be mitigated where possible. We therefore suggest the following measures.

- a Staff rotated into the Centre should not be required to perform more than a minimal volume of departmental work during the period of their rotation. If a department faces intense work pressures, the number of rotating staff should be explicitly reduced rather than maintaining the same numbers of rotating staff while giving them little or no time to complete research.
- b We suggest that researchers on rotation be provided with office space located within the Centre. This will increase the degree of interaction with other researchers, both permanent Centre members and other rotating staff. This will help to create the intellectual atmosphere

needed for fruitful research. It will also in part insulate rotating researchers from demands of their home departments to continue to perform their normal policy work.

- c The Bank may consider lengthening the rotation period from the current standard period of 6 months to 9 months or a year.
- d The Bank should review the balance between permanent and rotating staff and where appropriate create more permanent posts. This may be particularly advisable in the finance sections where currently a large majority of Centre researchers are rotating staff.

2.3 Non-research outputs

The Bundesbank operates and develops in cooperation with other central banks and financial institutions large micro data sets such as a security holder data base for the euro area and a Europe-wide survey on household finance. The data collection and preparation is part of the Centre's services. While the data sets provide highly valuable material for research on the behaviour of households, firms and banks, the operation of the data bases consumes a lot of manpower at the expense of the capacity for research.

We recommend the following.

- a The Bank should consider hiring additional permanent staff for a newly created micro data base service unit.
- b The Bank may find it desirable to create a pool of part-time research assistants. The Centre's current endowment of 1.5 full-time equivalents appears much too small.

2.4 The involvement of external researchers

Bundesbank researchers should fully participate in international networks of academic and governmental researchers. Such participation may include attendance at seminars and conferences but it should also involve visits to the Bundesbank by outside researchers.

Also, those responsible for managing the research function of the bank should have access to external views and evaluations of the Centre's. These may come from external academics or from staff members, past or present, of other central banking or regulatory institutions.

To achieve these objectives, the Bundesbank operates a program of visits by outside researchers and runs a system of research professors whereby academics, typically at local universities, are involved either in advising bank researchers or in some cases in engaging in research projects with Bundesbank staff. Also, the Bank instituted the Research Council described above, a group of six leading academics, mostly overseas who visit the Bundesbank for meetings on a six monthly basis.

We recommend the following.

- a The bank should consider whether the current operation of the Research Council strikes the right balance between governance, input on research directions and commentary on completed research. If the bank feels the governance role of the Council is less important than in the past, it may decide to diminish or change the role of the Council (either by abolishing it altogether or, for example, by moving to an annual cycle of meetings with the meetings being more substantive than at present). In so doing, the bank should nevertheless seek to engage leading international scholars in providing both input and evaluation to the Centre's research. This is essential if research standards are to be maintained or indeed raised.

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- b On research professors and visitors, we recommend that the bank extend this flexible programme but seek to be more transparent in its selection of candidates and clearer in the objectives it has for the visitor programmes (for example, planning how work on particular research topics may be advanced by selecting an appropriate senior visitor). The allocation of visitors to different research groups must depend on the priority of research in those areas and to the effectiveness that the groups have exhibited in integrating past visitors into their work programmes. As argued in recommendation a. above, it is extremely important that the bank involve as visitors and research professors leading international scholars from universities inside and outside Germany.

2.5 Research agenda

The Research Centre's success as a visible, accepted research institution depends on developing a convincing research agenda. The research agenda should achieve the following: (a) clarify the expected role of the Centre's research with respect to the policy functions of the Bundesbank; (b) define the main fields of research to be addressed by the Centre and set priorities; (c) bind the many topics and projects together and show the links.

The current procedure of selecting research projects involves generating suggestions for research topics predominantly in a bottom up fashion. In the case of rotating researchers, these suggested topics are then discussed and vetted by managers within their departments.

Although discussion within the researcher's department may provide researchers with guidance, it seems that the current approach gives little scope for strategic direction in research effort. We note that research proposals are apparently rarely rejected and there seems too little opportunity for topics to be influenced by the views of senior Bundesbank management or of experienced academic researchers.

We therefore recommend the following.

- a The Centre should adopt a more transparent approach to (i) setting research priorities and (ii) selecting topics. A group consisting of the President, the research director and his deputies might determine high level research priorities to be addressed by the Centre. This group could elicit suggestions of other Bundesbank board members in a structured way by requesting written comments on a short initial draft summary of research priorities.
- b Individual researchers could then submit proposals to the Centre's directorate. Proposals would make a case based on relevance to the Bundesbank, the significance of the proposed research to academic and policy debates outside the Bank, and the resources in time or direct costs that the project would consume. In framing the research agenda, the directorate may wish to consult international researchers with respect to the relevance and viability of specific topics.

Appendix A Interviews Conducted and Programme Site Visits

1st meeting 10/11 May 2011

Tuesday, 10 May 2011

Room 868

10.00 – 11.00 Meeting of the Evaluators
11.00 – 12.00 Welcome
12.00 – 13.30 Joint Lunch

Room 860

13.30 – 15.00 Meeting with Heinz Herrmann
15.00 – 16.00 Meeting with Karl-Heinz Tödter
16.00 – 17.00 Meeting with Klaus Düllmann
17.00 – 18.00 Meeting with Frank Heid

Wednesday, 11 May 2011

Room 860

10.00 – 12.00 Meeting with researchers (2
groups)
12.00 – 14.00 Lunch
14.00 – 16.00 Meeting with researchers (2
groups)

2nd meeting 15/16 June 2011

Wednesday, 15 June 2011

Room 1129

10.00 – 11.00 Meeting with Jens Ulbrich
(head economics department)

Room Süd5 1 26

11.00 – 12.00 Meeting with Thilo Liebig
(deputy head financial stability
department)

12.30 – 13.30 Lunch

Room 417

15.00 – 16.00 Meeting with Erich Loeper
(head banking department)

Room 1219

16.00 – 17.00 Meeting with Andreas Dombret
(board member, in charge of financial
stability)

Thursday, 16 June 2011

Room 868

10.00 – 11.00 Evaluators meeting

Room ZBR-Saal

11.30 – 12.30 Meeting with Bundesbank research
council
12.30 – 14.00 Lunch

On **July 15th 2011** the evaluators met for a third and final time at the Bundesbank to discuss their initial findings, and also to have meetings with Jens Weidmann (President of the Bundesbank) and Heinz Herrmann (director of the Bundesbank Research Centre).

Appendix B More information on citation analysis

Figure B1 Citations for journal publications 2008-2011 via Google Scholar

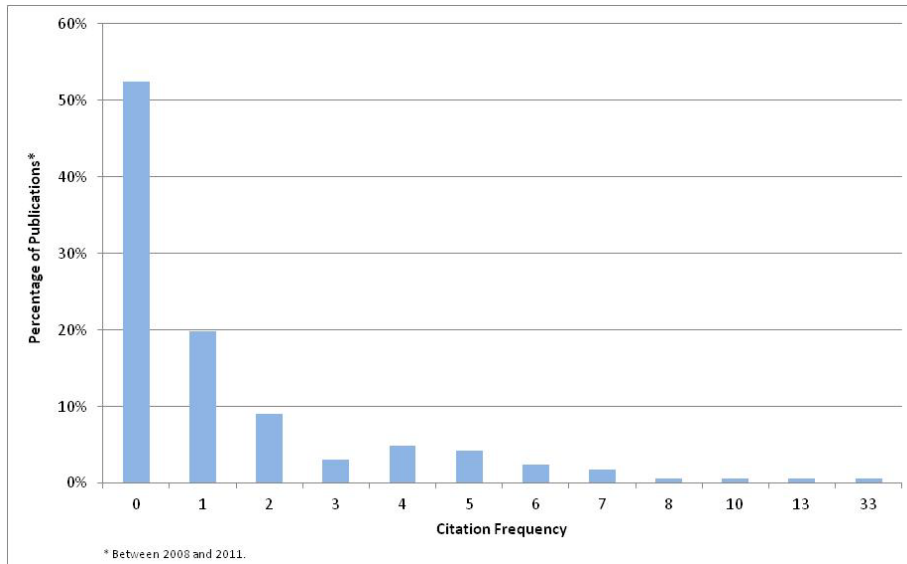
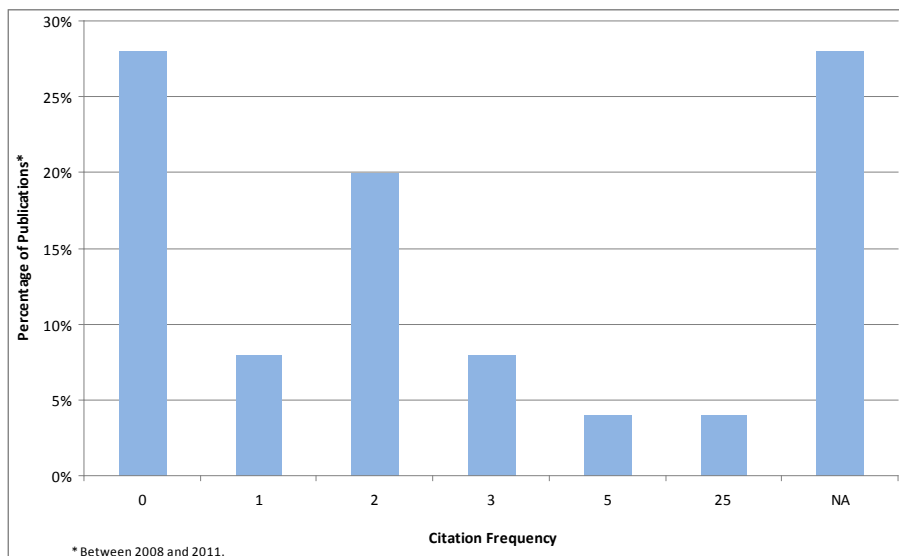


Figure B2 Citations for book publications 2008-2011 via Google Scholar



NA denotes publications completed by the authors before joining the Bundesbank.

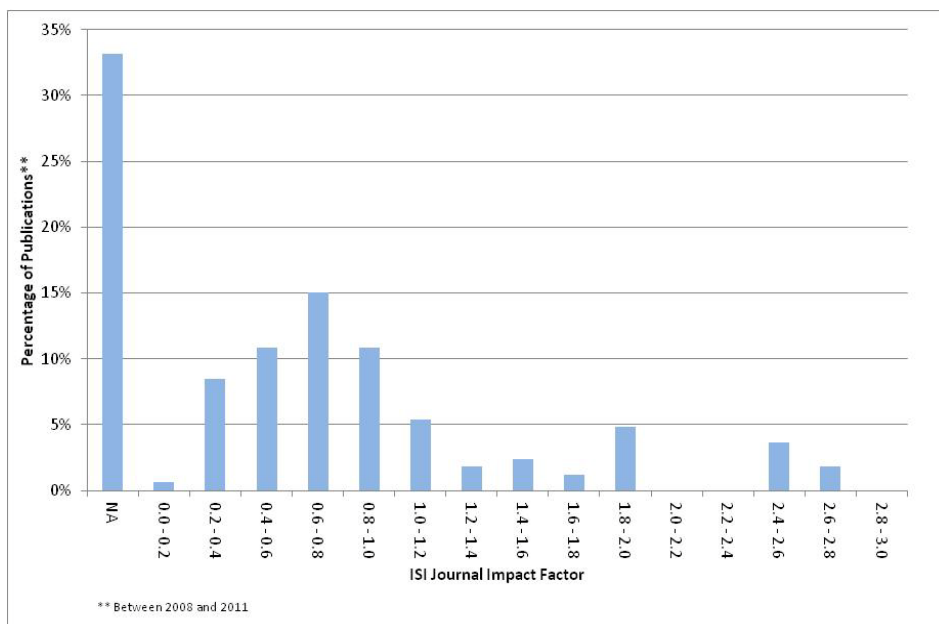
Table B1 Distribution of journal publications by impact factor journal, 2008-2011

ISI Journal Impact Factor Range	Numbers of Publications	Percentages of Publications
NA	55	33%
0.0 - 0.2	1	1%
0.2 - 0.4	14	8%
0.4 - 0.6	18	11%
0.6 - 0.8	25	15%
0.8 - 1.0	18	11%
1.0 - 1.2	9	5%
1.2 - 1.4	3	2%
1.4 - 1.6	4	2%
1.6 - 1.8	2	1%
1.8 - 2.0	8	5%
2.0 - 2.2	0	0%
2.2 - 2.4	0	0%
2.4 - 2.6	6	4%
2.6 - 2.8	3	2%
2.8 - 3.0	0	0%
Total	166	100%

NA denotes publications completed by the authors before joining the Bundesbank.

Table B1 shows the frequency of Bundesbank staff publication in journals with different ISI Journal Impact Factor. We grouped the Impact Factor values into 15 ranges from 0.0 to 3.0 as shown in the first column of Table B1. Additionally, we added the first row, labelled NA, for publications in journals that do not have an Impact Factor value. The second column shows the numbers of publications that are published in the journals that have an impact factor within a certain range. The last column shows the frequency calculated in the second column in percentage terms.

Figure B3, Visualisation of Table B1



NA denotes journals that do not have an Impact Factor.