

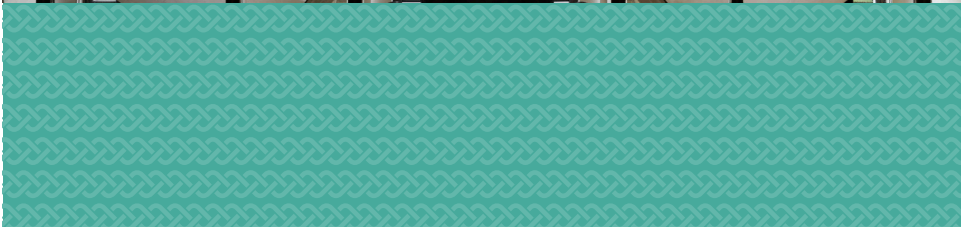


BANK OF ENGLAND

Independent
Evaluation
Office

Evaluation of the Bank of England's research

December 2019





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Independent Evaluation Office, Bank of England

Foreword from the Chair of Court

Just as companies need to invest in research and development to ensure that they remain competitive, central banks need to invest in research to support effective policymaking. And just as companies cut back on investment when their resources are squeezed, the Bank's research outputs declined during the financial crisis. Recognising this, in 2014 the Bank made investment in research a key part of its One Bank Strategic Plan. And with that plan coming to an end, in 2018 Court commissioned the Independent Evaluation Office (IEO) to assess whether the aim to improve research in the 2014 Strategic Plan had been met. The IEO was asked to consider whether the investment in research had enabled the Bank to make progress on its research objectives. The IEO's findings are described in this report.

The report shows that research has benefited from this investment. There is a more conducive environment for research at the Bank, with more researchers given more time to carry out their research. The Bank is publishing more across the full range of the Bank's remit: monetary, macroprudential and microprudential policy. Research is being used in policy development and is informing policymakers. And the Bank's reputation as a research institution has risen globally. Developing researchers' skills has helped improve the quality of research and analysis produced.

The IEO's recommendations fall under three themes. The first considers the importance of clarifying the role of research in delivering the Bank's mission. The second theme looks to provide more clarity and structure around career paths for researchers. The final theme reflects on the challenges of ensuring that there are structures and resources in place that support the Bank's research objectives, in particular ensuring that researchers can make the best use of the Bank's unique data.

At our 25 October meeting, Court welcomed the Bank's commitment in taking forward these recommendations. We will monitor the implementation of these recommendations as part of the IEO's follow-up framework.

Brad Fried, Chair of Court
December 2019

The Bank of England's Independent Evaluation Office can be contacted at independentevaluation@bankofengland.co.uk

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Executive summary

In February 2018, the Court of Directors (the Bank's board) commissioned its Independent Evaluation Office (IEO) to conduct an evaluation of the Bank's research, to start later that year. The evaluation would look at the quality, impact and effectiveness of the Bank's research programme. This report sets out our findings and recommendations.

Outstanding research and analysis underpins everything the Bank does. While the Bank has conducted research for many years, it had, to a degree, been crowded out during the financial crisis by the shorter term analysis needed at the time. Initiatives to increase the quality and impact of the Bank's research were therefore included in the 2014 Strategic Plan's Analytic Excellence pillar. The IEO was tasked with assessing how well the investment in research following the 2014 Strategic Plan had helped the Bank make progress against its research objectives: to increase the Bank's external profile and influence; to inform policy development; and to enhance internal skills and knowledge building.

Our evaluation has found good evidence that the investment in research following the 2014 Strategic Plan has helped the Bank make progress on its research objectives. We find that the Strategic Plan successfully reset the approach to research at the Bank. Providing research time and targets for external impact has clearly raised the Bank's profile in the research community and we have seen evidence of added value in policy processes across the Bank. As well as supporting research in traditional topics, such as monetary policy, there has also been significant progress in novel areas, including fintech.

Five years on, it is natural to take stock of what has been achieved and to consider what, if any, changes the Bank wants to make to its approach. Our recommendations are designed to help the Bank with the process of **clarifying the role of research in delivering the Bank's mission**. As the Bank sets out its new strategic plan in 2020, it should state the importance of research and how research can contribute to the challenges the Bank faces. We also note that the innovative hybrid model the Bank has chosen with research done both centrally in a 'research hub' and locally has many benefits, but also some costs, including a lack of clarity over ownership. We recommend the Bank clarify where responsibility lies for delivering research, both in terms of high-level oversight and individual objectives. More generally the Bank should ensure its approach to measuring and rewarding research is consistent with incentivising the projects it most values. While policymakers value the research they see, and researchers value policymaker engagement, the Bank could further develop effective communication between these two groups to further boost internal impact.

We also find that the Bank was successful in improving the Bank's research capability following the Strategic Plan. Consistent with the aims of the Strategic Plan, it recruited and developed a cadre of staff with the expertise to better inform domestic policy and global debate. Our recommendations here are designed to **provide more clarity and structure around career paths for researchers**. There is scope for the Bank to better monitor researcher skills and experience levels, which needs a clear definition of a researcher role within the Bank. The Bank should also set out more clearly the different career paths it sees researchers taking within the Bank. While we found that management of researchers is generally working well, new managers of researchers could be better supported. And researchers recruited on completion of their PhD would also benefit from a structured programme in their early careers.

We also recommend that the Bank **ensure that structures and resources support the Bank's research objectives**. Generally structures are good and the Bank particularly benefits from its links to academics. But further improvements could be made here. The Bank should ensure researchers have appropriate access to data and technology. It should also review and improve some of the process aspects of how research is supported by the Research Hub.

Figure 1 Table of recommendations

	<p>Clarify the role of research in delivering the Bank's mission</p> <ul style="list-style-type: none"> • As the Bank sets out its new strategic plan in 2020, state the importance of research and how it can contribute to the challenges the Bank faces. • Clarify where responsibility lies for delivering research, both in terms of high-level oversight and individual objectives. • Align research metrics with the Bank's objectives for research. • Further develop effective methods of communication between researchers and policymakers.
	<p>Provide more clarity and structure around career paths for researchers</p> <ul style="list-style-type: none"> • Provide a clear definition of a researcher role within the Bank. • Provide examples of different career paths for researchers within the Bank. • Provide advice and support for managers of researchers so they understand the different challenges for managing researchers. • Build more structure around the PhD recruitment and the PhD programme to support researchers in their first few years at the Bank.
	<p>Ensure that structures and resources support the Bank's research objectives</p> <ul style="list-style-type: none"> • Review and expand the role of the Research Hub to deliver effectively its part of the research objectives. • Ensure researchers have appropriate access to data and technology needed to deliver Bank research objectives effectively and efficiently. • Better exploit relationships with academic institutions and individuals.

Our evaluation was primarily conducted between December 2018 and July 2019 by a dedicated project team reporting directly to the Chair of Court.⁽¹⁾ The IEO team benefited from feedback and challenge from a Bankwide senior-level advisory group (including external members of the Bank's Financial Policy Committee (FPC), Monetary Policy Committee (MPC) and Prudential Regulatory Committee (PRC)). Hyun Song Shin (Head of Research, Bank for International Settlements) provided support and independent challenge to the team throughout the evaluation.

This report was approved for publication by the Chair of Court at the October 2019 Court meeting.

(1) The IEO team was Melissa Davey (IEO Director), Mhairi Burnett, Andrew Moorhouse and Nora Wegner. Adam Day and Millie Rettie provided research assistance and analysis. The analysis and recommendations in this report, together with any errors herein, remain the full responsibility of the IEO, and not the IEO's advisor or members of Bank staff. This report is based on data and information available to the IEO team as of 18 October 2019.

1 Context for the evaluation

Outstanding research and analysis underpins everything the Bank does. It informs policymakers in their decision making, it influences the international debate, it increases the Bank's collective knowledge and advances knowledge in the academic community. It also attracts researchers to work with and at the Bank.

Although the Bank has conducted research for many years, during the financial crisis research had, to a degree, been crowded out by the more short-term analysis needed at the time. When the 2014 Strategic Plan was being developed, the Bank decided to reinvest in research to increase its quality and impact. The Strategic Plan addressed this by including research initiatives in the Analytic Excellence pillar.

This evaluation assesses how well the investment in research following the 2014 Strategic Plan has helped the Bank make progress against its research objectives: to increase the Bank's external profile and influence; to inform policy development; and to enhance internal skills and knowledge building.

The rest of this section describes: the 2014 Strategic Plan initiatives (Section 1.1); the process aspects of the operating model for research (Section 1.2); the people aspects of the operating model for research (Section 1.3); and our approach to this evaluation (Section 1.4).

1.1 The 2014 Strategic Plan research initiatives

In 2014 the Bank announced its Strategic Plan, which contained research initiatives under the Analytic Excellence pillar. These initiatives aimed to 'shift the focus back to longer-term capability building, including recruiting and developing a cadre of staff with the expertise in key fields necessary to inform domestic policy and influence global debate better'.

The first research initiative was to create a One Bank research agenda. The Bank said:

- We will set an ambitious Bankwide agenda for research and analysis at the intersection of monetary, macroprudential and microprudential policy. We will systematically co-ordinate research objectives and capabilities, and sponsoring high-level conferences and publishing papers to enhance the Bank's profile and influence. We will dedicate additional resources to this work.
- We will open up the Bank's research agenda to external contributions by publishing our key research questions; opening up our data sets to the public; and through these routes begin to crowd-source solutions to key policy questions.

The second initiative was to adopt a new approach to data and analysis. The Bank said:

- We will create a 'virtual' research community ('research hub') across the Bank to support the Bank's policy priorities that allows suitable hypothecation of resources for the initiative while keeping research closely aligned to the research priorities of One Bank.
- We will partner with outside academic and corporate entities to develop our techniques for investigating big data to address policy questions. We will build advanced inductive analytical capabilities, by partnering PhD mathematicians and statisticians with analytic staff across all policy areas.

1.2 The operating model for research — process

The Bank chose to move to an innovative hybrid approach to organise its research. Before the Strategic Plan all research was done in local business areas. That contrasted with some other central banks that had research departments. The Bank chose a hybrid approach. Research is still carried out locally in business areas. But a central Research Hub was also formed, staffed by a small number of permanent experienced staff and researchers from business areas who are seconded to work on projects. The Research Hub has comparative advantages in supporting cross-cutting research projects and ring-fencing researchers, whereas researchers in local areas, focusing on more area specific research, can draw on local policy expertise.

As well as the structure, the Bank agreed a set of objectives for its research:

- to increase the Bank's external profile and influence;
- to inform policy development; and
- to enhance internal skills and knowledge building.

To help meet its objectives the Bank set up a number of processes and committees. The One Bank Research Steering Committee (OBRSC) is formed of the Chief Economist, Heads of Research and Advanced Analytics, and Director-level representatives from each business area. OBRSC meets quarterly to consider research proposals for Research Hub projects and associated resources.⁽²⁾ OBRSC acts as guardian of the One Bank Research Agenda (OBRA) and supports its successful delivery by discussing the selection of ideas, diversity in topics and approaches, identification of overlaps and gaps, and agreement on resourcing (so research meets research objectives). It reports annually to the Governors' Committee (GovCo).

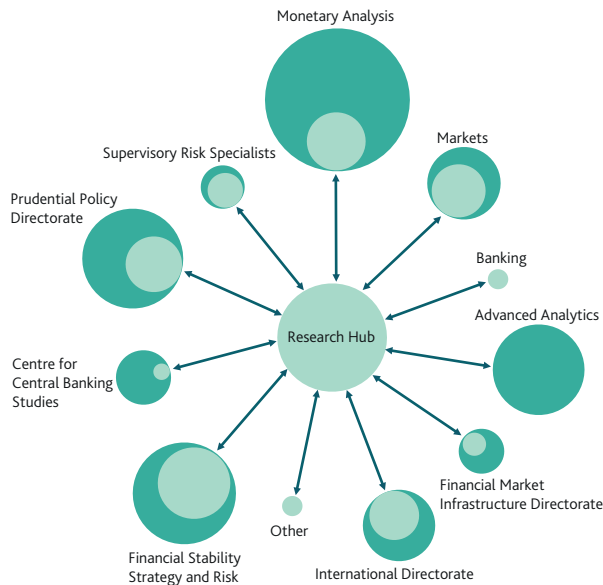
The Bank first set out its research priorities in the OBRA in February 2015, which was published externally. Twice a year, the Bank updates the research topics for the next six months, agreed by GovCo, and publishes these on the website. Researchers in the Bank undertake research on these OBRA topics, often jointly with external researchers. The breadth of these topics helps unlock research beyond the traditional research areas of monetary policy and financial stability. Each topic has permanent Research Hub members assigned as topic advisors who help ensure that research is undertaken on each OBRA priority. They support researchers in taking project proposals to be discussed at OBRSC and provide feedback. OBRSC considers how the proposed projects would support the Bank's research objectives, their quality and policy relevance, and the capabilities of the researchers proposing the project. This includes assessment from academics and Research Hub topic advisors over where it could be published. Once approved at OBRSC, proposals become research projects.

The share of research undertaken in the Research Hub and business areas is shown in **Figure 1.1**.⁽³⁾ The light central bubble shows the relative size of the Research Hub permanent staff, with the other light bubbles showing the size of each business areas' research resources seconded to the Research Hub. Each business area has a yearly secondment target in terms of the number of months staff from their area should spend in the Research Hub. The darker bubbles represent the total research resources in those business areas. In some of the traditional research areas, such as Monetary Analysis (MA), more research resources are devoted to local research. Whereas in some of the non-traditional research areas, the Research Hub secondments form a larger part of the areas' research resources. The Bank's overall budget for research is currently around 1.4% of staff costs.

The Bank monitors a set of research metrics to attempt to record progress on the external and internal impact of the Bank's research and skills building. A list of metrics was compiled following the Strategic Plan and where possible targets for numeric metrics were agreed (Box 1). These are regularly discussed at OBRSC.

(2) An operational committee was also set up. The Research Steering Group (RSG) is formed of the Chief Economist, Heads of Research and Advanced Analytics, and senior research managers from business areas. It meets approximately every three weeks to discuss cross-Bank research activities to support the research community.

(3) Data cover the financial year 2018/19.

Figure 1.1 Distribution of research in the Bank

1.3 The operating model for research — people

In the Strategic Plan the Bank committed to dedicate additional resources to research. In order to staff the Research Hub and supplement the Bank's existing researchers, an extra recruitment round was undertaken in late 2014. A PhD programme was set up to support PhD entrants in their first three years in the Bank. New researchers spend 50% of their time on research and 50% on policy analysis, on a fixed salary, with opportunities to complete their PhD publications. Unlike in some other institutions, these roles are permanent.

Researchers at the Bank can be promoted either by applying for an advertised role at a higher scale or through an in-role promotion (IRP) process. The criteria for the IRP process for researchers were agreed along with the other staffing changes following the Strategic Plan. They include external factors such as being a recognised researcher in their area of expertise with a track record of publications, the internal policy impact of their research and more general skills. There is a separate researcher pay scale for those identified as specialist researchers.

1.4 Evaluation approach

In line with previous Independent Evaluation Office (IEO) evaluations, we developed a set of criteria against which the effectiveness of the Bank's approach could be judged — namely:

1. External impact
2. Internal impact
3. Operating model for research
4. Research staff
5. Data and technology

We conducted this evaluation now as it is five years since the Bank invested in research following the 2014 Strategic Plan and it should be possible to evaluate if this investment has enabled progress against the research objectives. The criteria focus on the quality and impact of the Bank's research outputs themselves and the effectiveness of the inputs that contribute to the production of research. We are defining research here as longer-term activities that would normally be recognised as research by the academic community (rather than shorter-term analysis aimed at addressing immediate policy questions).

We have used a variety of methods to inform the evaluation such as internal and external interviews, staff surveys, review of relevant documents (including cases studies), review of international comparisons, and a small academic panel exercise. Annex 1 sets out further detail on our approach.

Box 1 Research metrics

Since the Strategic Plan in 2014, a range of metrics have been introduced to assess the impact of the Bank's research. These metrics measure the Bank's collective research outputs, the external/academic and internal/policy impact of its research, and the number of researchers.

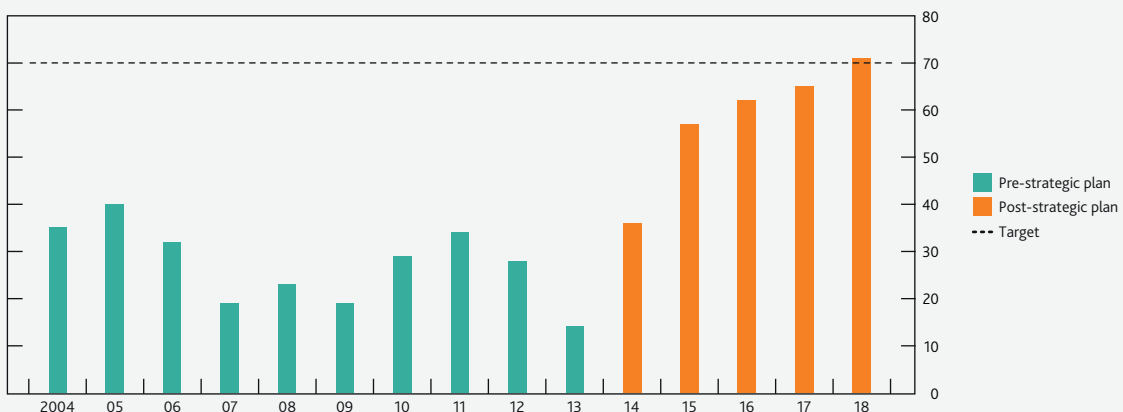
The Bank's scores across a variety of external impact metrics have improved since the 2014 Strategic Plan, with targets being met in a number of areas. A key academic indicator in economics is an institution's 'RePEc' ranking.⁽¹⁾ The Bank's RePEc rankings have increased on average for both the overall central bank ranking and the average central bank ranking based on the past 10 years. The Bank's target ranking of 7th or above for the latter was met in January 2018, up from 19th in 2014. The Bank is also meeting its targets in terms of publications. The launch of the Bank's Strategic Plan in 2014, with its renewed emphasis on research, has coincided with, and perhaps caused, rising numbers of Staff Working Paper (SWP) publications in every year since 2015 (Chart A). In 2018, the Bank published 71 SWPs, exceeding its target for the first time, and double the number of publications in 2014. In the same period, attendances at top conferences, where researchers present their papers, has more than doubled. The Bank is also publishing more articles in journals and top journals⁽²⁾ (Chart B), surpassing its overall target of eight publications in top journals for the first time in 2018. It is not surprising this target was not met earlier given that projects take some time to feed through to the publication of journal articles (Box 2).

Internal/policy impact metrics have been found to be more difficult to measure than external/academic ones. Currently, the basis of internal/policy impact metrics lies with Bank research references per Bank publication (Figure A), where progress since the 2014 Strategic Plan has been less clear. Total research references per *Financial Stability Report (FSR)* and *Inflation Report (IR)* reached their peak in 2017, and fell slightly in 2018. Most recently, Bank research is most likely to be cited in an FSR. We found that there were differences in the use of Bank research by policymakers. While policymakers need to cite research papers to count in these metrics, researchers may instead be involved in the analysis underlying speeches themselves and may appear in 'thank-yous' rather than references. Furthermore, some research results are used in the Bank's official publications without citation, prior to the research papers being published.

The staff retention and skills metrics are primarily based on numbers of researchers. The number of RePEc affiliated researchers at the Bank has increased since the launch of the Strategic Plan and the Bank is exceeding its target regarding the number of highly cited researchers. PhD recruitment is also monitored (see Section 3).

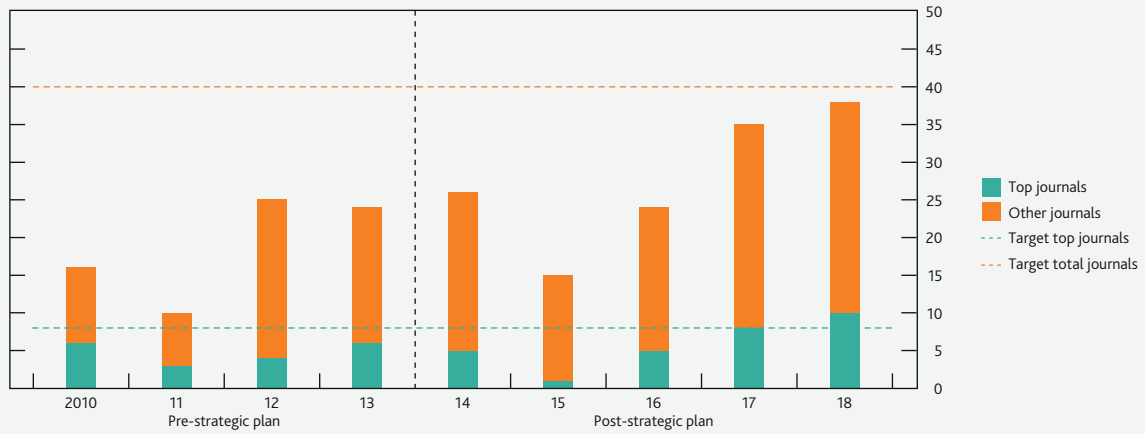
(1) RePEc (Research Papers in Economics) is a decentralised bibliographic database of working papers, journal articles, books, book chapters and software components. This information is weighted together to produce rankings to compare authors and organisations.
 (2) Some journals that favour policy-relevant work are given a higher weight in the Bank's metrics than they would be in academic measures.

Chart A Number of Staff Working Paper publications



Source: Bank of England website.

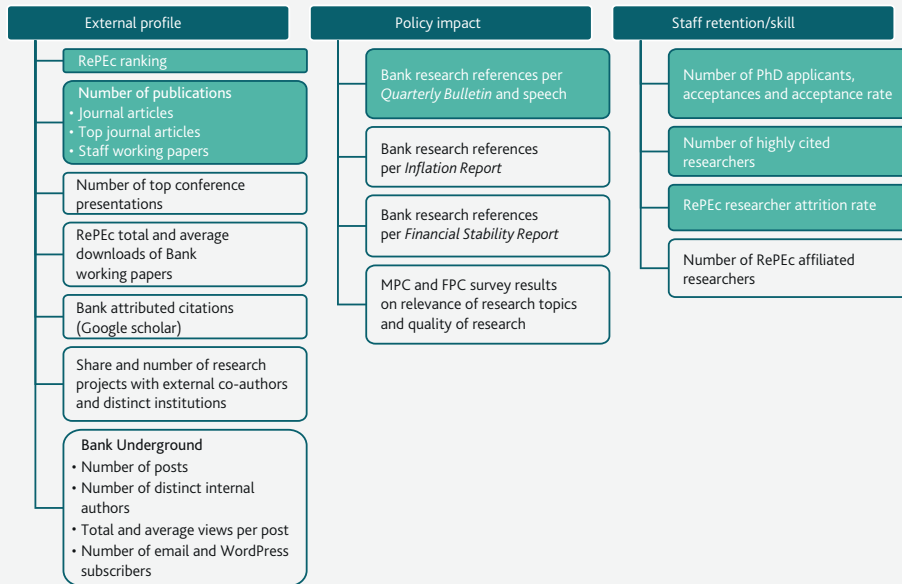
Chart B Number of journal article publications^{(a)(b)}



Source: Bank of England Research Hub records.

- (a) The data may be under-reported as they are reliant on the authors self-reporting any publications.
- (b) The data are based on the year a paper is accepted into a journal which may differ from its year of publication.

Figure A Research metrics



Note: A green box indicates that a target was set for the individual metric following the Strategic Plan.

Box 2 External/academic impact and internal/policy impact

In the Strategic Plan the Bank set out to increase its impact via research both internally and externally. In discussions with researchers in the economics community and other disciplines, we often heard that measuring impact is not straightforward and there are no simple answers. This box looks at some of the challenges and how the Bank currently measures impact. Section 2.3 suggests some further types of impact it could consider.

External impact can take many forms. The metrics that the Bank chose to measure impact against are largely in the academic sphere — for example, publishing in a peer-reviewed journal and the subsequent citations received. We would also consider pick up in non-Bank policy documents or speeches as external impact as well as news coverage (see Box 3). Although it is reasonably straightforward to monitor external impact in terms of publication and pickup, there are caveats around their use as an absolute indicator of quality. For example, journals may favour a certain approach and topics come in and out of fashion. And for the top journals, we understand that publication is more likely for papers using US data or focused on orthodox ideas.⁽¹⁾ Although publishing in top journals will, on average, result in more citations and thus a more significant influence in the long run, it can be challenging and time-consuming.⁽²⁾ **Figure A** shows a stylised process for publication in a top journal from idea gestation to publication — which can take around four years or more. That presents a trade-off between focusing on honing and revising projects for publication and beginning new avenues for research.

Figure A A stylised process for publication



Internal impact is even more difficult to measure. To date, the Bank has focused on impact by considering how its research is used in Bank policy publications and speeches, as well as feedback from policymakers. A broader measure would better monitor use in internal processes, though this will require a degree of self-reporting (Section 2.3). As with external impact, there are caveats around these indicators. Sometimes a research project may flow out of a piece of policy work, so its impact precedes its publication. Conversely, research may look at how the Bank could react to future risks, with little benefit to current policymakers but potentially more for future ones: an example is work on monetary policy at the zero lower bound in the early 2000's. Research that challenges the status quo or existing policy is important, but research that validates a previous decision can have 'impact' by giving policymakers more reassurance about the topic. Finally, a research project may enhance the skills and knowledge of the individuals involved in a way that enables them to support policy processes more effectively in the future.

(1) To counter this effect, some journals that favour policy-relevant work are given a higher weight in the Bank's metrics than they would be in academic measures.

(2) When a paper is submitted to a journal, a referee will provide a report and the journal will either publish the paper, ask the author(s) to revise and resubmit based on feedback or reject it. A researcher rejected by one journal may then submit the paper to another, beginning the process again.

Ideally, all projects would be useful inside the Bank and feed through into external publication. But, as noted above, there are a number of reasons that will not be the case, especially in the short term. For example, research with a strong UK conjunctural policy focus may be useful for the MPC, but unlikely to meet the requirements of a top US journal. Moreover, some research that is highly valued by policymakers, such as that containing highly sensitive findings, may not be published externally, at least in the near term. Sensitivity guidelines have become considerably more liberal since 2014, allowing most papers to be published without delay. But it is important that policy-sensitive projects that do not have an immediate external 'payoff' are encouraged and incentivised.

Nonetheless, there are also good reasons to continue to target external impact. Effective interaction with the broader academic community and supporting the production of high-quality publications are key ways for the Bank to hire excellent researchers who can bring their expertise to bear on policy questions. And external profile is needed to attract top quality external academics to work with the Bank's researchers and make effective use of Bank data.

2 Clarify the role of research in delivering the Bank's mission

One aim of the 2014 Strategic Plan was to improve the quality and impact of research across the institution (Section 1). This Section considers how well it has achieved that aim and possible further enhancements to the role of research in supporting the Bank's broader objectives.

Overall, we find that the Strategic Plan successfully reset the approach to research at the Bank. Providing research time and targets for external impact has clearly raised the Bank's profile in the research community and we have seen evidence of added value in policy processes across the Bank. As well as supporting research in 'traditional' topics, such as monetary policy, there has also been significant progress in novel areas, including fintech.

Five years on from that Strategic Plan, it is natural to take stock of what has been achieved and to consider what, if any, changes the Bank wishes to make to its approach. Our recommendations are designed to help the Bank with that process. In framing that, we note the value of the Bank stating the importance it places on research and how it sees research contributing to the challenges the Bank faces across its different responsibilities. We also note that the innovative hybrid model that the Bank has chosen to use with research done both centrally and locally has many benefits, but also some costs, including a lack of clarity over ownership. More generally the Bank should ensure that its approach to measuring and rewarding research is consistent with incentivising the projects it most values: in particular exploring further ways of measuring internal or policy impact. Finally, we note that while policymakers value the research they see, and researchers value policymaker engagement, improving the links between these two groups could further boost internal impact.

The evidence in this section is relevant to our first, second and third evaluation criteria: the external impact of research, the internal impact of research and the operating model for research. Section 2.1 considers restating the value of research, Section 2.2 where responsibility for delivering research lies, Section 2.3 aligning research metrics with objectives and Section 2.4 communication between researchers and policymakers.

Figure 2.1 Recommendations — Clarify the role of research in delivering the Bank's mission



2.1 Restating the value of research

It is five years since the One Bank Strategic Plan. That Plan stated that 'Making sure we are at the forefront of research and analysis is a necessary part of our policies and actions'. At that time, it was not clear that enough investment had been made in research, as evidenced by the Bank falling behind its peers in the RePEc tables (a measure of publication impact of research). The Strategic Plan successfully reset the approach to research at the Bank. Providing research time and targets for external impact has clearly raised the Bank's profile in the research community and there are examples of research and researchers adding value in policy processes across the Bank.

The OBRA topics have enabled the Bank to target research in the areas that it is most interested in while allowing individual researchers some freedom to choose the precise research question within that — with cross-Bank challenge via the OBRSC meetings. Over the five years, the regular updating of these topics has enabled the Bank to be agile in unlocking research into new and innovative areas, such as fintech. In general, we have seen good coverage of areas highlighted in the initial Strategic Plan (Section 1). One area where there has been less work so far is on the intersection between the Bank's different policy responsibilities — monetary, macroprudential and microprudential policy. That in part reflected the need to focus first on developing understanding of the novel area of macroprudential policy itself before broadening into interactions, especially with few data or natural experiments yet available.

Since the 2014 Strategic Plan, the Bank has faced increasing pressures on its budgets and introduced a new set of annual goals based around necessary strategic changes.⁽⁴⁾ In the annual prioritisation round, research resources have, alongside other business as usual activities, been cut back and research has been stopped completely in one business area. Although we are not in a position to judge the appropriateness of the trade-offs that have been made, we make two observations.

- First, we have seen evidence that research is valued differently around the Bank, with those areas that have carried out research for some time prioritising it more than those without a traditional focus on research. We also note that staff may avoid joining an area or starting a project there if they think there is a risk it will deprioritise research in the future.
- Second, the focus on change initiatives means that researchers, especially those who joined after 2014, may not have received a clear message that research is itself an activity that is highly valued and seen as vital for the Bank's mission. Our conversations with other central banks have highlighted that that is a crucial element of achieving their research aims.

We therefore recommend that as the Bank considers its objectives in the next strategic plan, it restates the importance of research in meeting the challenges the Bank faces over the medium term. Within that, it may want to consider how broad the research agenda should be within the Bank, including whether it wants to do more to unlock research in the business areas where it is less embedded. It could also consider where it sees the greatest value in terms of impact — such as internal policy formulation, the international policy debate, academic impact and skills building to allow for better informed day to day policy interactions. Such a statement would provide clarity to researchers and their management chain on what is expected and how they are contributing to the Bank's mission, and guide OBRSC in their decisions on which projects to prioritise in the hub. That would also feed through to the actions the Bank takes on our other recommendations, which are designed to deliver the research objectives.

2.2 Responsibility for delivering research

The Bank introduced a hybrid model in the Strategic Plan. Under this model, research is carried out both in the newly set up research 'hub' and in the business areas (see Section 1). Although there have been some shortfalls in business areas meeting their secondment targets at times, the hub model is generally working well, with three-quarters of researchers we surveyed saying that they'd had a positive experience in the hub. The Research Hub has provided a space for researchers to come together to work on cross-Bank topics and to ring fence their research time from day to day work, with some telling us that they had particularly benefited from interacting with experienced Research Hub staff. But most research staff also have at least 50% of their time on policy work, which helps them stay tuned in to and engaged with the policy debate.

In our view, this hybrid model has many benefits over fully centralised or decentralised models. But by its nature there are also some costs, both organisationally and administratively. Throughout the evaluation, we have seen examples of a lack of clarity over responsibility for the research outputs and resources of the broader Bank and therefore delivery of the research metrics. We therefore suggest that the Bank clarify where responsibility lies for delivering the Bank's research objectives — both in the Research Hub and outside.

(4) Bank of England Annual Report and Accounts, 1 March 2018–28 February 2019.

As part of any clarification of structures, it may wish to consider whether roles and responsibilities are clearly defined between the Chief Economist, the Head of Research and other Executive Directors with research outputs. For example, the Bank could be clearer on the research each area is expected to deliver (both via its hub secondments and outside), and hold the management chain to account for that. In a survey of Heads of Division and Directors, 60% of respondents in research-producing areas said that responsibility for research outputs was included in their objectives, but currently only 30% said that they or their managers received recognition for facilitating high-quality research outputs in their teams. Also, within the Research Hub and OBRSC process, the Bank may wish to consider whether it can lessen the administration burden on hub management to allow them to spend more time providing intellectual leadership and engaging with policy, so that they can be as effective a 'champion' for the Bank's research as possible.⁽⁵⁾

2.3 Aligning research metrics with objectives

Following the Strategic Plan, the aim was to increase the role of research in boosting the Bank's external impact, in supporting policy development (internal impact) and skills building. But in terms of the metrics (Section 1), at both a Bankwide level and in individuals' objectives and promotion criteria, it is notable that there is much more specificity to the external/academic metrics than the internal/policy ones. This was also highlighted in the NAO report into the One Bank Strategic Plan. As set out in Box 2, there can be a trade-off between papers that are most useful internally and those that have external impact. It is therefore important to have good methods for evaluating internal impact for both the Bank as a whole and individuals to help align incentives with the Bank's aims for research.

We note that no central bank that we or the Research Hub has talked to has an effective way of measuring internal impact. The Bank uses annual 'scores' from surveys of MPC and FPC members along with measures of QB, IR, FSR and speech references. Those however are a small subset of the ways that researchers and research influence policy. We suggest that the Bank ensure that researchers and managers are clear on the various forms that internal impact can take. Those can include using expertise to bring together their and/or others' work for policy purposes, working on or commenting on a speech, as well as their use in the Bank's official publications. And more senior researchers should also have an objective to coach and mentor junior staff. It is especially important to ensure that such internally focused work is properly incentivised and rewarded relative to that with a clear external payoff for the individual. To measure this, for projects in the Research Inventory, researchers should complete the relevant fields to record where research is used in eg a policy round or a speech.⁽⁶⁾ And broader impact should be captured within individuals' performance reviews. The Bank may want to consider whether there are ways to bring together that information to have a record of overall policy impact.

2.4 Communication between researchers and policymakers

Finally, in this area the Bank should ensure that there are effective ways to get research to policymakers and allow policymakers to influence research. Policymakers we talked to were often positive about the research they saw and there are great examples of research being used within policy processes, including work on developing housing tools for the FPC. Research managers note around a third of projects finished in 2018 have had internal impact already, with a few having broader policy impact in the international arena (Box 3). Researchers themselves value engaging with policy, believe they are aware of policymakers' interests and have set up ways that should allow interaction with research. There are examples of Bank staff co-authoring papers with policymakers.

We believe, however, that there is room for improvement. For example, policymakers rarely attend events such as 'poster sessions' (although there has been good feedback from those who have gone).⁽⁷⁾ And they were generally unaware of products that had been designed to help them keep up with research or ways for them to influence the research agenda.

(5) At an operational level, we also make some suggestions in Section 4 around the responsibilities that could lie with the hub.

(6) A Research Inventory was set up by the Research Hub to record the details of all research projects following the Strategic Plan.

(7) Poster sessions are events where researchers show attendees posters describing their research projects and attendees can ask questions and discuss the projects they find interesting.

Part of the responsibility here is with line management to ensure that research findings are appropriately reflected in the regular policy interactions with the Committees. But more could be done to build relationships between policymakers and researchers — noting that with a variety of backgrounds, interests and time, a one-sized fits all approach is unlikely to work. We are pleased to see that the research community has begun to reach out to policymakers individually. Regular interactions between individual policymakers (or their private offices) and senior researchers could provide an overview of appropriate research outputs. It would also allow policymakers to share their current interests with the research community and open up opportunities for discussion or, if appropriate, joint work.

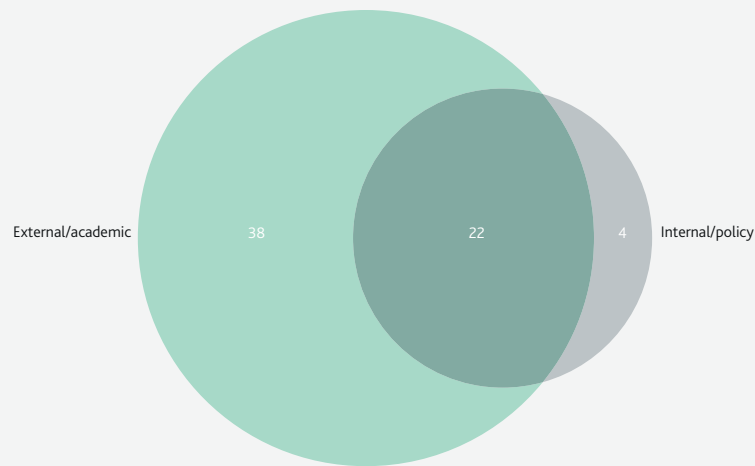
Business areas may also be able to learn from each other on which dissemination methods work best. For example, during the course of the evaluation we saw progress in sharing research in the prudential and supervisory sphere with relevant senior management in a fast-paced 'egg-timer' session, with a focus on the practical implications. And we have received positive feedback on the FPC research teach-ins, which benefit from a serious input into the presentations from staff who are closer to the policy debate. More generally, it is important that management and/or senior researchers help more junior staff translate their research findings into policy relevant material. Heads of Research at other central banks told us that they saw a significant part of their role as helping researchers in delivering their research to policymakers. Finally, delivery here will of course need buy-in from policymakers themselves.

Box 3

2018 Staff Working Papers: a case study

To gain a deeper understanding of the impact of the Bank's research, a case study of 2018 SWPs was conducted.⁽¹⁾ This case study considered whether papers had had external/academic impact (defined as publications in journals, presentations at conferences and citations of the SWP in a journal or report, including those of other policymaking institutions) and/or internal/policy impact (defined as instances where the SWP has been discussed internally, cited in a Bank publication or used to brief policymakers at the Bank, including briefings for international meetings). Of the 71 SWPs published in 2018, the majority had external and/or internal impact (**Figure A**). But a significantly larger number of SWPs had external/academic impact compared to internal/policy impact. This could reflect the higher specificity placed on external rather than internal metrics within the Bank (Section 2.3). Equally, it could be a consequence of external impact being easier to measure, and the possibility that a research project may not be immediately policy relevant.

Figure A Number of 2018 SWPs with external and/or internal impact^(a)



Source: Bank calculations.

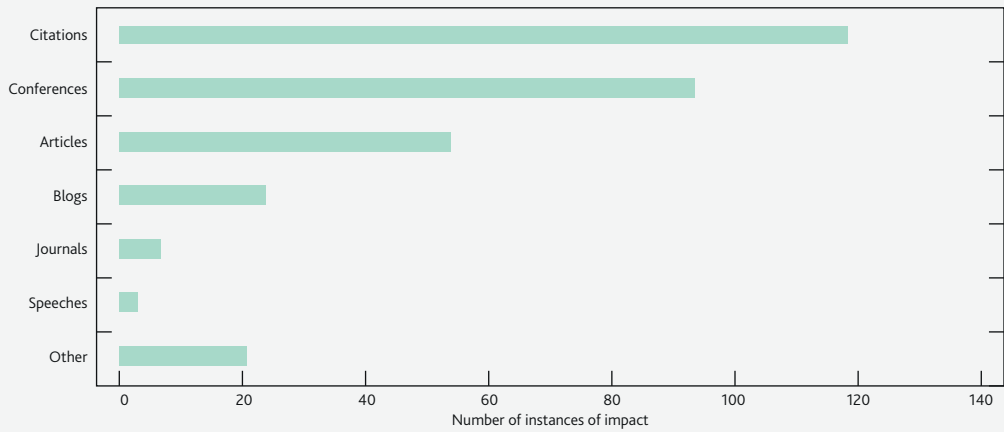
(a) At the time the case study was conducted a small number of papers had not had either external/academic impact, or internal/policy impact.

Charts A and B are indicative of the total external/academic and internal/policy impact of the individual SWPs. An SWP is most likely to have external/academic impact through citations in journal articles, reports and other working papers, including those of other central banks. Presentations of SWPs at conferences make up approximately a third of total external/academic impact, suggesting this is a useful way to increase exposure. Additionally, a very small number of SWPs have been referred to in speeches made by policymakers in other central banks. Although it is still very early, a small number of 2018 SWPs have already been published in journals. In terms of internal/policy impact, SWPs are most likely to create an impression through the internal discussion or presentation of the paper, for example, at pre-MPC/FPC and away days. They are almost as likely to contribute to speeches, with around a seventh of SWPs published in 2018 being cited in one or more Bank speeches.

As it is very early to judge the impact of SWPs published in 2018, we asked a panel of senior academic researchers to review a sample of these papers. The panel thought that the papers tackled relevant and topical questions, mostly using rigorous analysis, and were generally well written. Some used novel methodologies and new data sets. The panel felt that such papers were suitable for publication in good and excellent journals. Where panel members thought a paper was unlikely to be published in a journal, they typically felt the papers were addressing an important question for policymakers and central bankers.

(1) Bank SWPs are available at www.bankofengland.co.uk/working-paper/staff-working-paper.

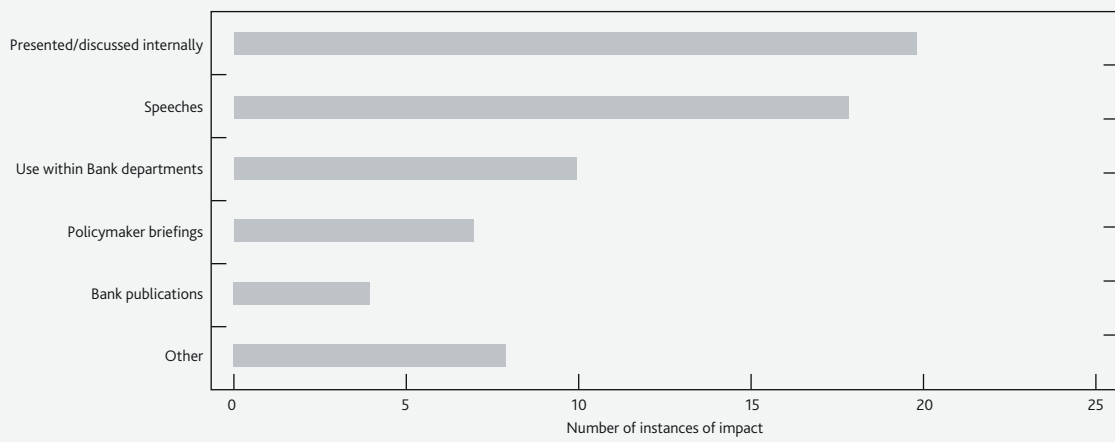
Chart A 2018 SWPs external/academic impact^(a)



Source: Google and Bank calculations.

(a) The chart is indicative as data are based on interpretation of search engine results. A paper can have multiple instances of impact both across and within these categories.

Chart B 2018 SWPs internal/policy impact^(a)



Source: Survey of Bank research managers.

(a) The chart is indicative as data are compiled by business area research managers who may have different views on impactful SWPs. A paper can have multiple instances of impact both across and within these categories.

3 Provide more clarity and structure around career paths for researchers

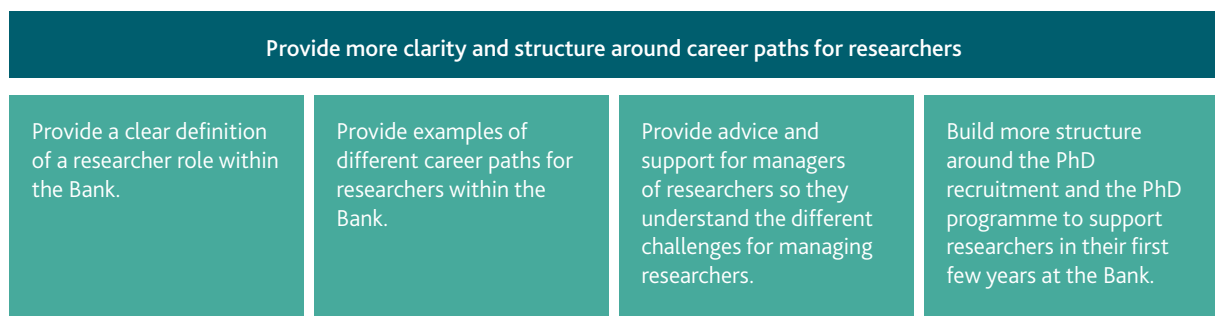
A successful research programme at the Bank cannot be achieved without a set of researchers who have the support and knowledge to understand how their research can help meet the Bank's objectives. This section considers issues relating to the development of researchers while they are in the Bank.

Overall we find that the Bank was successful in improving the Bank's research capability following the publication of the Strategic Plan. This partly reflected improved processes such as the launch of the Research Hub. But it also reflected the Bank's focus on longer-term capability building by recruiting and developing a cadre of staff with the expertise to better inform domestic policy and global debate. The Bank has continued to be successful in attracting high-quality new researchers to its PhD programme. However, we have found that the Bank has faced some recent challenges in recruiting more experienced staff, and we have heard concerns about retention of experienced staff. Both of these reflect the strong international competition for experienced researchers.

Following the successes in improving the Bank's research capability post-Strategic Plan, this is a suitable time to consider how the Bank can ensure it has the right mix of staff to meet its research and policy objectives. Our recommendations are intended to help with this process. By agreeing a clear definition of a researcher role within the institution, the Bank can more accurately monitor the skills and experience levels among researchers. Providing greater clarity over the different career paths for researchers within the Bank would also help those keen to progress understand the different roles available to them.

The evidence in this section is relevant to our fourth evaluation criteria: research staff. Section 3.1 considers the benefit of a clear definition of a researcher role. Section 3.2 looks at whether the Bank could set out more clearly the different career paths researchers could take within the Bank. Section 3.3 focuses on the management of researchers and Section 3.4 considers reviewing the Bank's PhD programme at the Bank.

Figure 3.1 Recommendations — Providing more clarity and structure around career paths for researchers



3.1 Defining a researcher role in the Bank

One of the challenges the IEO has faced during this evaluation is that, beyond those on the PhD programme, there is not an official or commonly used definition of a researcher role at the Bank. Without that, it is more difficult to accurately monitor the number and experience levels of researchers within the institution. We estimate the Bank has between 70 and 80 staff who have research as a significant part of their role.

We recommend the Bank adopt a consistent definition of a researcher role. This could be classified as a role where a significant proportion of time is spent on research. This would allow the Bank, both at an overall and Directorate level, to more accurately monitor not only the number of researchers within the Bank, but also whether they have the right quantity and mix of skills and experience to meet both research and policy objectives. This could help feed into considerations of any skills gaps the Bank may look to address during the annual researcher recruitment round (see Section 4).

We are aware that a larger Bank exercise is being undertaken to clarify roles across the organisation. We recommend that this work be included as part of this exercise. As part of this work, the Bank could consider whether it could provide more clarity over which of these positions are structural. This would be particularly beneficial for those researchers keen to develop their career within the Bank (see Section 3.2).

3.2 Career paths for researchers in the Bank

Following the launch of the Strategic Plan, the Bank undertook a recruitment exercise that was successful in increasing the number of researchers (defined as those who spend at least 30% of their time on research). Since then, the Bank has continued to attract new PhD graduates, with a very successful recruitment round following attendance at the American Economic Association⁽⁸⁾ in 2019. However managers have stated that they have struggled to attract more experienced hires. Some have also expressed concerns about recent retention levels.

Once inside the Bank, researchers can progress via different routes. For those keen to develop in a research-focused role, one way is the Bank's in-role promotion (IRP) process. The proportion of researchers who use this route is significantly greater than for Bank staff on average. And the proportion of researchers who have been successful in the IRP process has been high, despite stretching criteria measuring external and internal impact.

However not every researcher who joins the Bank will either want to or be able to develop into a senior research role in the Bank. These roles are not the only route for researchers to progress within the Bank. As part of the evaluation, the IEO spoke to a number of both current and ex-Bank researchers. One of the issues raised frequently during the discussions was that researchers would benefit from more guidance on the different career paths available in the Bank.

We observe that the Bank has made some progress in this area. The Bank's 'Research Careers in the Bank' document outlines some of the options, such as manager, policy expert or technical expert. And we have spoken to researchers who have advanced into different roles within the Bank. But reminding researchers of the different career paths available during their time in the Bank would be helpful. Those who are relatively new to the Bank may not be aware of how to transition to other roles and what skills and experiences might be required. Highlighting staff who have taken these paths before and who can provide practical advice and guidance — a set of 'role models' — would be beneficial for those considering the same.

For those researchers who have the interest and aptitude for management roles, there would be benefits to the Bank in having more managers in different areas who understand how to use research effectively to help the Bank meet its policy objectives, and how to bring the best out of junior researchers. To ensure that more management roles in policy areas can be filled by staff with relevant expertise, the Bank should try and ensure that these management roles are compatible with maintaining some research time.

3.3 Management of researchers

This evaluation has found that the management of researchers is generally working well within the Bank. One area in which we found some challenges was where new researchers were managed by someone with a limited research background or experience of managing researchers. Discussions with managers and responses to our survey outlined that there are different challenges to managing researchers and that it could take a period of time for new managers to acquaint themselves with these. Some of these issues are more process related but it was

(8) This is the winter meeting of the American Economic Association which is one of the main recruitment events for Economics PhDs.

also about finding the most effective way to guide researchers in how best to use their work to help meet policy objectives.

We observe that providing more central support for new managers, such as well publicised online support within the Bank's management hub, formal peer advice or a workshop for researcher managers could help bridge the knowledge gap for new managers. The Bank has recently refreshed its Management Development Pathway, so it could consider whether to incorporate this guidance into that framework. Furthermore, to ensure consistency of support regardless of an individuals' manager, mentoring and coaching junior staff should be an objective for all senior researchers (Section 1).

3.4 The PhD programme

This evaluation has found that as researchers are spread across the Bank, they may have different experiences. This may particularly be the case for those in areas without a significant number of researchers or a culture of research. Respondents to our survey noted that researchers in teams with three or more researchers felt more supported, on average, by their managers. One way of ensuring that newer researchers to the Bank receive a more consistent level of information and support in their early years would be through an induction process. We found that the PhD programme the Bank had in place for the first few years after the Strategic Plan was well received. It was researcher-led and included a short workshop with researchers and their managers, discussions with policymakers and practical help at the end of programme. The researcher who led this programme also acted as an informal advisor throughout the three years. It would be beneficial if this was resumed. Providing a greater level of structure around the first few years for new PhD students would help align with the support given to other staff in their first full-time job.

4 Ensure that structures and resources support the Bank's research objectives

This section considers how well the Bank's research objectives are supported by structures and resources (both those set up following the Strategic Plan and more generally) and whether they could be enhanced.

Overall, we find that the Bank has structures and resources that provide good support for research. Projects are being undertaken in the hub, by permanent and seconded staff, and in local areas. The Research Hub undertakes the governance processes for projects undertaken in the hub and its permanent staff are topic advisors for each headline topic in the OBRA. Academic advisors also provide feedback on hub project proposals. Local areas have processes to review their research projects, have access to academic advisors and research co-ordinators regularly liaise with the hub via RSG. Researchers appreciate their access to the Bank's unique data sets and use them in their research.

We think it may be time to review some of the process aspects of how research is supported by the Research Hub, by the availability of data and technology, and by access to academic advisors to help ensure the Bank continues to make progress on its research objectives. Our recommendations are designed to refine the structures and resources that support research in the Bank so it can be undertaken as efficiently and effectively as possible. As researchers are heavy users of data and technology, the better the Bank's provision the more effectively they can undertake research. Support from academics can also be beneficial to producing quality research.

The evidence in this section is relevant to our third, fourth and fifth evaluation criteria: the operating model for research, research staff and data and technology respectively. Section 4.1 considers the operating model for research and Section 4.2 how researchers use data and technology. Section 4.3 considers how the Bank can better use academic institutions and individuals to assist with the research.

Figure 4.1 Recommendations — Ensure that structures and resources support the Bank's research objectives



4.1 Review the role of the Research Hub

In Section 1 we described the role of the Research Hub in supporting and facilitating research in the Bank. Since the Research Hub was set up in 2015, it has hosted over 100 research projects, with around half now completed, most of which have been published as an SWP and several in academic journals (and the number of journal publications should continue to increase as projects progress through the stages of conducting research (Box 2)). There are also good examples of projects undertaken in the hub that have had policy impact. We believe however a more active or different role for the hub could unlock more value.

In Section 2 we noted that the Bank needs to be clear about whether it wants to do more to enable research in the business areas where it is less embedded. If the Bank decides it wants to do this, there is a role for the hub in helping make this happen. The hub's topic advisors should have the appropriate experience to do so, which is not always the case at the moment as there are relatively few staff to cover a large range of potential topic areas. Topic advisors could spend time embedded in business areas to gain experience of the range of areas. That would help them provide researchers in these areas with more support when undertaking research, as managers are unlikely to have research experience themselves.

As set out in Section 1, researchers produce project proposals for discussion at OBRSC or local research groups. We heard that more time to work these up would be beneficial. The Research Hub has successfully introduced secondments for researchers to complete the final polishing of a paper for journal publication at the end of a project, which may otherwise have to be done by researchers in their own time. Short secondments could additionally be used for the incubation of ideas. Researchers could spend time developing project proposals, and looking into data availability and cleaning, while being ring-fenced in the hub. This could help incentivise researchers to consider higher-risk but potentially higher-reward projects and could help researchers decide whether or not to pursue a project. If introduced, the Bank would need to consider whether these secondments could be implemented using hub budget or would need additional funding.

While the Bank's recent PhD recruitment rounds have been successful (Section 3) there is some frustration with the process due to its focus on filling local skills gaps. This can result in the Bank not being able to recruit good candidates who have different skills to those needed by the limited number of recruiting areas in an annual round. There may also be candidates that have skills that would be useful to the broader Bank rather than one particular area. We found that other organisations have a more centralised approach to hiring researchers. The Bank could consider whether Research Hub co-ordination of researcher recruitment along with some capacity to recruit researchers temporarily into the hub before they move to local areas, could better facilitate attracting the skills the Bank needs at an aggregate level rather than only recruiting to fill vacancies that have arisen over the past year. The hub could also consider its role in helping to recruit people that could galvanise research in areas without a tradition of research. But this will depend on the budgetary backdrop.

Bank researchers regularly present their work at high profile conferences with the annual number of these presentations doubling since the Strategic Plan. Conference attendance can be an important part of getting the best challenge and feedback to improve research projects. We found variation in conference attendance across different areas of the Bank, which appeared to be driven by budget limitations. One approach would be for the Research Hub to administer a Bankwide researchers' conference travel budget, providing a more consistent and transparent experience to researchers. But there may be other ways to address this within current structures.

4.2 Data and technology

Researchers need to have appropriate access to data and technology to carry out their research. This research can be data intensive, computationally intensive or both data and computationally intensive.

Researchers at the Bank have access to data including both the statistical, regulatory and operational data collected by the Bank and other authorities, and data purchased from commercial data vendors. They may also compile their own data sets through combining data from multiple sources and cleaning and/or categorising data. We found that researchers appreciate the access they have to the unique data sets available at the Bank and around half use data sets that are only available at the Bank in their research.

We observed that sometimes researchers find it hard to take full advantage of the Bank's data due to: difficulty knowing what data sets are available; gaining access to the data; gaining access for external co-authors; and exploiting the data computationally using the Bank's technology. Researchers have made full use of a temporary Research Hub advisor specialising in data access issues. Ideally support of this type would be available in the longer term via a data librarian type role for researchers and other staff, although the cost of this would need to be considered against other priorities. And as guidelines around data use develop, the Bank needs to continue to support access to data for external co-authors, where confidentiality issues can arise.

Moreover, there are a number of data sets in the Bank that are not currently easily available to researchers due to the way they are collected, stored and processed. These data sets may become more accessible in the future as the Bank's data collections and technology develops. Projects currently in train should enable: legacy systems to be replaced with those that better enable data access; data to become more visible as the Bank's Data Inventory is improved; and data loaded on the central Data Hub to be shared more easily.

Even when researchers can access data, they will often have to spend time cleaning and preparing it to get it ready for analysis. In our work looking at comparable organisations, we found that they generally had more, and more highly qualified, research assistants. The Bank could consider whether altering the ratio of researchers to research assistants could help researchers source, clean and document data, and assist with coding, freeing up researcher time for higher-value research and policy work. The Research Hub is trialling this approach and if successful, the recruitment of more highly qualified research assistants — perhaps ones who would go on to do a PhD — or the upskilling of existing research assistants could be considered. More generally, we note that the Bank is reviewing its data science training needs as part of its [response to the Future of Finance report](#). Building data science capabilities may enable researchers and research assistants to make the best and fullest use of the Bank's data.

Researchers also need access to appropriate technology to undertake their research. They have welcomed progress made by a 'Technology for Researchers' project, which has delivered research laptops⁽⁹⁾ and undertaken cloud computing pilots (on non-confidential data). But there remain some frustrations among researchers around technology, especially around access to high powered computing. This should be addressed for non-confidential data by the broader provision of access to cloud computing. Bankwide projects should also help provide access to higher-powered computing for confidential data but these are not scheduled to deliver in the short term. We note that it may be quicker and cheaper to provide cloud computing for confidential data, if a secure solution were made available.

We recommend that while there are projects in train — including the setting up of a new Data Directorate with an Executive Director — which should improve researchers' access to data and technology, it is important that research and researchers continue to be represented in discussions as these projects progress. They also need to be represented in discussions on whether the Bank continues to purchase certain data sets.⁽¹⁰⁾

4.3 Working with academics

We observed that Bank staff successfully collaborate with external academics — over half of the 2018 SWPs discussed in Box 3 had an external co-author. Researchers also have access to academic advisors who provide a range of assistance to researchers, from being in the Bank one day a week to more *ad-hoc* arrangements. In addition, the Bank has introduced a One Bank Visitor Programme, which enables external researchers to visit the Bank for a week, during which they will give a seminar to staff and collaborate with researchers. We found that researchers value both academic visitors and advisors highly, both for research advice and mentoring, and for the multi-year support some of them have offered researchers. The Bank could examine and possibly formalise the roles undertaken by its academic advisors. It could encourage long-term relationships where advisors are regular visitors to the Bank and are interested in mentoring staff as well as offering technical advice.

Collaboration on policy-relevant projects with academics whose skills are not available in the Bank could also be considered more systematically. This could be used to supplement the relatively small number of senior researchers in the Bank. Existing training material could be used to help academic visitors get quickly up to speed with areas of Bank research and focus them on policy questions. Additionally, the Bank could consider whether it could more often temporarily hire experienced researchers with specific skills to work on certain policy projects.

We observed that some Bank staff are affiliated with universities to work with researchers specialising in their area. Researchers report that having access to academics in this way is an attractive feature of the Bank. Staff could also be encouraged to make the most of these academics and sabbatical opportunities.

(9) Researchers have administrator rights to research laptops so they can install software that cannot be installed on networked Bank laptops. They are not connected to the Bank's network so researchers can collaborate more easily with external co-authors.

(10) Research is also undertaken on data sets purchased by the Bank. In an environment of flat budgets there is some concern around the future availability of these types of data sets. Changes to the availability of purchased data impacts researchers heavily due to the multi-year nature of research projects. It is important that researchers' needs are considered when negotiating with vendors.

Annex Background to the evaluation: remit, scope and methods

In February 2018, the Bank's Court of Directors commissioned its IEO to conduct an evaluation of the Bank's approach to research. The evaluation would assess the effectiveness, quality and impact of the Bank's current research programme.

The purpose of the evaluation has been to determine whether the investment in research following the 2014 Strategic Plan has helped the Bank make progress against its research aims: to increase the Bank's external profile and influence; to inform policy development; and to enhance internal skills and knowledge building.

In line with the approach taken in previous reports, we developed a set of criteria describing what 'good' should comprise and against which the effectiveness of the Bank's approach could be judged. Specifically these were:

Evaluation criteria	Research question
External impact	Has the Bank's aim to raise its research profile and influence been achieved?
Internal impact	Has the Bank's aim for research to inform internal policy development been achieved?
Operating model for research	Has the operational model for research enabled the Bank to meet its research objectives?
Research staff	Are research staff being deployed most effectively to meet the Bank's research objectives?
Data and technology	Are data and technology being used in the most efficient way to meet the Bank's research objectives?

The evaluation criteria focus on both the quality and impact of the Bank's research outputs, and the effectiveness of the inputs that contribute to the production of research.

We deployed several methods to conduct our evaluation as set out in the table. The team received full and unrestricted access to relevant internal documents and staff for interview.

Input	Details
Interviews and surveys	Approximately 125 interviews with staff including MPC, FPC and PRC external members, Executive Directors, researchers, their managers, local area research managers and Research Hub staff, and 93 responses to an IEO survey of researchers and their managers and 54 responses to an IEO survey of Heads of Division and Directors. Focus groups with current researchers. Interviews with researchers that had recently left the Bank. Interviews with nine academic visitors including Houblon-Norman fellows and academic consultants. Interviews with a number of other research bodies.
Desk based review	Thematic analysis of internal documents including on the operating model for research, OBRSC and RSG documents, and staff policies.
Meeting observation	OBRSC and RSG meetings.
Case studies	The impact of 2018 SWPs and an Academic Panel review of the quality of a sample of 2018 SWPs. ^(a)
Peer comparisons	Interviews with the European Central Bank, Bundesbank, Federal Reserve Board, Bank of Canada, and comparison with other international organisations.

(a) The participating academics were asked the following questions about each SWP in the sample: is the underlying research question academically interesting; do the research methods seem appropriate; is the analysis rigorous; is the paper well written; could the paper be published in a journal; does the paper make a novel contribution to furthering knowledge in its topic area; and what is the estimated experience of the authors. External advisors were offered remuneration at the Bank's standard daily rate for academic advisors.

The evaluation was primarily conducted between December 2018 and July 2019.

The evaluation benefited from input and challenge from an IEO-appointed external advisor — Hyun Song Shin — the Head of Research at the Bank of International Settlements.

The IEO team was also aided by a Bankwide Senior Advisory Group with internal senior representation from Research and Statistics Directorate and other areas of the Bank undertaking research, as well as external members from the MPC, FPC and PRC, and officials.⁽¹¹⁾ The group met monthly, providing feedback, challenge and a useful means of exchange as our analysis and evaluation developed throughout the evaluation.

Consistent with previous IEO evaluations, the team's work was run at arm's length from the business areas and reported directly to the Chair of the Bank's Court of Directors. As such, recommendations and analysis contained in this report are the sole responsibility of the IEO. The report is based on data and information available to the IEO as of 18 October 2019.

(11) Membership consisted of David Aikman (Technical Head of Division, Financial Stability Strategy and Risk), Julia Black (PRC external member), Sarah Breeden (at the time Executive Director, International Banks, recently appointed Executive Director, UK Deposit Takers Supervision), Andy Haldane (Chief Economist, Monetary Analysis, Research and Statistics), Richard Harrison (Senior Technical Advisor, Monetary Analysis), Anil Kashyap (FPC external member), Lea Paterson (Executive Director, People and Culture), Paul Robinson (Head of Advanced Analytics, Research and Statistics), Victoria Saporta (Executive Director, Prudential Policy), James Talbot (Director, International), Misa Tanaka (Head of Research, Research and Statistics), Silvana Tenreyro (MPC external member) and Neeltje Van Horen (Senior Research Advisor, Research and Statistics).

Glossary

FPC – Financial Policy Committee

FSR – Financial Stability Report

GovCo – Governors' Committee

IEO – Independent Evaluation Office

IR – Inflation Report

IRP – In-Role Promotion

MA – Monetary Analysis

MPC – Monetary Policy Committee

NAO – National Audit Office

OBRA – One Bank Research Agenda

OBRSC – One Bank Research Steering Committee

PhD – Doctor of Philosophy

PRC – Prudential Regulation Committee

QB – Quarterly Bulletin

RePEc – Research Papers in Economics

RSG – Research Steering Group

SWP – Staff Working Paper

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