Appointment of Professor Julia Black to the Prudential Regulation Committee (PRC) of the Bank of England

Responses to the Treasury Select Committee's questionnaire

Professor Julia Black, 21 August 2018

1. **Do you have any business or financial connections, or other commitments, which might give rise to a conflict of interest in carrying out your duties as an external member of the PRC?**

   I do not have any business or financial connections or other commitments which might give rise to a conflict of interest in carrying out my duties as an external member of the PRC. My roles at the LSE and my non-executive roles (as a board member of UK Research and Innovation and as chair of the Audit Committee of the British Academy) are not related to the financial sector and do not give rise to a conflict of interest. None of my family is employed or works in connection with the financial services industry.

   I have recently been appointed as an external member of the SONIA oversight committee within the Bank, and the Bank has confirmed that this would not give rise to a conflict with my role on the PRC.

   I am fully familiar with the PRC's Code of Practice on Conflicts of Interest and with the Bank's Our Code, which includes provision on acting with integrity and demonstrating impartiality, and will comply with them in full.

2. **Do you intend to serve out the full term for which you have been appointed?**

   Yes, I intend to serve the full three years for which I have been appointed.

3. **Have you taken on, or do you intend to take on, any other work commitments in addition to your membership of the PRC? If so, what impact will they have on your work on the PRC?**

   I will be adjusting my work commitments to ensure that I can spend the time which is needed on my role for the PRC. The expectation of external members of the PRC is that they will spend 2 days a week on their role. In order to ensure that I can fully meet this commitment I will be resigning my role as Pro Director of Research at the London School of Economics and Political Science and stepping down from the senior management team of the university. I will also be leaving the board of the Solicitors Regulation Authority at the end of December 2018 after 5 years on the board.

   As a result of these changes my other professional commitments whilst I am a member of the PRC will be as follows:

- Part time employment at the LSE for 3 days a week, continuing my role as a law professor and leading on specific projects for the Director
- External member of the Bank of England's SONIA committee (non-executive role) – 2 meetings a year and up to two stakeholder meetings a year
- Board member for UK Research and Innovation (non-executive role) – 8 meetings and one away day a year
- Chair of the Audit Committee of the British Academy (non-executive role) – 2 Audit Committee meetings and 2-3 Council meetings a year

I am very privileged to have been appointed to the PRC and am committed to ensuring that I can always give my full attention to its important work.

4. Please explain how your experience to date has equipped you to fulfil your responsibilities as a member of the PRC. To which areas of the PRC's work do you expect to make a particular contribution?

My professional experience over the last 25 years has spanned academia, experience as an advisor and consultant to regulators in a wide range of sectors in the UK and overseas, senior management experience of a leading university, and experience as a non-executive member of the board of a regulator and various other non-executive roles. As a result of this combination of roles, I can bring to my role on the PRC considerable expertise in policy development and implementation in financial services regulation and more widely, practical experience of senior strategic and operational leadership within organisations, and extensive experience of stakeholder engagement.

I have a strong knowledge of the UK and EU financial regulatory regimes, and have researched, written and taught in the area of financial regulation since the early 1990s, including publishing over 50 articles on financial regulation and on regulation more generally over the last 25 years. I have always combined academic work with close practical engagement with regulators, working with them both as a researcher and as a consultant. I have also ensured I maintain a good understanding of how regulation is impacting on firms and how they are responding through engagement with firms through participation in workshops, panel events, and seminars run by firms and trade bodies.

My earliest engagement with financial regulation at a senior policy level was as a member of the advisory group for the Financial Services Authority on the formulation in the first set of Principles for Business in 1998-2000. I have continued to engage formally and informally with financial regulators since then. I was invited to give evidence to the Parliamentary Commission on Banking Standards and I was an external academic advisor to the Bank's Fair and Effective Markets Review.

Whilst I have specialised in financial regulation, my academic and professional work focuses on design, operation and accountability of regulatory regimes in a wide range of sectors, at the international, regional and national level, and which are both state and non-state based. I am a clear strategic thinker and over the last 15-20 years I have been called on to work with senior teams and boards in over 15 different regulatory organisations in the UK and overseas to help them develop and implement their strategies and vision, as well as working with policy oversight bodies such as the OECD and the National Audit Office. I have worked on and with regulators in a number of domains beyond financial services, including legal services, environmental regulation, health and safety regulation, electricity regulation, food safety regulation, competition regulation, and the regulation of higher education. As a result, I have a broad hinterland of regulatory knowledge on which to draw on in my role on the PRC, as insights gained from working in one area can often be profitably used to address problems in another.

I also have senior management experience in a globally leading university, the London School of Economics and Political Science (LSE). Since January 2014 I have been the LSE's Pro-Director (Pro-Vice Chancellor) for Research and a member of the LSE's senior management team. From 2017-18 I served as the LSE's Interim Director (equivalent to Vice-Chancellor).

I also have experience of leadership in a non-executive capacity as a Board member of the Solicitors Regulation Authority (SRA), which regulates over 10,000 firms and 130,000 solicitors in England and Wales ranging from high street practices to multi-national operations, and as a non-executive member of UK Research and Innovation, and my other non-executive roles.

In addition, my experience of operating simultaneously in different organisations as a non-executive board member and as a chief executive and member of the senior executive team has also given me a strong understanding of the difference between operating as a Board member and a member of the executive team, and the positive role that non-executive Board members can play in providing critical challenge to the senior team.

Finally, I am used to operating in public sector environments and within complex governance arrangements. I respect the need to operate within a legal mandate, to act in accordance with the Nolan principles, and to uphold robust arrangements for governance and accountability.

5. Which of your publications or papers are of most relevance to your future role as an external PRC member?

There are three areas of my research and publications which will be particularly relevant: the first is focused specifically on financial regulation; the second on two important regulatory techniques which pervade in financial regulation as well as elsewhere – risk based regulation and principles-based regulation; and the third is the research I have been developing on regulatory disasters – again focusing on a wide range of regulatory systems in the UK and elsewhere. Note that I have also taught for many years on issues relating to financial regulation and regulation more broadly on which I have not published.

Financial services regulation

With respect to financial regulation, the most pertinent publications in the last 10 years are the following:

- ‘Reconceiving Markets: From the Economic to the Social’ (2013) 13(2) *Jnl of Corporate Law Studies* 401-442 - arguing for the need to adopt insights from disciplines beyond economics in order to understand the dynamics of financial markets and to regulate them more effectively

- ‘Paradoxes and Failures: New Governance Techniques and the Financial Crisis’ (2012) 75(6) *Modern Law Review* 1038-1064 – analysing the reasons why some of the ‘new’ regulatory techniques such as principles based and risk based regulation failed to prevent the financial crisis

- ‘Regulatory Styles and Supervisory Strategies’ in the *Oxford Handbook of Financial Regulation,* edited by N. Moloney, E. Ferran and H. Jackson (OUP, 2015) – analysing the ways in which the strategies and approaches used to regulate financial markets have changed since the inception of financial regulation in the late 1980s

- ‘Restructuring Global and EU Financial Regulation: Character, Capacities and Learning’ in G.Ferrarini, K.J.Hopt and E.Wymeersch (eds), *Rethinking Financial Regulation and Supervision in Times of Crisis* (OUP 2012) – focusing on the dynamics of the restructuring of global and EU financial regulatory organisations in the wake of the crisis and the need for regulators to enhance their regulatory capacities in order to learn from the crisis

Regulatory techniques

I am particularly known for my work on the use of rule design as a regulatory technique, particularly principles based regulation, and I am one of a handful of academics who have been writing on, and shaping, risk based regulation since the early 2000s.

- Driving priorities in risk-based regulation: what’s the problem?’ (2016) 43 (4) *Journal of Law and Society* 565-595 (with R. Baldwin) – focuses on the factors that influence how and why regulators prioritise certain risks or problems over others, and the implications this has for how the regulatory regime operates.
- ‘When Risk Based Regulation Aims Low: A Strategic Framework’ (2012) 6 (2) *Regulation and Governance* 131-148 (with R. Baldwin) and ‘When Risk Based Regulation Aims Low: Challenges and Approaches’ (2012) 6 (1) *Regulation and Governance* 1-21 (with R. Baldwin) – these articles draw on research conducted for the environment regulators of England and Wales, Scotland, Northern Ireland and Ireland, providing an analytical framework which regulators and range of regulatory techniques which regulators can use to manage low risks
- ‘Really Responsive Risk Based Regulation’ (2010) 32(2) *Law and Policy* 181-213 (with R. Baldwin) –analyses some of the strengths and limitations of using risk based regulation to manage risk and uncertainty within the

constraints that flow from the organisational, behavioural and institutional context in which regulation operates and from the inherent nature of risk based regulation itself

- ‘Forms and Paradoxes of Principles Based Regulation’ (2008) 3(4) *Capital Markets Law Journal* 425-458 - the article identifies and explores seven paradoxes which principles-based regulation may encounter in its various forms. These relate to interpretation, communication, compliance, enforcement, internal management, ethics, and above all trust. PBR, in its full form, can provide an effective, durable, resilient and goal based regulatory regime; but at the same time its paradoxical nature means that it is vulnerable in many respects. Ultimately, to be effective PBR relies on trust. Principles-based regulation can help to create trust, but the core elements of that trust have to already exist if principles-based regulation is ever to operate effectively
- ‘‘The Emergence of Risk Based Regulation and the New Public Management in the UK’ [2005] Public Law 512-549 –identifies the early emergence and development of risk based regulation by UK regulators and some of the lessons they learned in those developmental phases

I have also done some work on the various ways in which regulation can fail, notably:

- ‘Learning from Regulatory Disasters’ (2014) 10(3) *Policy Quarterly* 3-11 – analysing the causes of disasters arising in whole or in part from regulatory failures in the US, UK and New Zealand, including mining disasters, Deep Water Horizon and the financial crisis. The article builds on my previous work to develop an analysis of 5 key elements of a regulatory system: goals and values, individual behaviours, organisational dynamics (of regulators and regulated organisations), regulatory design and techniques, knowledge and understandings of the problem / risks and of operation of the system being regulated, and trust and legitimacy in the effective operation of a regulatory regime. The article argues that failures can arise in each of those elements and in the interactions between them; consequently regulators need to pay attention to each of these elements in order to reduce the risks of failures.

I also have a background as a public lawyer, and as such have focused on the accountability and legitimacy of regulators, in particular in the following:

- ‘Constructing and contesting legitimacy and accountability in polycentric regulatory regimes’ (2008) 2 *Regulation & Governance* 137–164 – arguing that regulators (particularly non-state regulators) need legitimacy in order to be able to function effectively, but different groups or ‘legitimacy communities’ have different sets of criteria or legitimacy claims when deciding whether a regulator is legitimate or not. In order to meet these diverse claims, regulators seek to build their legitimacy in one or more of four ways: they build democratic legitimacy through their membership structures and representation; functional legitimacy through the effectiveness of their activities; normative legitimacy through the goals and values they pursue; and process legitimacy through the fairness and transparency of their decision making.

- ‘Calling Regulators to Account: Challenges, Capacities and Prospects’ in N. Bamforth and P. Leyland, *Accountability in the Contemporary Constitution* (OUP, 2013) – focusing on the accountability systems within the UK constitution which apply to UK regulators and some of the challenges that Parliament and the public face in holding regulators to account
- ‘The Credit Crisis and the Constitution’ in D. Oliver, T. Prosser and R. Rawlings (eds), *The Regulatory State* (Oxford: OUP, 2010) - focusing on how the financial crisis was handled from a constitutional perspective including the role of Parliament and the Treasury Select Committee

6. What have been the PRC’s and before that the Board of the PRA’s greatest successes, in your opinion? Where is there still work to be done?

The PRA has made significant progress since it was created in 2013 in a number of areas. In my view, there have been five key areas of success, and there are five main areas where there is work to be done.

In terms of successes, to my mind the greatest achievements have been:

- the continued development and implementation of the post-crisis regulatory agenda in ways which have improved the resilience of the institutions which the PRA supervises;
- embedding the secondary competition objective into its decision making;
- making ‘forward looking’ supervision a reality, building up capital buffers within financial institutions and in particular through the use of stress testing;
- creating clear accountability for senior management of the financial institutions it supervises through the development and implementation of the Senior Managers and Certification Regime for banks (in conjunction with the FCA) and the Senior Insurance Managers Regime, and through taking enforcement action against senior individuals, not just institutions; and
- its effective interaction with other regulatory organisations and related committees at the global, EU and national level, including its absorption into the Bank in 2016.

The post regulatory agenda was only part way through its development and implementation at the global and EU levels when the PRA was created in 2013. The UK has also had its own distinct policy agenda which the PRA has been responsible for developing and implementing. This agenda stemmed in large part from the reports of the Parliamentary Committee on Banking Standards and the Independent Commission on Banking, notably enhancing the governance of firms and the accountability of senior managers and the structural separation of banks (ring-fencing) respectively. The PRA has been effective in the development of policy and implementation with respect to the Basel III framework for banks and its implementation in EU legislation, including the liquidity coverage ratio, and the continued refinement of that framework, for example the introduction of a maximum differential in capital requirements as a result of using the internal ratings based approach and the standardised approach to calculating credit risk; the Solvency II regime for insurance companies (which has been the subject of a separate TSC inquiry); the implementation of the Banking Recovery and Resolution Directive and the review of recovery and resolution plans of banks in the supervisory process; working with retail banks to develop their plans for ring-fencing to ensure that both ring-fenced and non-ring-fenced entities have sustainable business models and are consistent with the policy objectives of ring fencing (due to be completed by January 2019); and the development and implementation of the senior managers regimes for banks and insurance companies. This has been a significant load for both the PRA and firms to absorb, and has had to be done whilst coping with new risks and challenges as they arise, for example the development of fin tech, the rise in cyber-risk and the policy and operational challenges consequent on Brexit.

The PRA has also taken strong note of its secondary competition objective, absorbing this into its policy and supervisory activity. Combining risk regulation with competition regulation is often difficult, for one of the easiest ways for firms to compete is to lower costs by spending less on safety, which is why, for example, health and safety regulators do not have competition objectives. As consumers cannot tell how much has been spent on safety, and as those safety costs may or may not be of direct benefit to them in improving the value for money of the product they buy, consumers are likely to opt for the cheapest product, ultimately pushing those firms who have high safety standards, and accompanying costs, out of the market. In banking and insurance, one equivalent of spending less on safety standards is holding less capital against risks. Firms that hold less capital than others have a competitive advantage, and so the role of the PRA has to be to ensure that competition takes place on fair terms. That means ensuring that the regulatory rules themselves don't favour incumbents or particular types of firm - for example, by imposing barriers to entry or favouring large firms due to their complexity or cost of compliance; and ensuring that firms don't compete through regulatory arbitrage or straightforward non-compliance.

To that end the PRA has focused on ensuring that the regulatory framework is appropriately calibrated, in that both the regulatory rules and the supervisory strategies it adopts are adjusted in such a way that they don't allow regulatory arbitrage or impose a disproportionate burden on smaller firms or new entrants, thus putting them at a competitive disadvantage. So, for example, with respect to regulatory arbitrage or 'gaming', it has been reviewing the use of 'double leverage' by groups, whereby one or more parent entities within a group funds equity through debt externally, so lowering their overall cost of funding. With respect to calibration of the regulatory rules, it has worked with the Basel Committee to adjust the risk weights for high loan to value mortgages, and narrowing the potential gap between the capital required under the IRB as opposed to the standardised approach to ensure that banks using internal models cannot hold less than 72.5% of the capital requirements derived under the standardised approach. This helps new entrants who are using the standardised approach by reducing the competitive advantage of large incumbents who have the resources to use an internal ratings based approach. In addition, the PRC has changed its supervisory strategy to enable supervisors to reduce variable capital add-ons for credit risk for those using the standardised approach. They have also sought to make it easier for small firms to adopt an internal ratings based approach, and thus have capital requirements which are more closely tailored to their level of risk.

In the insurance market, the PRC has facilitated the use of internal models based approaches to both small and larger firms, but with just over a third of approvals for the use of internal models being given to smaller firms (8 out of 23). They have also developed and implemented a streamlined and tailored regime for smaller insurance firms which fall outside Solvency II, which is 35% of the firms the PRA supervises. They have also been working with the Treasury to design a new and commercially viable framework for insurance-linked securities. Whilst these changes can increase competition, the PRA has constantly to be aware that in order to facilitate competition they are moderating the safety cushion that firms have in place, or allowing innovative financial products which by their nature involve risk. Clearly these are all areas where regulatory rules and supervisory approaches have to be very carefully calibrated, and often continually adjusted, to ensure that there is the right balance between safety and soundness on the one hand, and competition on the other.

The PRA has also been working with the FCA to facilitate the entry of new firms into the banking market through the New Bank Start-up Unit, set up in January 2016. This provides information and support to firms thinking of becoming a bank in the UK, and also enables them to start their businesses with limited permissions before having to comply with the full gamut of the authorisation and regulatory requirements during a 'mobilisation phase'. Since the PRA was formed it has authorised 16 new UK banks, of which four had business models based on providing banking services to customers purely digitally, and one was a new clearing bank.

With respect to its supervisory approach, the PRA has committed from the outset to adopting a 'forward looking, judgement based approach' to supervision. It has increased the capital requirements for the most systemically important banks in particular, and it has also been developing and refining the stress tests for banks and for insurance companies. Stress testing has an important role to play in ensuring the resilience of financial institutions. The scenarios which the PRA is using for stress testing have become increasingly sophisticated. For example it has moved from a focus largely on domestic risks in 2014 to testing against severe global stress scenarios and severe economic conditions and incorporating the impact of regulation, eg misconduct costs and the impact of new accounting standards for financial assets and liabilities IFRS 9). In 2017 it also added a new 'exploratory' scenario on a biennial basis to examine banks' long-term strategic responses to an extended period of low growth and low interest rates and in an increasingly competitive environment. Banks' capital has been increasing as a result, and 2017 was the first year in which banks did not require additional capital after the latest rounds of stress testing. It has also conducted stress tests for the insurance sector, and found that though in aggregate insurers are resilient against specific market stresses they are more vulnerable to economic stresses, and that there is more work needed to develop a common framework for assessing exposure to more complex scenarios.

Another key area where the PRA has successfully shown considerable commitment is to improving the governance and management of banks and insurance companies and the accountability of the most senior managers within them. The development of the SM&CR and the SIMR, working jointly with the FCA, is a major piece of post-crisis regulation. One of the most important lessons of the crisis was that there needed to be a radical change in the governance of financial institutions, and that key to getting that change to happen was to hold those responsible to account for their actions. As a result, the senior managers' regimes constitute a significant change in regulatory or supervisory approach. The PRA has also made it clear that these regimes are not to exist on paper only. The PRA, again with the FCA, completed an important report into the failure of HBOS, and to conducting investigations into the senior managers involved. The PRA has also taken enforcement action against individual senior managers, not just financial institutions. So, for example, in 2016 it imposed financial penalties of £173,802 and £88,890 respectively on Mr Barry Tootell, former CEO of the Co-operative Bank plc, and Mr Keith Alderson, former MD of the Corporate Banking Division, because they failed to exercise due skill, care and diligence in carrying out their roles at the firm. It also issued its first ever prohibition orders against each of them holding senior positions in PRA-authorised firms in the future. It also recently imposed a fine on James Staley, CEO of Barclays. As a result, I don't think that senior managers in banks or insurance companies can be in any doubt that consequences will follow from their actions.

Finally, the PRA has succeeded in establishing itself as a separate and respected regulator, first as a separate subsidiary of the Bank and then as part of the Bank from 2016. It has also worked effectively with the complex network of regulators and related committees at the global, EU and national level to influence decision making. In particular, in the UK, it has had to develop a close working relationship with the FCA, and had to both shape and adjust to the shift to macro-prudential supervision developed in the wake of the crisis. This has required engaging closely with the Financial Policy Committee of the Bank, which is responsible for considering macro-prudential risks to the financial system and can require the PRC to act in a certain way as a result (as it has in requiring the imposition of a leverage ratio on the UK's systemically important banks, for example) and with the Monetary Policy Committee.

This has required more than just working with new committees; for all involved it has required developing new ways of thinking. Prior to the crisis no prudential supervisor would have engaged with monetary policy making and macro-prudential oversight did not exist. Now, the PRA plays a role in many aspects of FPC considerations, such as supporting the analysis of current vulnerabilities and potential behavioural impacts of various policy options, to the implementation and monitoring of FPC recommendations and directions. These include recommendations on high loan-to-income mortgages, stress tests on buy to let mortgages, and the introduction of the leverage ratio framework for major UK banks and building societies with global retail deposits over £50 billion. With respect to the MPC, the PRA plays an important role in helping the MPC to evaluate the likely responses to changes in interest rates within the market. For its part, the PRC gains insights and analysis from other areas of the Bank which are relevant to its role, for example with respect to market intelligence, or macro-economic and sectoral analysis.

There is always more work to be done, however, and the PRA and PRC face an ever-growing ‘to do’ list and five key strategic and operational challenges.

Firstly and most immediately, there is the challenge of managing Brexit, both in the lead up to the event and in the days, months and years that follow. The PRA has worked with the government to ensure that a temporary permissions regime is in place, but even if we leave in an orderly fashion and with a transition period, there is still the significant operational challenge of having to authorise all those operations and branches which have previously operated under the passporting regime. The PRC will also have an important role to play working with the FCA, the rest of the Bank, the Treasury, Government, Parliament and others to advise on the options for a post-exit trading and regulatory relationship with the EU for financial services, and in the development and implementation of the policy agenda that will flow from any agreement that is reached. There will also have to be adjustments in the regulatory relationship with countries outside the EU with whom our relationships are currently governed under the third country rules of the EU. Furthermore, there will be significant supervisory challenges to manage as financial institutions restructure themselves to ensure they can continue to take advantage of the EU passporting regime. And just dealing with the operational and policy challenges will absorb huge amounts of time and resources of both the PRC/PRA and firms, and thus potentially draw the attention of both away from risks which may be building up in the system.

Secondly, the PRC has to understand and adapt to the ever-changing nature of the market and the ever-changing nature of risks, especially in the new context of the data and digital revolution. In particular, both it and the sector face significant risks from cyber crime. It is striking that in its 2018 Annual Report the PRA notes that in 2014, only 1% of firms put cyber crime in the list of their top five risks facing their business; in 2018 this is over 50%. To be honest, I’m surprised it’s so low. The National Cyber Security Committee anticipates that a major attack on the UK is inevitable. Cyber-crime poses clear operational risks both to firms and to the PRA itself, both through disruption to core business processes and through significant data breaches. But it also poses a prudential risk to insurance companies who provide insurance against losses resulting from cyber-crime. So for the PRC cyber poses a dual prudential risk: operational and financial.

Thirdly, the PRC has to keep pace with constantly changing market practices and business models, and to ensure that institutions are sufficiently resilient to absorb shocks and not amplify them. Fin tech poses both challenges and opportunities for the PRC, just as it does for the market. The Committee has asked a specific question on fin tech (Question 16), so I provide more detail on that below: it is clear that fin tech impacts across the piste: on retail market; retail banking; equity and increasingly bond trading; and on payments, clearing and settlement.

But even without the changes introduced by fin tech, the PRC faces the constant challenge of calibrating prudential requirements in the face of changing risk profiles of assets, liabilities and business models. It also has to be alert to the changes in market and business practices which regulation can itself prompt, for example the impacts of the introduction of IFRS 9 (one implication of which is that firms need to recognise credit losses earlier than previously) which could make long term lending more expensive for firms with consequences for lending behaviour. The PRC also has to maintain constant watch on the shifting roles of market actors, eg the role of asset markets / shadow banking in credit provision; the changing compositions and combinations of assets and liabilities in the balance sheets of financial institutions (eg the concentration of insurance assets in illiquid property markets, or impaired annuity liabilities being backed by equity release mortgages), the constantly changing nature of credit risks, and ever developing business models which can create new risks. It also has to facilitate market innovation whilst preserving safety and soundness.

Fourthly, there is the ever-continuing agenda of policy development and implementation, which would occur quite independently of Brexit but will be impacted by it in ways which cannot yet be properly anticipated. Key amongst these is the continued adjustments in the implementation of Solvency II, which provides the PRC with relatively little supervisory discretion, but where it is trying to use the room that it has to moderate the impacts of this piece of EU legislation. The TSC has already engaged extensively with Solvency II, and following the TSC report the PRA has been working with firms and the ABI to make revisions where possible and appropriate. This has led to a number of changes, including the application of the matching adjustment, on streamlining the process for approving model changes and various changes in reporting requirement to ease the burden on firms. Work is still ongoing, for example to monitor changes in insurers' business models and in their asset base, and to ensure that the internal ratings frameworks used by insurers to assess illiquid assets are robust.

In addition, ring-fencing is due to be implemented by January 2019 and the PRC will need to be attentive to the unintended consequences and risks it might give rise to. With respect to recovery and resolution, the interim requirements for bail-in debt are due to take effect by 2020; and there is still work to do on developing a resolution regime for insurance companies and on cross-border resolution, the latter of which again may be further complicated by Brexit. Further, the senior managers' certification regime needs to be fully implemented for insurance companies, and the PRA needs to take on board calls from the TSC and its own Office of Independent Evaluation to ensure that it is protecting all types of policy makers. The list goes on.

Finally, and perhaps most challenging, the PRC has to address all these challenges whilst simultaneously continuing with the day job, and innovating there too to ensure that its own operations are fit for purpose in a constantly changing market, economic and political environment. The PRC has to remain dynamic and nimble, shaping change as it unfolds, but at the same time it has to manage its own operational and organisational resilience. The PRC rightly draws attention to its operational risks and dependencies in achieving its objectives in its annual reports, and it poses an ongoing challenge to ensure that it has the organisational capacity to manage the work that it has. These challenges are not limited to systems and process, notably IT and data management, which are critical, but include most importantly ensuring that it has people with the right skill set, often requiring skills which are in short supply. It also has to ensure that it has the analytical capacity and operational flexibility to ensure the appropriate resource allocation to fit priorities and risks / risk appetite whilst being sufficiently resilient to absorb the significant and growing workload it has to manage and meet the challenges of a constantly changing context.

7. **What is your assessment of the public profile of the PRC, both within the industry and among the wider public? How important is it that the public understands the role of the PRC and the decisions it takes?**

I would say that the profile of the PRA and the PRC is pretty high within the industry (though some may not have caught up with the fact the PRA Board is now called the PRC). In particular, the PRA has been running firm feedback surveys since 2014/15, and the responses are largely very positive, and with increasing response rates. In the latest survey, 96% said they had a clear understanding of PRA's objectives; 88% that their firm has adequate access to the right people / supervisory team at the PRA; 92% that the firm is clear about what the PRA expects the firm to do or specific actions it is expected to take; and 80% considering that the deadlines for data and information requests are reasonable.

Much of the PRC's communications activity is understandably directed at those firms it regulates and the financial sector more generally, and much of it is by necessity very technical, eg policy consultations, guidance on implementation, updates on policy initiatives, speeches to industry audiences, the PRA Regulatory Digest, and participation in seminars, workshops, panel events and so forth.

On the other hand, whilst I don't have any specific figures, my sense is that public awareness of the PRC is pretty low. Google searches shouldn't be taken as a reliable indicator, but if you type 'PRC' into Google the Prudential Regulation Committee is some way down the page. Admittedly it does have to compete as an acronym with the People's Republic of China, but still the Professional Regulation Commission of the Philippines and the Planning and Resources Committee of the University of Cambridge come above it. That said, the PRA fares much better on the 'Google search' metric. It may be that absorption of the PRA into the Bank helps and hinders communication – people have heard of the Bank but may not know what it does, so saying PRA is part of the Bank helps with public recognition to that extent. However, the 'brand' of the Bank dominates that of the PRA.

However, it is not so clear whether it is important that the public understand the role of the PRC, as a specific committee, though the PRC should make sure it is easy for them to find out should they want to by having clear explanations of their role easily available, for example through its website. What is important is that the public understands that there is a body or organisation which is protecting the safety and soundness of the financial system on which we all rely, and thus is protecting their deposits and savings, and their insurance policies. Further that someone will be working to ensure that if things do go wrong (which they will) that risks to consumers, the public and taxpayers will be minimised and hopefully removed. They also need to know exactly what the limits to their protections are, notably through the Financial Services Compensation Scheme. So it is important that the public needs to know that the work is being done and that those who are doing the work are being held properly to account, even if they are not sure of the exact details of how and by whom.

8. How do you intend to add to the public's understanding of the role and decisions of the PRC?

It is extremely important that regulators engage with stakeholders and the wider public, listen to their concerns, and in particular to explain to consumers and the public what the regulator can do, and what it cannot do. The public need to know what risks the regulator can protect the public from, and what it will do when things go wrong.

In particular, regulators need to communicate to the public in ways which are relevant to them in their day to day lives: so, for example, the role of the PRC and PRA in protecting people's savings and deposits and their insurance policies, and in ensuring that if there are disruptions in the financial system or the operations of a firm that impact on them will be minimised. Further, I do think there is a need to help the public, and individual consumers, to understand that they also have to take responsibility for their decisions (which is recognised in FSMA) and that regulators can never eliminate risks and so adverse things may happen. Indeed, the PRA is not a zero-failure regulator: firms may be allowed to fail.

But there is an onus on regulators to communicate to consumers and the wider public in advance what might happen when things go wrong and how the PRA will handle them, in conjunction with other regulators and the compensation scheme as appropriate. So if a building society closes, for example, or an insurance company goes under, what will happen to their deposits / borrowings/ policies. It is usually best to make these contingency arrangements clear during a time when things are going well so that people are prepared when things go wrong, and to do so in very clear language, jointly with the other regulators. That is particularly important in a context where panic behaviour can create the very problem (eg a run) which regulators are trying to avoid.

With respect to my own role, as noted above I am used to engaging with the public and other stakeholders in wide range of fora, and I participated in the organisation of the Bank's first Open Forum, which now runs annually. In addition, in my role on the board of the Solicitors Regulation Authority and separately on the role of UK Research and Innovation I have participated in meetings and focus groups with stakeholders England and the devolved nations (though note that the SRA's jurisdiction only covers England and Wales). It is incredibly important to ensure that a regulator or organisation really does engage with all parts of the country which it is responsible for in order to ensure it is not caught in a London-centric 'bubble' and I would be very happy to play such an outreach role in my capacity as an external member of the PRC where possible.

9. What is your view on the transparency of the PRC? Is there anymore that the Committee could be doing in this area considering that no formal minutes are published?

This question links to that above. With respect to transparency to the public and to the regulated sector as a whole, the PRC and the PRA are fully accountable to Parliament and the PRA publishes the full range of consultation and discussion documents, annual reports, speeches that are normally expected of regulators in the UK. It also participates regularly in industry workshops, seminars and panel events. So with respect to its policy work it is transparent. With respect to more operational matters, there is a difficulty in balancing the demands of transparency to the public and / or particular stakeholders with the need to maintain confidentiality, as in order to supervise firms effectively the PRA has to have access to a considerable amount of confidential and proprietary information. Firms have to have confidence that they can be open with the PRA in their supervisory relationship, and therefore that the information they provide will remain confidential. Moreover, PRC/PRA decisions with respect to individual firms may well be market sensitive, and should only be disclosed in line with the relevant rules on market disclosure. It should be noted that feedback from firms does suggest that the PRA is transparent in its relationship with individual firms: it is notable that feedback from firms is that they are clear in the expectations that the PRA has of them and any specific actions which they may take. That said, there is always more that the PRA and indeed any regulator could do to engage with the public and stakeholders more widely to explain its purposes and to understand their concerns.

10. What are the main operational challenges now facing the PRC?

Some of these challenges were noted in my response to Question 6 above. In more detail, the PRC/PRA faces the core challenge of any risk-based regulator, which is to ensure that resources are applied in areas of greatest risk. But prioritisation is a constant challenge when there are so many pressing issues to be dealt with at any one time. As noted above, the PRC/PRA already had a very full agenda and managing the consequences for the firms it regulates from Brexit adds significantly to those. That is a lot for any organisation to absorb and will inevitably pose operational challenges in their own right.

The PRC/PRA also has to ensure it has people with the right mix of skills and with judgement within the organisation. In many areas the PRA will be competing with others in the financial sector with core skills, but in some key areas they are competing for skills which are in short supply more generally, for example in IT, project management, data management and cyber security. In all areas they are competing with organisations who can offer much higher rates of pay. Moreover, the PRC needs people with these skills just in order to stand still, as it were. If it is to be able to enhance its regulatory and supervisory techniques, it has to be at the forefront of developments in ‘reg tech’ – for example in developing new methods of data analysis, of using AI to process information. It has the benefit of being able to draw on the wider skills within the Bank to help it in this regard, and it should work with regulators in sectors outside of finance to see what can be learned there, but recruitment and retention of skilled staff will be a constant challenge.

There are also legacy IT issues with which it has to deal. The PRA and the FCA are both still using parts of the FSA’s IT system, but as we know, replacing IT systems which are in constant use is never straightforward. Relatedly, the PRA is reliant on the FCA for certain key data relating to firms which they jointly supervise. Systems for data handling also have to be increasingly sophisticated and robust in order to cope with the increasing levels of data which the PRA has to handle (much of which is consequent on post-crisis reporting requirements), and the high levels of sensitivity of that data. This is challenging enough in a safe environment; it is far greater in an environment where the risks to data security and to cyber attack grow ever higher.

Finally, the PRC/PRA will also have a greater responsibility for developing policy, much of which is currently developed at the EU level, and so may have to devote more resources to that area too.

11. Which do you think are currently the greatest risks to the safety and soundness of the UK financial services firms, and how likely is it that those risks will crystallise?

There are a number of risks which are faced by financial services firms in general, and some more specific risks which are faced by banks and insurance companies in particular.

All financial services firms face risks arising from the highly febrile national and international political environment. This includes not only Brexit, but the growing disputes in global trade and the unpredictable nature of various countries’ foreign policies at the moment, which can have unpredictable effects on asset values and risk exposures. All also face risks arising from the possibility that we will be operating in a low inflation and low interest rate environment for some time, with an increasing possibility of a sudden correction in the equity and property markets, a prolonged global recession, and in the face of increasing competition from new market actors. All also face risks arising from climate change, as detailed further below in response to Question 15.

In addition, all financial services firms also face risks arising from disorderly markets, whether this is as a result of disorderly responses of the market to actions by regulators or central banks taken in response to challenging economic and / or political conditions, or disorderly trading in general caused by market actors themselves, for example caused by algorithmic trading, or some other reason. Firms may again find themselves unable to wind down large trading books in such conditions, and liquidity could again come under pressure, notwithstanding the additional liquidity coverage requirements which are now in place. Bail-in instruments may prove less reliable than anticipated, and cross-border resolution regimes to be too fragile to bear the weight put on them. And so on.

Perhaps more prosaically, exposures to operational risks arising from data loss, IT failures or cyber crime are also pervasive, as is exposure to fraud or recklessness by individuals or teams within their institutions.

More specifically, banks in the UK face risks arising from the structural separation of retail banking from the rest of their operations, at least whilst they manage that transition into new operational and business models. Structural separation also concentrates property risk in the ring-fenced retail bank.

With respect to insurance companies, the low interest rate environment poses risks to general insurers, as it can prompt them to chase risk and under-reserve, especially against long tail risks. They also face increased exposure to both man-made disaster and catastrophic risk (as noted with respect to climate risks below), to claims arising from cyber, IT, data or other operational failures which have caused large scale losses; and to the shift in their asset profile to higher holdings of residential and commercial property. Life insurers, and particularly those writing annuity contracts, face exposure to credit losses through defaults and downgrades, and in over-exposure to falls in property values through equity release products. .

Whether or when any of these risks may materialise is always impossible to predict, but what is important is to ensure that through stress testing that financial institutions, regulators and central banks are as prepared as they can be to deal with risks should they crystallise.

12. What is your assessment of prudential regulation in the UK, and do you think the PRC has the tools it needs to ensure the safety and soundness of the firms it regulates?

Prudential regulation in the UK has undergone a fundamental change since the crisis. Even prior to the creation of the PRA, the FSA had completely changed its approach to supervision in the wake of the crisis. The PRA has a wide range of tools at its disposal, and many of its staff lived through the last crisis and so in that respect are 'battle hardened'. It has also shown that it is prepared to take enforcement action against both firms and individuals. Since its creation in April it has opened 25 cases against individuals and 10 against firms. Of those which are now completed, three led to sanctions being imposed by the PRA against individuals and seven against firms (with 19 cases still ongoing). The PRA has also established a new Enforcement Decision Making Committee. However, it is always possible that conditions may change and / or political priorities shift. So the PRA probably has the tools it needs now, but as conditions change, new powers and tools may be needed to address new challenges which emerge or new political priorities which develop.

As importantly, the PRA is well embedded within the network of regulators / overseers which are looking at different elements of the system, and who all now recognise the importance of understanding how the different elements interact in order to ensure the safety and soundness of the financial system as a whole. The PRC's interaction with the FPC and MPC was noted above in response to Question 6, and it has an effective operational relationship with the FCA. Cross membership between the executive members of the PRC, FPC, MPC and FCA is important to maintaining mutual understanding, co-operation and peer based critical challenge.

However, having legal tools, functioning networks, skilled staff and adequate resources are all necessary in order to ensure that the PRA can operate as a strong and robust regulator, but they are not sufficient. Critically, lack of political support can undermine even the best equipped regulator. It is notable that in reflecting on its role in the lead up to the financial crisis, the FSA argued strongly that it would not have had the political support to impose tougher regulation on banks in the boom years preceding the crisis, even if they had wanted to (see FSA, The Turner Review: A Regulatory Response to the Global Banking Crisis (2009) and FSA, *The Failure of the Royal Bank of Scotland: Financial Services Authority Board Report* (2011) p.261-2). The political economy of regulation is as fascinating as it is complex. Regulators operate in a political as well as a legal context and they need a political licence to operate, irrespective of their formal legal powers. The political pendulum can regularly swing between calls for tough regulation at one point in time, and then towards de-regulation or lighter regulation at another, depending on whether there has just been a crisis or whether conditions appear benign and risks seem remote. The difficulty is always proving the counter-factual: if the regulatory system were not operating as it is, would firms be behaving as they are, or if the regulatory system were reduced in various ways, would the behaviours of firms and market participants change and / or would risks increase, and so would the need for greater regulation then become apparent? In responding to these pendulum swings, regulators need to be responsive to criticism and account for their actions, but they also need to be independent and robust in using the powers they have to pursue their legal purposes and objectives effectively.

13. To what extent are you concerned with the operational resilience of UK financial services firms?

The recent failures of IT systems at TSB, for example, demonstrate that operational resilience is a key issue facing UK financial services firms: the IT failure is reported to have cost the bank £200m. As the Bank, PRA and FCA's recent joint discussion paper on operational risk notes, operational disruption has the potential to cause harm to consumers and market participants, threaten the viability of firms and infrastructure, and cause instability in the financial system (*Building the UK Financial Sector's Operational Resilience,* July 2018).

Ensuring business continuity where operations have been disrupted is a significant concern, and as the discussion paper notes, operational disruption can cause more harm to consumers that financial failure. Financial services firms face a number of challenges in building operational resilience, including the difficulties of keeping pace with technological change and even simply updating outdated IT systems as well as dealing with newer risks such as cyber incidents; managing complexity in their business operations created by outsourcing, cross-border dependencies or concentrations of activity or data in particular sites; responding to changing consumer and market behaviours including the demands for faster transactions in both wholesale and retail markets; ensuring that they have people with the right skills; and operating in cost-constrained environments. These are in addition to the risks and opportunities posed by technological innovation – moving into the use of artificial intelligence or the use of distributed ledger technology, for example, is at the leading edge of business innovation in the financial sector, but it comes with its own operational risks.

In addition, although these are not covered in the discussion paper as such, the restructuring and reorganisation of operations which firms may undertake subsequent to Brexit may increase susceptibility to operational failures as those within the organisation develop and accustom themselves to new operating models.

In a recent speech on the significance of operational resilience, Lyndon Nelson, Deputy CEO of the PRA, urged firms to be on a WAR footing: they should be able to withstand; absorb; recover from operational failures ('Resilience and Continuity in an Interconnected and Changing World', June 2018). Firms therefore need to be clear about which business services have the potential to harm consumers, threaten the viability of the firm and / or undermine financial stability. From a regulatory perspective, it is important that firms prioritise those business services for attention, preventing disruption where possible, ensuring that systems and processes are sufficiently adaptable that should disruption occur these services could continue albeit in a modified way, or if they are disrupted that disruption will be minimal and opportunities for malfeasance, for example through fraud or data theft will be prevented, and they can return to running normally as quickly as possible. It is also important that firms learn from incidents and near misses in order to enhance the resilience of their systems and processes.

14. What is your assessment of the incentive structures in place at UK financial services firms? What more could be done to improve accountability at firms?

Remuneration within financial services firms has clearly been a strong public, political and regulatory concern since the crisis. The Financial Stability Board, the EU regulators and the UK regulators have each issued rules and codes on compensation and remuneration in an attempt to align the incentives of key individuals and senior managers within firms with the interests of shareholders and taxpayers.

Within the UK, the PRA has been active in monitoring remuneration policies and practices within the firms it regulates in an attempt to ensure that these are compatible with firms meeting their capital requirements, and poses the right incentives. In particular, that variable remuneration is deferred and can be withdrawn, and is thus put at risk if the firm fails to conform with the objectives of safety, soundness and good conduct of business.

In addition, the Financial Reporting Council's revised Code of Corporate Governance, issued in July 2018, stipulates that in order to promote long-term shareholdings by executive directors and thus align them with long-term shareholder interests, share awards granted for this purpose should be released for sale on a phased basis and be subject to a total vesting and holding period of five years or more.

Further, the revised Code continues to place significant emphasis on the role of remuneration committees, and sets out a series of principles which remuneration committees should observe when determining pay levels and pay structures.

In addition, firms are under new obligations to report on their gender pay gap, which has also provided some further information on remuneration practices within firms.

Ultimately, however, whilst pay structures in the large financial institutions are regulated and regulators can intervene to require firms to adjust their pay structures (though not their pay levels) to ensure that they are not posing a risk to the regulatory objectives, it is the responsibility of the boards of financial institutions to ensure that pay structures are responsible, fair and appropriate, and it's an issue on which constant attention is needed.

15. How is the PRC ensuring that climate related risks are sufficiently factored into firms' business models?

The Bank and the PRA / PRC have been calling attention to the financial risks which climate change may pose to financial institutions for some time, and the Bank has been active in international discussions on how best to address them, for example through engagement with the Financial Stability Board's private sector Task Force on Climate-related Financial Disclosures (TCFD) and co-chairing the G20 Green Finance Study Group on behalf of the United Kingdom.

Work has focused on three main channels of risk. First, physical risks arising from climate related events, such as floods, storms and droughts. These can impair asset values and increase credit risk where those assets were used as collateral for lending. Climate related losses also pose key risks to insurance companies which have underwritten losses relating to such natural events: insured losses have increased from an average of around US$10 billion per annum in the 1980s to an average of around US$45 billion per annum so far this decade. Overall losses have increased roughly three-fold over the past 30 years and are, on average, around four times the size of insured losses (PRA, *The Impact of Climate Change on the UK Insurance Sector*, 2015). In 2017, weather related insurance losses at a record high of US$130bn (PRA Annual Report 2018). Secondly, are the risks arising from transition of investments from firms producing or using fossil fuels and energy-intensive modes of production to those which support a lower carbon economy, particularly if that transition is sudden. Between them, firms account for about a third of global equity and fixed-income assets in 2015 (PRA report 2015). It has been estimated that the financial implications of such a transition could involve the reallocation of tens of trillion dollars of investments (Bank of England Quarterly Bulletin report, *The Bank of England's response to Climate Change*, Q2 2017). Thirdly, insurance companies also face risks from liability insurance claims, under which the insured claims under liability insurance for payments made to others where they have been held responsible for the loss, for example under professional indemnity, public liability or directors and officers insurance policies.

The PRA has been working with insurance firms to develop more sophisticated approaches to modelling risks from catastrophes and other weather-related events, incorporating the estimates of impacts of longer term trends as well as near-term risks. In 2015 it conducted an analysis of the impact of climate risks on the insurance companies it regulates (PRA 2015, above). The analysis focused on the direct impact of global natural catastrophes and windstorm, flood and related hazards in the UK. These are particularly relevant to the liability side of general insurers' balance sheets, and specifically to property-related classes of insurance business, which in 2015 accounted for 38% of the £78 billion of gross written premiums underwritten by the UK general insurance market. However, claims can also arise indirectly from climate related events which also need to be captured in the risk models. For example, in 2011 Thai floods caused US$45 billion of economic damage, which resulted in US$12 billion of insurance payments including claims arising from second-order effects such as supply chain interruption of global manufacturing firms. As the PRA has noted in its 2015 report, given the inherent uncertainty around such events, the emergence of more frequent and severe 'non-modelled' risks across a broad range of classes of business could present substantial challenges to insurance firms and should be factored into stress testing scenarios.

The PRA's supervisory activities with respect to insurance companies are building on the analysis in its 2015 report. That has involved exploring further firms' understanding of climate-related financial risks and how they are factored into firms' decisions and risk management. Climate-related factors have also been incorporated into the Bank's stress testing of general insurance firms. In conjunction with robust capital requirements, portfolio diversification and annual renewals (and thus potentially repricing) of insurance contracts, general insurance firms should be in a position to manage the current level of physical risks to the liability side of their balance sheets. Firms were able to pay out to cover the record levels of weather related losses in 2017, for example. But given the likelihood of increased severity and volatility of climate risks, continued diligence is required. Moreover, the risks to insurers' liabilities go beyond the physical perils that general insurers face. The value of both general and life insurers' assets are at risk from physical damage and from the way we choose to transition to a low carbon economy.

The PRA has also been working with banks to ensure that climate related risks, such as the exposure of mortgage books to floods, are adequately factored in with other financial risks when assessing credit risk. The PRA is due to publish a survey later this year on climate related risks to the banking sector, on which further action is likely to be based.

16. What is your assessment on how technological innovation will affect firms' business models?

Technological innovation is already having an impact across all areas of the financial system. One area of rapid growth has been in the development of new payment service methods, such as digital wallets, e-money and the rise of cross-border transfer payment systems which are faster and cheaper than those provided by the main banks, and which are increasingly outsourced to the cloud. Across the sector, customers expect to manage their finances in ways which are digitally based, and thus far cheaper for banks to maintain. However this poses challenges for traditional, branch based banks, as proportions of their customer base still prefer face to face banking, and branch closures can be opposed by sections of the local community. Customer security is being enhanced through the use of biometric authentication using finger printing or iris recognition. There has also been a rapid growth in comparison websites, posing greater competitive pressures on retail financial services. Developments in AI can also facilitate the development of more sophisticated 'robo-advisors', enabling consumers to receive basic levels of financial advice, for example about particular products, without having to speak to an advisor. Across retail and investment banking the rise in peer to peer lending has the potential to impact on business models, though it is likely that those using peer to peer lending platforms will have to have the confidence that they will be adequately protected against loss, eg through operational failures, fraud or malfeasance, for this activity to grow at scale.

Advances in data collection and data analysis through AI mean that financial services firms can develop products which are more tailored to the needs and risk profiles (including credit scores) of different groups and individuals, and target their advertising to them more effectively. In the wholesale markets, high frequency trading algorithms are a familiar feature of the equity markets and are moving into the bond markets too. Distributed ledger technology is being used increasingly to settle equity trades, and both distributed ledger technology and the use of smart contracts are developing in the context of trade finance, though there is still some way to go in that context. However, distributed ledger technology is being used increasingly to streamline customer due diligence process both in financial and in legal services. And in all areas data management and storage is becoming predominantly cloud based.

An interesting question is whose business models will adjust more quickly: will new entrant, small fin tech innovators be able to scale more quickly than incumbents can innovate, or will the incumbents instead partner with or buy up the innovators. A recent report from the European Banking Authority categorises incumbent firms into three types in terms of the level of adoption of innovative technologies and overall engagement with fin tech: proactive/front-runners, reactive and passive. As the report notes, potential risks may arise both for incumbents not able to react adequately and timely, remaining passive observers, but also for aggressive front-runners that alter their business models without a clear strategic objective in mind, backed by appropriate governance, operational and technical changes (EBA, *Report on the impact of FinTech on incumbent credit institutions' business models*, July 2018).

The report sets out five factors that might significantly affect incumbents' business models from a sustainability perspective: (i) digitalisation/innovation strategies pursued to keep up with the fast-changing environment, (ii) challenges arising from legacy IT systems, (iii) operational capacity to implement the necessary changes, (iv) concerns over retaining and attracting staff and (v) increasing risk of competition from peers and other entities. The report concludes that currently the predominant type of relationship between incumbents and FinTech is partnership with FinTech firms, which is considered a "win-win" situation. But this is a rapidly developing area, and just what the impact on the business models of both incumbents and innovators will be, and how their interrelationship will develop, remains to be seen.