



UNITED KINGDOM

FINANCIAL SECTOR ASSESSMENT PROGRAM

June 2016

MACROPRUDENTIAL INSTITUTIONAL FRAMEWORK— TECHNICAL NOTE

This Technical Note on Macprudential Institutional Framework on the United Kingdom was prepared by a staff team of the International Monetary Fund. It is based on the information available at the time it was completed in March 2016.

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MACROPRUDENTIAL INSTITUTIONAL FRAMEWORK

Prepared By
**Monetary and Capital Markets
Department**

This Technical Note was prepared in the context of an IMF Financial Sector Assessment Program (FSAP) in the United Kingdom in November 2015 and February 2016 led by Dimitri Demekas. It contains technical analysis and detailed information underpinning the FSAP findings and recommendations. Further information on the FSAP program can be found at <http://www.imf.org/external/np/fsap/fssa.aspx>

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Glossary

BCBS	Basel Committee on Banking Supervision
BoE	Bank of England
CCB	Countercyclical capital buffer
CRD IV	Capital Requirements Directive
CRR	Capital Requirements Regulation
D-SIB	Domestic systemically important bank
DTI	Debt-to-income ratio
EBA	European Banking Authority
EEA	European Economic Area
EMIR	European Market Infrastructure Regulation
ESRB	European Systemic Risk Board
FCA	Financial Conduct Authority
FMI	Financial market infrastructure
FPC	Financial Policy Committee
FSB	Financial Stability Board
FSR	Financial Stability Report
G-SIB	Global systemically important bank
IAIS	International Association of Insurance Supervisors
LCR	Liquidity coverage ratio
LTV	Loan-to-value ratio
MPC	Monetary Policy Committee
NSFR	Net stable funding ratio
OBR	Office for Budget Responsibility
O-SII	Other systemically important institution
PRA	Prudential Regulatory Authority
PRC	Prudential Regulation Committee
SRB	Systemic risk capital buffer

EXECUTIVE SUMMARY

The recent overhaul of the U.K. financial regulatory structure has placed emphasis on financial stability and built a new institutional framework that appears appropriate for conducting macroprudential policy effectively. The institutional setup is carefully thought out and well designed, providing clear roles and responsibilities, adequate powers and accountability, and promoting strong coordination between the constituent agencies. In particular:

- The Bank of England (BoE) has been assigned a clear financial stability mandate. The Financial Policy Committee (FPC) lies at the center of the macroprudential framework, tasked with identifying, monitoring and taking action to mitigate systemic risk. The framework provides a number of channels to promote the dialogue and interaction between the FPC and the Treasury, while safeguarding its independence.
- Legislation grants the FPC the power to make recommendations, including to the Treasury on the perimeter of regulation and the macroprudential toolkit, and on a comply-or-explain basis to the microprudential regulators.¹ The FPC also has powers of direction over specific macroprudential tools that are prescribed by the Treasury (and approved by Parliament). Information collection powers and data-sharing provisions appear adequate.
- The framework provides several formal mechanisms to foster the coordination and cooperation across different agencies whose actions have a material impact on financial stability. Importantly, the heads of the microprudential regulators are FPC members and the microprudential regulators' mandates are aligned with the BoE's financial stability objective.
- The accountability framework relies on a broad range of required communication tools, inquiries by the Treasury Select Committee (Parliament) and reviews by the Oversight Committee (BoE).

While the track record is short, the functioning of the framework has been encouraging. The FPC has played an active role during its first years of operation. Experience to date suggests that the BoE recognizes the interactions between its different policy functions and the need for coordination. The "One Bank" strategy is promoting increased connectivity within the BoE, and a series of planned joint exercises with FCA staff with the purpose of looking at risks beyond the core financial sector will continue furthering relationship-building and coordination. In terms of accountability, both the Treasury Select Committee and the Oversight Committee appear to provide appropriate oversight.

The U.K. authorities have shown due regard for the multilateral aspects of macroprudential policies. The authorities have been actively involved in international organizations where financial stability risks are discussed and standards are set (such as the Financial Stability Board (FSB) and the European Systemic Risk Board (ESRB)). To mitigate the cross-border leakages of macroprudential policy, EU legislation (applicable in the U.K.) sets out formal coordination arrangements for the

¹ For the purpose of this note, "the microprudential regulators" refers to the Prudential Regulatory Authority (PRA) and the Financial Conduct Authority (FCA).

countercyclical capital buffer (CCB) starting in 2016, and the FPC has already recognized foreign CCB rates ahead of schedule. For tools other than the CCB, reciprocity works mostly on a voluntary basis, and the FPC has stated its intention to reciprocate foreign macroprudential capital actions where appropriate. The working of these reciprocity arrangements (including those voluntary) remains mostly untested and needs to continue to be kept under review.²

With the new institutional setup in place, authorities have made significant progress in their operational framework and additional important work is underway. The FPC has established a functional process for identifying systemic risk and mapping risks into policy action. Risk assessment is conducted as a regular (quarterly) surveillance process, drawing on a broad range of indicators, market intelligence, supervisory insights and analysis by BoE staff (including the PRA and the FCA). Progress has been made and initiatives are ongoing for addressing remaining data gaps. An annually dedicated discussion on the regulatory perimeter has been established, and work is underway to develop a better understanding (and enhance the monitoring framework) of risks beyond the core financial sector. Direction powers have been established over tools that mainly target risks from excessive leverage and credit growth (including tools beyond Basel III).³ The policy for their use is one of “guided discretion”, whereby the FPC publishes Policy Statements explaining how they intend to use the tools, while maintaining discretion over their use. For managing liquidity and structural risks, the FPC relies mainly on its broad recommendation powers. The macroprudential toolkit is still evolving, as certain tools are yet to be implemented. The FPC has requested directions powers for tools covering buy-to-let lending (currently under consultation by the Treasury) and will continue to re-assess its need for additional tools as risks evolve and international standards for certain tools develop.

Looking ahead, the effectiveness of the framework will largely depend on continuing to maintain a strong focus on financial stability. An effective macroprudential framework is crucial for the U.K. financial system to remain a global public good, given its size and systemic nature. While the framework includes several provisions to promote the “willingness to act,” the challenge of maintaining a robust stance on financial stability in one of the world’s largest financial centers should not be underestimated. As memories of the last crisis fade, external pressures for inaction are likely to intensify and, within the BoE, resources on FPC issues could potentially be squeezed due to competing demands from other of its policy functions. The Treasury Select Committee and the Oversight Committee will play an important role in watching for this risk. The FPC itself should persist in its efforts to communicate broadly its mission and methods.

² The ESRB has recently released recommendations on an European Union (EU)-wide approach to reciprocating CCB rates set by authorities outside the European Economic Area (EEA) and a framework for facilitating reciprocity within the EEA for tools other than the CCB.

³ To date, these tools encompass the countercyclical capital buffer under Basel III, sectoral capital requirements, loan-to-value ratios (LTV) and debt-to-income ratios (DTI) on owner-occupied mortgage lending, and the leverage ratio, including a countercyclical leverage ratio buffer and a leverage surcharge for systemically important institutions.

INTRODUCTION⁴

1. **The U.K. authorities identified significant failings in the U.K. regulatory and supervisory framework following the last global financial crisis.** The previous ‘tripartite system’ made the BoE, the Treasury, and the Financial Services Authority (FSA) collectively responsible for financial stability. Under this fragmentation of responsibilities, no single institution had the responsibility, authority, or powers to monitor the system as a whole, identify potentially destabilizing trends, and respond to them with concerted action (HM Treasury, 2010).
2. **As a result, the domestic institutional framework for regulation and supervision was revamped.** The existing regulatory regime was dismantled, the single financial regulator (FSA) ceased to exist, and a new structure was put in place. Two microprudential regulators were created. The PRA was established as a subsidiary of the BoE to carry out the prudential regulation of deposit-takers, insurers and major investment firms. The FCA was established to regulate the conduct of all financial services firms. It is also responsible for prudential regulation of firms that are not prudentially-regulated by the PRA. An independent FPC was established at the BoE to help protect and enhance the stability of the U.K. financial system as a whole.⁵
3. **The first section of this Note reviews the institutional framework for the conduct of macroprudential policy in the United Kingdom.** An effective macroprudential framework is crucial for the U.K. financial system to remain a global public good, given its size and systemic nature. The analysis reviews how the institutional setup promotes the *willingness to act, ability to act, effective cooperation, and accountability*. The assessment is primarily guided by the key considerations for the design of effective institutional frameworks identified in [IMF 2013](#) and [IMF 2014](#). It is also informed by external reviews conducted in the early stages of the framework.⁶ Where relevant, the note discusses how different elements of the framework have functioned in practice to date. However, it should be noted that the track record is still short and the framework has operated in a relatively favorable environment, with strong support for the macroprudential authorities resulting from fresh memories of the crisis.
4. **The second section of this Note reviews the steps taken by the authorities to make the macroprudential framework operational.** With the new institutional setup in place, the authorities have made significant progress in their operational framework and important work is underway. The

⁴ The Technical Note was prepared by Nicolas Arregui from the IMF Monetary and Capital Markets department, for the 2016 United Kingdom FSAP. The analysis was based on publicly available information, background documentation provided by the BoE, the FCA, and the Treasury, as well as discussions with the BoE, ESRB Secretariat, FCA, PRA, Treasury, and academics.

⁵ In addition, the regulation of all systemic important infrastructure, including settlement systems and clearing houses, were transferred to the BoE.

⁶ [FSB \(2013\)](#) assessed that authorities had largely addressed the 2011 FSAP recommendation to “revise the legal framework to clarify mandates and include a specific financial stability mandate.” [ESRB \(2014\)](#) assessed the U.K. to be fully compliant with its 2011 recommendation regarding the macroprudential mandate of national authorities.

assessment is focused on the authorities' processes for monitoring systemic risk (including beyond the core financial system), data gaps, and the U.K. macroprudential toolkit.

5. This Note does not assess the appropriateness of specific macroprudential policy decisions. Instead, the focus is on the general functioning of the framework. Moreover, this Note does not take into account the BoE and Financial Services Bill in Parliament at the time of the mission.⁷ Based on the public documentation and discussions with authorities, the Bill, once enacted, should have no material impact on the conclusions in this Note. The main proposed changes to the macroprudential framework include: (i) bringing the PRA within the Bank, ending its status as a subsidiary, and creating a new committee of the Bank to be known as the Prudential Regulation Committee (PRC); (ii) adjusting the statutory basis of the FPC from a subcommittee of the Court to a committee of the Bank, in line with the Monetary Policy Committee (MPC) and the new PRC; (iii) adding the Deputy Governor for Markets and Banking (who currently attends the FPC as an observer) as an ex-officio member of the FPC; (iv) adding a new external member to the FPC, in order to preserve the balance between executive and external members; and (v) abolishing the Oversight Committee and transferring its oversight functions to the BoE Court itself (which should retain an independent Chair and a majority of non-executive members).⁸

INSTITUTIONAL FRAMEWORK

6. A strong institutional framework is essential to ensure that macroprudential policy can work effectively. The framework needs to assure *willingness to act* and counter biases for inaction or insufficiently timely action that can arise from difficulties in quantifying the benefits of macroprudential action, which are often exacerbated by lobbying by the financial industry and political pressures. Equally important, it needs to foster the *ability to act* in the face of evolving systemic threats, assuring access to information and an appropriate range and reach of macroprudential instruments. It needs to promote *effective cooperation* in risk assessments and mitigation, in a manner that preserves the autonomy of separate policy functions. It needs finally to establish *strong accountability*, based on clear objectives that can guide the exercise of macroprudential powers, and strong communication to create public awareness of risks and understanding of the need to take mitigating action.

7. The new institutional design in the U.K. appears appropriate for conducting macroprudential policy effectively. The institutional setup is carefully thought out and well designed, providing clear roles and responsibilities, adequate powers and accountability, and promoting strong coordination between the constituent agencies. Albeit the short track record, the experience so far is encouraging.

⁷ The Bill received Royal Assent and became an Act of Parliament in May 2016.

⁸ The BoE's Court of Directors (Court) acts as a unitary board, setting the organization's strategy and budget and taking key decisions on resourcing and appointments.

A. Willingness to Act

8. The new framework gives the BoE a clear financial stability mandate. The BoE did not have a statutory responsibility for financial stability until its introduction by the Banking Act of 2009. The new statutory objective (“to contribute to protect and enhance financial stability”) was further strengthened with the Financial Services Act in 2012 (“to protect and enhance financial stability”).⁹ Financial stability is pursued through: (i) macroprudential and microprudential policies; (ii) financial operations including as lender of last resort; (iii) the BoE’s role as a resolution authority; and (iv) BoE supervision of key payment, clearing, and settlement infrastructure.

9. The FPC, tasked with helping the BoE meet its financial stability statutory objective, is at the center of the macroprudential framework. The FPC is established as a statutory decision-making body at the BoE.¹⁰ It consists of five BoE members (Governor, three Deputy Governors—including the head of the PRA—and the Executive Director for the analysis of threats to financial stability), the head of the FCA, four external members chosen by the Chancellor from outside the bank, and a non-voting member from Treasury. The appointment of external members brings a broader range of expertise to the Committee, and may help in keeping the discussion focused and challenging the views of the BoE executives. There are requirements on the personal independence of external members in legislation (the Chancellor is required to consider conflicts of interest before making an appointment), the FPC Code of Conduct and in the public appointment scrutiny by the Treasury Select Committee.

10. The FPC’s functions are to identify, monitor, and take action to mitigate systemic risk (that is, risk to the stability of the U.K. financial system as a whole or of a significant part of it). This includes risks attributable to structural features of financial markets, to the distribution of risk within the financial sector, and to unsustainable levels of leverage, debt or credit growth. The framework requires the FPC to take into account policy trade-offs when performing its duties. In particular, the FPC has a secondary objective to support the economic policy of the Government and is required, when practicable, to accompany its decisions with a cost-benefit analysis.

⁹ The purpose of financial stability is to contribute to avoiding serious interruptions in the vital functions of the financial system: the provision of payment and settlement services, intermediating between savers and borrowers, and insuring against risk.

¹⁰ The FPC is established as a sub-committee of the Court of Directors of the BoE.

11. The legislative framework provides channels to promote the dialogue and interaction between the FPC and the Treasury, while safeguarding the Committee's independence. For instance:¹¹

- **Treasury representative at the FPC.** A Treasury representative sits at the FPC but does not hold voting rights. In practice, the line between dialogue and undue interference could at times be hard to assess and therefore needs to be actively monitored by the framework's accountability mechanisms. In 2013, under public scrutiny, two FPC members had differing views on the role played by Treasury in the discussion on the capital needs for the two part state-owned banks. Importantly, both members agreed that the interaction with Government had not had a material impact on the recommendation made by the FPC.¹² This example illustrates how the public scrutiny mechanisms established in the framework play an important role so FPC members continue to act based on their own best judgment.
- **Remit and recommendations letters from Treasury.** Legislation allows Treasury to make recommendations to the FPC on how to interpret its mandate (i.e., the responsibility of the Committee in relation to its objectives and matters it should have regard to when exercising its functions). While the FPC is required to respond to these recommendations, it is free to disagree and not act in accordance. Additionally, the Treasury is required to specify its economic policy, so the FPC shall take it into account as part of its secondary objective, subject to its primary financial stability objective. These letters are now commonly referred to as "remit letters" (see, for instance, BoE webpage) but are not equivalent to the MPC's remit letters. The latter complete the MPC's both primary and secondary objectives, and include no recommendations subject to the Committee's discretion. Referring to the former as "recommendation letters" could help make this distinction more evident.

12. The FPC's decision making arrangements also promote the framework's willingness to act. Legislation requires the chair of the FPC to seek consensus wherever possible, but if consensus cannot be reached, a simple majority voting arrangement is in place. A summary of the Committee's deliberations is to be reflected in the meeting records. In practice, FPC members have put a strong emphasis on seeking consensus and all decisions to date have been unanimous. While seeking consensus is always desirable, it is important going forward that the preference for consensus is not interpreted as a hard requirement. This could risk paralyzing or delaying policies, or potentially making members compromise more than is desirable. In line with this observation, when discussing the decision process for the calibration of the CCB, the FPC acknowledged that the discrete nature of the decision may not always lend itself to a consensus-based process and agreed to be flexible in its approach to setting the buffer.¹³

¹¹ Additionally, the Governor is required in legislation to meet the Chancellor following each financial stability report (FSR) to discuss matters relating to the stability of the U.K. financial system, with a public record of the meeting published within six weeks.

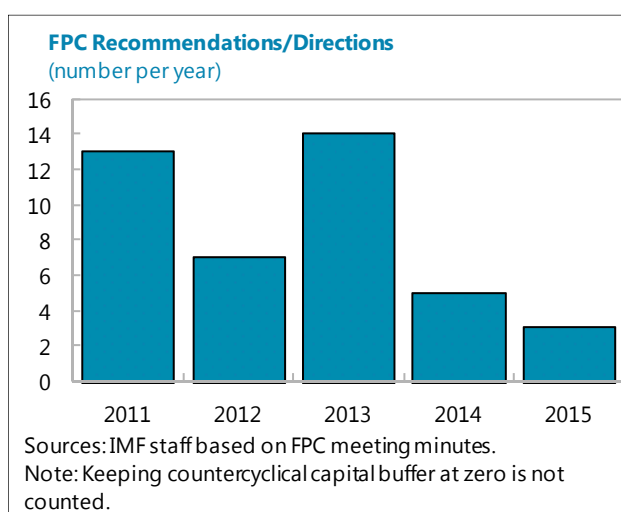
¹² See Andrew Haldane's and Don Kohn's reappointment hearings at the Treasury Select Committee, 2013.

¹³ See FPC records for December 2015.

13. Finally, the mandates of the microprudential regulators (the PRA and the FCA) are aligned with the BoE’s stability objective. The PRA’s general objective requires it to promote the safety and soundness of the firms it regulates, focusing on the adverse effect they may have on financial stability. The FCA’s “integrity objective” includes protecting and enhancing the soundness, stability and resilience of the U.K. financial system. This alignment of objectives can reduce conflicts, help foster engagement, and increase compliance with recommendations, by ensuring that powers assigned to these agencies can be used in the pursuit of financial stability. Since implementation of the new regulatory framework, it has placed a strong emphasis on enhancing the resilience of the financial system. This environment is less prone to conflicts between the macro and microprudential authorities. As a result, the alignment of mandates and the resolution of potential conflicts have yet to be tested.

14. In practice, the FPC has been fairly active during its first years of operation. A

total of 42 recommendations or directions have been issued since the interim FPC began operating.¹⁴ This includes measures to address systemic risk (notably in the banking sector), but also to set up the macroprudential framework itself (for instance, by making recommendations on the macroprudential toolkit). The U.K. ranked among the most active users of macroprudential policies in the EU during 2014, according to a review conducted by [ESRB \(2015\)](#).¹⁵



B. Ability to Act

15. The new responsibilities of the BoE have been matched with an expanded set of powers. Legislation grants the FPC powers of recommendation and direction. The FPC can make recommendations to any party (including the rest of the BoE and the Treasury), and in the case of the microprudential regulators (the PRA and the FCA), such recommendations can be made on a comply-or-explain basis. That is, regulators must comply with the recommendation as soon as is practical or explain publicly in writing why they have not done so. In addition, the FPC has the power to direct the microprudential regulators to deploy specific macroprudential tools that are prescribed by the Treasury, and approved by parliament, for these purposes. The set of tools under the direct control of the FPC is still evolving, as discussed in the next section. Directions and

¹⁴ This number excludes the decision to keep the CCB rate at zero percent.

¹⁵ This is based on just the number of measures, not their relative importance or impact.

recommendations to the PRA and FCA may not relate to specific institutions but to all or “types of” institutions (such as systemically important institutions).¹⁶

16. The U.K. authorities have adequate information collection powers. The BoE may direct the microprudential regulators to provide information available to them or that they have the power to request.¹⁷ Each microprudential regulator has information collection powers from authorized entities for the purpose of their respective functions (which as discussed, take into account financial stability).¹⁸ Moreover, the PRA has a duty to collect information relevant either to the stability of individual financial institutions or the U.K. financial system more broadly. To this end, the PRA has the power to require additional information relevant to U.K. financial stability beyond PRA-authorized firms (the so-called “financial stability information power”).¹⁹ This includes, among others, managers of UK-related investment funds, service providers critical to authorized entities, and other entities critical for financial stability as prescribed by the Treasury. To date, the authorities have not felt the need to exercise this power to collect information, relying on other alternatives instead. More generally, the FPC may issue recommendations, including requests for information, to other regulators and authorities as needed.

17. Moreover, the new framework includes provisions to adapt to the potentially evolving nature of systemic risk. The FPC may make recommendations to the Treasury pertaining to the categories of firms outside the scope of the PRA’s regulation from which it may collect information specifically for the purpose of financial stability. This allows for closing data gaps beyond the regulatory perimeter of regulation without modifying the perimeter. The FPC may also make recommendations to the Treasury on the perimeter itself, including on the division between regulated and unregulated activities as well as on the split of responsibilities between the PRA and the FCA.²⁰ Finally, the FPC may also make recommendation to the Treasury to adjust the macroprudential toolkit (including on the need for further powers of direction).²¹

¹⁶ Given the concentrated nature of the U.K. banking system, the FPC sometimes uses firm-specific data to inform macroprudential policy decisions.

¹⁷ The BoE, the PRA, and the FCA are allowed to share confidential information with each other for the purpose of carrying out their respective functions.

¹⁸ Information collection powers also include entities connected to authorized entities and, in the case of the FCA, recognized investment exchanges.

¹⁹ The PRA may exercise this power to provide this data to other authorities, such as the FPC or the Treasury.

²⁰ Note this would also affect the perimeter subject to information gathering powers.

²¹ Powers of direction are prescribed by the Treasury and approved by Parliament. However, an expedite process temporarily waiving the need for Parliamentary approval is in place in case of emergency (based on the Treasury’s stated opinion).

C. Coordination and Cooperation

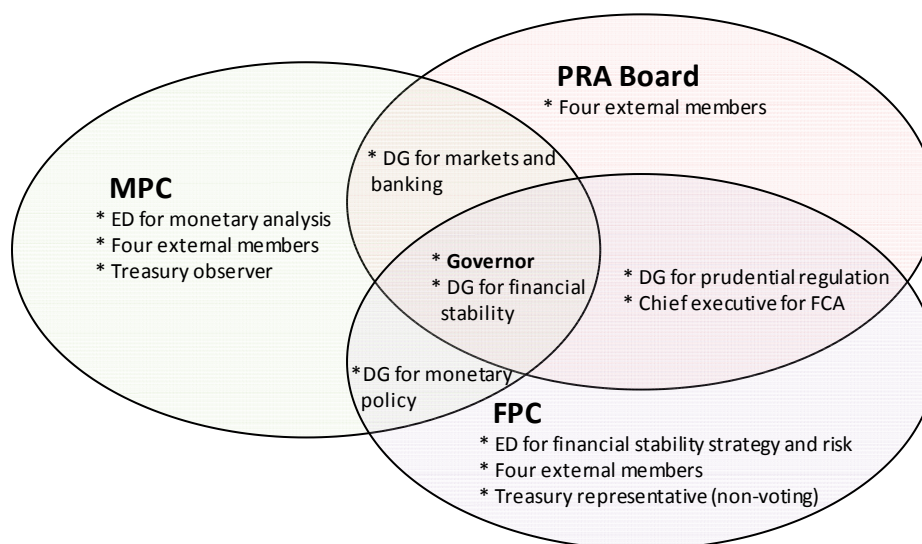
Domestic

18. The framework includes several formal mechanisms to foster the coordination and cooperation across different agencies whose actions have a material impact on financial stability. There are strong complementarities and interactions between macroprudential, microprudential and monetary policies. The new framework cannot be effective if the different bodies work in silos, so several mechanisms for cooperation have been established. For instance:

- Coordination between the FPC and the microprudential regulators relies on a variety of mechanisms, including information sharing responsibilities, the references to financial stability in the mandates of the microprudential regulators, the duty of the FPC to have regard (as far as possible) to the microprudential regulators' objectives, and overlapping memberships across their governing bodies.²² As described above, the FPC has power of directions over some of the microprudential regulators' tools, and may make recommendations, including on a comply-or-explain basis.²³
- Housing both the FPC and the MPC within the BoE and with overlapping memberships facilitates effective information sharing and forming a common understanding of key economic judgments and each committee's likely policy response. The members of each committee are able to attend the other committee's briefing meetings. Each committee has been prompted, in its remit and recommendation letter from Treasury, to be clear on how it has had regard for the actions of the other in its own policymaking.

²² The FCA and the PRA's chief executives are both members of each others' respective Boards, as well as both being members of the FPC. The BoE Governor is the Chair of the FPC, the MPC, and the PRA Board.

²³ The oversight of financial market infrastructures (FMI) sits within the BoE, headed by the Deputy Governor for Financial Stability who sits as an FPC member. The FPC can make, and indeed has already made, recommendations on issues relevant to financial infrastructures.

Figure 1. United Kingdom: Membership of the Bank of England Policy Committees

Source: Hall, S., A. Pattani, and P. Tucker, "Macroprudential Policy at the Bank of England," Quarterly Bulletin, Bank of England, 2013Q3. Updated by IMF staff.

Note: ED= Executive director; DG=Deputy Governor.

19. A number of initiatives within the BoE seek to take advantage of the complementarities between its different responsibilities. During 2014, key senior staff at the executive level moved between policy areas.²⁴ The BoE has launched the "One Bank, One Mission" three-year initiative, to promote increased connectivity and a common culture within the BoE.²⁵ This includes via sharing of information and analyses, and more frequent joint meetings between the MPC, the FPC, and the PRA Board. To guard against the creation of silos, the strategy stresses that all BoE staff work to support all three policy-making committees of the BoE.²⁶ In practice, analysis that goes to the decision-making committees on areas of common interest is typically produced jointly by staff across the different areas of the BoE. The FPC has held joint briefings and discussions with both the MPC and the PRA Board on topics of common interest, including stress testing, long-run risks from China, and housing policy. To further enhance the interaction between the MPC and FPC, four joint briefing meetings have been scheduled for 2016. Finally, as part of the strategic plan,

²⁴ Andrew Haldane and Spencer Dale were appointed to take over each other's positions, effectively exchanging the roles of Executive Director for financial stability (FPC member) and Executive Director of monetary analysis (MPC member). Additionally, Paul Fisher, former Executive Director for markets (MPC and interim FPC member) was appointed as Head Deputy of the PRA. More recently, in January 2016 it was announced that Andrew Bailey would be leaving his position as Head of the PRA to take over as Head of the FCA.

²⁵ To promote a unified culture, the BoE's leadership team has identified a set of core values to guide managers' performance evaluation across the institution. Additionally, work has been done to harmonize remuneration terms and conditions across the BoE and therefore reduce barriers to internal mobility.

²⁶ The Oversight Committee assessed that management and staff across different parts of the BoE have increasingly worked together to ensure that all policy committees receive coordinated briefing on macroeconomic, financial stability and prudential issues (see BoE Annual Report, 2014).

the BoE has launched a coordinated research agenda focusing in particular on the intersection between policy areas (i.e., monetary, macro and microprudential).

20. The experience so far suggests the BoE recognizes the important interactions between different policy functions and emphasizes the need for coordination and cooperation. For instance:

- **Forward guidance and knock-out.** When the MPC first engaged in forward guidance for monetary policy, it provided the FPC with a knock-out power. That is, the guidance would cease to hold if the FPC judged the monetary policy stance posed a significant threat to financial stability that could not be contained by the combination of micro and macroprudential tools available. As a result, the FPC had to consider the stability risks of low-for-long rates on a regular basis, while monetary policy remained as a last line of defense.
- **Stress testing exercise.** Since 2014, the BoE stress testing exercise is conducted jointly by the FPC and the PRA Board, drawing on expertise from across the Bank, including macroeconomists, financial stability experts and supervisors. Therefore it brings together the microprudential assessments of banks with a macro perspective on risks to which the sector must be resilient.
- **Housing market.** Under the direction of the FPC, the BoE, PRA, and FCA took coordinated and consistent measures to mitigate risks related to the housing market. The FPC considered developments in the U.K. housing sectors drawing on a macroeconomic assessment provided by the MPC's forecast and policy analysis from across the BoE. In 2014, it worked through the FCA to require lenders to apply a stressed affordability test, and it worked through the PRA to limit high loan-to-income ratio loans by banks and building societies.

21. Interactions between BoE and FCA staff have recently increased and are set to deepen further, as the FPC broadens its focus beyond the core financial system. During the first years of operation of the FPC, it advanced its relationship with the PRA further than with the FCA.²⁷ This was due in part to the significant focus on the banking system during those years. As the work on rebuilding the resilience of the banking sector progressed, the FPC has broadened its focus on risks related to other financial sectors and systemic non-financial risks. In this context, interactions between BoE and FCA staff have strengthened significantly over the last year. The FCA has had a more active participation in the briefing stages of the FPC rounds. Joint working and coordination groups have been established to focus on risks related to asset management and market liquidity, hedge funds and cyber risks. Going forward, joint work between BoE and FCA staff will be ongoing as they undertake a series of deep dives into various industries to determine levels of systemic relevance. This will provide an opportunity for further relationship building, coordination, and flow of information.

²⁷ See [FSB peer review \(2013\)](#) and Alex Brazier's appointment hearing at the Treasury Select Committee, 2015.

International

22. The size and international nature of the U.K.'s financial sector require a significant emphasis on multilateral issues in the conduct of macroprudential policy. The U.K. is host to many international financial companies and home to several financial firms with a large overseas presence. The U.K.'s financial stability is in no small part dependent on effective global and European macroprudential surveillance and sound, consistently implemented international regulatory standards and EU rules. Many risks cross borders, and lack of forceful macroprudential action in one country can increase the likelihood of crises, imposing negative externalities on other countries. Additionally, financial integration increases the scope for cross-border leakages and spillovers of macroprudential policy.

23. Aware of this, the U.K. authorities have expressed their intention to cooperate with overseas counterparts in the monitoring and mitigation of systemic risk. The FPC has stated it seeks to cooperate with relevant EU institutions and through other global fora to ensure that macroprudential policy decisions are implemented effectively and that cross-border leakages are dealt with appropriately. It has also stated it intends to have due regard to the impact of its decisions on jurisdictions both inside and outside the EEA.

24. Consistent with their stated intentions, the U.K. authorities have been actively involved in international organizations where financial stability risks are discussed, policies are coordinated, and standards are set. The FSB (at the global level) and the ESRB (at the EU level) are key fora for international cooperation, data sharing and coordination. The BoE governor (and chair of the FPC) is the acting head of the former and the vice-head of the latter. At a working level, the FPC has asked BoE and FCA staff to engage actively in international fora on various financial stability risks that operate across borders, such as market liquidity and cyber risk. Legislation allows the BoE to disclose information to foreign authorities with functions similar to those of the Treasury, BoE or the FCA. The FCA maintains a number of "gateways" which allow it to share confidential supervisory information, where appropriate, to assist or enable other regulators to carry out their functions.

25. The U.K. authorities have also engaged actively in the EU regulatory framework legislative process. Regulatory standards implemented at the EU-level either through directly applicable Regulations or maximum-harmonized Directives, typically leave no scope for the U.K. to put in place further rules or domestic legislation once the EU rules are in place.²⁸ For instance, the FPC cannot give a direction or make a recommendation that would contravene provisions of EU law. As a result, the U.K. authorities have actively engaged in trying to influence EU legislative processes. Importantly, as discussed further below, the EU prudential rules for the core financial system (i.e., the Capital Requirements Regulation (CRR) and Directive for banks, building societies and investment firms) do allow for a degree of flexibility when dealing with financial stability matters.

²⁸ Maximum harmonized legislation, unlike minimum standards, means that member states cannot set tougher regulatory standards for firms in their jurisdiction.

26. The FPC has already reciprocated macroprudential policies by foreign counterparts, but reciprocity for U.K. measures remains untested. Reciprocity arrangements mitigate cross-border leakages, by ensuring the same regulatory constraints are applied across all relevant providers of credit in the region (including cross-border lending and lending via foreign branches).²⁹ EU legislation (applicable in the U.K.) sets out a formal coordination arrangement for the CCB starting in 2016, which is mandatory within a certain range (and voluntary otherwise). The FPC has reciprocated foreign CCB rates ahead of schedule (including CCB rates set in Norway, Sweden and Hong Kong).³⁰ Reciprocity is a cornerstone of the Basel III agreement on the CCB, so the expectation is that the U.K.'s CCB will also be reciprocated back by jurisdictions beyond the EEA. This will be revealed as the CCB is used in the coming years. For tools other than CCB, reciprocity across jurisdictions (including within the EEA) typically works on a voluntary basis and remains mostly untested. The authorities should keep developments under review and assess the need for additional bilateral agreements or stronger regional agreements. Along this line, the ESRB has recently proposed a framework for facilitating reciprocity within the EEA (beyond CCB).

27. An alternative to reciprocity arrangements is the establishment of closer regulatory and supervisory control for host authorities over foreign branches. Within the EEA, legal constraints prevent this, as it is deemed contrary to a common market in financial services. For non-EEA branches, PRA authorization is centered on an assessment of the quality of the home state's supervision, the activities undertaken by the U.K. branch, and the level of assurance that the PRA gains from the home state supervisor over resolution. If deemed necessary, non-EEA international banks wishing to undertake critical economic functions (e.g., retail or corporate banking) in the U.K. could be required to set up a U.K. subsidiary.

D. Accountability

28. The new responsibilities and powers assigned to the BoE have been matched with stronger accountability arrangements. An effective accountability framework is particularly important in the U.K. framework, as it vests a lot of authority in the BoE, which has operational independence to achieve its financial stability objective.³¹ The BoE is accountable to the general public and Parliament (through the Treasury Select Committee of the House of Commons). There are a number of inherent difficulties in establishing an effective accountability framework. For instance, the objective of financial stability is hard to quantify and the failure to preserve stability could become known with a considerable lag.³² In addition to a clearly-assigned well-defined

²⁹ Foreign branches operating in the U.K. account for roughly one third of the banking sector assets, two thirds of which correspond to non-EEA branches.

³⁰ Authorities intend to adhere to ESRB's recent recommendation to coordinate EEA reciprocity for the CCB vis-à-vis non-EEA authorities.

³¹ On the positive side, vesting a lot of authority in the BoE can harness its expertise in systemic risk identification, promote coordination and provide a shield from political interference.

³² Additionally, the FPC typically focuses on "tail-risks," so if FPC actions successfully reduce the probability of a risk materializing, such that it does not occur, this may be observationally equivalent to the action being unnecessary in the first place and FPC concerns being unwarranted.

objective, the accountability framework relies on a broad range of required communication tools, inquiries by the Treasury Select Committee (Parliament) and reviews by the Oversight Committee (BoE).

Communication

29. The accountability framework relies on a broad range of required communication tools. Such tools can help the public to establish whether the authority is taking appropriate action to achieve its objective. They can also influence the conduct of the macroprudential policymaker in ways that foster the effective pursuit of the objective. These include:

- **Financial stability strategy.** The BoE's Court of Directors (in consultation with the FPC) is required at least every three years to produce and publish a strategy in relation to its financial stability objective, which the FPC must take into account. An initial financial stability strategy was adopted in September 2013 to fulfill the timing requirement in the Financial Services Act, and later updated in 2014. The strategy specifies that the purpose of preserving stability is to maintain the three vital functions of the financial system: (i) providing the main mechanism for paying for goods, services and financial assets; (ii) intermediating between savers and borrowers; and (iii) insuring against and dispersing risk.
- **FPC meeting records.** The FPC meeting records must specify any decisions taken, including the decisions to take no action, and must set out a summary of the deliberations in relation to each decision. Records must be published no later than six weeks after the meeting is held, although publication of some information may be deferred if judged to be against the public interest. All FPC members work through and sign off on the record.
- **Financial stability report (FSR).** The FPC must publish an FSR twice every year.³³ The FSR is required in legislation to include (as it relates to the U.K. financial system): the FPC's view of stability at the time of the report's preparation; an assessment of the developments that have influenced the current position; the strengths and weaknesses; risks to the stability; and the FPC's view of the outlook for stability. It must also report the FPC's view of progress against previous Recommendations and Directions, as well as any new policy actions taken to reduce and mitigate risks to stability. The changes in the structure of the FSR introduced in 2015 have streamlined the document and have improved its focus by prioritizing among risks.
- **Policy statements and core indicators.** For those tools over which the FPC is given direction powers, it must publish a statement it proposes to follow for the exercise of such power. As discussed in more detail in the following section, the statements published to-date identify a set of core indicators that must be routinely reviewed to guide the use of each tool. While these indicators do not constrain the FPC behavior, they play an important role for accountability and

³³ The Governor is required in legislation to meet the Chancellor following each FSR to discuss matters relating to the stability of the U.K. financial system, with a public record of the meeting published within six weeks.

communication, providing a basis for explaining FPC decisions (including decisions not to act) to an external audience.³⁴

30. The communication framework aims for clear and consistent messages, while recognizing the importance for accountability of transparency in the range of arguments expressed in FPC deliberations. The framework for the FPC decision-making and communication is established by the Bank of England Act of 1998 (as amended by the Financial Services Act), the Chancellor’s annual remit and recommendations, and the FPC code of conduct. The Act states that FPC should reach decision by consensus wherever possible, or by vote if consensus cannot be reached. The Chancellor’s remit and recommendations stress the benefits of providing clear, focused and consistent communication around FPC’s decisions. It states that where decisions are reached by consensus, communication by individual members needs to be coordinated and consistent. Where consensus cannot be reached and decisions are made by vote, the balance of arguments should be reflected in the meeting records, members should be free to explain their differences, and will be publicly accountable accordingly. Recognizing its value for accountability, the FPC code of conduct (as amended in 2015) makes it clear that meeting records must reflect the range of arguments in reaching FPC decisions, whether through consensus or a vote. Members are fully entitled to explain their policy position but should respect consensus (when reached), in order not to undermine the effectiveness of the agreed policy. Where a decision is made by vote, individual member’s votes are to be reflected in the meeting records.

31. The FPC must continue its work to promote the public awareness and understanding of the Committee. Communication with markets and the public can foster an understanding of the benefits of specific macroprudential tools. A broad-based understanding among the general public of the importance of financial stability and the FPC’s role is important to underpin the long-run legitimacy of the Committee. A number of tools have been used by the FPC to target a less technical audience: FPC members make a combined total of approximately 15 FPC-related speeches per year (published on the BoE’s website), and also undertake a number of press interviews with the media, join panel discussions at conferences and write op-eds. Additionally, members undertake regional visits and market intelligence meetings to increase awareness and understanding of macroprudential policy.³⁵ However, public understanding of the FPC’s role and responsibilities remains low relative to the MPC and more work will be needed in the coming years.³⁶ Another challenge for the coming years will be to continue building a well-understood policy reaction function. Clear communications can steer market expectations on how and under what

³⁴ Additionally, these indicators favor consistency and enhance the predictability of the regime.

³⁵ Additional outlets include *Quarterly Bulletin* articles, working papers, and *Bank Underground* blog-posts.

³⁶ At Spencer Dale’s appointment hearing by the Treasury Select Committee on April 30th 2014, the Committee Chair quoted a survey showing that only 11 percent of those interviewed had heard about the FPC (of which at least one third had a wrong impression of what its work consisted of).

circumstances any given policy tool will be used, which can in turn condition behavior and reduce costs associated with variation in macroprudential tools.³⁷

Treasury Select Committee

32. FPC members give evidence regularly before the Treasury Select Committee in Parliament. The Treasury Select Committee is appointed by the House of Commons to examine the expenditure, administration, and policy of the Treasury and associated public bodies, including the BoE, the PRA and the FCA. The Committee chooses its own subjects of inquiry. An inquiry may give rise to a report with recommendations, or may simply consist of the publication of oral evidence. Evidence is given in a variety of hearing meetings:

- **FSR meetings.** The Treasury Select Committee holds hearings twice a year on the FPC's FSRs. In each hearing, a group of FPC members explains their assessment of risks and policy actions.³⁸ Hearings are not restricted to the content in the corresponding FSR. To date, these hearing have been used to gather evidence on a broad range of issues, such as views on international regulatory reform, the U.K. institutional design (e.g., the FPC accountability structure), FPC independence and FPC practices (e.g., communication and coordination), and to follow up on individual member appointment hearings or other Committee inquiries.
- **Appointment hearings.** The Treasury Select Committee has established the practice of holding hearings with persons appointed or re-appointed to the FPC and reporting on those hearings.³⁹ Personal independence and professional competence have been the criteria used by the Committee to assess the suitability of the appointments.⁴⁰ The requirement on personal independence is set to guard against conflicts of interest, undue Treasury influence and the risk of "groupthink". While so far the Committee has concluded that all appointments satisfied the two suitability criteria, it has at times expressed public concern about specific issues.⁴¹
- **Topical inquiries.** Additionally, the Committee may undertake inquiries on specific topics of interest. For instance, some inquiries that have related to the U.K. macroprudential framework

³⁷ As financial sector agents factor in this reaction function, they will likely adjust their behavior at an earlier stage in anticipation of FPC actions.

³⁸ Based on the experience so far, each hearing is typically attended by the BoE Governor, a Deputy Governor, and two FPC external members (see Appendix 2). Occasionally, external experts may additionally be called to give evidence.

³⁹ Analogous meetings are held with MPC members.

⁴⁰ These are the same criteria that guide the suitability assessment for appointments to the MPC and the Office for Budget Responsibility (OBR). While the Treasury Select Committee has veto power on the appointments to the independent OBR, it does not have veto powers over the appointments to the MPC nor the FPC.

⁴¹ For instance, the Committee expressed concern about: Alastair Clark's possible perception as an insider in his appointment to the interim FPC, Clara Furse's awareness of the importance of asserting the independence of the FPC, and the process for appointing Spencer Dale as an executive director of the BoE (and an FPC member). The Committee noted in this last case an exception could be made because of the wider reorganization of the BoE's that was being undertaken and the recent expansion of the BoE's responsibilities. However, it expected the usual "fair and open competition" process to be followed in the future.

include those on financial regulation, the accountability of the BoE, the proposals by the Independent Commission on Banking, and macroprudential tools.

- **Hearings are typically public, with the oral and written evidence received for these sessions published, and the most recent hearings available for online watching.** Inquiries may also be conducted in written form, with letters from the Committee (and corresponding responses) typically placed in the public domain.

33. Evidence so far suggests that the Treasury Select Committee has played an influential role. While conclusions and recommendations in the Committee's inquiries are not binding, the Committee's public scrutiny underpins its ability to be influential. The Treasury Select Committee has a high profile typically capturing the attention of the media, and has been actively following the developments in the macroprudential framework. The inquiries are intrusive and broad in scope. The Committee has leveraged its influence to shape the institutional framework, including pushing for the granting of direction powers over the leverage ratio to the FPC ahead of Treasury's original intention, and modifications to the FPC code of conduct regarding the conflict-of-interest review and political activities of its members and the FPC's communication transparency.

Oversight Committee

34. The framework provides an additional accountability mechanism within the BoE. The Oversight Committee is a sub-committee of the court of the BoE consisting of its non-executive members.⁴² Its functions include keeping under review the performance and procedures of the FPC and the BoE's performance in relation to its objectives (including financial stability).^{43,44} The Committee has access to all FPC briefing material, and up to two Committee members may sit as observers at any of the FPC meetings. It may also appoint experts to conduct performance reviews, though these must be retrospective and not related to current policy. Performance review reports are to be published.⁴⁵ The Committee must report on its duties in the BoE's Annual Report and some of its work is reflected in the Court minutes. Finally, the Oversight Committee is itself accountable to Parliament via the Treasury Select Committee.

35. An Independent Evaluation Office was established in 2014 to support the Committee in discharging its statutory obligations. The Office is staffed by a small permanent secretariat,

⁴² In practice, the Oversight Committee has held joint meetings with Court for most purposes, with the executive withdrawing when appropriate.

⁴³ The Committee has a broader set of responsibilities that are not discussed in this section. For instance, its oversight responsibilities extend to other parts of the BoE, such as the MPC. The Committee is also charged with monitoring the response to its review reports and monitoring the implementation of accepted recommendations.

⁴⁴ Technically, an external member of Court (and therefore a member of the Oversight Committee) may be appointed as an external member of the FPC. Indeed, Michael Cohrs was appointed as an external member of the non-statutory interim FPC while being a member of Court. Once his term as an external FPC member concluded, he continued to attend FPC meetings in his capacity as a member of the Oversight Committee. Going forward, it is important to watch for the potential conflict of interests this may represent.

⁴⁵ However, publication may be delayed if judged to be against the public interest.

supplemented with staff seconded from within the BoE or with external support. It reports directly to the chair of the BoE court (and of the Oversight Committee). The Office undertakes one-off assessments of areas of the BoE's work, and facilitates broader Court oversight of the performance of the BoE's policy areas and strategy. Additionally, it may provide support for external reviews of the BoE.

36. With privileged access to FPC materials and deliberations, the role of the Oversight Committee complements that of the Treasury Select Committee. Given the nature of the Oversight Committee, it is difficult to assess its effectiveness based solely on publicly available information. Authorities interviewed during the mission have generally agreed that the Committee plays an important role as an internal cross-check and as a disciplining device. Committee members have typically exercised their right to attend FPC meetings (see Appendix 1).

- **Process review.** Process reviews have been informed by structured questionnaires and individual meetings of the Committee chairman with all FPC members. The Committee monitors FPC members' satisfaction regarding the support provided by BoE's staff as well as FPC members' views on interactions with other decision-making bodies. In 2015, the Committee reviewed and approved the proposed amendments to the communication section of the FPC Code of Conduct. The FPC itself has suggested the Oversight Committee could include an assessment of the robustness of the FPC's deliberations in the BoE's Annual Report.
- **Performance review.** To date, performance reviews of the FPC against its objectives, as portrayed in the BoE's Annual Report (2014 and 2015), have been mostly descriptive. Given the relatively short period of operation of the new framework, no external performance review has yet been commissioned centered on macroprudential policies (or processes). As a reference, the external reviews commissioned on other subjects (such as the Warsh review on "Transparency and the Bank of England's Monetary Policy Committee") have played an influential role.

E. Tradeoffs and Risks

37. Concentrating responsibilities and powers within the BoE favors coordination but increases the potential of creating a "groupthink" mentality. Housing a range of policy functions under the BoE and the overlapping membership of policy committees play an important role in promoting coordination. At the same time, this carries the risk that a few senior officials may end up having a disproportionate influence on policy making. The framework includes safeguards against this risk of groupthink. Crucially, the FPC external members bring a different range of knowledge and insights, and are less likely to be absorbed in the "institutional view." The Treasury Select Committee and the Oversight Committee should continue to watch that deliberations are effective and that external members feel empowered to challenge the identification of risks or assessment of the appropriate policy response. There are also other alternative venues to challenge a dominant view. For instance, as discussed above, the Treasury may at any time make recommendations to the FPC on how to interpret its mandate (i.e., the responsibility of the Committee in relation to its objectives and matters it should have regard to when exercising its

functions), which must specify in writing its intention to comply or the reasons not to do so. In its most recent remit and recommendation letter the Treasury prompted the FPC to seek, when appropriate, the views of industry participants, academics, other regulators and the public.

38. Looking ahead, the effectiveness of the framework will largely depend on a continued strong focus on financial stability. An effective macroprudential framework is crucial for the U.K. financial system to remain a global public good, given its size and systemic nature. The crisis tilted the focus of policy-making toward a stronger emphasis on financial stability but maintaining that culture will require ongoing effort. While the framework includes several provisions to promote the “willingness to act,” the challenge of maintaining a robust stance on financial stability in one of the world’s largest financial centers should not be underestimated. As memories of the last crisis fade, external pressures for inaction are likely to intensify and, within the BoE, resources on FPC issues could potentially be squeezed due to competing demands from other of its policy functions. Parliament, the Treasury, and all agencies involved—first and foremost the BoE—have a responsibility in protecting against this risk. As discussed above, the FPC itself should persist in its efforts to promote a better understanding by the general public of the FPC’s role and responsibilities.

OPERATIONAL FRAMEWORK

39. With the new institutional setup in place, the authorities have made significant progress in their operational framework and additional important work is underway. This section explores the operational underpinnings of the U.K. macroprudential framework (i.e., the authorities’ ability to monitor systemic risk and map it into policy action when needed). The assessment is focused on the authorities’ processes for monitoring systemic risk (including beyond the core financial system), data gaps, and the U.K. macroprudential toolkit. The FPC has established a functional process for identifying systemic risk and mapping risks into policy action. Risk assessment is conducted as a regular (quarterly) surveillance process, drawing on a broad range of indicators, market intelligence, supervisory insights and analysis by BoE staff (including the PRA) and the FCA. Progress has been made and initiatives are ongoing for addressing remaining data gaps. An annual dedicated discussion on the regulatory perimeter has been established, and work is underway to develop a better understanding (and to enhance the monitoring framework) of risks beyond the core financial sector. Direction powers have been established over tools that mainly target risks from excessive leverage and credit growth (including tools beyond Basel III).⁴⁶ The policy for their use is one of “guided discretion.” For managing liquidity and structural risks, the FPC relies mainly on its broad recommendation powers. The macroprudential toolkit is still evolving, as certain tools are yet to be implemented. The FPC has requested direction powers for tools covering buy-to-let lending (currently under consultation by the Government) and will continue to re-assess its need for further tools as risks evolve and international standards for certain tools develop.

⁴⁶ To date, these tools encompass the CCB under Basel III, sectoral capital requirements, loan-to-value (LTV) ratios and debt-to-income (DTI) ratios on owner-occupied mortgage lending, and the leverage ratio, including a countercyclical leverage ratio buffer and a leverage surcharge for systemically important institutions.

A. Process and Risk Monitoring

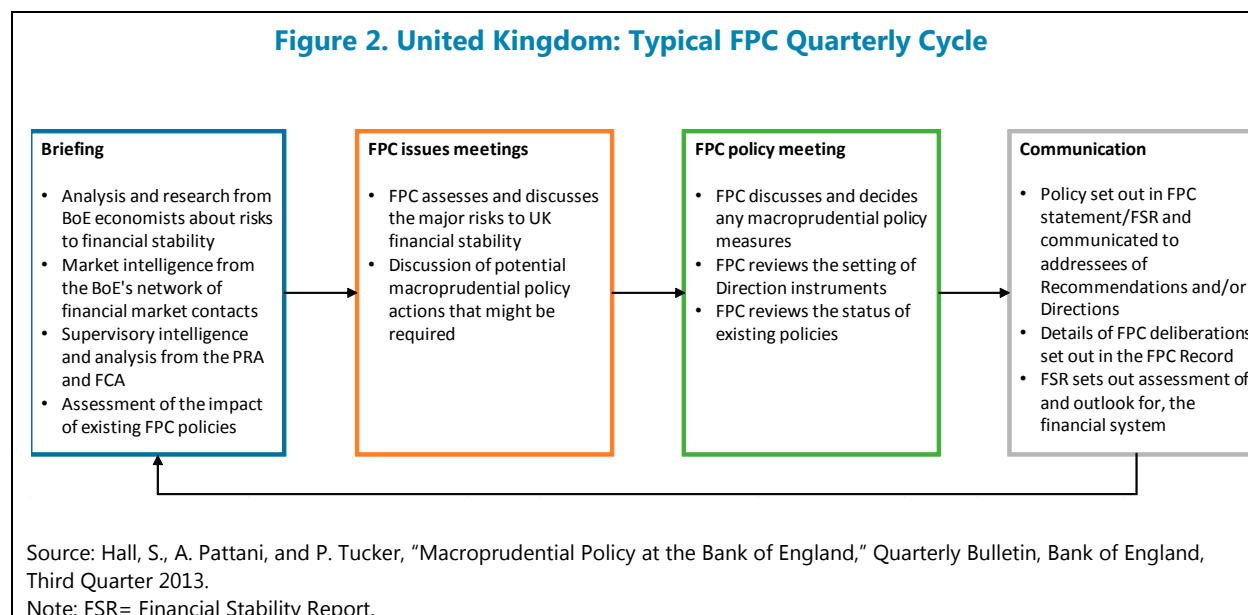
40. The FPC has established a functional process for identifying systemic risk and mapping risks into policy action. The FPC follows a quarterly schedule, with the dates of formal policy meetings pre-announced at the BoE's webpage. A typical quarterly cycle consists of four stages: (i) the briefings on financial developments and financial stability risks; (ii) the FPC discussions on key financial stability issues and potential macroprudential policies (issues meetings); (iii) the policy-making FPC meeting (policy meetings); and (iv) the communication of risk assessments and policy decisions. The FPC is supported in these areas by a broad range of staff:

- A dedicated FPC secretariat, housed within the BoE, is responsible for coordinating the wide-ranging inputs to the FPC and for supporting its output, including some of its public communications.
- A dedicated financial stability directorate at the BoE provides a substantial portion of the analytical support to the FPC. Responsibilities for systemic risk monitoring are organized mainly by sources of risk: real economy (households and corporates), banks, and markets and nonbank financial institutions. Cross-cutting issues are usually covered jointly with staff in other parts of the BoE or the FCA.
- Staff in other parts of the BoE (including the PRA, the Markets and the FMI Directorates), the FCA, and occasionally the Treasury, also provide critical briefing inputs.

Briefing inputs take a variety of formats, ranging from short notes to in-depth reports, and presentations by senior staff at the BoE and the FCA. While some briefing inputs are requested by the FPC, some others are provided on the initiative of staff. The FPC and the PRA Board receive a joint Quarterly Risk Pack setting out staff views on main risks to financial stability and supporting analysis. This is a key ingredient of the FSR.

41. The authorities analyze a broad range of indicators to detect the build-up of systemic risk. Out of that broad range, a subset of so-called "core indicators" is made publicly available in each FSR (or more frequently in some cases). These core indicators are organized around tools, in order to guide the FPC use of its direction powers. This has two implications:

- First, because a variety of tools may target the same risk and because some of the indicators are measures of resilience (instead of risks), this approach may lead to repetition of indicators across tools.
- Second, because "core indicators" are selected for those tools over which the FPC has direction powers, this approach has less indicator-coverage for those risks that are dealt with (by the FPC) using recommendation powers. For instance, the current set of "core indicators" provides good coverage for identifying risks related to broad-based expansion of credit and to the household sector, but more limited coverage for risks related to the corporate sector and liquidity mismatches in the core financial sector.

Figure 2. United Kingdom: Typical FPC Quarterly Cycle

Importantly, the "core indicators" are just a subset of the broad range of indicators that the authorities review on a regular basis (which indeed do provide proper coverage for risks related to the corporate sector and liquidity mismatches in the core financial sector). For the purpose of accountability and communication, the authorities may consider organizing "core indicators" around types of "risk" and "resilience", instead of tools. This approach could better portray the FPC's broader monitoring of risks, reduce duplication of indicators, and align better with the new structure of the FSR.⁴⁷ For example, the tables in Appendix 3 map the current set of BoE core indicators into the set of core indicators identified in [IMF \(2014\)](#) to monitor four categories of risks in the time-dimension (i.e., risks stemming from broad-based expansion of credit, the corporate sector, the household sector, or liquidity mismatches). The grouping could be further refined with the creation of a "resilience" indicators group. A possible disadvantage of this approach would be that, for those risks that are dealt with using recommendation powers (such as funding liquidity risks in the core financial sector), it would provide a less clear mapping from systemic risk analysis to potential policy action.⁴⁸

42. In addition, the authorities rely on analytical exercises and qualitative information to inform their judgment. No single set of indicators provides a perfect measure of systemic risk, so the assessment must inevitably rely on judgment. The annual concurrent stress testing exercise is an integral part of the authorities' assessment of the resilience in the core financial system. The stress testing framework is reviewed in detail in a separate Technical Note. Qualitative information plays also an important role. Market intelligence is drawn from an extensive contact base, including a wide range of financial agents and institutions, and covering a wide range of markets. It provides insights

⁴⁷ Naturally, core indicators are just a starting point and would not seek to cover every possible risk, but to provide consistent coverage of some sources of systemic risks that have historically been associated with crises.

⁴⁸ In the case of liquidity risks, liquidity indicators could be made part of resilience indicators instead of the risk indicators.

beyond publicly available data that may be useful to identify incipient sources of financial instability. The PRA and the FCA provide regular updates on key developments and supervisory intelligence.

B. Data and Information

43. Progress has been made in addressing data gaps in recent years. Significant progress has been made on data regarding bank interconnectedness, regulated mortgage lending and derivatives and securities markets. Some of the progress reflects the implementation of EU legislation (such as European Market Infrastructure Regulation (EMIR) requirements on transaction level data on derivatives) or participation in voluntary international initiatives (such as the G20 Data Gaps Initiative recommendations to address key information gaps for G-SIBs).⁴⁹ Other progress reflects targeted activity to address specific data gaps (such as the collection of banks' large capital market exposures to other banks, nonbank financials, non-financial corporates and governments, and the FCA collection of data on the performance of regulated mortgages).

44. However, material gaps remain and the authorities should continue their efforts to address them. Areas where major gaps in data availability remain include in building a complete picture of the U.K. flow of funds, activities of nonbank financial institutions, and in the buy-to-let mortgage market. A significant gap in the U.K. flow of funds framework is on securities holdings. Data on buy-to-let mortgage lending (which are not regulated products) are patchy, with limited coverage on mortgage features such as loan-to-value and interest-coverage ratios. The authorities are aware of these gaps and work is underway to close them. The strategy to fill those gaps includes a joint work program between the BoE and the Office for National Statistics to improve flow of funds statistics, joint work between the Bank and the FCA to improve information on nonbank financial institutions, and BoE in-house data collection and joint work with the Council of Mortgage Lenders on the buy-to-let mortgage market.

C. Perimeter

45. The FPC has committed to hold, at least annually, a dedicated discussion on risks and regulation outside the core banking sector.⁵⁰ The FPC has so far had two dedicated discussions on the regulatory perimeter in June 2014 and June 2015. The FPC framework to assess systemic risk of financial activities considers sources of fragility (such as leverage, liquidity/maturity transformation, imperfect credit risk transfer), and three key transmission channels:⁵¹

⁴⁹ Within the next three years, transaction-level data on securities financing transactions, such as repos and securities loans, will be collected under the Securities Financing Transaction Regulation, and data on the holdings of Central Securities Depositories to be collected under the Central Securities Depositories Regulation.

⁵⁰ See FPC responses to the Chancellor's remit and recommendations in June 2013, March 2014, March 2015 and August 2015.

⁵¹ By the time of the mission, the full details of the BoE's activities-based framework to assessing risks in nonbank financial system had not been published. This section is based on the description in the FSRs, the FPC meeting records, and the discussion with authorities.

- **The provision of critical services.** These include: intermediating savers and borrowers, insuring against and dispersing risk, and payment services.
- **Risks to systemically important counterparties.** Problems in the nonbank financial system can impact providers of critical financial services, such as banks or insurers.
- **Disruption to systemically important financial markets.** Problems in the nonbank financial system can transmit distress to systemically important markets.

Additionally, the assessment takes into account the adequacy of existing regulation in addressing risks from activities.

46. The perimeter exercise is broadly in line with FSB’s high-level policy framework for oversight of shadow banking. Specifically, it is in line with the following principles: the authorities are in charge of defining and keeping up to date the regulatory perimeter, the emphasis is on economic functions (activities) rather than legal forms (entities), the focus is narrowed where there is maturity or liquidity transformation, leverage or imperfect risk credit risk (“sources of fragility”), and the adequacy of the existing regulatory framework is taken into consideration. Additionally, the FSB calls for proportionality to risks, which is in line with the analysis of key transmission channels in the U.K. framework.

47. The assessments so far have been conducted at a high-level and the work to better-understand certain risks is still ongoing. Over the last two years, systemic risks arising from activities conducted in 30 different types of institutions and markets have been assessed. The authorities have been mindful of the ongoing international (and domestic) work to reform and understand the nonbank financial system, as well as data gaps that acted as impediments to a full assessment of risks. To continue to monitor activities in the 30 sectors (and new activities that may arise), the BoE is developing a monitoring framework involving key metrics for each sector. The intensity of the systemic risk monitoring will depend on the judgment of systemic risk in each sector.

48. The FPC has begun a regular comprehensive analysis of activities beyond the core banking sector (“deep dive”) to complement the annual review. Deep dives involve a detailed assessment of systemic risk associated with each activity, including: a description of fragilities, an assessment of transmission channels to financial stability, a review of existing mitigants and ongoing European/international policy work in this area, and the identification of any residual gaps in addressing fragilities. Deep dives will help identify data gaps, and to the extent necessary, will explore potential policy remedies. The FPC has decided initially to focus on five activities: (i) investment activities of open-ended investment funds; (ii) investment activities of hedge funds; (iii) securities financing transactions; (iv) non-traditional non-insurance and investment activities of insurance companies; and (v) derivative transactions. A review of the deep dives conducted to date will be published in the July 2016 FSR.

D. Macroprudential Toolkit

49. **Legislation grants the FPC a broad set of powers of recommendation and direction.**

The conduct of macroprudential policy is not limited to those designated tools over which the FPC has directions powers. Other policies (including micro-prudential or even non-financial) may better deal with certain types of risks. Indeed, to date the FPC has maintained a broad scope of interest and has operated mostly via its recommendation powers (also, many direction powers did not become available until recently). The Government has expressed a preference for giving the FPC powers of direction over tools that are: specific (i.e. only extend to regulatory aspects that are clearly delineated), subject to sufficient national discretion, and focused on system-wide rather than firm-specific characteristics. In turn, the FPC sees benefits in having a relatively narrow (“parsimonious”) set of direction powers, in terms of accountability, policy effectiveness and building a public reaction function for the Committee. Implementation of directions may be timelier than for recommendations.⁵² As a result, direction powers are generally related to mitigating risks in the time dimension, while structural risks will typically be dealt with using recommendations (Appendix 4).

50. Powers of direction have been established over tools that mainly target risks from excessive leverage and credit growth (including property markets). To date, those tools encompass sectoral capital requirements for residential (including mortgages) and commercial property exposures, sectoral capital requirements for intra-financial sector exposures, limits on LTV ratios and DTI ratios on owner-occupied mortgage lending and the leverage ratio (including a countercyclical leverage ratio buffer and a leverage surcharge for systemically important institutions). The FPC also sets the countercyclical capital buffer rate for U.K. exposures under Basel III (implemented in Europe under CRR/CRD IV),⁵³ As such, these powers can be used to enhance the resilience of the core financial system, and to address risks from broad-based expansions in credit, property market (owner-occupied residential and commercial real estate), and financial interconnectedness. The coverage of these direction powers is mainly those U.K.-authorized firms that fall under CRD IV/CRR (i.e., banks, building societies and investment firms), although some housing tools can be applied more broadly.

51. **The statements of general policy for such tools are broadly in line with Fund guidance**

[\(IMF 2014\)](#). The FPC is required to publish a policy statement for each of its direction powers. Directions are used within a clear framework, with a strong macroprudential mandate for varying policies over the cycle. Each statement covers a description of the tool, its likely impact on financial stability and growth (both a description of the channels and an estimation of its impact), and the circumstances under which the tool is expected to be used. The use of tools is supported by “guided discretion,” where a set of core indicators is routinely reviewed (as described above), but decisions are based on judgment that takes account of all available information (including market and

⁵² The PRA and FCA must not only comply but also do it as soon as practical and there is scope for the Treasury when establishing a power of direction to allow for the disapplication of procedural requirements for consultation periods if judged necessary.

⁵³ Strictly speaking, the FPC’s power to set the UK countercyclical capital buffer is not a power of direction, as it is established through European law rather than the UK legislation that governs the FPC’s powers of direction.

supervisory intelligence, and stress testing results). Tools are more likely to be adjusted the greater the deviation from historical benchmarks and the more homogeneous the picture painted by different indicators is. All statements published so far recognize the potential for policy leakages, which therefore need to be monitored and may require a recommendation to expand the perimeter. Additionally, in all statements the FPC expresses its intention to cooperate with cross-border authorities to ensure that macroprudential decisions are implemented effectively and that cross-border leakages are dealt with appropriately.

52. The authorities have given careful thought on how to use tools that had not been available before (and how to communicate it). This includes:

- **CCB.** The CCB will be used primarily to increase the resilience of banks. The policy strategy aims to match the resilience of the system to the changing scale of risks it faces. The assessment relies on judgment informed by a set of core indicators, market and supervisory intelligence and stress-testing exercises. The FPC intends to set the CCB above zero before risks become elevated, with the CCB in the region of one percent when risks are neither subdued nor elevated. The U.K. strategy favors moving early and gradually, taking into account the uncertainty in measuring risks, the 12-month implementation lag and the likely lower costs of allowing banks to adjust via retained earnings. If risks in the financial system crystallize, the FPC may cut the CCB rate, including where appropriate to zero percent.
- **Leverage buffers.** The policy strategy for the leverage buffer is to scale it up in proportion to any countercyclical capital buffer on U.K. exposures and also for systemically important banks. The principle behind the FPC's leverage requirements is that they are 35 percent of a firm's risk-weighted equity requirements. As with the risk-weighted equity buffers, the FPC views the purpose of the additional systemic and countercyclical leverage buffers as to absorb the impact of stress.
- **LTV/DTI.** When implementing its LTV/DTI tools, the FPC could apply limits based on two parameters: the LTV or DTI ratio *threshold*, and the *proportion* of the flow of new mortgages that lenders could extend above that *threshold* (either in volume or in value). As such, the tool allows for more flexibility than a hard cap on LTV or DTI ratios.

53. Tools to address funding liquidity risks in the core financial sector sit with the PRA and may be influenced by the FPC via recommendation. Following the global financial crisis, an overhauled liquidity framework was introduced. As part of this framework, the PRA provided firms with individual liquidity guidance advising them on the amount and quality of liquidity resources appropriate to the firm's circumstances. In 2012, the interim FPC made a recommendation to relax liquidity requirements taking into account the contingent liquidity provided by the BoE. The PRA is now transitioning to a new liquidity regime, following the introduction at the EU level of the Liquidity Coverage Ratio (LCR), which aims to ensure firms' short-term resilience to liquidity risk. The

LCR is formally phased-in from 2015 until 2018.⁵⁴ However, by FPC recommendation, the PRA moved ahead of schedule and applied an initial transitional requirement higher than stipulated in the CRR (i.e., 80 percent instead of 60 percent LCR ratio). The EU version of the Basel Committee on Banking Supervision (BCBS) Net Stable Funding Ratio (NSFR) will be introduced in 2018, aiming to increase the resilience of firms to liquidity risk over a longer time horizon.

54. The FPC may influence policies towards systemically important firms using its recommendation powers. In line with FSB principles, the U.K. authorities rely on intensified supervision, enhanced loss absorbency and improved resolvability and resolution to mitigate risks from “too big to fail.” Structural reforms within the U.K. banking system are being implemented to ensure the continuity in the provision of core banking services, facilitate effective resolution of systemic banking groups and increase their resilience. For the largest deposit takers, the Financial Services (Banking Reform) Act 2013 requires the ring-fencing of critical activities (such as deposit, payment and overdraft services to individuals and small businesses) within banking groups.⁵⁵ The ring-fence is to be implemented by the PRA by 2019. In 2013, the FPC established as a medium term priority to review from a macroprudential perspective, and where necessary act to influence, the design and implementation of reforms to address “too-big-to-fail”. For instance, the FPC has kept under review: (i) the process for identifying U.K. domestic systemically important banks (D-SIBs); (ii) macroprudential objectives to consider when setting the height of the ring-fence; (iii) protocols around stays in derivative contracts; (iv) policies on resolution and on recovery and resolvability; and (v) the U.K. framework for ‘gone concern’ loss-absorbing capacity.

55. The framework for applying higher loss absorbency requirements to systemic institutions is a shared responsibility.

- The identification and additional loss absorbency requirements for global systemically important banks (G-SIBs) lie with FSB. G-SIBs are identified in an annual assessment according to a framework developed by the BCBS and implemented by PRA.⁵⁶ The FSB initial list of banks that will be subject to a G-SIB capital surcharge starting in 2016 includes four U.K. headquartered banks (Table 1). G-SIB buffers will be phased in to come into full force by 2019.
- The PRA, following EBA guidelines for other systemically important institution (O-SII) identification, is responsible for identifying domestic and regional systemically important banks beginning in 2016. The provisions of the capital requirements directive (CRD IV) requiring O-SII to maintain a specific O-SII buffer are not mandatory and the U.K. is not implementing them. However, a systemic risk capital buffer (SRB) will apply to ring-fenced banks and large building societies due to their relative importance to the U.K. economy. The systemic risk buffer will be applicable starting from 2019. The FPC is responsible for establishing a framework to measure

⁵⁴ In line with the CRR, the 100 percent LCR implementation will be reached one year ahead than required by the Basel standard.

⁵⁵ PRA-regulated banks and building societies with core deposits greater than £25 billion will be subject to ring-fencing.

⁵⁶ The framework is implemented in Europe through CRD IV/CRR.

the systemic importance of ring-fenced institutions and mapping it into buffer rates. A framework proposal is currently under consultation. The framework will be subject to review every two years. The PRA is in charge of implementing the framework and may exercise supervisory judgment when doing so.

Table 1. United Kingdom: Global Systemically Important Banks, 2014

G-SIBs	Sub-category	G-SIB buffer (in percent)
HSBC	4	2.5
Barclays	3	2
Royal Bank of Scotland	2	1.5
Standard Chartered	1	1

Source: Financial Stability Board, 2014.

Note: In the 2015 list, which determines the higher loss absorbency requirement that will apply to each G-SIB from 1 January 2017, the Royal Bank of Scotland has been moved to subcategory one. The other three G-SIBs have been kept in their respective subcategories.

- Global systemically important insurers are identified by FSB based on a framework developed by the IAIS that stresses the role of interconnectedness and the extent to which the insurance firms perform non-traditional and non-insurance activities.⁵⁷ Global systemic insurers will face a specific capital requirement (so called Higher Loss Absorbency) starting from 2019. In the U.K., there are currently no plans to designate systemic insurers domestically.

56. Overall, the overarching framework of EU law allows for certain flexibility to respond to financial stability concerns in the core financial system. The FPC cannot give a direction or make a recommendation that would contravene the EU prudential rules for banks, building societies and investment firms (i.e., Capital Requirements Regulation and Directive CRR/CRD IV). Under CRR/CRD IV national authorities have a degree of flexibility when dealing with financial stability matters. Within CRD IV, the CCB, the systemic risk buffer and (to a lesser extent) the G-SIB surcharge are flexible to capture local circumstances.^{58,59} Pillar 1 of CRR allows authorities to impose higher capital requirements in respect of residential and commercial property (and intra-financial system exposures) on financial stability grounds. Additionally, in certain circumstances and subject to procedural requirements, a wide range of tools (so called “national flexibility measures”) can be set

⁵⁷ The 2015 list of global systemic insurers includes two head-quartered in the U.K. (out of a total of nine): Aviva plc and Prudential plc.

⁵⁸ Because the range for the systemic risk buffer as implemented in the U.K. is below three percent, the European framework requires notification but not authorization.

⁵⁹ The flexibility of the G-SIB surcharge is materially less than for either the systemic risk buffer or countercyclical capital buffer: the PRA can only exercise supervisory judgment to move firms up or down by a single G-SIB bucket, and even this is subject to the approval of the Basel Committee / FSB.

at a national level to address systemic risk.⁶⁰ There is an associated implementation lag that needs to be taken into account when deciding policy. The Pillar 2 provisions in CRD IV allow imposing additional capital requirements to address risks not adequately captured under Pillar 1.⁶¹ This allows targeting, based on financial stability concerns, certain exposures for which flexibility is not explicitly provided, such as corporate exposures (other than commercial real estate) or exposures in foreign currency. To address liquidity risks, additional liquidity measures could be recommended by the FPC and implemented either under the liquidity requirements under Pillar 2 provisions in CRD IV, or as a national flexibility measure in CRR. Finally, housing tools and the leverage ratio are not covered by the scope of EU legislation and are therefore established under the national legal framework.⁶²

57. The macroprudential toolkit in the U.K. is still evolving, as a number of tools are implemented, the FPC re-assesses its need for further tools and international standards for certain tools develop. A number of tools are still to be implemented over the coming years, including the NSFR (2018), the leverage ratio for banks other than G-SIBs (2018), the SRB for ring-fenced banks (2019), the leverage surcharge for ring-fenced banks (2019), and the higher-loss absorbency requirements for global systemically important insurers (2019). The FPC has requested direction powers over tools related to buy-to-let lending, and Government is undergoing consultation on these tools.⁶³ Further tools may be identified following the work done by the BoE/FCA and internationally on market liquidity issues. Moreover, the FPC has stated that it would consider asking for powers of direction to set bank liquidity requirements and margin requirements in securities financing markets once international standards have been agreed upon.

⁶⁰ These national flexibility measures require notification (establishing that the measure is necessary, effective and proportionate, establishing that other specified measures cannot adequately address systemic risk), and non-objection by the European Council (based on opinions of ESRB and EBA). The process may take up to three months.

⁶¹ Sectoral capital requirements may be implemented in a variety of ways (Pillar 1, Pillar 2, or the national flexibility measures), each with different procedural requirements and implications for reciprocity.

⁶² International and EU definitions of the leverage standard for banks are to be agreed by end-2016, and authorities are working to preserve the flexibility to adopt additional buffers for countercyclical and systemic buffers for the leverage ratio.

⁶³ Indeed, based on the analysis of risks in the sector, the 2016 UK FSAP main note recommends extending the FPC's powers of direction for tools targeting the buy-to-let market.

Appendix I. Financial Policy Committee Meetings

Figure A1.1. FPC Policy-decision Meeting Attendance

	Interim FPC								FPC															
	11Q2	11Q3	11Q4	12Q1	12Q2	12Q3	12Q4	13Q1	13Q2	13Q3	13Q4	14Q1	14Q2	14Q3a	14Q3b	14Q4	15Q1	15Q2	15Q3	15Q4				
Bank of England																								
Governor																								
Mervyn King	✓	✓	✓	✓	✓	✓	✓	✓	✓															
Mark Carney									✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
DG financial stability																								
Paul Tucker	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓														
Jon Cunliffe									✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
DG monetary policy																								
Charles Bean	✓	✓	✓	✓	✓	*	✓	✓	✓	✓														
Ben Broadbent									✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
DG prudential regulation/PRA																								
Hector Sants	✓	✓	✓	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Andrew Bailey									✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Other BoE																								
Paul Fisher	✓	✓	✓	✓	✓	✓	✓	✓																
Andrew Haldane	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Spencer Dale									✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Alex Brazier																				✓	✓	✓		
FSA																								
Adair Turner	✓	✓	✓	✓	✓	✓	✓	✓																
FCA																								
Martin Wheatley	Attended in non-voting capacity								✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Tracey McDermott**																				✓	✓			
External members																								
Alastair Clark	✓	✓	✓	✓	✓	✓	✓	✓																
Michael Cohrs	✓	✓	✓	✓	✓	✓	✓	✓																
Donald Kohn	✓	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Robert Jenkins			✓	✓	✓	✓	✓	✓																
Clara Furse									✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Martin Taylor									✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Richard Sharp									✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Treasury (non-voting)																								
Jonathan Taylor	✓			✓	✓	✓																		
Tom Scholar			✓					✓																
John Kingman								✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Charles Roxburgh									✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
DG markets (not FPC member)																								
Nemat Shafik									✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Oversight Committee (not FPC member)																								
Bradley Fried									✓															
Tim Frost									✓															
David Lees									✓	✓														
Michael Cohrs									✓	✓														
Dave Prentis									✓	✓														
Anthony Habgood																				✓	✓	✓	✓	
Dido Harding																				✓				

Source: IMF staff based on FPC meeting minutes.

Note: DG= Deputy Governor; FSA=Financial Services Authority.

* Not present, but contributed to the discussions.

** Acting Chief Executive of the FCA.

Appendix II. Treasury Select Committee FSR Hearings

Figure A2.1. Treasury Select Committee FSR Hearings Attendance

FPC member	Title	Jan-12	Jul-12	Jan-13	Jul-13	Jan-14	Jul-14	Jan-15	Jul-15	Jan-16
Mark Carney	Governor					✓	✓	✓	✓	✓
Mervyn King	Governor	✓	✓	✓						
Jon Cunliffe	Deputy Governor					✓		✓	✓	
Andrew Bailey	Deputy Governor			✓	✓		✓			
Paul Tucker	Deputy Governor		✓		✓					
Andrew Haldane	ED Financial Stability	✓		✓						
Alex Brazier	ED Financial Stability									✓
Paul Fisher	ED Markets		✓							
Lord Turner of Ecchinswell	Chairman FSA		✓							
Michael Cohrs	External Member	✓		✓						
Clara Furse	External Member					✓		✓		✓
Robert Jenkins	External Member	✓		✓						
Donald Kohn	External Member		✓		✓		✓		✓	
Martin Taylor	External Member				✓		✓	✓		✓
Richard Sharp	External Member					✓			✓	
Kevin Dowd	External Expert							✓		
Thomas Huertas	External Expert							✓		

Source: IMF staff based on Treasury Committee oral evidence transcripts.
 Note: ED= Executive director; FSA= Financial Services Authority.

Figure A3.1. Bank of England "Core Indicator" Coverage by Source of Risk

Source of Risk	IMF indicators	BoE core indicators for		
		Countercyclical capital buffer	Sectoral Capital Requirements	Other
Broad-based expansion of credit	Credit to GDP Gap	Credit to GDP (ratio and gap)		
	Change in credit to GDP ratio			
	Credit growth	Private nonfinancial sector credit growth	Household and CRE credit growth	
	Asset price deviations from long-term trends		Real estate valuations	House price growth (LTV/D1)
	Debt service ratio			
	Leverage (on individual loans or at the asset level)		Household debt to income ratio	Household debt to income ratio (LTV/D1)
			PNFC debt to profit ratio	
			NBFI debt to GDP ratio (excl. insurance companies and pension funds)	
	Noncore-to-core liabilities and wholesale funding ratio	Loan-to-deposits ratio		
	Current account deficits	Short-term wholesale funding ratio		
		Current account balance to GDP		
		Net foreign asset position to GDP		
		Gross external debt to GDP		
	Spread and volatility measures	Long-term real interest rate		
		VIX		
		Global corporate bond spreads		
		Spreads on new UK lending (household and corporate)	Spreads on new UK lending (residential mortgage and CRE)	
	Other	Banks balance sheet stretch	Banks balance sheet stretch	
		Capital ratio	Capital ratio	
		Leverage ratio	Leverage ratio	
		Average risk weights	Average risk weights	
		Bank ROA		
		Overseas exposures indicators	Overseas exposures indicators	
		Banks' CDS premia		
		Bank equity measures		
			Banks' balance sheet interconnectedness	
			Residential LTV/LTI, CRE LTV	

Note: CRE=Commercial real estate; LTV=loan-to-value ratio; LTI= loan-to-income ratio; PNFC=private non-financial corporate; NBFI= nonbank financial institution.
Source: IMF staff.

Figure A3.2. Bank of England “Core Indicator” Coverage by Source of Risk

Source of Risk	IMF indicators	BoE core indicators for	
		LTV/DTI	Other (and corresponding FPC tool)
Household sector	Household mortgage loan growth rate	Household credit growth	Household and CRE credit growth (SCR)
	Share of household mortgage loans to total credit		
	House price growth	House price growth	
	House price growth by region and type of property		
	House price to rent ratio	Rental yield	Residential price-to-rent ratio (SCR)
	House price-to-disposable income ratio	House price-to-disposable income ratio	
	LTV ratio	LTV ratio on new residential mortgages	Residential LTV (SCR)
	DSTI ratio		
	LTI ratio	LTI ratio on new residential mortgages	Residential LTI (SCR)
	Household credit gap		
	Share of banks' and nonbanks' household loans		
	Share of FX-loans or interest-only loans		
	Other	Household debt to income ratio	
		Mortgage approvals	
	Housing transactions		
	Spreads on new residential mortgage lending		

Note: DSTI= debt service to income ratio; LTV=loan-to-value ratio; LTI= loan-to-income ratio; SCR= sectoral capital requirements.

Source: IMF staff.

Figure A3.3. Bank of England “Core Indicator” Coverage by Source of Risk

Source of Risk	IMF indicators	BoE Indicator	Corresponding FPC tool
Corporate sector	Growth rate in corporate credit	PNFC credit growth	CCB
	Share of corporate credit in total credit		
	CRE credit growth	CRE credit growth	SCR
	CRE prices		
	Leverage on new and old loans	PNFC debt to profit ratio	SCR
	Corporate debt service ratio		
	Corporate credit/operating surplus		
	Corporate credit gap		
	Lending standards	LTV ratio on new residential mortgages (buy-to-let)	LTV/DTI
	Share of FX loans and natural hedges		
Other		Spreads on new UK corporate lending	CCB
		Spreads on new UK CRE lending	SCR
Liquidity	Loan-to-deposits ratio	Loan-to-deposits ratio	CCB
	Noncore -to-core funding ratio	Short-term wholesale funding ratio	CCB
	Liquid asset ratio (e.g. Basel III LCR)		
	Maturity mismatch indicators (e.g. Basel III NSFR)		
	Securities issuance		
	Unsecured funding		
	Gross open FX-position		
	Short-term capital inflows		

Note: CCB= countercyclical capital ratio; CRE=commercial real estate; LTV=loan-to-value ratio; LTI= loan-to-income ratio; SCR= sectoral capital requirements.

Source: IMF staff.

Figure A4.1. U.K. Macroprudential Toolkit

Tool	Legal basis**	Agency in charge of		Perimeter	Reciprocity	Timing
		Decision	Implementation			
Sectoral capital buffer (residential/commercial mortgage and intrafinancial exposures)	Pillar 1 or 2 CRD, or Art. 458 CRR	FPC PoD	PRA	UK incorporated "CRD institutions"	Voluntary	2013
Countercyclical capital buffer	Art. 130, 135-140 CRD	FPC	PRA/FCA	UK incorporated "CRD institutions"	EEA: mandatory up to 2.5% Other countries: voluntary	2014
LTV/DTI limits (residential mortgage lending; owner-occupied)	National Law	FPC PoD	PRA/FCA	All PRA- and FCA-authorized firms conducting owner-occupied lending*	Voluntary	2015
Leverage ratio minimum	National Law	FPC PoD	PRA	Initially, UK G-SIBs and other major domestic UK banks and building societies. Extended to all UK banks, building societies, and PRA-regulated investment firms from 2018.	Voluntary	2015 (systemic)/2018 (rest)
systemic buffer (global)				UK G-SIBs		In parallel with systemic risk-weighted buffers. 2019
systemic buffer (domestic)				Domestically important banks, building societies and PRA-regulated investment firms		2019
countercyclical surcharge				Initially, UK G-SIBs and other major domestic UK banks and building societies. Extended to all UK banks, building societies, and PRA-regulated investment firms from 2018.		2015 (systemic)/2018 (rest)
Liquidity buffers		PRA/FPC Rec	PRA			
LCR	Arts. 412 and 460 CRR			UK incorporated "CRD institutions"	-	Phase-in 2015-2018
NSFR	Arts. 413 and 510 CRR			UK incorporated "CRD institutions"	-	Introduce minimum standard in 2018
MaP adjustments to liquidity requirements	Art. 458 CRR or Pillar II CRD			UK incorporated "CRD institutions"	Voluntary	
National flexibility measures	Art. 458 CRR	BoE/HMT/FPC Rec	PRA	UK incorporated "CRD institutions"	Voluntary	2014
Pillar II measures	Art. 104 CRD	PRA/FPC Rec	PRA	UK incorporated "CRD institutions"	Voluntary	2015
O-SII (identification)	Art. 131 CRD	PRA	PRA	List identified following EBA guidelines.	-	Identification from 2016.
G-SII capital buffer	Art. 131 CRD	PRA	PRA	List identified by FSB-BCBS	-	Phase-in 2016-2019
Systemic risk buffer	Art. 133 CRD	FPC/PRA	PRA	Ring-fenced banks and large building societies.	-	2019
HLA for global systemic insurers	-	PRA	PRA	List identified by FSB-IAIS	-	2019

Source: IMF staff.

Note: EEA=European Economic Area; FCA= Financial Conduct Authority; FSB= Financial Stability Board; HLA=higher loss-absorbency; MaP= Macroprudential; PoD=Power of Direction; Rec=Recommendation.

"CRD institutions" include banks, building societies and investment firms (regulated in the UK by PRA or FCA).

PRA also maintains large exposure limits for banks, but this has not been used as a macroprudential tool.

* When implemented through prudential requirements, this includes mortgage lending by overseas lenders' UK subsidiaries and branches regulated by the PRA, but excludes EEA branches conducting mortgage lending through EEA passporting rights, unless the measures are reciprocated by the relevant foreign authorities.

** CRD instruments are transposed into national law.