



**BANK OF ENGLAND**

## Record of the Financial Policy Committee Meetings on 20 and 27 November 2018

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This is the record of the Financial Policy Committee meetings held on 20 and 27 November 2018.

It is also available on the Internet: <https://www.bankofengland.co.uk/record/2018/financial-policy-committee-november-2018>

The Financial Policy Committee (FPC) was established under the Bank of England Act 1998, through amendments made in the Financial Services Act 2012. The legislation establishing the FPC came into force on 1 April 2013. The objectives of the Committee are to exercise its functions with a view to contributing to the achievement by the Bank of England of its Financial Stability Objective and, subject to that, supporting the economic policy of Her Majesty's Government, including its objectives for growth and employment. The responsibility of the Committee, with regard to the Financial Stability Objective, relates primarily to the identification of, monitoring of, and taking of action to remove or reduce systemic risks with a view to protecting and enhancing the resilience of the UK financial system. The FPC is a committee of the Bank of England.

The FPC's next policy meeting will be on 26 February and the Record of that meeting will be published on 12 March.

## Record of the Financial Policy Committee meetings held on 20 and 27 November 2018

At its meetings on 20 and 27 November 2018, the Financial Policy Committee (FPC):

- Judged that the 2018 stress test showed the UK banking system was resilient to deep simultaneous recessions in the UK and global economies that were more severe overall than the global financial crisis and that were combined with large falls in asset prices and a separate stress of misconduct costs. All participating banks had remained above their risk-weighted capital and leverage hurdle rates and would be able to continue to meet credit demand from the real economy, even in this very severe stress.
- Reviewed preparations to mitigate disruption to the financial system that could arise from Brexit:
  - It reviewed a 'Disorderly Brexit scenario', with no deal and no transition period, that led to a severe economic shock. Based on a comparison of this scenario with the stress test, the FPC judged that the UK banking system would be strong enough to continue to serve UK households and businesses even in the event of a disorderly Brexit. The UK economic scenario in the 2018 stress test of major UK banks was sufficiently severe to encompass the outcomes based on 'worst case' assumptions about the challenges the UK economy could face in the event of a cliff-edge Brexit.
  - It judged that major UK banks had sufficient liquidity to withstand a major market disruption.
  - It agreed that most risks of disruption to the financial services that EU firms provided to UK households and businesses had been addressed, including through legislation. Further UK legislation, currently in train, would need to be passed to ensure the legal framework for financial services was fully in place ahead of Brexit.
  - It welcomed the European Commission's recent statement that it was willing to act to ensure that EU counterparties could continue to clear derivatives at UK central counterparties (CCPs) after March 2019. However, without greater clarity on the scope, conditions and timing of the prospective EU action, the contracts that EU members had cleared with UK CCPs would need to be closed out or transferred by March 2019 – a process that would need to begin in December 2018.
  - It reiterated that, irrespective of the particular form of the UK's future relationship with the EU, and consistent with its statutory responsibilities, the FPC would remain

committed to the implementation of robust prudential standards in the UK. This would require maintaining a level of resilience that was at least as great as that currently planned, which itself exceeded that required by international baseline standards, as well as maintaining more generally the UK authorities' ability to manage UK financial stability risks.

- Continued to judge that, apart from those related to Brexit, domestic risks remained at a standard level overall. Lender risk appetite was strong but, reflecting uncertainty, demand for credit had been muted. It agreed that risks to UK financial stability from global debt vulnerabilities remained material.
- Maintained the UK countercyclical capital buffer (CCyB) rate at 1%. It stood ready to move the UK CCyB rate in either direction as the risk environment evolved.
- Noted that leveraged lending to businesses had grown rapidly, both globally and, more recently, in the UK. Strong creditor risk appetite, including for securitisations of leveraged loans, had loosened underwriting standards materially. However, UK banks' holdings of these securitisations were very small and their aggregate exposures to leveraged lending were covered in the Bank's 2018 stress test.
- Completed an in-depth assessment of the risks associated with leverage from the use of derivatives in the non-bank financial system. It judged that risks of forced sales to meet derivative margin calls currently appeared limited. However, more comprehensive and consistent monitoring by authorities would be needed to keep this under review.
- Agreed that it was not necessary to recommend any changes to the regulatory perimeter at this stage, based on its 2018 annual review. It noted that it had already started an in-depth assessment of risks in leveraged loan markets, given the rapid growth of leveraged lending.

1. The Committee met on 20 November 2018 to agree its view on the outlook for financial stability and, on the basis of that, its intended policy action. To do so, the FPC discussed the risks faced by the UK financial system and assessed the resilience of the system to those risks. Its aim is to ensure the UK financial system is resilient to, and prepared for, the wide range of risks it could face – so that the system can serve UK households and businesses in bad times as well as good.
2. The Committee met subsequently on 27 November 2018 to confirm its response to the results of the 2018 annual cyclical scenario (ACS) stress test of the UK banking system, and its setting of the UK CCyB rate.

### **2018 annual stress test of the UK banking system**

3. As part of assessing the resilience of the UK banking system, the FPC reviewed the results of the 2018 ACS stress test. The test covered seven major UK banks and building societies, accounting for around 80% of the outstanding stock of PRA-regulated banks' lending to UK households and businesses. A key purpose of the stress test was to measure the resilience of UK banks, and the UK banking system as a whole, to hypothetical adverse scenarios such as severe recessions, in order to ensure those banks had sufficient resilience to withstand shocks.
4. The scenario for the stress test had been set in March 2018. In the scenario, UK GDP fell by 4.7%, the UK unemployment rate rose to 9.5%, UK residential property prices fell by 33% and UK commercial real estate prices fell by 40%. The scenario also included a sudden loss of overseas investor appetite for UK assets, a 27% fall in the sterling exchange rate index and Bank Rate rising to 4%, and a synchronised global downturn with world GDP falling by 2.4%. The stresses applied to these variables were the same as in the 2017 test. The purpose of maintaining the severity of the stress had been to allow the Bank to isolate, as far as possible, the impact of a new accounting standard that had come into effect on 1 January 2018 (International Financial Reporting Standard 9, or IFRS 9). The FPC had judged in March that the calibration of the scenario remained appropriate for the risk environment. Consistent with the approach that the FPC had set out in March, the assessment of the test would take account of internationally agreed transitional arrangements for IFRS 9.
5. As in previous years, the 2018 stress test also included a traded risk scenario designed to be consistent with the macroeconomic scenario, as well as stressed projections for misconduct, well beyond current provisions.
6. Major UK banks had continued to strengthen their capital positions over the course of 2017, and had entered the 2018 stress test with an aggregate Tier 1 risk-weighted capital ratio of 17.7%, up

from 16.4% at the beginning of the 2017 test. The aggregate common equity Tier 1 (CET1) and Tier 1 leverage ratios – on which banks were assessed in the stress test – had also risen over the year from 13.4% to 14.5% and from 5.4% to 5.7% respectively. The aggregate CET1 capital ratio was nearly three and a half times higher than before the financial crisis.

7. The results showed that, prior to the conversion of any banks' additional Tier 1 (AT1) capital instruments, the stress reduced banks' aggregate CET1 capital ratio from its 14.5% start point to a low of 9.2% in the second year of the stress. This meant that despite facing loss rates consistent with the financial crisis, the major UK banks' aggregate CET1 capital ratio after the stress would still be twice its level before the crisis.

8. The main drivers of the fall in capital and leverage ratios in the stress were loan impairment charges, traded risk losses, an increase in risk-weighted assets, and stressed misconduct costs. Total impairments of £115 billion occurred in the first two years of the test. This reduced the aggregate CET1 ratio by 5.4 percentage points at the peak of the stress, relative to the baseline. Traded risk losses reduced banks' aggregate CET1 ratio by 1.6 percentage points by the low point of the stress in 2019. The increase in risk-weighted assets and stressed misconduct costs reduced the aggregate CET1 ratio by 2.5 and 1.0 percentage points by the low point of the stress.

9. The Committee had flagged in October 2018 that it would use the 2018 stress test to assess implications for UK banks of the rapid growth in leveraged lending, given its concern over that growth. The aggregate one-year mark-to-market loss rate on banks' pipeline exposures to leveraged loans that were underwritten but not yet distributed was 22% in the 2018 ACS, generating a loss of £2.8 billion and reducing the aggregate CET1 ratio by 0.2 percentage points. For non-investment grade corporate loans to large US and UK companies that were held on balance sheet, the estimated cumulative five-year stressed impairment rate was 10.5%.

10. Reductions in distributions offset more than two fifths of the fall in the CET1 capital ratio. This reflected a number of individual factors. Banks did not pay out any dividends on ordinary shares during the first two years of the stress. This retention of £28 billion, relative to the baseline, pushed up the aggregate CET1 ratio by 1.5 percentage points at the two-year CET1 low point of the stress. Total variable remuneration was also cut from a baseline projection of £10.9 billion to £1.3 billion over the first two years of the stress. This boosted the CET1 capital ratio by 0.5 percentage points. Other distributions, including AT1 discretionary coupons, were reduced from a baseline projection of £6.7 billion to £2.4 billion over the same period. This boosted banks' aggregate CET1 capital ratio by 0.2 percentage points relative to the baseline. Banks' commitment to using the flexibility to reduce distributions, including variable remuneration, in a stress was therefore an important element of the

FPC and PRC's judgment about the adequacy of capital levels today, and reductions in distributions could be important for maintaining financial stability in an actual stress event.

11. As set out in the *Key Elements* of the 2018 stress test,<sup>1</sup> banks' performance in the 2018 stress test were assessed by comparing their capital ratios at the low-point of the stress test against risk-weighted capital and leverage hurdle rates that were composed of banks' minimum capital requirements and the capital buffers that apply to reflect their domestic as well as global systemic importance. Consistent with the Key Elements, the 2018 hurdle rates would also be adjusted to reflect the increased loss absorbency under IFRS 9.

#### *Adjustments to the hurdle rate to reflect IFRS 9*

12. Before agreeing the precise form of the hurdle rates adjustments to reflect the impact of IFRS 9, the Committee reviewed the rationale for such adjustments.

13. Under the new accounting standard, banks would set aside provisions for expected credit losses on all loans, not just where a loan was past due or had already fallen into default. As the FPC had previously set out, its view was that by enhancing transparency and market confidence in book measures of capital, IFRS 9 accounting would support financial stability.

14. The effect of IFRS 9 on the timing of losses during a stress period meant that participating banks had more provisions recorded for expected future losses at the low point of the test than under the old accounting standard. These additional provisions meant there was generally a greater fall in capital at the low point of the stress under IFRS 9. But other things equal, the more provisions a bank had taken early in the stress test against potential future loan defaults, the less its capital would be vulnerable to depletion later on in the scenario when defaults on those loans occurred.

15. As the FPC had set out in March 2018, it was appropriate to recognise this through downward adjustments to each bank's hurdle rates in the test. Such an approach avoided an unwarranted *de facto* increase in system-wide capital requirements as a result of the stress test, and was consistent with its previous judgement that the necessary level of loss absorbing capacity for the UK banking system was invariant to accounting standards.

16. Consistent with what the FPC had agreed in March, any such adjustments were subject to two constraints. First, that the effect of the adjustments on system-wide capital requirements was no bigger than the impact in aggregate of the change in accounting standard. And second, that no bank

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<sup>1</sup> See <https://www.bankofengland.co.uk/news/2018/march/key-elements-of-the-2018-stress-test>

was left with a hurdle rate below its minimum CET1 capital (Pillar 1 plus Pillar 2A) and minimum Tier 1 leverage ratio requirements.

17. The Committee observed that given the use of IFRS 9 transitional arrangements, the size of the appropriate adjustments to the hurdle rates in the 2018 stress test was limited. However, the size of the adjustments that were necessary to avoid an unwarranted *de facto* increase in capital requirements would increase over time, as these transitional arrangements were phased out.

18. The FPC considered a number of ways in which such an adjustment could be delivered. The PRC's views would also inform the Bank's approach.

19. One option was to adjust the hurdle rate for each bank in line with the capital impact arising from those provisions newly made because of the introduction of IFRS 9. This meant that banks with relatively larger increases in provisions due to IFRS 9, such as banks with a relatively larger share of retail losses, would generally benefit from relatively larger adjustments to their hurdle rates. This would recognise their increased resilience to future defaults of those loans in the stress, for a given capital ratio.

20. Alternatively, the hurdle rate adjustment could be calibrated to take account of those provisions held in excess of one-year regulatory expected loss, at the low point of the stress. This would mirror the capital framework where, in general, one-year expected losses were assumed to be provisioned for, with any shortfall in provisions being deducted from capital. One issue with this approach was that banks had different internal models that were used to calculate regulatory expected losses.

21. Or the calibration could be focused on the three stage definitions of IFRS 9: (i) stage one – non-defaulted assets, on which provisions must be made for 12-month expected losses; (ii) stage 2 – non-defaulted assets which had experienced a significant increase in credit risk, on which provisions must be made for lifetime expected credit losses; and (iii) stage 3 – defaulted assets, on which provisions must be made for lifetime expected credit losses. New provisions relating to 'stage 2' assets accounted for the bulk of the difference in the timing of loss recognition relative to the IAS 39 accounting approach. They could therefore be seen as a proxy for the overall impact of IFRS 9.

22. The FPC agreed that its approach would evolve over time. For adjusting the hurdle rate in the 2018 stress, it agreed that the first option was a simple approach consistent with ensuring that IFRS 9 did not result in an unwarranted *de facto* increase in capital requirements at a system-wide level. This simple approach was made possible owing to banks submitting both transitional and non-transitional results, and was supported by the stress test having used the same scenario as last year.

23. But it agreed that ahead of future stress tests, it would be appropriate for the Bank to work on a more lasting treatment that did not rely on comparisons with provisions under the old accounting standard. This would also provide additional time to learn more about the interaction between IFRS 9 and banks' internal regulatory capital models.

24. At this stage, the FPC considered that adopting one of the other two approaches set out above could make sense for future stress tests. The Bank would seek views on the best future approach with relevant stakeholders in 2019, where appropriate, with a view to finalising the approach in next year's stress test.

### *Overall Assessment*

25. All participating banks remained above their risk-weighted capital and leverage hurdle rates and would be able to continue to meet credit demand from the real economy, even in this very severe stress. Lending to the real economy expanded by around 2% in total over the five years of the scenario. This was in line with the requirements of the test, reflecting an important macroprudential goal of stress testing – namely to help assess whether the banking system was sufficiently capitalised to be able to maintain the supply of credit to the real economy in the face of severe adverse shocks.

26. In the FPC's view, the 2018 stress test therefore showed the UK banking system was resilient to deep simultaneous recessions in the UK and global economies that were more severe overall than the global financial crisis and that were combined with large falls in asset prices and a separate stress of misconduct costs.

27. The FPC noted that some AT1 instruments converted to CET1 in the test. This was because on a definition of CET1 that excluded the benefit of transitional arrangements under IFRS 9, two banks (Barclays and Lloyds Banking Group) saw their CET1 ratios fall below 7% in the stress. Banks were being assessed on an IFRS 9 transitional basis. But according to the specific contractual terms of banks' AT1 instruments currently in use, conversion was based on a definition of CET1 that excluded the benefit of transitional arrangements under IFRS 9.

### **Resilience of the UK financial system to a disorderly, cliff-edge Brexit**

28. Since the EU referendum in 2016, the FPC and other authorities had identified risks of disruption to the financial system that could arise from Brexit and worked to ensure they were addressed. The FPC had published its regular assessments in its Financial Stability Reports (FSRs), Statements and Records of its meetings.



29. The FPC was focused on outcomes that would have the greatest potential impact on financial stability. In that context, the FPC considered the particular risks that could arise if the UK's relationship with the EU were to move abruptly to default World Trade Organisation (WTO) rules without an implementation period. Such a scenario could affect the ability of the financial system to serve households and businesses through: macroeconomic shocks that could generate credit losses for banks and test the capacity of the UK banking system to continue to lend; a significant re-pricing in financial markets that could test market functioning and the resilience of market-based finance, and create trading losses for banks; and disruption to provision of financial services across the UK-EU border.

#### *Macroeconomic scenarios for disorderly Brexit*

30. The challenges the UK economy could face in the event the UK left the EU with no deal and no transition period would depend crucially on political decisions by the EU and UK authorities and on the degree of preparation by firms and critical infrastructure before Brexit.

31. The FPC had been reviewing potential 'tail' risks arising from Brexit since the referendum. At its March 2017 meeting the FPC had requested that stress scenarios be developed against which the resilience of the UK financial system could be assessed. Consistent with its remit to protect and enhance the resilience of the financial system to major shocks, however unlikely they might be, the scenarios were underpinned by 'worst case' assumptions about the challenges the UK economy could face. The 'Disorderly Brexit scenario' on which the FPC focused was therefore not a forecast for the economy in the event that the UK left the EU with no deal and no transition period.

32. The Committee had extensive discussions of the framework that had been used in the scenario analysis. It assessed the top-down approach underpinning the key calculations. The Committee reviewed the underlying assumptions and examined the empirical economic relationships.

33. The worst case assumptions underpinning the Disorderly scenario were that: tariffs and other barriers to trade between the UK and EU were introduced suddenly; while the UK recognises EU product standards, the EU did not reciprocate; no new trade deals were implemented within a five-year period; economic uncertainty increased and financial conditions tightened; the EU did not take action to address remaining risks of disruption to derivative markets; the UK lost existing trade agreements that it currently had with non-EU countries through membership of the EU; the UK's border infrastructure was assumed to be unable to cope smoothly with new customs requirements for some time; uncertainty about institutional credibility resulted in a pronounced increase in the return investors demand for holding sterling assets; there were spillovers to other UK financial markets, leading to a further tightening of financial conditions. Macroeconomic policy was assumed to respond in line with its objectives - the UK CCyB rate was assumed to be cut by the FPC to 0%; by

signalling the usability of all capital buffers, this was assumed to avoid any tightening in credit conditions that might otherwise arise if banks were to try to preserve their capital positions. The FPC would set these assumptions out in its forthcoming FSR, and the Bank would include more detail in its response to the Treasury Committee.

34. Established empirical economic relationships had then been used to calibrate the impact of those assumptions. These relationships were between trade barriers and volumes of trade and foreign direct investment, openness and productive potential, and relative economic conditions and net migration. The FPC would also set out the established analysis on these relationships in the forthcoming FSR, and the Bank would include more detail in its report to the Treasury Committee.

35. The FPC noted that empirical relationships between economic openness and trade and productivity had been established during decades of gradual trade liberalisation. In a disorderly Brexit, the UK's openness to trade would decline abruptly. This was a unique situation in recent history. There were no broad-based empirical studies of the effects of trade de-integration, and it was unprecedented for an advanced economy to withdraw from a trade agreement as deep and complex as the EU. So, consistent with creating a scenario for a disorderly Brexit underpinned by 'worst-case' assumptions, the scenario assumed that the costs of de-integration came in somewhat faster than the benefits of integration had in the past.

36. The scenario was then produced using the Bank of England's suite of macroeconomic models. This ensured that the paths for output, employment, interest rates and property prices in the scenario were both internally consistent and consistent with the underpinning assumptions and empirical relationships.

37. The FPC discussed the paths of key variables in the Disorderly Brexit scenario, given the worst-case assumptions and the established economic relationships used. Overall, in this scenario, GDP fell by 8% from its level in 2019 Q1. The fall in economic activity was reflected in a mix of higher unemployment, lower labour supply and lower productivity. These reductions in supply capacity meant that, although output fell by more than it had done in the financial crisis, unemployment rose by less than it had done then, peaking at a rate of 7½%. The sharp fall in sterling, alongside the imposition of tariffs on EU imports, pushed up costs of imports and overall CPI inflation picked up to peak at 6½%. This created a challenging trade-off between economic activity and inflation. In order to bring inflation back to the 2% target, Bank Rate rose sharply, peaking at 5½%, and averaged 4% over the first three years of the scenario. The weakness of output and incomes, alongside rising interest rates and a pronounced tightening of financial conditions, resulted in sharp falls in some asset prices. Residential property prices fell by 30% and commercial property prices fell by 48%.

38. The view of the Committee was that this scenario, though based on worst case assumptions and highly unlikely to be exceeded in severity, was appropriate for assessing the resilience of the UK financial system to Brexit. Resilience to this scenario would ensure resilience to a range of possible outcomes in the event of a no deal, no transition scenario.

39. The Committee agreed to publish the Disorderly scenario and its underpinning assumptions. Three factors informed this decision. First, the Treasury Committee had explicitly requested that the Bank analyse how the EU Withdrawal Agreement would affect the Bank's ability to deliver its objectives for monetary and financial stability, including in a 'no deal' scenario. Given the Treasury Committee had requested that the analysis should be published after the negotiations between the Government and Commission had concluded, but in good time before any Parliamentary vote, the date of the FPC's meeting and publication of the FSR had been brought forward. This would enable the FPC's latest assessments on the resilience of the UK financial system to Brexit to be included in the Bank's response<sup>2</sup>.

40. Second, the Committee had judged that the results of the 2018 stress test, which would be published alongside the FSR as usual, were instructive in assessing the resilience of the financial system to Brexit. It judged that it was important to show the Disorderly Brexit scenario analysis alongside the stress test results in order to demonstrate the resilience of the UK banking system to a range of outcomes based on 'worst case' assumptions about the challenges the UK economy could face in the event of a cliff-edge Brexit.

41. Finally, the Committee's previous decisions to redact parts of its discussions concerning the risks to the UK financial system from Brexit had been based in part on the possibility that releasing scenarios could prejudice ongoing discussions between the Government and the EU27 around the UK's withdrawal. The negotiations on the draft withdrawal agreement had now concluded and so the public interest case for redacting the information was diminished.

42. In addition, to illustrate the magnitude of the effects of the most severe assumptions underpinning the scenario, the Committee also agreed to publish a less severe variant of the scenario – labelled 'Disruptive'.

#### *Resilience of major banks to a disorderly Brexit*

43. To maintain consistent provision of financial services to the real economy, UK banks must be able to absorb the impact on their balance sheets of any adverse economic shocks that might arise from Brexit. To assess their ability to do this, the FPC compared the scenario that major UK banks

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<sup>2</sup> <https://www.bankofengland.co.uk/news/2018/november/change-of-publication-date-for-fsr-and-stress-testing-results>

were tested against in the 2018 annual stress test with the Disorderly Brexit scenario it had just discussed. The FPC had made a similar comparison in 2017, using the 2017 stress test results, drawing on its initial discussions of the different combinations of risks that could have the greatest impact on financial stability.

44. In the ACS stress test, UK GDP fell by 4.7%, the UK unemployment rate rose to 9.5%, UK residential property prices fell by 33% and UK commercial real estate prices fell by 40%. The scenario also included a sudden loss of overseas investor appetite for UK assets, a 27% fall in the sterling exchange rate index and Bank Rate rising to 4%. The large reductions in productivity and labour supply in the Disorderly Brexit scenario meant that, although output in that scenario fell by more than in the ACS stress test, the rise in unemployment was smaller.

45. The FPC compared the impact of the two scenarios on banks' capital ratios. The total impact of the Disorderly Brexit macroeconomic scenario on major UK banks was to reduce their aggregate CET1 capital ratio by around 1.5 percentage points. That was in line with the aggregate impact of the UK macroeconomic shock in the 2018 stress test. In addition, the Disorderly Brexit scenario included sharp adjustments in UK financial markets. Overall, these market adjustments led to losses on trading books that added a further 0.5 percentage points to the impact on the major UK banks' aggregate CET1 capital ratio. The 2018 stress test also included a severe UK financial market stress. In addition, it included a severe global market stress, meaning that, overall, losses on trading books in the stress test reduced the major UK banks' aggregate CET1 capital ratio by 1.2 percentage points, relative to the start of the stress. The stress test also included a separate stress of misconduct redress costs. Taken together, this brought the total impact of the ACS to 5.4 percentage points.

46. In the FPC's judgement, the UK economic scenario in the 2018 stress test of major UK banks was sufficiently severe to encompass the Disorderly Brexit scenario. Because they would be resilient to the tougher annual stress test, the FPC therefore judged that major UK banks would also be resilient to, rather than amplify, the Disorderly Brexit scenario.

47. The FPC noted that the aggregate impact of the Disorderly Brexit scenario, and of the UK macroeconomic element of the ACS, on banks' capital appeared limited. In part, that reflected the geographic diversification of major UK banks; in aggregate, only around half of their exposures were to the UK. This diversification increased the resilience of the system as a whole to country-specific shocks, such as that in the Disorderly Brexit scenario.

48. The FPC reviewed other indicators of bank resilience. Recent developments in bank share prices reflected revisions to expectations of, and uncertainty about, their earnings. The FPC continued to judge that UK banks' low price-to-book ratios were consistent with market concerns over

expected future profitability, rather than concerns about existing asset quality. Other market indicators corroborate this judgement.

49. Any disruption in financial markets in a disorderly Brexit could place pressure on banks' ability to continue to fund their business and provide financial services to the UK real economy. The FPC therefore reviewed the resilience of banks' funding and liquidity positions.

50. The resilience of major UK banks' funding structures had improved significantly since the financial crisis. For example, major UK banks' short-term wholesale funding, as a proportion of total funding, has fallen to 3.8% from 15.2% in 2007. At a group level, major UK banks held more than £1 trillion of high-quality liquid assets. On a consistent basis, this was more than four times the level they had held before the financial crisis. This meant they more than met the Liquidity Coverage Ratio (LCR) standard, which measured a bank's liquid assets as a proportion of the net outflows it might face over a severe 30-day stress. In aggregate, major UK banking groups had 50% more liquid assets than needed to meet this standard. Their holdings of liquid assets were sufficient to withstand more than three months of stress in wholesale funding markets.

51. As a result of supervisory actions and their own prudent risk management, major UK banks had aligned the currency of their liquid assets with that of their maturing wholesale funding. They could now withstand many months without access to foreign exchange markets. In addition, UK banks had pre-positioned collateral at the Bank of England such that they could access around £300 billion of additional funding through the Bank's regular facilities. The Bank was able to provide substantial liquidity in all major currencies.

52. On the basis of the liquidity positions of the major UK banks, the FPC judged that major UK banks had sufficient liquidity to withstand a major disruption in financial markets.

#### *Market functioning and resilience of market-based finance*

53. Some market volatility would be expected in a disorderly Brexit, though markets had functioned well during volatility following the EU referendum. Following the referendum, activity in some dealer-intermediated markets, including corporate and UK government bond markets, had been subdued, but was orderly. And repo markets had proved resilient. At the same time, electronically traded markets (such as foreign exchange and equity markets) had been resilient to extremely high volumes of transactions compared to normal levels.

54. The FPC, along with the MPC, was briefed that the UK authorities had undertaken extensive contingency planning. The Bank of England, alongside other domestic authorities, and financial

companies themselves, had put extensive contingency plans in place to support institutional resilience and market functioning during any period of heightened uncertainty.

55. The functioning of some markets could be tested by high demand for liquidity, including from open-ended investment funds. The FPC had discussed this dynamic earlier in the year, when it had discussed the potential for financial stability risks from open-ended funds invested in commercial real estate. The Financial Conduct Authority (FCA) was monitoring the level of investor net flows and cash positions of UK-domiciled daily-dealing property funds and had undertaken contingency planning with fund managers. More broadly, market functioning should be supported by the resilience of dealers. Post-crisis reforms had made dealers much stronger, reducing the probability that market-making losses could lead to their distress or failure and dealers also appeared to be further adapting their businesses to the post-crisis regulatory regime. There had also been signs of some improvement in gilt repo market functioning.

56. The FPC also reviewed the potential for life insurers both to amplify and dampen market shocks. The largest life insurers had an aggregate surplus of capital above their regulatory requirements of £44.5 billion; 62% more than their regulatory requirements. The FPC considered Bank estimates of the sensitivity of aggregate UK life insurer capital surpluses to movements in key market variables impacted in the Disorderly Brexit scenario. Sharp falls in property and equity prices like those in the Disorderly Brexit scenario would cause life insurers' aggregate capital positions to deteriorate materially, but they would remain well above regulatory requirements. Consequently the FPC judged that insurers were also sufficiently resilient to be able to support markets in stress.

#### *Risks of disruption to cross-border financial services*

57. In November 2017, the FPC had published a checklist of actions that would mitigate risks of disruption to important financial services used by households and businesses to support their economic activity. It had since updated its judgements of progress against this checklist on a quarterly basis.

58. The FPC reviewed progress against each risk in the checklist.

#### *Legal frameworks*

- Ensure a UK legal and regulatory framework is in place. The EU (Withdrawal) Act had come into force. HM Treasury planned to take forward around 60 pieces of secondary legislation for financial services before March. The FPC considered that sixteen statutory instruments were particularly important to mitigate risks of disruption to users of financial services. As of 26 November, four of these had become law, including the temporary regimes to allow EU banks, insurers and CCPs to serve UK customers. Timelines remained tight to take forward

the remaining legislation. An additional 7 of the 16 statutory instruments had been published or were progressing through Parliament, but the other five instruments, including legislation to give regulators' temporary transitional powers and to create a contractual continuity regime, had not been published. The FPC continued to judge that the risk to the UK was at a medium level but that there had been a reduction in risk since October.

- Implementation period to allow mitigating actions by firms. Financial institutions would need time to obtain necessary regulatory permissions and complete any necessary restructuring of their operations and re-papering of contracts. The UK Government and European Commission had completed negotiations on a Withdrawal Agreement that included an implementation period. If agreed, such an implementation period would reduce all of the risks set out in the FPC's checklist. The FPC continued to judge that the risk to the UK and to the EU was at a medium level.

#### *Preserving the continuity of outstanding cross-border contracts*

- Insurance contracts. The UK government had legislated to ensure that the 16 million insurance policies that UK households and businesses had with EU insurance companies could continue to be serviced after Brexit. EU or member state rules might prevent UK insurance companies collecting premiums from, or paying claims to, their 38 million policyholders in the EU. The European Commission had indicated it would not mitigate this risk at the EU level. While some countries were legislating to mitigate this risk at a national level, it was unclear how comprehensive these actions would be by March. Most UK insurance companies were making good progress in restructuring their business in order to serve their EU customers after Brexit. However, even if all current plans were delivered successfully, at least 9 million EU policyholders would remain at risk. Given the volume of restructuring and the process of court approval of plans, there were also material execution risks. The FPC judged that the risk to the UK had been reduced to a low level since October but that the risk to the EU remained at a medium level.
- OTC derivative contracts (uncleared). In the absence of action certain 'lifecycle' events could not be performed on cross-border derivative contracts after Brexit. This could affect uncleared derivative contracts between the EU and the UK with a total notional value of £28 trillion, of which an increasing share (£18 trillion) matured after March 2019. The UK government had legislated to ensure that these lifecycle events could continue to be performed after Brexit on derivative contracts that UK clients (such as non-financial companies) had with EU banks. However, national rules in some EU member states might prevent EU clients and banks from performing certain lifecycle events on derivative contracts that they had with UK banks. The

European Commission had indicated it would not mitigate this risk at the EU level. While some countries were legislating to mitigate this risk at a national level, it was unclear how comprehensive these actions would be by March. This could compromise the ability of derivative users to manage risks and might therefore lead to large-scale terminations in stress. This could amplify any stress around the UK's exit from the EU, contributing to a tightening in financial conditions in a disruptive Brexit. The FPC judged that there had been a reduction in risk to the UK since October and that it was now at a medium level but that the risk to the EU remained at a high level.

- OTC derivative contracts (cleared). The UK government had legislated to ensure that UK businesses could continue to use clearing services provided by EU-based clearing houses. Under EU law, after March 2019 EU clearing members would be acting unlawfully if they accessed clearing services from UK CCPs, and UK CCPs would not be permitted to provide such services, unless they were recognised by the European Securities and Markets Authority (ESMA). The FPC welcomed the recent statement from the European Commission regarding its willingness to act in respect of cleared derivatives that would allow UK CCPs to be recognised – on a temporary and conditional basis – by ESMA in a no deal scenario. ESMA had announced that it was now engaging with UK CCPs on this. However, without greater clarity on the scope, conditions and timing of the prospective EU action, CCPs and their members could not determine whether the Commission's proposal fully removed the legal risks they face. As a result the derivatives contracts EU clearing members had cleared with UK CCPs would need to be closed out or transferred by the end of March 2019. That process would be necessary to ensure the safe operation of UK CCPs beyond that date. It would need to begin in December 2018 in order to mitigate the risk of material market disruption and respect CCP rulebooks. The ECB estimated that EU-based firms cleared 90% of their interest rate swaps in the UK. Overall, EU-based firms had OTC derivative contracts with a notional value of £60 trillion at UK CCPs, an increasing share (£45 trillion) of which matured after March 2019. The movement of a large volume of contracts in a short time frame would be costly to, and disrupt the derivative positions of, EU businesses and could strain capacity in the derivatives market. In addition, fragmentation of central clearing would raise costs for EU businesses. Industry estimates suggested that every single basis point increase in the cost of clearing interest rate swaps alone could cost EU businesses around €22 billion per year. The FPC judged that there had been a reduction in risks to both the UK and EU since October. It assessed the risk to the UK was now at a low level but that the risk to the EU remained at a high level.

*Avoiding disruption to availability of new financial services*



- Clearing services. The UK government had legislated to ensure that UK businesses could continue to use clearing services provided by EU-based clearing houses. The European Commission had indicated that it was willing, in a no deal scenario, to act in respect of cleared derivatives that would allow UK CCPs to be recognised by ESMA. This would, in principle, allow EU counterparties to clear new trades with UK CCPs, but further information was required on the scope, conditions and timing of the prospective action. If UK CCPs were not recognised after Brexit, EU counterparties would need to make new arrangements with other CCPs. This created material risks of disruption to those EU counterparties. The FPC judged that there had been a reduction in the risks to both the UK and the EU since October. It assessed that the risks to the UK were now at a low level, but the risks to the EU remained at a high level.
- Banking services. The UK government had legislated to ensure that UK households and businesses could continue to be served by EU-based banks after Brexit. EU or member state rules might prevent EU customers from accessing UK-based banks, on which they currently relied for around half of their wholesale banking services. Major UK-based banks were in the processes of transferring their EU clients to 25 new (or expanding) subsidiaries in the EU. Nineteen of these had now been authorised. But other risks, such as the operational readiness of these new entities or restrictions on firms' ability to service legacy business which remained in the UK entity, might still cause some disruption to EU households and businesses. The FPC judged that there had been a reduction in risks to both the UK and EU since October and that the risk to the UK was now at a low level while the risk to the EU remained at a medium level.
- Asset management. The UK government had legislated for EU asset management firms to continue operating in the UK after exit. Further legislation would provide a temporary permissions regime for EU investment funds to continue marketing in the UK. EU rules allowed asset managers to delegate the management of their assets to entities outside the EEA when a co-operation agreement was in place between the authorities. The European Commission had publicly encouraged European Supervisory Authorities to prepare such agreements with the UK. In the absence of a co-operation agreement, there was a risk of changes to asset managers' businesses that could be disruptive. The FPC judged that risks to both the UK and EU remained at a medium level, and that there had been a reduction in risk to the UK and EU since October.
- Personal data. The UK government had announced its intention to continue to allow the free flow of personal data from the UK to the EU. Once in effect, this would reduce disruption to UK households' and businesses' use of EU financial service providers. The European

Commission had indicated that it did not intend to take similar action to ensure the free flow of personal data from the EU to the UK in a no deal scenario. This might restrict EU households and businesses from continuing to access UK financial service providers. UK households and businesses might also be affected due to the two-way data transfers required to access certain financial services. Although companies could add clauses into contracts in order to comply with the EU's cross-border personal data transfer rules, these were subject to some legal and operational risk. The FPC judged that risks to both the UK and EU remained at a medium level.

- The FPC judged that in the UK, significant progress continued to be made towards mitigating the risks of disruption to cross-border financial services but that further legislation needed to be passed. It also judged that EU authorities had taken few mitigating actions, and that greater clarity was needed on prospective EU action.
- The FPC also discussed a range of other risks that could cause some, albeit less material, disruption to economic activity if they were not mitigated. Although it had judged that the potential impact of these other risks did not warrant being included in the checklist, it agreed that it would set out the channels of risks and possible mitigating factors in its forthcoming FSR. These risks were around Credit Rating Agencies, settlement finality protection for financial market infrastructure, UK banks' access to euro payment systems, the ability of EU firms to trade on UK trading venues and increased prudential requirements for banks and insurance companies.
- As the FPC had set out previously, irrespective of the particular form of the UK's future relationship with the EU, and consistent with its statutory responsibility, the FPC would remain committed to the implementation of robust prudential standards in the UK. This would require maintaining a level of resilience that was at least as great as that currently planned, which itself exceeded that required by international baseline standards, as well as maintaining more generally the UK authorities' ability to manage UK financial stability risks.

## **Other risks to financial stability**

59. The Committee reviewed other financial system and economic developments to inform its view on the current risks faced by the UK financial system. These would be set out in detail in the forthcoming FSR, and are summarised below.

### *Global vulnerabilities and debt market conditions*

60. Global growth remained relatively robust, despite falling back somewhat from high levels in 2017, with most of the world growing at rates above estimates of potential growth in 2018 H1. Global financial conditions had continued to tighten since June. Global equity markets had fallen and credit spreads had risen.

61. Following market tensions in May, Italian government bond yields had risen again in October, to their highest levels since early 2014. This rise was linked to the new Italian government's publication of a draft budget, which envisaged a fiscal loosening, reversing the previous tightening policy. Italian banks held a significant proportion of Italian public debt and greater perceived sovereign risk had spilled over to measures of their riskiness. Although direct UK banking exposures to Italy were low, if financial strains were to spread across the euro area, there could be a material risk to UK financial stability.

62. Financial conditions in emerging market economies (EMEs) had shifted from accommodative to tightening. Market pressures had been most acute for Turkey and Argentina. Both countries had large current account deficits and relied heavily on dollar-denominated debt. Contagion to other EMEs had been focused on those with weak credit ratings.

63. In China, private non-financial sector debt as a share of GDP was 213%, having risen around 60 percentage points in the past six years. The Chinese authorities had taken policy actions to de-risk the financial system. But a sharp slowdown in economic growth – possibly as a result of an escalation of trade tensions with the US – would make China's elevated debt levels significantly less sustainable.

#### *Leveraged lending and UK corporate indebtedness*

64. Leveraged lending to businesses had grown rapidly, both globally and, more recently, in the UK. Gross issuance of leveraged loans had reached pre-crisis levels, both globally and in the UK. While a significant proportion of that issuance had been used for refinancing, 'new money' issuance had also increased to its highest level since the global financial crisis. Most of these proceeds had been used to engineer changes in the liability structure of the corporate sector to optimise returns, rather than to fund new investment.

65. Strong creditor risk appetite had loosened underwriting standards in this market materially. The share of so-called 'covenant-lite' loans — where investors did not require borrowers to maintain certain financial ratios— had reached record highs.

66. Borrowers in the leveraged lending market were also increasingly indebted. The average leverage of borrowers had reached pre-crisis levels globally and a similar trend was evident in the

UK. The proportion of leveraged loans issued to firms globally with debt to EBITDA ratios at, or above, six had picked up to around 27% in the year to 2018 Q3, the highest proportion since 2007. Moreover, there had been growing use of adjustments to how earnings were calculated at the point a loan was made. These adjustments involved so-called 'add-backs' that assumed potential future earnings improvements were realised. These add-backs were uncertain, so may have led to EBITDA being overstated and, therefore, leverage understated.

67. Despite weaker underwriting standards and higher leverage, credit spreads on leveraged loans had fallen significantly. This was indicative that growth in this market was being driven by an expansion in the supply of credit rather than borrower demand. Evidently, investors in leveraged loans were not demanding additional compensation for the growing risks and were at increasing risk of loss.

68. The scale, growth and deterioration of underwriting standards of leveraged lending in recent years shared similar trends with the US subprime mortgage market before the crisis. But there were also important differences between these markets, which mattered for the ultimate risks to UK financial stability. For example, unlike subprime mortgages, the securitisation market for leveraged loans was considerably less reliant on short-term wholesale funding.

69. The rapid growth in leveraged lending had been driven by increased securitisation activity through collateralised loan obligations (CLOs), as well as demand from investment funds. CLOs were held mainly by non-bank investors, including pension funds, insurers and investment funds. Nevertheless, international banks held around a third of the outstanding stock of CLOs.

70. In contrast to international banks, UK banks only held a very small share of the stock of CLOs. These exposures accounted for only around 1% of the global stock of CLOs and around 1.5% of major UK banks' CET1 capital. UK banks also had exposures to risks from leveraged loans that they had originated, but not yet distributed. And they retained exposures to the same borrowers, for example through credit facilities.

71. UK banks' aggregate exposures to leveraged lending had been covered in the Bank's 2018 stress test. The Committee noted that the stress test, which it had discussed earlier and which imposed loss rates that were higher than banks would have incurred if corporate default rates were similar to those during the global financial crisis, provided a mechanism for capturing risks stemming from weaker covenants. This helped correct potential shortcomings in banks' risk weight models, which, the Committee observed, may not adequately reflect the increased level of risk, or mechanically generate higher capital charges as covenants were eroded.

72. The growth in leveraged lending had contributed to a pickup in aggregate corporate leverage. In the UK, whilst total corporate indebtedness had remained below pre-crisis levels, higher risk borrowers now accounted for more of the stock of total UK corporate debt. However, UK banks' domestic corporate lending did not reflect a material shift towards higher-risk borrowers.

73. The FPC would continue to monitor closely, at an aggregate level, the underwriting standards of UK banks originating leveraged loans. And it would continue to review how pockets of corporate indebtedness in the UK, and the increasing role of non-bank lenders globally, could pose risks to UK financial stability.

#### *UK external financing*

74. The current account deficit had shrunk in recent years, and stood at 3.9% of annualised GDP in 2018 Q2, though it remained high by international standards. Over the period 2012-15, the current account deficit had been financed by UK investors selling overseas assets at a faster rate than foreign investors were selling UK assets. However, this position had reversed since 2016, and foreign inflows had been substantial. Foreign investors had a particularly large presence in the UK commercial real estate (CRE) and leveraged loan markets. In the UK CRE market, foreign investors, notably from the United States and Asia, accounted for nearly 50% of transactions, and 71% of London transactions, in the 12 months to 2018 Q3. The leveraged loan market was also particularly reliant on cross-border investment. 85% of the total gross issuance of leveraged loans by UK non-financial companies had been syndicated abroad in 2017, a record level. This share had increased to 94% in the year to November 2018.

75. There had been mixed evidence as to investor appetite for UK assets since the EU referendum. The term premium on sterling assets remained below its historical average and had moved in line with those of other advanced economies since 2016. While sterling investment grade corporate bond spreads had risen since the beginning of the year, they were only slightly above their historical average, and were at a similar level to that seen at the beginning of 2016.

76. However, estimates of equity risk premia for an index of UK-focused companies had increased since the EU referendum, in contrast to falls in equity risk premia for the S&P 500 index and Euro Stoxx index over that period. And the Bank of America Merrill Lynch Global Fund Manager survey reported in November 2018 that 27% of respondents were underweight UK equities, compared to an average of 12% since 1999.

#### *Household indebtedness*

77. Household debt (excluding student loans) had reached 125% of household incomes, materially below its peak of 144% in 2008 but high historically.

78. Mortgage price and non-price terms had loosened in recent years as competition had intensified. While the share of lending with loan-to-income (LTI) ratios at or above 4.5 had fallen slightly to 9.4% in 2018 Q2 – below the FPC’s flow limit – the share of new mortgages with LTI ratios between 4.0 and 4.5 had reached 19.2%, an historical high. The share of advertised products available to finance a 90% loan to value (LTV) mortgage had increased from 13.8% in September 2015 to a post-crisis peak of 17.3% in September 2018. The proportion of new mortgage lending at LTV ratios at or above 90% was 17.8% in 2018 Q2, up from 16.3% in 2015 Q2. The additional interest rate charged on a 90% LTV mortgage compared to a 75% LTV mortgage – a measure of compensation lenders received for risk – was 46 basis points in October 2018, compared to 139 basis points in 2015.

79. Mortgage lending had grown by 3.2% in the year to September 2018, broadly in line with household disposable income growth. This modest growth reflected weakness in demand – particularly concentrated in London and the South East – driven by the squeeze in real incomes, property tax changes relating to properties, and slightly lower consumer confidence, in part due to uncertainties related to Brexit.

80. Reflecting strong lender risk appetite and slowing house price growth, the share of the stock of owner-occupier mortgages with LTV ratios greater than 75% had increased since 2016. This increased the risk of losses to lenders since there was less collateral available if the borrower defaulted. At the same time, however, the share of households with mortgage DSRs of at least 40% fell to 1% in 2018 H2. With all other factors held equal, mortgage interest rates would need to increase by almost 300 basis points for the share to reach its 1997-2006 average of 1.8%.

81. Consumer credit had grown by 7.7% in the 12 months to September 2018, slowing from a peak of 10.9% in November 2016. During 2017, the slowing in consumer credit reflected the completion of a structural shift towards households purchasing more cars using dealership car finance. The more recent slowdown was consistent with some tightening in supply across consumer credit products. Lenders responding to the Credit Conditions Survey (CCS) had reported tightening in the availability of consumer credit since 2017.

#### *Overall domestic credit environment*

82. In aggregate, growth in total private non-financial sector credit (excluding student loans) had been modest. It slowed to 3.9% in the year to 2018 Q2, slightly faster than nominal GDP growth of 3.2%. The stock of total credit to GDP had fallen by over 30 percentage points since 2008, and was

now growing broadly in line with GDP. But it remained elevated by historical standards. Debt servicing burdens for households and businesses remained low, supported by current low interest rates.

83. The UK's credit-to-GDP gap, which measured the difference between the ratio of credit to GDP and a simple statistical estimate of its long-term trend, remained significantly negative, at -12 percentage points. This indicator had been strongly correlated with past financial crises. But as the FPC had previously noted, the long-term trend on which it was based currently gave undue weight to the rapid build-up in credit prior to the global financial crisis, which proved to be unsustainable.

### **Risk overview and UK CCyB rate decision**

84. In the FPC's judgement, apart from those related to Brexit, domestic risks remained at a standard level overall. Lender risk appetite was strong, particularly in the mortgage market. However mortgage lending growth had been modest. Consumer credit growth had also slowed recently, consistent with some tightening in credit conditions. In corporate credit markets, risk appetite had been strong, particularly in leveraged lending. In recent months, there had been signs that creditor risk appetite in financial markets had begun to decrease, consistent with some moderation in global activity growth and a pickup in trade tensions. Overall aggregate credit growth in the UK had slowed.

85. Risks to UK financial stability from global debt vulnerabilities remained material in the Committee's judgement. Global financial conditions had continued to tighten since June. Global equity markets had fallen and credit spreads had risen. A further deterioration in Italy's financial outlook could result in material spillovers to the euro area and the UK. Financial conditions in emerging market economies had shifted from accommodative to tightening. Debt levels in China remained highly elevated. A sharp slowdown in growth in China – possibly as a result of an escalation of trade tensions with the US – would make its elevated debt levels significantly less sustainable.

86. The Committee considered the appropriate setting of the UK CCyB rate. The prevailing UK CCyB rate of 1% had first been set in November 2017. Given the normal twelve month implementation period, this rate would take effect from 28 November 2018.

87. In Q3, the Committee had noted that it would conduct, as normal, a comprehensive assessment of the resilience of the UK banking system in the 2018 stress test as part of reviewing at this meeting the adequacy of the 1% CCyB rate. The results of this test, which the FPC had

reviewed earlier in the meeting, showed that the riskiness of banks' UK assets had not changed overall since the 2017 ACS: loss rates over the stress period were broadly unchanged. This analysis therefore suggested that a UK CCyB rate in the region of 1% remained appropriate.

88. As the Committee had discussed earlier, the UK economic scenario in the 2018 stress test of major UK banks was also sufficiently severe to encompass the outcomes based on 'worst case' assumptions about the challenges the UK economy could face in the event of a cliff-edge Brexit. Given this, the Committee had continued to judge that the UK banking system had a sufficient buffer of capital to serve UK households and businesses through a disorderly Brexit.

89. Given its assessment of the risk outlook and the resilience of the UK banking system, the FPC therefore decided to maintain the UK CCyB rate at 1% in Q4 2018. This decision was consistent with the Committee's 2015 published strategy that it expected to set a UK CCyB rate in the region of 1% in a standard domestic risk environment.

90. The Committee discussed that it stood ready to move the UK CCyB rate in either direction as the risk environment evolved.

91. If an economic stress were to materialise, the FPC would be prepared to cut the UK CCyB rate, as it did in July 2016. This would enable banks to use the released buffer to absorb up to £11 billion of losses. Relative to the counterfactual where these losses might lead banks to restrict lending to ensure they could meet a 1% UK CCyB rate, the release could preserve their capacity to lend to UK households and businesses by around £250 billion. This compared to £65 billion of net lending in the past year, so the released capital could sustain this level of net lending for several years. The release of the UK CCyB rate would be consistent with the FPC's firm intention that all elements of banks' regulatory capital buffers could be used to absorb losses, reducing banks' incentives to cut lending to the real economy in a stress.

92. In the absence of economic stress, the FPC would remain vigilant to developments in the domestic credit environment. There were signs that lender risk appetite was strong and credit supply conditions were accommodative. This had not translated into materially greater riskiness of the financial environment because demand for credit had, at the same time, been muted. This could reflect Brexit-related uncertainty. Were that uncertainty to fade, credit demand could rebound significantly and lead to an increase in the riskiness of banks' exposures. Given current accommodative lending conditions, that could require a timely policy response to ensure resilience.

93. The FPC would continue to review the setting of the UK CCyB rate as economic conditions and the overall risk environment evolved.



## Resilience of market-based finance

### *Assessment of leverage in non-banks*

94. In 2017, the FPC had asked for an in-depth assessment of the role of leverage in the non-bank financial system, especially leverage created through the use of derivatives. It had published initial work in the June 2018 FSR. At its meeting, the FPC reviewed and confirmed its conclusions on current risks, drawing on this and work done since June by the Bank and the FCA. This work had made extensive use of trade repository data, which authorities had collected since 2014. The FPC's conclusions would be set out in detail in the forthcoming FSR.

95. Non-bank leverage could support financial market functioning, but it could also expose non-banks to greater losses and sudden demands for high-quality collateral, which could result in forced sales of potentially illiquid assets.

96. The FPC judged that where this potential for greater losses threatened the provision of any critical services a non-bank provides (such as insurance) or the solvency of its systemically important counterparties (such as large banks), this should be mitigated by post-crisis reforms, such as capital requirements, central clearing and collateralisation of uncleared derivatives.

97. However risks from potential sudden demands for liquidity remained. If a non-bank did not have sufficient liquid assets to meet these demands, it might be forced to sell less liquid assets, potentially depressing prices, causing losses for other institutions and impairing the functioning of markets.

98. The quantitative analysis that the Committee considered therefore focused on the capacity of non-banks in the UK to cover the posting of variation margin on over-the-counter (OTC) interest rate derivatives, an important driver of potential demands for liquidity.

99. The FPC's assessment focused on single-currency OTC interest rate derivatives — the largest class of derivatives globally by outstanding market value. The institutions covered included: the largest UK insurers, and the biggest derivatives users among UK pension funds, UK investment funds and hedge funds reporting to the FCA.

100. At an aggregate level, these non-banks' stock of liquid assets was around £56 billion in cash and £500 billion in government bonds. This was vastly greater than the total variation margin calls non-banks would face even under the most severe interest rate scenario considered by the FPC.

101. Based on analysis that estimated the liquidity shortfalls and potential fire sales of individual firms, most non-banks appeared to have sufficient liquid assets to meet such calls. A small minority of non-banks would face margin calls in excess of their available liquid asset buffers. However, the liquidity shortfall, and corresponding potential amount of forced asset sales, remained small as a proportion of the total demand on liquidity. Even if all non-banks were to sell only sterling corporate bonds to obtain the liquidity to meet this shortfall, this was still equivalent to just 7% of monthly trading volume in the sterling corporate bond market.

102. Taken together, these results meant that risks of forced sales to meet derivative margin calls currently appeared limited.

103. This conclusion was, however, based on a partial analysis. For example, the analysis was limited to UK institutions and did not consider the potential for firms outside of the UK being forced into asset sales that impact markets globally, with spillovers to the UK. Moreover, liquidity risk deserved particular attention as the nature of the risk was evolving. For example, a further increase in the rate of central clearing would require more variation margin to be paid in cash rather than government bonds. The Committee agreed that more comprehensive and consistent monitoring by authorities was needed to keep such liquidity risks under review.

104. The FPC welcomed that the Bank was planning to work with other domestic supervisors to enhance the monitoring of these risks. Internationally, the International Organization of Securities Commissions (IOSCO) had issued a consultation paper on how to operationalise the Financial Stability Board's (FSB) recommendation to develop consistent leverage measures for funds. For IOSCO to deliver the objective of the FSB recommendation, the FPC considered that a core set of measures would need to be consistent globally and enable effective monitoring of the potential losses and liquidity demands funds could face. This would enable effective global risk assessment and support supervisors' decision-making. If it were found that risks reached systemic levels, in the FPC's view further action should be considered.

#### *Wider review of risks and regulation beyond the core banking sector*

105. Since 2014, the FPC had augmented its rolling programme of in-depth assessments on specific activities outside of the core banking sector with an overall annual review. If it deemed necessary, the FPC, in line with its objectives, had a power to make Recommendations to HM Treasury on the scope of regulated activities and on the allocation of regulated activities between the PRA and FCA.

106. As part of its 2018 review, the FPC considered the fragilities within the non-bank financial system and the channels through which these could affect financial stability. Fragilities it considered

included leverage as well as liquidity or maturity mismatch between assets and liabilities. The FPC also reviewed recent regulatory changes, and assessed whether vulnerabilities in the non-bank financial system would be addressed by domestic or international workstreams, or whether further action might be needed.

107. In line with the cyber work plan set out in its June 2017 *FSR*, the Committee also considered the importance of the cyber resilience of third-party providers that were outside the regulatory perimeter but which were important for the UK financial system.

108. One type of third-party services that had seen significant growth was the use of cloud service providers that offered shared virtual data storage and processing capabilities. If configured correctly, cloud services could significantly improve operational resilience of individual institutions, because the scale and expertise of cloud service providers allowed them to build resilience in a way that exceeded the capability of individual firms. However, there were risks associated with third-party provision of such services, which financial firms needed to manage. For example, the market was at present highly concentrated among a few cloud service providers, therefore disruption at one provider could interfere with the provision of vital services by several firms.

109. Given these risks and that cloud services had the potential to continue growing rapidly, the FPC agreed that it would commence close monitoring of risks from the provision of cloud services to the financial sector. It would also continue to assess whether the resilience of other third-party service providers could threaten UK financial stability.

110. The FPC also reviewed a number of other fast-growing or evolving areas that it had previously committed to monitoring closely: exchange-traded funds, peer-to-peer (P2P) lending, financial technology innovation and risks from 'fast markets'. In 2017, P2P lending had accounted for less than £5 billion of new lending. Given the limited size and a recent slow-down in P2P lending growth, the FPC judged it was not likely to pose a threat to UK financial stability in the medium term. It agreed at this stage to remove it from its close-monitoring list.

111. In light of its review, the FPC agreed that it was not necessary to recommend any changes to the regulatory perimeter at this stage. It noted that it had already started an in-depth assessment of risks in leveraged loan markets, given the rapid growth of leveraged lending. It would include a progress update on its other previous in-depth assessments in its forthcoming *FSR*.

### *Libor*

112. In June 2018, the FPC had agreed it would continue to monitor progress and report regularly on developments in the risks associated with reliance on Libor. The Committee was updated on

progress on the transition to alternative risk-free reference rates. There had been initial encouraging signs. The share of the notional cleared sterling swap market referencing SONIA (the preferred risk-free rate) reached 18%, up from 11% in July 2017. There had also been a pickup in the volume of SONIA futures contracts traded, and there were increasing signs of SONIA being used in cash markets; as at end-October there had been £5.5 billion of SONIA-linked bonds issued from a mix of banks and supranational government entities. Finally, progress had been made in other currencies; in the US, there had been increased use of the Secured Overnight Financing Rate (SOFR), the preferred US dollar risk-free rate; and in the euro area, the euro short-term rate (ESTER) had been chosen as the preferred risk-free rate and was due to be published from the end of 2019. These developments would be set out in more detail in the forthcoming FSR.

113. In spite of this progress, important challenges for the market and authorities remained. The FCA and PRA had written to CEOs of major banks and insurers in the UK seeking assurance that regulated firms understood the risks associated with Libor transition. Responses were due by 14 December, and would support the FPC's ongoing monitoring of risks related to Libor transition.

### *Cyber*

114. The FPC had been planning to have a further discussion at its meeting of its impact tolerances for cyber disruption, ahead of the cyber stress testing pilot that the Bank was due to launch in 2019. This was one part of the four necessary elements of regulation for the UK financial system's cyber resilience necessary to mitigate systemic risk, which the FPC had set out in 2017: (i) clear baseline expectations for firms' resilience that reflected the importance of firms and the services they provide for the financial system; (ii) regular testing by firms and supervisors; (iii) identification of firms that were outside the financial regulatory perimeter, but which might be important for regulated firms; and (iv) clear and tested arrangements to respond to cyber attacks when they occurred.

115. It agreed to delay until the first half of 2019 the setting of impact tolerances, given the focus on preparations for Brexit. Staff would however continue to develop proposals in the interim.

### **The FPC's remit response**

116. On 29 October, the FPC had received from the Chancellor a letter setting out the economic policy of Her Majesty's Government and Treasury's recommendations under Sections 9D-9E of the Bank of England Act 1998. The FPC would respond in due course.

### **Regular / other reviews**

## *Review of redacted text*

117. Under Section 9U of the Bank of England Act 1998, the FPC can defer publication of some parts of the Records of its meetings, if it decides that publication at that point would be against the public interest. Where it defers publication of text, it sets a date for publication or keeps that decision under review.

118. At its meeting, the FPC decided that it was no longer necessary to defer the publication of the remaining text from its previous discussions on Brexit. The majority of the relevant text related to the Committee's discussion of the adverse economic shocks that could arise from Brexit. It had published on a number of occasions its judgement that the Bank's 2017 stress test of the UK banking system encompassed an appropriately wide range of UK macroeconomic outcomes that could be associated with Brexit. Chapter 2 of the forthcoming FSR would contain further detail, and an assessment compared to the 2018 stress test, based on the Committee's earlier discussion at this meeting; detail from this would also be included in the Bank's response to a request from the Treasury Committee for the Bank to provide an analysis of how the EU Withdrawal Agreement will affect the Bank's ability to deliver its objectives for monetary and financial stability, including in a 'no deal' scenario. Further, the negotiations between the UK and the EU27 had now concluded and so the public interest case for redacting the information was diminished.

119. The FPC therefore agreed that the text where publication had previously been deferred would be reproduced in full in Annex 3 of its forthcoming FSR.<sup>3</sup> The Records of the FPC's previous meetings would also be updated to include this text, when the Record of this meeting was published on 5 December.

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<sup>3</sup> <https://www.bankofengland.co.uk/financial-stability-report/2018/november-2018>

The following members of the Committee were present:

Mark Carney, Governor

Jon Cunliffe, Deputy Governor responsible for financial stability

Ben Broadbent, Deputy Governor responsible for monetary policy

Dave Ramsden, Deputy Governor responsible for markets and banking

Sam Woods, Deputy Governor responsible for prudential regulation

Alex Brazier

Anil Kashyap

Donald Kohn

Richard Sharp

Elisabeth Stheeman

Martin Taylor

Andrew Bailey, Chief Executive of the Financial Conduct Authority

Charles Roxburgh attended as the Treasury member in a non-voting capacity.

Martin Taylor was present on 27 November, but was unavoidably unable to attend on 20 November, after the meeting had been brought forward so that the FPC's latest assessments on the resilience of the UK financial system to Brexit could be included in the Bank's response to the Treasury Committee. He communicated his views to the Governor beforehand, and the Committee agreed that he should be treated as present for the purposes of the meeting.

As permitted under the Bank of England Act 1998, Diana Noble was present at the 20 November meeting as observer in her role as a member of Court.

## ANNEX: PREVIOUS FPC POLICY DECISIONS

### Outstanding FPC Recommendations and Directions

The FPC has no Recommendations or Directions that have not already been implemented.

### Other FPC policy decisions which remain in place

The table below sets out previous FPC decisions, which remain in force, in the setting of its policy tools. The calibration of these tools is kept under review.

Topic	Calibration
<b>Countercyclical capital buffer rate</b>	<p>At its meeting in November 2018, the FPC set the UK CCyB rate at 1%, unchanged from October.</p> <p>The UK has also reciprocated a number of foreign CCyB decisions — for more details see the Bank of England website.<sup>1</sup> Under PRA rules, foreign CCyB rates applying from 2016 onwards will be automatically reciprocated up to 2.5%.</p>
<b>Mortgage loan to income ratios</b>	<p>In June 2014, the FPC made the following Recommendation (14/Q2/2): The Prudential Regulation Authority (PRA) and the Financial Conduct Authority (FCA) should ensure that mortgage lenders do not extend more than 15% of their total number of new residential mortgages at loan to income ratios at or greater than 4.5. This Recommendation applies to all lenders which extend residential mortgage lending in excess of £100 million per annum. The Recommendation should be implemented as soon as is practicable.</p> <p>The PRA and the FCA have published their approaches to implementing this Recommendation: the PRA has issued a policy statement, including rules,<sup>2</sup> and the FCA has issued general guidance.<sup>3</sup></p>
<b>Mortgage affordability</b>	<p>At its meeting in June 2017, the FPC replaced its June 2014 mortgage affordability Recommendation to reference mortgage contract reversion rates:</p> <p>When assessing affordability, mortgage lenders should apply an interest rate stress test that assesses whether borrowers could still afford their mortgages if, at any point over the first five years of the loan, their mortgage rate were to be 3 percentage points higher than the reversion rate specified in the mortgage contract at the time of origination (or, if the mortgage contract does not specify a reversion rate, 3 percentage points higher than the product rate at origination). This Recommendation is intended to be read together with the FCA requirements around considering the effect of future interest rate rises as set out in MCOB 11.6.18(2). This Recommendation applies to all lenders which extend residential mortgage lending in excess of £100 million per annum.</p> <p>At its meeting in September 2017, the FPC confirmed that the affordability Recommendation did not apply to any remortgaging where there is no increase in the amount of borrowing, whether done by the same or a different lender.</p>

<sup>1</sup><https://www.bankofengland.co.uk/financial-stability>

<sup>2</sup><http://www.bankofengland.co.uk/pr/Documents/publications/ps/2014/ps914.pdf>

<sup>3</sup><https://www.fca.org.uk/publications/finalised-guidance/fg17-2-fpc-recommendation-loan-income-ratios-mortgage-lending>