HM Treasury

Review of the cash ratio deposit scheme:

consultation on proposed changes

February 2018

HM Treasury

Review of the cash ratio deposit scheme:

consultation on proposed changes

February 2018

© Crown copyright 2018

This publication is licensed under the terms of the Open Government Licence v3.0 except where otherwise stated. To view this licence, visit nationalarchives.gov.uk/doc/open-government-licence/version/3 or write to the Information Policy Team, The National Archives, Kew, London TW9 4DU, or email: psi@nationalarchives.gsi.gov.uk.

Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

This publication is available at www.gov.uk/government/publications

Any enquiries regarding this publication should be sent to us at public.enquiries@hmtreasury.gsi.gov.uk

ISBN 978-1-912225-53-8

PU2141

Contents

Executive summary		2
Chapter 1	Introduction	4
Chapter 2	Operation of the CRD scheme	6
Chapter 3	Projecting future costs	11
Chapter 4	Projecting future income	14
Chapter 5	The impact on the financial sector	20
Chapter 6	Alternative funding arrangements	22
Chapter 7	Consultation and how to respond	23
Annex A	Indexation	24
Annex B	Draft Statutory Instrument	27
Annex C	Consultation stage impact assessment	30

Executive summary

Under the cash ratio deposit (CRD) scheme, deposit-taking financial institutions (i.e. banks and building societies) place non-interest bearing deposits at the Bank of England ("the Bank"). The Bank invests these deposits in financial instruments, and the income earned on these investments is used to fund the costs of the Bank's monetary policy and financial stability operations.

As part of the last review of the CRD scheme (which took place in 2013), the government made a commitment to conduct a further formal review within five years. The scheme parameters set at that review were conditioned on a set of assumptions regarding gilt yields and the growth rate of eligible liabilities over the subsequent five years. Leaving the existing parameters unchanged would mean that income generated by the scheme would no longer match the Bank's forecast expenditure. This would inhibit the Bank from discharging its functions in pursuit of its statutory objectives in respect of monetary policy and financial stability. Over the last CRD period the scheme did not generate sufficient income to cover the cost of the Bank's policy functions.

The current government review therefore focuses on the operation and suitability of the CRD scheme, taking into account the interests of the wider financial sector, the Bank's customers and the taxpayer, as well as the need to ensure that the Bank's policy costs are fully funded over the next CRD period.

This consultation document sets out the findings of that review and the amendments the government is considering to make to the CRD scheme.[1]

The review of the past performance of the CRD scheme found that the Bank's income has fallen below required levels over the last five years. This was due to two reasons: (i) gilt yields have fallen below expected levels at the time of the last CRD review; and, (ii) the Bank's responsibilities have increased in this period, resulting in increased policy costs.

While discrepancies between projections and actual outcomes have always existed under the CRD scheme, this has become more significant in recent years as the Bank has taken on increased responsibilities. This has resulted in the Bank being underfunded in recent years. The proposals set out in this consultation document are intended to correct this and to put the Bank on a sounder financial footing.

For the 2018-23 period, total costs are projected to be £845 million. The Bank has committed to containing its costs in the medium term and will manage this through a cost containment and re-prioritisation programme. Given this, and absent

1 As part of the review, the Treasury has already informally consulted all institutions that are currently "eligible institutions" under the CRD scheme. A total of 19 responses were received.

significant changes to the Bank's remit, the total costs estimate of £845 million is based on a planning assumption that the Bank's annual costs, to be recovered through the CRD scheme, will remain at 2018-19 levels, averaging £169 million over the review period. The Bank will continue to increase transparency around the income and use of resources under this scheme over the CRD review period.

Recommendations of the review

- The CRD scheme continues to be a suitable method of funding the Bank's monetary policy and financial stability costs but the CRD ratio should be increased to address the shortfall in the Bank's funding and requires refinement to make it responsive to changes in gilt yields. Responsiveness should be achieved by moving from a single fixed ratio to a variable ratio, indexed to gilt yields and calculated every six months.
- The current value bands should be maintained, with the threshold value band remaining at £600 million.
- All other parameters of the scheme should remain unchanged but be kept under review.
- The government will continue to monitor the effectiveness of the CRD scheme and will conduct a further formal review within five years and publish a report in respect of that review.

Consultation and how to respond

The purpose of publishing this consultation document is to enable any interested parties to make representations on the following issues:

- the proposal to move from a fixed ratio to a ratio that is indexed to yields on a portfolio of gilts and is calculated every six months
- the technical aspects of the operation of the scheme that interested parties consider could be improved
- any other matters raised in this consultation document

This consultation will be published on HM Treasury's website. Following receipt of responses, we will inform the interested parties of the results and the action that has been decided on, or contact them with further questions that have been raised as a result of this consultation.

Responses are invited by 9 March 2018 and should be sent to CRD-Review@HMTreasury.gsi.gov.uk. This shorter consultation period reflects the fact that the government has already sought the views of all eligible institutions as part of this review.

Chapter 1
Introduction

1.1 Under the CRD scheme, deposit-taking institutions place non-interest bearing deposits at the Bank. The Bank invests these deposits in gilts, and the income earned is used to fund the costs of its monetary policy and financial stability operations.

1.2 The CRD scheme was placed on a statutory footing by the Bank of England Act 1998 ("the Act"), with effect from 1 June 1998. The scheme was reviewed in 2003, 2008 and 2013. As part of the 2013 review, the government made a commitment to conduct a further formal review in five years' time at the latest. This consultation document sets out the conclusions of that review.

The Review

1.3 The review of the CRD scheme was announced by the Chief Secretary to the Treasury in a written statement to the House of Commons on 18 December 2017.[1]

1.4 The review was led by a joint HMT-Bank steering group, whose lead members were:

- Katharine Braddick, Director General of Financial Services, HM Treasury
- Andrew Hauser, Executive Director for Banking, Payments and Financial Resilience, Bank of England
- Richard Hughes, Director of Fiscal Group and Acting Chief Economic Adviser, HM Treasury
- Rommel Pereira, Finance Director, Bank of England
- Joanna Place, Chief Operating Officer, Bank of England

1.5 As part of the review, the Treasury has already informally consulted all eligible institutions under the CRD scheme. A total of 19 responses were received.

[1] http://www.parliament.uk/business/publications/written-questions-answers-statements/written-statement/Commons/2017-12-18/HCWS361/

Background

1.6 Financial institutions potentially liable to make deposits at the Bank are defined as "eligible institutions" under the Act. These are, broadly:

- UK deposit-taking institutions (banks and building societies) authorised under the Financial Services and Markets Act 2000
- European institutions not authorised by the Prudential Regulation Authority (PRA) but having permission according to the Capital Requirements Directive 2013/36/EU to operate a branch in the UK for the purposes of accepting deposits or other repayable funds from the public

1.7 The size of an eligible institution's cash ratio deposit is calculated by applying two factors:

- the size of its eligible liabilities[2] above a minimum threshold
- a cash ratio, applied above this threshold[3]

2 Paragraph 2 of Schedule 2 to the Act provides that the liability base of an eligible institution at any time is the aggregate of those sterling and foreign currency liabilities of the institution which are eligible liabilities.

3 Eligible institutions with eligible liabilities below this threshold are not required to place any cash on deposit at the Bank under the current scheme.

Chapter 2
Operation of the CRD scheme

2.1 This chapter considers how the CRD scheme has operated to date and provides an overview of the assumptions on costs, yields and eligible liability growth used in 2013 to establish the current parameters of the scheme. It also looks at the scheme's performance over the last 20 years.

Past performance of the CRD scheme 2013-18

2.2 As part of the current review, the government looked at the performance of the scheme in the 2013-18 period. Most significantly, the review found a total shortfall of funding for the Bank's policy functions over this period of £144 million. The reasons for this shortfall are explained below.

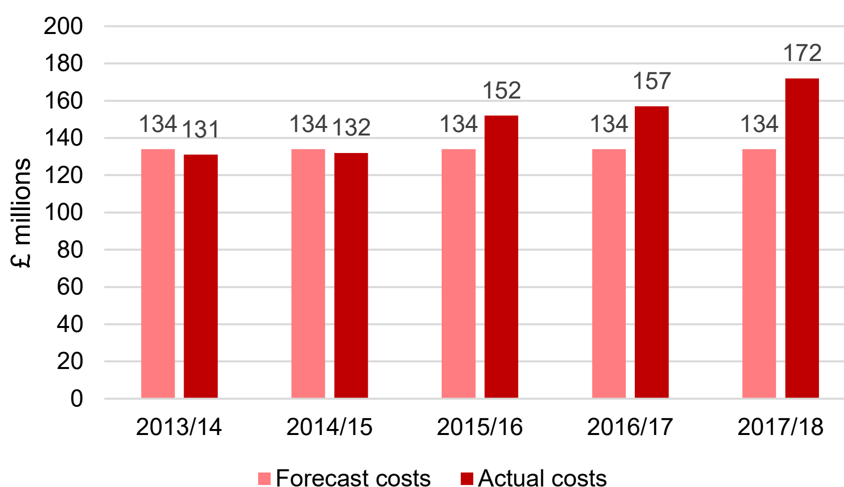
Costs

2.3 The Bank operates a financial framework that includes different funding mechanisms:

- banking and lending operations for the Bank's own account ('remunerated functions'), which are financed from earnings on those functions
- the Bank operating in its capacity under the Financial Services and Markets Act as the PRA, which is funded through a levy on regulated firms to recover all costs in the performance of the PRA's functions under the Act
- the policy functions, monetary policy and financial stability, of the Bank, which are funded through the CRD scheme

2.4 The total cost of the Bank's monetary policy and financial stability functions over the five-year period of 2013-18 was higher than expected, totalling £744 million (of which £172 million is expected to be incurred during the current financial year 2017-18). This is £74 million above the £670 million which had been projected at the time of the 2013 review (see Figure 2.1).

Figure 2.1 The Bank's monetary policy and financial stability costs (2013-18)



Source: Bank of England, 2018

2.5 This increase in costs, relative to initial forecasts, is attributable to: a) the Bank having been given additional and ongoing financial stability responsibilities;[1] and b) the Bank enhancing its ability to better deliver its monetary policy and financial stability objectives through strategic initiatives adopted in 2014. Further detail of these increased costs is provided below:

a) The Bank's additional responsibilities include:

- While the Bank has been the UK's resolution authority since the Banking Act 2009, its statutory responsibilities increased following the transposition of the Bank Resolution and Recovery Directive in 2014. This increased the Bank's obligations to prepare resolution plans and resolvability assessments for all banks and building societies subject to the resolution regime on an annual basis amongst other things. Furthermore, the Bank undertook additional work to develop policy standards for the resolvability of firms at the domestic and international level. The resolution regime was also expanded to include central counterparties (CCPs). The overall aim of these reforms was to strengthen the resilience of the financial sector.

- The Bank's Financial Market Infrastructure (FMI) remit has grown due to an increase in the number of firms under its supervision. FMI is at the heart of the UK financial system and enables the financial system to operate in an orderly manner to support the smooth functioning of the economy. This is critical to the Bank's monetary and financial stability objectives. It also supports the G20-led regulatory reform agenda, which since the crisis has placed increased weight on the role of FMIs in financial markets.

---

[1] As per the Financial Services Act 2012 and the Bank of England and Financial Services Act 2016.

b) Strategic initiatives: As part of the One Bank strategic plan announced in 2014[2] new initiatives were adopted to provide the Bank with better means to meet its monetary and financial stability objectives. The new initiatives include:

- The Financial Stability Strategy and Risk Division was expanded to support the objectives of the Financial Policy Committee (FPC) and Monetary Policy Committee (MPC). For example, the Division is involved in stress testing the impact of adverse economic and market outcomes on the lending, trading and funding activities of banks and building societies. This is an essential part of the Bank's role in assessing whether the banking sector is resilient to future shocks without adversely affecting the provision of financial services to households and businesses.
- Enhancing the International Division to provide the FPC with an ongoing assessment of the impact of global shocks on the UK economy. The division also supports the Governor in his role as chair of the Financial Stability Board, an international grouping of national financial authorities, which aims to deliver a global financial system that is safer, simpler and fairer since the financial crisis.
- A Research and Statistics Hub that supports effective monetary policy decisions. The Hub enhances internal debate, improves policy formulation and provides a challenge function to inform the decisions of the MPC, FPC and Prudential Regulation Committee. The Research Hub also raises the Bank's external profile and its influence through the production and dissemination of analytical work.

2.6 The aggregate impact of these new responsibilities and initiatives amounts to an additional cost of £100 million over the 2013-18 period. These were in part funded by a review of the Bank's corporate service functions in 2013 which realised savings of around £15 million per year. This work was a part of the One Bank strategy (referred to above) to create a more unified institution following the Bank's rapid expansion, including the integration of the PRA. The delivery of the One Bank strategy has been the subject of a National Audit Office (NAO) Value for Money review, which was completed in June 2017.[3] The NAO commended the progress made by the Bank towards building 'One Bank' noting that 14 of the 15 initiatives put in place had been achieved. The NAO also suggested areas that require further improvements, such as additional scrutiny of investment and greater clarity on outcomes when starting new initiatives. The Bank has drawn on some of the lessons and findings from the NAO's review to inform its new Vision 2020 strategic plan.[4]

2 First announced in the Bank of England Annual Report 2014 (p.14), available at: https://www.bankofengland.co.uk/-/media/boe/files/annual-report/2014/boe-2014.pdf.

3 National Audit Office 'Progress delivering the 'One Mission, One Bank' strategy value for money review – full report available at: https://www.nao.org.uk/wp-content/uploads/2017/06/Progress-delivering-the-One-Mission-One-Bank-strategy.pdf.

4 A full response to the NAO value for money review is available on the Bank's website at: https://www.bankofengland.co.uk/news/2017/june/nao-report-on-one-bank-strategy.

2.7 While the Bank's costs have increased as a result of the additional responsibilities taken on over the 2013-18 period, the Bank has put in place a cost containment and re-prioritisation programme and will fund any future enhancements through efficiency savings. Given this, and absent significant changes to the Bank's remit, the total costs estimate of £845 million for the 2018-23 period is based on a planning assumption that the Bank's annual costs, to be recovered through the CRD scheme, will remain at 2018-19 levels, averaging £169 million over the review period. The Bank will continue to increase transparency around the income and use of resources under this scheme.

Yields

2.8 Lower-than-expected CRD income has arisen principally because the average annual investment yield expected on CRD deposits over the period from March 2013 to February 2018 was 2.7% (including a forecast yield for 2017-18 of 2.2%), compared to an estimate of 3.0% in the 2013 review. This is due to the lower prevailing yields on new gilt investments and the prolonged period of a low Bank Rate.

Growth in eligible liabilities

2.9 Total eligible liabilities have grown at a rate close to forecast, from £2,229 billion at 1 June 2013[5] to £2,616 billion at 1 December 2017, at an annualised growth rate of 3.6%. However, excluding the growth in eligible liabilities under the £600 million threshold, the total cash ratio deposit has grown at 3.1%. The 2013 CRD review had assumed a growth rate of 3.3% in this cash ratio deposit. In terms of the scheme's income shortfall, eligible liability growth is of less significance than the effect from yields.

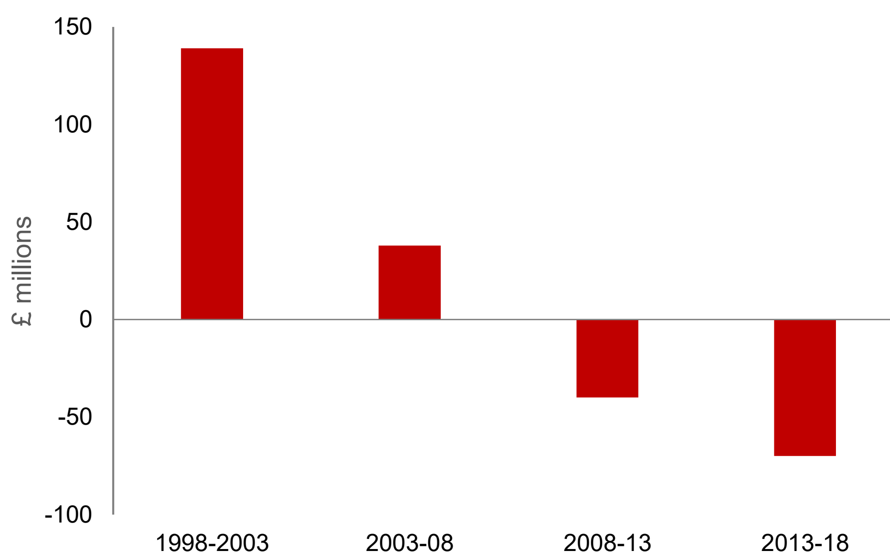
Net effect

2.10 Over the course of the 2013-18 period, the CRD scheme generated a total income of £587 million (of which £105 million is expected in 2017-18), lower than the £657 million forecast at the last review. The £70 million shortfall in CRD income, in addition to the £74 million increase in costs, has resulted in a deficit in the scheme totalling £144 million over the 2013-18 period.

2.11 The CRD scheme has broadly operated in its current form since becoming statutory in 1998, based on a fixed ratio being applied to all eligible liabilities above a threshold value band. Over that period, the extent to which the scheme has met its forecast income has varied, with surpluses in the first two review periods turning into growing deficits in the latter two (see Figure 2.2).

[5] This is the date at which the Cash Ratio Deposit (Value Bands and Ratios) Order 2013 came into force.

Figure 2.2 CRD scheme actual income relative to forecast costs (1998-2018)



Source: Bank of England, 2018

2.12 These surpluses and deficits have resulted from the fact that the CRD scheme is based on forecasts of (i) the Bank's costs, (ii) the aggregate level of eligible liabilities, and (iii) the level of gilt yields.[6] Given the margin for error in the forecasts and the absence of any mechanism to respond to in-period deviations, the scheme has been susceptible to discrepancies over each five-year review period. In respect of each review period from 2003 onwards, these surpluses and deficits have largely arisen as a result of the expected yield over the five-year period deviating from the forecast set at the beginning of that period. As can be seen from Figure 2.2, the differences are large and growing.

2.13 Differences in the Bank's costs have generally been the result of changes to its functions or remit which were not foreseen at the time of the reviews. It is not the purpose of the review to pre-judge the Bank's objectives over the coming five-year period.

2.14 Chapter 3 examines the projected costs of the Bank's monetary policy and financial stability functions for the next five years, as the basis for setting the new CRD ratio. Chapter 4 then proposes revisions to the operation of the scheme to reduce the pattern of surpluses and deficits

6 Neither the Bank nor the Treasury forecast gilt yields. These forecasts are the implied forward rates taken from the gilt yield curve.

Chapter 3

Projecting future costs

3.1 This chapter sets out the basis upon which the review examined the Bank's projected costs in respect of its monetary policy and financial stability functions for the period 2018-23. It then describes those forecast costs and what they will cover.

Cost review

3.2 The review considered the Bank's forecast costs in relation to its monetary policy and financial stability functions (i.e. those costs to be met through CRD income). This included examining detailed policy costs since 2014 to understand how the Bank's costs have risen in line with an expansion in its role and responsibilities. The largest component of the forecast costs was staff pay and benefits. Within this, significant reforms to the Bank's reward strategy in 2015, including to the employee pension scheme, represented a notable effort toward controlling long-term costs. Growth in the number of employees working on monetary policy and financial stability, along with the grade mix in divisions, have also broadly matched the Bank's expanded functions and strategic initiatives.

3.3 Other areas of costs which have been considered as part of the review include internal recharges from other areas within the Bank, such as legal, IT and communications; policy costs recovered from the PRA and Markets divisions; as well as property utilisation and estate costs covered by the CRD scheme.

3.4 The assessment of the Bank's policy costs also took account of the recent report by the NAO (see paragraph 2.6 above) which, since 2016,[1] has been able to undertake value for money assessments of the Bank's operations. The review noted the recommendations in respect of upfront scrutiny of costs going forward.

3.5 Having undertaken a comprehensive review of the Bank's forecast costs for the period 2018-23, the review concluded that the policy costs covered by the scheme are reasonable, having particular regard to the Bank's expanded remit in monetary policy and financial stability since 2013.

3.6 The Bank's total policy costs over the period 2018-23 are forecast to increase compared to the previous CRD period as explained in Chapter 2. The Bank's costs for the 2013-18 period amounted to £744 million, above the £670

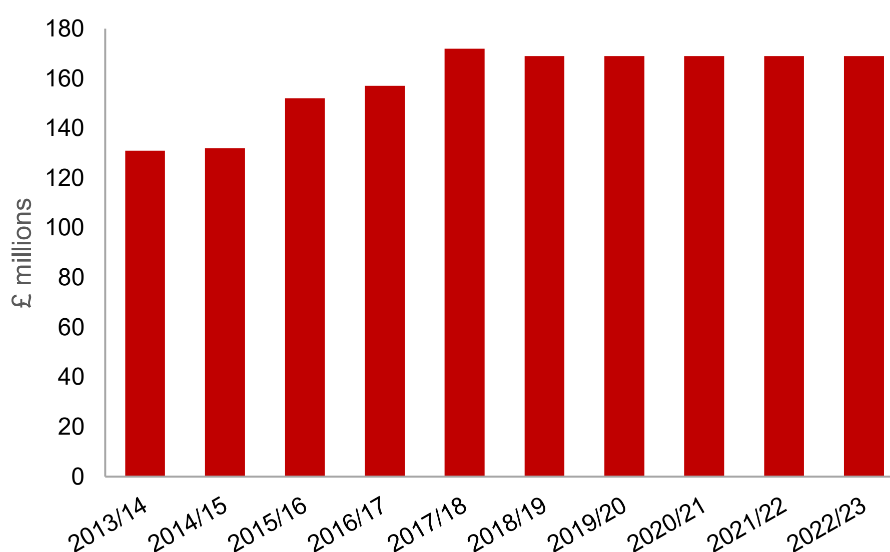
1 The Bank of England and Financial Services Act 2016 gave the National Audit Office the power to examine the economy, efficiency and effectiveness with which the Bank uses its resources.

million originally forecast. For the 2018-23 period total costs are projected to be £845 million.

2018-2023 cost estimates

3.7 The review tested the assumptions underpinning the £845 million estimate of costs over the next five years and their implications for the parameters of the scheme. Costs for 2017-18 are projected to be £172 million, after which, absent significant changes to the Bank's remit, and as a result of the cost containment and re-prioritisation programme, the total costs are estimated at £845 million. This is based on a planning assumption that the Bank's annual policy costs, to be recovered through the CRD scheme, will remain at 2018-19 levels, averaging £169 million over the review period (see Figure 3.1).

Figure 3.1 Bank of England policy costs (2013-2023)



Source: Bank of England, 2018

3.8 The projected total costs of the Bank's monetary policy and financial stability functions will be in the order of £845 million over the five-year period from March 2018 to February 2023. These costs will be fixed over the five-year period. This estimate takes into account:

- The additional costs of the Bank's increased responsibilities and the initiatives adopted by the Bank as part of the One Bank strategic plan which aim to provide the Bank with better means to meet its monetary and financial stability objectives (as outlined in paragraph 2.5). Those initiatives and responsibilities are already in place and have not been fully covered by the 2013-18 CRD ratio.
- The comprehensive programme of cost containment and re-prioritisation that the Bank is proposing to put in place over the CRD review period (as described in paragraph 2.7). This will mean that continued efforts will be made to deliver savings, so that any future enhancements will be funded through efficiency savings. It will also include processes to prioritise work streams and resources and align the operating model to consider where critical work needs to take place.

- An estimate of future pension service costs, which are valued using an investment grade corporate bond yield (as mandated by IAS19), at future reporting dates, to discount the future cash flows. This means that actual pension costs will fluctuate year on year in line with movements in corporate bond yields. However, the estimate of pensions costs used for the review has been based on reasonable assumptions regarding future corporate bond yields. These costs amount to £22 million per year.
- The fact that FMI supervisory costs will no longer be funded through the CRD scheme. This reflects the intention that the supervisory costs of CCPs, payment systems and central securities depositories are to be charged directly to the supervised firms. A separate consultation will be published in 2018 on the proposed change to FMI supervisory cost recovery.
- The inclusion of the costs of running the Asset Purchase Facility (APF) in line with the current nature and scale of its indemnified operations that amount to approximately £5 million per year. While operations through the APF represent unconventional monetary policy, the APF can be expected to continue to operate in its current form as a principal monetary policy implementation tool for a number of years. This was not the case during the 2013 Review, when the APF had only been running for four years.

Chapter 4

Projecting future income

4.1 This chapter considers whether amendments to the current parameters of the CRD scheme are required in order to ensure that the income generated is sufficient to cover the Bank's policy costs for the 2018-23 period (as described in Chapter 3), and considers how to address volatility in that income.[1]

4.2 For the purposes of calibrating the scheme parameters and projecting future income respectively, annual eligible liability growth in the central scenario is assumed to be 2.9% (based on the Bank's forecasts for growth in broad money[2] over the 2018-23 period), and a portfolio return of 2.0% (based on the return from the Bank's portfolio if yields implied by the gilt forward-curve were to materialise).

The current scheme

4.3 On the basis of the current parameters of the CRD scheme (namely a ratio of 0.18%, a threshold value band of £600 million and applying the existing definition of eligible liabilities) and the assumptions set out in paragraph 4.2, an income of £501 million would be generated over the 2018-23 period, i.e. £343 million below the projected costs of the Bank's policy functions in the period (see Table 4.1).

Table 4.1 Additions or deductions to five-year income forecast from different assumptions (given a minimum threshold of £600m and a CRD ratio of 0.18%)

£m		Average annual growth in eligible liabilities (%)		
		0.5	2.9	6.0
Portfolio return (%)	2.0	-373	-343	-311
	3.3	-58	0	55
	3.5	-10	43	109

4.4 Under the current parameters, the scheme is unlikely to cover the Bank's forecast costs for the 2018-23 period. Table 4.1 shows that the return required on the portfolio in order to cover the Bank's forecast costs would

1 Alternative funding models are considered in Chapter 6.

2 M4 excluding intermediate other financial corporations.

need to be around 3.3%. The central scenario assumes a portfolio return of 2.0%, based on forward rates implied by the gilt yield curve.

4.5 The review found that, in order for the current scheme to meet the forecast costs of £845 million over the next five-year period, the ratio will need to be increased to 0.35% with the threshold value band remaining at £600 million. As explained in paragraph 2.7, the Bank has committed to containing its costs in the medium term and will manage this through a cost containment and re-prioritisation programme. Given this, and absent significant changes to the Bank's remit, the total costs estimate of £845 million is based on a planning assumption that the Bank's annual policy costs, to be recovered through the CRD scheme, will remain at 2018-19 levels, averaging £169 million over the review period.

Table 4.2 Additions or deductions to five-year income forecast from different assumptions (given a minimum threshold of £600m and a CRD ratio of 0.35%)

£m		Average annual growth in eligible liabilities (%)		
		0.5	2.9	6.0
Portfolio return (%)	1.5	-166	-121	-66
	1.8	-30	0	89
	2.0	60	120	193

4.6 Table 4.2 shows the income under alternative scenarios of eligible liabilities growth and the investment yield in the future with a ratio of 0.35%. It should be noted that given the increase in the ratio, and therefore the size of the total CRD deposit, the central estimate for the portfolio yield would be reduced to 1.8% (as new purchases at current gilt yields will be lower than the average yield in the existing portfolio).[3]

An indexation-based approach

4.7 Under the current CRD scheme, the ratio for calculating the amount eligible institutions must deposit with the Bank is fixed. Income generated by the scheme is sensitive to gilt yields and could be higher or lower than what is required to meet the Bank's policy costs.

4.8 The review considered how the CRD scheme may be amended to achieve more accurate cost-recovery through each review period. The review proposes to move to an indexation-based approach, which would see the ratio calculated and adjusted, every six months and indexed to prevailing gilt yields. This would make the scheme responsive to changes in gilt yields, to the extent that those gilt yields affect the return on the Bank's portfolio. Under an indexation model, the ratio would increase when yields fall and decrease when yields rise. Such an approach has the potential to lead to a smoother income profile over each five-year review period and, therefore, lead to the Bank being able to better recover its policy costs under the CRD

3 The portfolio return scenarios in Table 4.2 are shown for illustrative purposes only, and do not indicate any probability of alternative scenarios materialising.

scheme. It would also ensure that the Bank does not overcharge payers if gilt yields rise.

4.9 Annex A sets out in detail how an indexation-based scheme would operate in practice. The key features are as follows:

- The ratio would be calculated semi-annually, in line with the current timetable for call notices that are sent by the Bank to relevant eligible institutions.
- The formula for determining the ratio would be as follows:

$$CRD\ ratio = \frac{Target\ income}{Aggregate\ eligibile\ liabilities * Portfolio\ yield}$$

Where:

Target income = The income required by the Bank to cover its costs. This will be calculated based on the Bank's total five-year cost base, divided evenly into annual periods, and will be fixed at the beginning of the five-year 2018-23 period.

Aggregate eligible liabilities = The sum of all eligible liabilities (as currently defined) above the £600 million value band threshold, across all eligible institutions. This will be fixed throughout the five-year period at the average of the forecast eligible liabilities over 2018-23.

Portfolio yield = This is an approximation of the income generated by the Bank's investments made by the Bank under the CRD scheme, based on an externally-sourced market-based measure of gilt yields. Further detail of how the portfolio yield is calculated is included in Annex A.

4.10 The calculation of the ratio would be based on a fixed target income and fixed level of aggregate eligible liabilities, such that the only variable that could cause the CRD ratio to change is the level of gilt yields which influences the portfolio yield calculation.

4.11 In considering the impact of this model, the review undertook sensitivity analysis using three projected paths of gilt yields over the next five-year period, namely (i) a baseline scenario where yields would evolve in line with current forward rates as implied by the gilt yield curve, (ii) an upside scenario where yields rise 1.75 percentage points over the baseline over five years, and (iii) a downside scenario where yields fall 1.75 percentage points relative to the baseline over five years.

4.12 The review then looked at how the ratio under the CRD scheme would behave in relation to each of these scenarios. This analysis is set out in Figure 4.1. In each case, the ratio will increase over the next five years. This is because older investments at much higher yields will mature from the portfolio and are likely to be reinvested in lower yielding gilts.

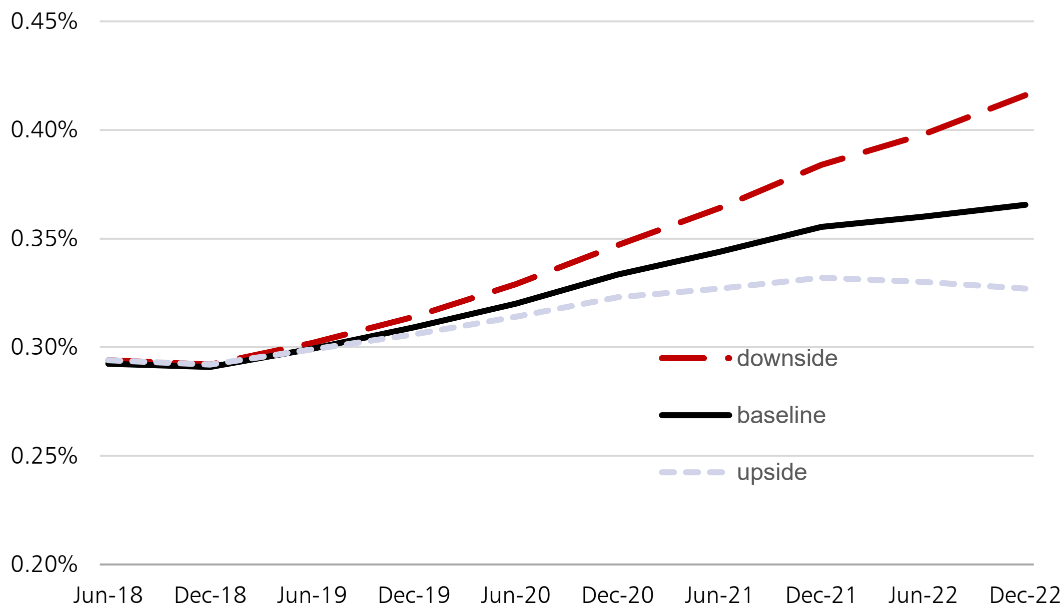
4.13 Given the lower level of yields today as compared to 2013, and the higher policy costs, there would need to be an initial one-off increase in the size of the Bank's investments. This is because an increase to the ratio will be required, whether under a fixed ratio approach or under the indexation model. This increased ratio will, in turn, lead to a one-off increase in the size

of the deposits placed with the Bank by eligible institutions, with those deposits needing to be invested by the Bank. This uplift is accounted for in the portfolio yield calculation as explained in more detail in Annex A.

4.14 As Figure 4.1 shows, the position in relation to each scenario would be as follows:

- In the **baseline** scenario, the CRD ratio would average 0.33%[4] over the five-year period, broadly in line with the estimate of the fixed CRD ratio required under the same assumptions (see paragraph 4.6).
- If gilt yields evolve in line with the illustrative **upside** scenario, the CRD ratio will fall relative to the baseline, as the Bank would be able to meet its target income with a smaller portfolio. The CRD ratio would average 0.31%.
- Similarly, if gilt yields follow the illustrative **downside** scenario, the ratio will increase relative to the baseline, as the Bank will require a larger deposit to meet its target income with lower yields. The CRD ratio would average 0.34%.

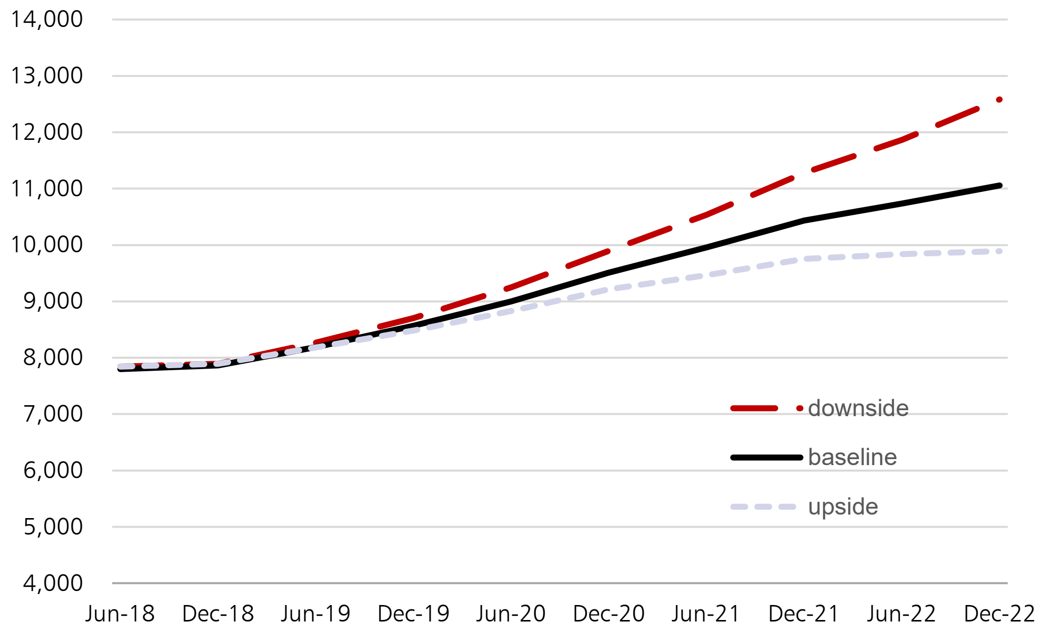
Figure 4.1 CRD ratio under three illustrative yield scenarios



4.15 It should be noted that, in both the illustrative upside and downside scenarios, the change in the ratio under the indexation model is gradual. This is because only a small part of the portfolio is invested at the yields prevailing in each six-month period (see Annex A).

4 The indexation model gives a broadly similar average ratio to that in the fixed model over time. In the next five-year period, the profile of the CRD ratio, and therefore the size of the portfolio, under indexation will likely be lower than the fixed model at the start of the period, and higher at the end (Figures 4.1 and 4.2). The effect of this is likely to be a slightly lower average ratio under indexation, relative to the fixed model, given the current forward yields implied by the gilt curve over the next five years.

Figure 4.2 CRD portfolio size under three illustrative yield scenarios, (£m)



4.16 Figure 4.2 shows the resulting total portfolio size, using the ratios from Figure 4.1. Table 4.3 highlights the range the ratio may take over the course of the five-year period, under the three different yield scenarios.

Table 4.3 CRD ratios under three illustrative yield scenarios

Scenario	Lowest CRD ratio	Highest CRD ratio	Average CRD ratio
Baseline	0.29%	0.37%	0.33%
Illustrative upside	0.29%	0.33%	0.31%
Illustrative downside	0.29%	0.42%	0.34%

4.17 One issue the review identified in relation to the impact of indexation on eligible institutions was the fact that, in contrast to a fixed ratio, a ratio that is calculated every six months in line with prevailing gilt yields would result in a degree of uncertainty for CRD payers. This is because they would need to incorporate a forecast of gilt yields when projecting their future deposits payable under the scheme. This point was also raised by some respondents to the informal consultation. Whilst it is accepted that this approach does introduce a degree of uncertainty, it should be noted that the portfolio yield calculation (as summarised in paragraph 4.9 above and explained in Annex A) is heavily weighted to historical yields reflecting the Bank's investment portfolio. Accordingly, CRD payers will be able to calculate the vast majority of the portfolio yield in a timeframe considered to be compatible with budgeting horizons,[5] a view that was shared by some respondents to the

5 Further detail on this point can be found in the impact assessment in Annex C.

informal consultation. Moreover, the ratio will be calculated semi-annually, which means that any changes to the ratio are likely to be incremental.

Policy proposal

4.18 In light of the above, the review proposes an indexation-based approach to make the ratio responsive to changes in gilt yields. Current market forecasts suggest that an indexation-based approach would result in a ratio averaging around 0.33% over the five-year period.

4.19 The review concluded that the preferred policy option is to move to an indexation-based approach. A ratio that is indexed to prevailing gilt yields and calculated semi-annually is likely to result in a smoother income profile over each review period. This would allow for a more accurate recovery of the Bank's costs, better meeting the purpose of the scheme. The Bank will publish datasets used to calculate the indexed ratio, along with the ratio itself and key steps in its calculation. This consultation invites views on this preferred policy option.

4.20 The parameters of the scheme will continue to be kept under review. A further formal review of the CRD scheme will be undertaken at the latest in five years' time.

Chapter 5
The impact on the financial sector

5.1 Following the review in 2013, the government made amendments to the value bands and ratios under the CRD scheme. The amendments (i) increased the minimum threshold for making deposits to £600 million from £500 million, and (ii) increased the ratio from 0.11 to 0.18%. In relation to the threshold value band, in June 2013, there were 124 eligible institutions that were required to place cash ratio deposits with the Bank. As at December 2017, this figure had increased to 146.

The threshold value band

5.2 The review considered whether amendments to the value bands should be made and, in particular, to the threshold value band above which deposits are required to be placed with the Bank under the scheme. There was little consensus on this issue among respondents to the informal consultation, with some suggesting the threshold should be raised (which would have the effect of reducing the number of institutions that are required to place deposits with the Bank) and others suggesting that it should be lowered (thus broadening the base of institutions).

5.3 The review has considered whether amending the threshold value band (in either direction) would have an impact on the CRD scheme and have concluded, after conducting sensitivity analysis, that there would be negligible difference to the overall scheme income were the value band to be amended by £100 million in either direction. If the threshold were reduced, it would increase the burden on smaller institutions that are currently not required to place deposits at the Bank under the CRD scheme. If the minimum threshold were increased, it would have the effect of focusing the financial burden still further on a smaller number of institutions. The review therefore concluded that the minimum threshold should remain at £600 million for the next period.

Incidence of the scheme

5.4 In December 2017, 81% of the total deposits were made by the largest 20 institutions, of which 14 institutions each contributed more than £50 million in deposits under the scheme. Across all eligible institutions, the median deposit was £5.0 million with a mean of £32.2 million, (due to concentration of the deposit base in the largest firms). Thus, the main incidence of the scheme is on larger banks and building societies. Table 5.1 shows the proportions of deposits made by UK-owned and foreign-owned institutions. UK-owned institutions contribute 81% of the deposits made.

Owing to commercial sensitivity, only aggregated information relating to deposits has been included in Table 5.1.

Table 5.1 Required cash ratio deposits of UK and non-UK eligible institutions as at 1 December 2017

Group	Deposits (£m)	Deposits as % of total
UK		
Major British banking groups	3,058	65
Other UK banks and building societies	749	16
Non-UK		
Branches of EU institutions	248	5
Subsidiaries of foreign institutions in the UK	241	5
Branches of non-EU institutions	412	9
Total	**4,708**	**100**

Source: Bank of England, 2017

5.5 Some respondents to the informal consultation indicated that they had no objections to the proposal to move to an indexation-based approach being considered, as long as the CRD scheme remained fair and proportionate.

5.6 An increase in the ratio means that all deposit-takers with eligible liabilities above the threshold value band of over £600 million would face higher required cash ratio deposits. There will be a corresponding initial uplift to deposits in aggregate. Deposit levels following an initial implementation in June 2018 would then depend on the ratio calculated by the indexation result every six months, as set out in Chapter 4.

5.7 Some respondents to the informal consultation noted that there was an administrative burden of managing the deposit in the context of prudential requirements for major banks and building societies. Further detail can be found in the impact assessment in Annex C (under indirect costs).

5.8 In the wider context of the total tax burden on banks and building societies the review notes that in 2016-17, £3.0 billion was raised from the government bank levy, and over £1.6 billion from the bank corporation tax surcharge. Corporation tax receipts from the banking sector over the same period totalled £4.8 billion.[1] By comparison the CRD scheme is looking to recover £169 million per annum.

1 HMRC, 'Pay As You Earn and Corporate Tax Receipts from the Banking Sector' August 2017 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/639115/PAYE__Corporate_Tax_Receipts_from_the_Banking_Sector_2017.pdf

Chapter 6

Alternative funding arrangements

6.1 The review considered alternative funding arrangements to the CRD scheme and looked at the arrangements used to fund unremunerated functions of central banks in other countries. The most common means of funding has been through retaining the profit from foreign exchange reserves and income from seigniorage (whereby no interest is paid on banknotes and the reserves backing these are invested in interest bearing assets).

6.2 In the UK, the revenues from both of these have always been remitted to the government. The UK's foreign exchange reserves are an asset of the government, and as such the income belongs to the Treasury. The proceeds of seigniorage income have been paid to the government as set out in section 6(1) Currency and Bank Notes Act 1928. Amendments to either of these conventions are unlikely to be achievable in the near-term and, as such, the government does not propose to make any amendment to these at this time.

6.3 A number of respondents to the informal consultation indicated that they considered a fee-based model or levy a more suitable means of funding the Bank's monetary policy and financial stability functions. While the review considered whether a move to a fee-based model or levy, similar to those used by the Financial Conduct Authority and the Prudential Regulation Authority, would be appropriate, it concluded that such a proposal was not possible within the scope of the existing legislation and in the current CRD review period.

6.4 A fee-based model would require more in-depth analysis, starting from first-principles in terms of how costs could be apportioned in a fair and efficient way. Therefore, moving to a fee-based model was not recommended as an option in the near-term. Looking ahead, and in order to inform the next review of the CRD scheme, the Bank intends to do further analysis of alternative funding arrangements.

Chapter 7
Consultation and how to respond

7.1 The purpose of publishing this consultation document is to enable any interested parties to make representations on the following issues:

- the proposal to move from a fixed ratio to a ratio that is indexed to yields on a portfolio of gilts, and is calculated every six months
- the technical aspects of the operation of the scheme that interested parties consider could be improved
- any other matters raised in this consultation document

7.2 The proposed amendments to the scheme as outlined in this consultation will require the implementation of secondary legislation under Schedule 2 to the Bank of England Act 1998. A draft of the statutory instrument which gives effect to the proposed changes can be found in Annex B.

7.3 Responses to the consultation are invited by 9 March 2018 and should be sent to:

Mario Pisani
Deputy Director, Debt and Reserves Management Team
HM Treasury
1 Horse Guards Road
London
SW1A 2HQ
Email: CRD-Review@HMTreasury.gsi.gov.uk

7.4 Responses may be made public unless confidentiality is specifically requested.

Annex A
Indexation

A.1 This section provides further detail on the indexation-based approach proposed in Chapter 4, and which the review has recommended for the new CRD ratio.

The CRD ratio formula

A.2 Paragraph 4.9 set out the following formula which would be used to determine the CRD ratio and is calculated every six months:

$$CRD\ ratio = \frac{Target\ income}{Aggregate\ eligibile\ liabilities * Portfolio\ yield}$$

Where target income will be fixed at £169 million[1] and aggregate eligible liabilities will be fixed at £2,837,817.5 million as specified in the legislation.

The portfolio yield

A.3 The portfolio yield will be recalculated every six months, and consists of three components weighted as per below:

$$\begin{aligned} Portfolio\ yield \\ &= 0.55\ (average\ of\ 8yr\ gilt\ yields\ over\ prior\ 13\ years) \\ &+ 0.42\ (average\ of\ 8yr\ gilt\ yields\ over\ May\ 2018\ to\ Nov\ 2018) \\ &+ 0.03\ (average\ of\ 8yr\ gilt\ yields\ over\ prior\ six\ months) \end{aligned}$$

A.4 It is based on an eight-year gilt yield, chosen to reflect the average duration of the Bank's portfolio. The portfolio generally holds purchases to maturity.

A.5 The first term represents long-term holdings, and is proxied by a historical average of yields over a lookback period of 13 years, chosen to most accurately represent the Bank's current gilt portfolio. The weight, on this part of the portfolio is 55% of the overall portfolio yield.

A.6 The second term is required due to the initial increase in the size of the deposit during the transition to the new mechanism. This means a significant part of the portfolio will be invested in mid-2018, and exposed to prevailing market yields in this period. The weighting on this portfolio increase is 42% of the portfolio yield. For the first six-month period starting in June 2018, this will use the average of eight-year gilt yields in the prior six

[1] Equivalent to the total budget divided evenly into five years.

months (i.e. to May 2018), as a proxy for the likely level of yields over the subsequent six months. From the second six-month period onward (starting December 2018), the average of eight-year gilt yields over the first period will be known with certainty, and so this term will become a constant.

A.7 The third term reflects the expected re-investments from maturing holdings over the following six months. The yield on the forthcoming investments will not be known with certainty, and so will be estimated using the most recent six-month average of eight-year gilt yields. The weighting, on reinvestments is 3% of the portfolio yield.

Worked example

A.8 As per the discussion of costs, the target income would be fixed at £169 million per year. The aggregate eligible liabilities term would also be fixed at the average for the five-year period, at £2,837,817.5 million.

A.9 For illustration purposes, the below sets out the calculations for the first two periods.

A.10 In the first period, from June 2018, the ratio is calculated based on the following assumptions:

- the average of eight-year gilt yields over the prior 13 years to May 2018 = 2.5%
- the average of eight-year gilt yields over the prior six months (November 2017 to May 2018) = 1.2%
- at this point, yields over May 2018 to November 2018 in the second term of the formula are not yet known, so the average of eight-year gilt yields over the prior six months (November 2017 to May 2018) was also used as a proxy = 1.2%

In this case, the portfolio yield would be:

$$\begin{aligned} &Portfolio\ yield \\ &= 0.55\ (average\ of\ 8yr\ gilt\ yields\ over\ prior\ 13\ years) \\ &+ 0.42\ (average\ of\ 8yr\ gilt\ yields\ over\ May\ 2018\ to\ Nov\ 2018) \\ &+ 0.03\ (average\ of\ 8yr\ gilt\ yields\ over\ prior\ six\ months) \\ &= (0.55 * 2.5\%) + (0.42 * 1.2\%) + (0.03 * 1.2\%) \\ &= 1.915\% \end{aligned}$$

The resulting CRD ratio would be:

$$CRD\ ratio = \frac{Target\ income}{Aggregate\ eligibile\ liabilities * Portfolio\ yield}$$

$$= \frac{£169\ m}{£2,837,817.5\ m * 1.915\%}$$

$$= 0.311\%$$

In the following period beginning in December 2018, this example assumes the actual average of eight-year gilt yields over May 2018 to November 2018 was 1.0%, and the average over the prior 13 years had fallen to 2.4%. The second term of the portfolio yield calculation will now be fixed at (0.42 * 1.0%), and become a constant in future calculations. The third term, which uses eight-year gilt yields over the prior six months, will now also refer to May 2018 to November 2018, and 1.0%. The new portfolio yield would be:

$$= (0.55 * 2.4\%) + (0.42 * 1.0\%) + (0.03 * 1.0\%)$$

$$= 1.77\%$$

The subsequent CRD ratio would be:

$$= \frac{£169m}{£2{,}837{,}817.5\ m * 1.77\%}$$

$$= 0.336\%$$

Operational considerations

A.11 The operation of an indexation-based approach would fit within the existing timetable for call notices.[2] The ratio would be calculated on the fourteenth working day of May and November. The gilt yield data averaged in the calculation would be of weekly frequency, using yields from the last working day of each week, up to and including the thirteenth working day of May or November. The Bank would then issue call notices to eligible institutions.

A.12 For the purpose of calculating the ratio the Bank would publish the necessary series of eight-year gilt yield data on its website. This data would be sourced from a third-party vendor. The Bank would also publish the portfolio yield, including the results of the three terms in the portfolio yield calculation, and the final CRD ratio, on its website shortly after calculation.

2 The call notice specifies the amount an institution is expected to have on deposit with the Bank during a specified period.

Annex B

Draft Statutory Instrument

Draft Order laid before Parliament under section 40(2) of the Bank of England Act 1998, for approval by resolution of each House of Parliament.

DRAFT STATUTORY INSTRUMENTS

2018 No.

BANKS AND BANKING

Cash Ratio Deposits (Value Bands and Ratios) Order 2018

Made - - - -	***
Coming into force - -	*1st June 2018*

The Treasury, in exercise of the powers conferred by paragraph 5 of Schedule 2 to the Bank of England Act 1998([1]), make the following Order.

In accordance with section 40(2) of the Bank of England Act 1998([2]), a draft of this Order was laid before Parliament and approved by a resolution of each House of Parliament.

In accordance with paragraphs 10 and 11 of Schedule 2 to the Bank of England Act 1998, the Treasury have consulted the Bank of England, such persons as appear to them to be representative of persons likely to be materially affected by this Order and such other persons as they think fit, and, in making this Order, have had regard to the financial needs of the Bank of England.

Citation and commencement

1. This Order may be cited as the Cash Ratio Deposits (Value Bands and Ratios) Order 2018 and comes into force on 1st June 2018.

---

(1) 1998 c.11.

(2) Section 40(2) was amended by paragraph 3 of Schedule 1 to the Financial Services Act 2012 (c.21) and paragraph 18 of Schedule 2 to the Bank of England and Financial Services Act 2016 (c.14).

Interpretation

2. In this Order—

"the Act" means the Bank of England Act 1998;

"the Bank" means the Bank of England;

"call notice period" means the six-month period covered by a call notice issued by the Bank under paragraph 3 of Schedule 2 to the Act;

"gilt" means UK government sterling denominated bonds issued by or on behalf of the Treasury; and

"relevant date" means the fourteenth working day of the month immediately prior to the commencement of each call notice period.

Revocation of the 2013 Order

3. The Cash Ratio Deposits (Value Bands and Ratios) Order 2013([3]) is revoked.

Value bands

4. The value bands specified for the purposes of paragraph 4 of Schedule 2 to the Act are—

(a) up to and including £600 million; and

(b) over £600 million.

Ratios

5.—(1) For the purposes of paragraph 4 of Schedule 2 to the Act, the ratio applicable to each value band shall be as follows.

(2) For the value band referred to in article 4(a), the ratio, expressed as a percentage, shall be 0%.

(3) For the value band referred to in article 4(b), the ratio, expressed as a percentage, for each call notice period is calculated by applying the following formula—

$$\frac{i}{el \times py}$$

(4) For the purposes of the formula in paragraph (3)—

(a) "i" equals £169,000,000;

(b) "el" equals £2,837,817,500,000; and

(c) "py" represents the portfolio yield on the investments made by the Bank under the cash ratio deposit scheme and is calculated by applying the following formula—

$$(0.55 \times a) + (0.42 \times b) + (0.03 \times c)$$

where—

(i) "a" is the arithmetic mean of the yield on 8-year gilts over the period of 13 years ending with the day immediately before the relevant date;

(ii) "b" equals—

(aa) for the first call notice period following the coming into force of this Order, the arithmetic mean of the yield on 8-year gilts over the period of six months ending with the day immediately before the fourteenth working day of the month prior to the commencement of that period; and

(bb) for each subsequent call notice period, the arithmetic mean of the yield on 8-year gilts over the period of six months ending with the day immediately

([3]) S.I. 2013/1189.

before the fourteenth working day of the month prior to the commencement of the second call notice period following the coming into force of this Order; and

(iii) "c" is the arithmetic mean of the yield on 8-year gilts over the period of six months ending with the day immediately before the relevant date.

(5) The ratio referred to in paragraph (3) shall be rounded to three decimal places.

Review

6.—(1) The Treasury must from time to time—

(a) carry out a review of this Order; and

(b) publish a report setting out the conclusions of the review.

(2) The first report must be published before the end of the period of five years beginning with 1st June 2018.

(3) Subsequent reports must be published at intervals not exceeding five years.

Name
Name
Date Two of the Lords Commissioners of Her Majesty's Treasury

EXPLANATORY NOTE

(This note is not part of the Order)

Schedule 2 to the Bank of England Act 1998 (c.11) makes provision concerning the maintenance by certain institutions of cash ratio deposits with the Bank of England ("the Bank"). The institutions covered by these arrangements are those defined as "deposit-takers" by section 17(7) of, and paragraph 1(1A) to (1C) of Schedule 2 to, that Act. The Bank is empowered by paragraph 3 of that Schedule to give such an institution a call notice specifying an amount the institution is expected to have on deposit with the Bank during a specified period. Under paragraph 4 of that Schedule, the depositable amount is to be calculated by multiplying so much of an institution's average liability base as falls into each of the different value bands by the ratio applicable to that band, and adding up these amounts.

This Order specifies the value bands and the ratios applicable to them, and revokes the Order which specified previous value bands and ratios. The Order specifies two value bands. For the value band up to and including £600 million, the ratio, in the form of a percentage, is 0%. For the value band over £600 million, the ratio, in the form of a percentage, is calculated for each call notice period applying the formula contained in the Order.

A full impact assessment of the effect that this Order will have on the costs of business and the voluntary sector is available from Her Majesty's Treasury, 1 Horse Guards Road, London SW1A 2HQ or on https://www.gov.uk/government/organisations/hm-treasury and is published alongside the Order on www.legislation.gov.uk.

Annex C

Consultation stage impact assessment

C.1 Following the passage of the Small Business Enterprise and Employment Act 2015, changes to the CRD scheme fall within the scope of the government's business impact target.

C.2 This impact assessment aims to set out the economic impact on businesses of the changes proposed in this consultation document. The government will seek further evidence through the consultation to provide a fuller picture of costs and benefits in a final stage impact assessment which will be subject to validation by the Regulatory Policy Committee.

Policy objectives

C.3 Price stability and financial stability are key pre-requisites for the government's economic objective of creating strong, sustainable and balanced growth. This is set out in remits for the respective policy committees of the Bank.

C.4 The cash ratio deposit scheme is intended to finance the Bank of England's monetary policy and financial stability activities. The intended effect of amending the scheme is to ensure that the income received by the Bank of England is in line with its forecast expenditure for these activities.

Proposed amendments

C.5 Over time it has become apparent that the income from the scheme can be volatile relative to the cost of the Bank's operations, as noted in Chapter 2. The proposed amendments to the scheme seek to address this through linking the ratio to a measure of gilt yields, which reflects the income the Bank will receive from its investments, and which is also responsive to the interest foregone by institutions.

C.6 Further details of the indexation mechanism are set out in Chapter 4 and in Annex A. In summary, the key formulas are as follows:

$$CRD\ ratio = \frac{Target\ income}{Aggregate\ eligibile\ liabilities * Portfolio\ yield}$$

$$\begin{aligned} Portfolio\ yield \\ &= 0.55\ (average\ of\ 8yr\ gilt\ yields\ over\ prior\ 13\ years) \\ &+ 0.42\ (average\ of\ 8yr\ gilt\ yields\ over\ May\ 2018\ to\ Nov\ 2018) \\ &+ 0.03\ (average\ of\ 8yr\ gilt\ yields\ over\ prior\ 6\ months) \end{aligned}$$

C.7 Target income will be fixed at £169 million, which is the result of evenly dividing the expected policy expenditure into five annual periods. Aggregate eligible liabilities will also be fixed in the formula until it is next reviewed at the latest in five years' time. This will be based on the average of forecast eligible liabilities in the £600 million value band, across the next five years. The determination for these terms is the same as it would otherwise be under a fixed ratio scheme.

C.8 The remaining term, portfolio yield, will be recalculated every six months in line with the existing schedule for call notices. The Bank will also publish the ratio and make relevant data available.

Costs to the main affected group

C.9 The direct cost of the amendments will reflect the foregone income (or 'opportunity cost') of the additional deposit against the status quo of maintaining the ratio at 0.18% under the same yield and eligible liability growth scenarios.

C.10 For the purpose of projecting yields and corresponding ratios, the current forward rates as implied by the gilt yield curve[1] have been used to model the best estimate for how yields on the eight-year benchmark will evolve, shown in Figure A.1. To account for the uncertainty around future yields, scenarios where yields grow higher and lower relative to the central estimate were modelled, in line with the scenarios in Chapter 4 (figure 4.1).

Figure C.1 Historic yields on the eight-year generic gilt and projections for the CRD period 2018-23

C.11 Assumptions for eligible liability growth are based on the Bank's forecast growth in broad money[2] averaging 2.9% per year.

C.12 The foregone income of the deposit will be unique to each institution and its various uses for that asset. As a proxy, the market implied forward yield on

[1] Using the 10-day average of yields implied by the gilt forward curve. Neither HM Treasury or the Bank of England forecast gilt yields.

[2] M4, excluding intermediate other financial corporations.

five-year gilts is used to reflect an asset of equivalent risk weighting to the CRD deposit, and which is an approximation of liquid assets which may be displaced by the requirement to make a greater CRD deposit.

Table C.1: Direct costs to firms arising from the proposed amendments

	2018	2019	2020	2021	2022
Additional deposit (£m) relative to the status quo	3,027	3,604	4,392	5,169	5,626
Foregone income, central estimate (£m)	32	43	60	81	100
High / Low estimate (£m)	32	42-44	56-64	71-92	81-124

C.13 The best estimate of costs to the sector as a whole is £317 million (NPV: £300 million[3]) within a range of £283 million to £357 million.

C.14 As outlined in Chapter 5, in December 2017, 81% of the total deposit was made by just 20 institutions. Under the proposed indexation approach, the ratio will continue to be applied in proportion to the eligible liability base of an institution. Therefore, there is no departure from the proportionality inherent in the fixed ratio scheme.

Indirect costs

C.15 Since the last review, the framework of capital requirements for UK banks and building societies has altered substantially. As part of the assessment of costs, the indirect costs of a higher ratio on institutions' balance sheets were considered. In line with the above analysis, under both a fixed ratio scheme and indexation, the ratio is likely to rise - hence this impact assessment has explored the indirect costs relating to the ratio increase under the central estimate.

C.16 In terms of meeting capital adequacy requirements, the deposit has a zero-risk weighting under the Basel III framework, therefore it is not considered that there will be an additional cost from changes to capital relating to risk weighted assets. In respect of the UK leverage ratio framework, which currently applies to major banks and building societies, the change from 0.18% to an average over five years of around 0.33% will result in a relatively small impact, and the most recent data shows that institutions have headroom above their minimum requirements. [4]

C.17 For liquidity management purposes, the deposit is not eligible as a high-quality liquid asset under the EU Liquidity Coverage Ratio (LCR) framework, as it is not a part of the central bank reserves. However, the additional cost

[3] The Net Present Value was derived using forecasts for GDP deflators, in line with guidance from the Better Regulation Executive. For the purposes of the Business Impact Target the Equivalent Net Annual Direct Cost to Business is £266 million within a range of £239 million to £298 million over the five-year period, assuming an annual discount rate of 3.5%.

[4] Bank of England Financial Stability Report November 2017, https://www.bankofengland.co.uk/financial-stability-report/2017/november-2017

of moving from the status quo to an indexation-based model is expected to be small (uncertainty will be addressed as a separate non-monetised cost).

C.18 The operational costs to the Bank arising from administering the scheme are negligible.

Non-monetised costs

C.19 Moving to an indexation-based approach would mean that institutions no longer have certainty over the ratio which will be applied. However, the weightings within the portfolio yield measure mean that short term fluctuations in yields have a minimal impact on the overall ratio.

C.20 After the December 2018 call notice, the middle term (42% weighting) becomes a constant. If, for example an institution wanted to forecast the ratio that would apply in one year's time, it would need to estimate yields prevailing over the next two six-month periods. Those data points would have a combined weighting of around 10% in the portfolio yield calculation, therefore 90% is known. For each additional year added to the forecast horizon the known portion of the portfolio yield formula would fall by 10%.

C.21 Institutions affected by the scheme are accustomed to sourcing yield forecasts in the course of their ordinary business. Some respondents to the informal consultation noted that their planning horizons for managing assets such as the CRD deposit were shorter than the full five years of the period, and that uncertainty over the ratio alone was unlikely to present a significant challenge.

Benefits

C.22 The benefits of the Bank's monetary policy and financial stability activities are to the whole banking sector as well as the wider economy. The recent review by the Bank's Independent Evaluation Office of the Bank's liquidity facilities noted the progress the Bank has made in opening up access to its facilities, making them cheaper and more flexible. [5] The review noted the role of the Sterling Monetary Framework in reducing the costs of potential liquidity disruption to participants and the economy.

C.23 A study by the National Institute of Economic and Social Research suggested that a permanent reduction in the probability of a banking crisis occurring of just 1% would lead to an expected GDP increase of £4.5bn per annum in net present value terms. [6] This was not included for the purposes of calculating the equivalent net direct cost to business.

Equalities impacts

C.24 The measure concerns changes to the Cash Ratio Deposit scheme, which is paid only by banks and building societies. No impact is expected for individuals.

---

5 https://www.bankofengland.co.uk/-/media/boe/files/independent-evaluation-office/2018/evaluation-of-the-bank-of-englands-approach-to-providing-sterling-liquidity.pdf?la=en&hash=AC0E28720BEAEB5D48CF1AE6155019DC28B2D420

6 http://www.legislation.gov.uk/ukia/2015/62/pdfs/ukia_20150062_en.pdf

Monitoring and evaluation

C.25 The review clause included in the Statutory Instrument ensures the scheme will be reviewed within five years at the latest.

Declaration

C.26 The Rt Hon Elizabeth Truss MP, Chief Secretary to the Treasury, has read this impact assessment and is satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impacts of the measure.