National Audit Office

Report
by the Comptroller
and Auditor General

HM Treasury

Exiting the EU: The financial settlement

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HM Treasury

Exiting the EU: The financial settlement

Report by the Comptroller and Auditor General

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Comptroller and Auditor General
National Audit Office

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This report forms part of our programme of work to examine how the government is overseeing and implementing the UK's exit from the EU. It is our first report on the financial settlement.

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Summary

1 The UK invoked Article 50 of the Lisbon Treaty on 29 March 2017; as a result, it is scheduled to leave the European Union (EU) on 29 March 2019. The government is negotiating the terms of withdrawal with the EU, including the transition to a new relationship. The first phase of the negotiations included discussion on what the UK will pay towards the net commitments and liabilities that the EU entered into when the UK was a member state: the financial settlement. HM Treasury has led the government's negotiations of the settlement.

2 In September 2017, the Prime Minister set out the UK government's position that the UK would honour commitments it made while it was a member of the EU. She said that she did not want other member states to fear that they will need to pay more or receive less over the remainder of the current budget plan, which runs until December 2020, as a result of the UK's decision to leave the EU.

3 In December 2017, the government and the European Commission (the Commission) published a joint report on progress during the first phase of the negotiations. This set out the principles underpinning the financial settlement. Under these principles, the UK will continue to contribute to the EU's annual budgets until December 2020 as if it had remained a member state. The UK will also bear a share of the EU's outstanding net commitments and liabilities at that date. It will not be required to pay these off until they fall due. In some cases, such as pension liabilities, these payments could extend for decades into the future.

4 The joint report is clear that "nothing is agreed until everything is agreed". The commitments detailed in the report will not be enforceable until the UK and EU agree the final withdrawal agreement at the end of all negotiations over the UK's withdrawal. In March 2018, the UK government and the Commission published a draft of the withdrawal agreement. This translated the commitments in the joint report into a draft legal agreement, as well as providing further details on how the UK's settlement payments will be calculated and the timing of payments.

5 In January 2018, the Chancellor of the Exchequer wrote to the Treasury Select Committee setting out a 'reasonable central estimate' of the settlement's value of between £35 billion and £39 billion (**Figure 1**). HM Treasury made its estimate to provide some understanding in monetary terms of what the government had agreed with the Commission, given that the joint report itself does not contain monetary values. Its estimate was derived as far as possible from publicly available data.

Figure 1

Components of the estimated EU exit financial settlement

HM Treasury's 'reasonable central estimate' is that the financial settlement will cost between £35 billion and £39 billion

Settlement component	The UK's contributions to the EU's annual budget, 2019 and 2020	The UK's share of the EU's outstanding budgetary commitments at the end of 2020	The UK's share of EU assets and liabilities incurred before the end of 2020	Total
Value in HM Treasury's estimate (€bn)	17–18	21–23	2–4	40–45
Exchange rate applied	An exchange rate on the date the joint report was published of €1.13: £1			
Estimate (£bn)	15–16	19–20	2–4	35–39
Would the UK have paid/received this if it remained a member state?	Yes. Existing payment mechanism will be used for 2019 and 2020 contributions.	Yes. Payment would have been made through the UK's budgetary contributions to the next EU budget after 2020. The draft withdrawal agreement (March 2018) sets out arrangements for calculating and making these payments in absence of the normal budget contribution mechanisms that cover member states.		
Estimated timing of payments upon UK exit from the EU	2019–2020	2021–2026	2021–2064	

Notes

1 The sterling estimates of the settlement do not sum to £35 billion to £39 billion due to rounding.

2 Timing of payments shows HM Treasury's estimate of when the majority of payments will have been made. For outstanding commitments and liabilities there may be a small amount of payments after 2026 and 2064 respectively.

Source: National Audit Office analysis of HM Treasury data

Our report

6 This report forms part of our programme of work to examine how the government is overseeing and implementing the UK's exit from the EU. It is our first report on the financial settlement. It aims to support Parliamentary scrutiny of HM Treasury's estimate of the financial settlement. In particular, it responds to the Chair of the Treasury Select Committee's request in December 2017 that the Comptroller and Auditor General "examine the reasonableness of this payment, including the assumptions and methodologies used". We have not assessed the value for money of the settlement itself, nor how effectively HM Treasury negotiated the principles of the settlement. In this report we:

- explain the settlement within the context of the wider negotiations on the UK's withdrawal from the EU, and how much the government expects the settlement to cost (Part One);
- assess HM Treasury's estimate of the settlement, clarifying how it has been calculated and describing the uncertainties that could cause its value to be different from that estimate (Part Two); and
- set out those aspects of the financial settlement that are still to be finalised and those areas where the value of the settlement could be affected by future EU decisions (Part Three).

Key findings

The financial settlement

7 HM Treasury took legal advice on the UK's rights and obligations on leaving the EU. It has been strongly represented to us by HM Treasury that it would be damaging to the national interest to publish the legal advice in any detail and we accept that this is so at present. The advice is primarily concerned with the UK's rights and obligations in the absence of a withdrawal agreement. The advice indicates that a withdrawal agreement will fall to be interpreted on its own terms. This is important because the proposed financial settlement is part of the wider draft withdrawal agreement which covers a number of other issues, including the transition period, in contrast to the "no agreement" scenario on which the legal advice was based (paragraphs 1.4 to 1.7).

8 **The UK will continue to contribute to the EU's annual budgets in 2019 and 2020 as if it had remained a member state, but the other components of the settlement will require new, untested methods of calculation.** If it had remained a member state, the UK's share of outstanding net commitments and liabilities would have been incorporated into its annual contributions in future budget periods. When it is no longer a member state, the UK will be outside the established budget-setting process. This means new mechanisms will need to be developed to calculate its share of payments. In March 2018, the UK government and the Commission published a draft of the withdrawal agreement, which gives some detail on how these mechanisms will operate (paragraphs 1.9 and 3.2 to 3.3).

9 **HM Treasury estimates that the UK will make around 60% of settlement payments by the end of 2021 but may be making some payments for several decades.** Under the draft withdrawal agreement, the UK will not pay liabilities before they fall due unless it requests to pay them off earlier. HM Treasury expects to pay off the UK's share of outstanding budgetary commitments as at the end of 2020 over the following six years. Some liabilities are scheduled to extend much further into the future: the UK's liability to contribute to the EU pension liability may last until at least 2064 (paragraph 1.20; Figure 10).

HM Treasury's estimate of the settlement's value

10 **At the time of the joint report, the results of HM Treasury's internal modelling were consistent with its £35 billion to £39 billion public estimate of the settlement's value.** While negotiating the principles of the financial settlement, HM Treasury modelled the cost of each component using a combination of audited EU accounts, Commission forecasts and its own projections of the future based on historical trends. These models indicated that the settlement would cost the UK a net figure (payments minus receipts) of £37.5 billion (paragraphs 1.12 to 1.19; Figures 5, 6, 7, 8 and 9).

11 **The actual value of the settlement is uncertain because it depends on future events.** The joint report and the draft withdrawal agreement did not state the cost of the financial settlement. The precise value of most components of the settlement is subject to future events and therefore uncertain. For some payments, such as the UK's budget contributions, this uncertainty is partly reduced by the EU budget system, which limits how much the EU can spend and request from member states. But it has been necessary for HM Treasury to base its estimate on a number of assumptions. For example:

- The UK's economic performance relative to the EU's member states will determine the UK's budget contributions in 2019 and 2020, which in turn form part of the calculation of its share of liabilities after 2020. For its published estimate, HM Treasury used the Commission's forecast of the UK's share of budget contributions in 2018 to estimate its share in 2019 and 2020. But actual UK budget contributions in 2019 and 2020 may be different from this. HM Treasury's own forecast of the UK's share of contributions is slightly lower than the Commission's.
- The settlement estimate deducts revenues that HM Treasury expects UK public and private sector organisations to receive from the EU. HM Treasury has assumed that these receipts will continue at the same rate as in recent years. However, it is quite possible that the UK's revenues from the EU may change in the context of the UK withdrawal. For example, fewer UK businesses may apply for EU funding due to real or perceived uncertainties regarding eligibility, reducing the flow of EU funding into the UK, although HM Treasury considers this risk to be mitigated because allocations have already been agreed for the largest programmes.
- HM Treasury based the UK's share of future pension payments in its published estimate on the pension liability in the EU's balance sheet as at 31 December 2016. As with any valuation of a pension liability, this is based on a number of assumptions about future events, such as mortality rates and salary increases, as well as valuation estimates such as the discount rate used, which is historically low. Payments will be different from HM Treasury's estimate if events differ from these assumptions.
- The settlement value is exposed to changes in the exchange rate because settlement payments will be drawn up and paid in euros. For its estimate, HM Treasury used an exchange rate from the day the joint report was published to convert its estimate from euros to pounds. This may not match the exchange rate when payments are made (paragraphs 2.2 to 2.20; Figures 11 and 12).

12 **Relatively small changes to some of these assumptions would cause HM Treasury's central estimate to be outside its £35 billion to £39 billion range.** HM Treasury estimated the settlement's value in order to provide some understanding of the likely monetary impact of what was in the joint report. This meant it did not incorporate some of the main uncertainties of which it was aware, such as whether the financing share will be higher or lower than the estimate based on the Commission's forecasts, so as not to introduce new assumptions about future events. Consequently, HM Treasury's public estimate states a narrow range of possible outcomes given the degree of uncertainty over the settlement's value (paragraphs 2.21 to 2.23; Figure 13).

13 **The UK could pay up to £3 billion more in budget contributions after its withdrawal than HM Treasury estimates to offset earlier payments being lower.** The EU can request up to five months' of annual contributions in the first three months of any calendar year to pay for programmes that spend more in the earlier months of the year. HM Treasury assumes that the UK will have paid five months' worth of its annual contribution to the EU's 2019 budget before the UK's expected withdrawal date of 29 March 2019, although this is uncertain. If the EU requests three months' worth of contributions prior to withdrawal this would increase payments after withdrawal by around £3 billion. However, the EU has only requested fewer than four months' worth of contributions in the first quarter on two occasions in the past eight years (paragraphs 2.13 and 2.14).

14 **HM Treasury's public estimate of the settlement will not be the same as the payments and receipts recorded in government accounts.** HM Treasury's estimate is of the net cost of the settlement to the UK as a whole. The net cost of the settlement recorded in government accounts is likely to be higher than HM Treasury's public estimate. This is because HM Treasury's estimate includes receipts that will go directly to the private sector, which we estimate to be worth €8.1 billion (£7.2 billion). These will not come into the government's accounts (paragraph 1.16).

15 **HM Treasury's settlement estimate does not include the UK's commitments to the European Development Fund (EDF), which it expects will cost £2.9 billion after the UK leaves the EU.** The joint report states that the UK will honour its commitments to the current EDF, the EU's main instrument for providing development aid, which runs until the end of 2020. HM Treasury did not include the EDF payments in its settlement estimate because the EDF is not established under the EU treaties and sits outside the EU budget (paragraph 2.24).

16 **There are some other potential liabilities that the UK is exposed to that are not reflected in HM Treasury's published estimate as it has assessed they are unlikely to result in payments**. These include a share of the EU's contingent liabilities on the date of the UK's withdrawal or those that relate to events that take place before 31 December 2020 for legal cases. HM Treasury forecasts that the UK's share of total outstanding contingent liabilities will be €14 billion as at the date of withdrawal. Additionally, the UK will provide a guarantee worth €35.7 billion to the European Investment Bank. This guarantee could be called upon alongside contributions from remaining member states. HM Treasury and the Commission deem these liabilities to be remote, meaning they do not expect them to cost anything more than the amounts factored into the settlement estimate as provisions. But the UK will be required to pay its share towards settling any contingent liabilities that do materialise. There may also be costs to the UK if it wishes to retain access to specific funds and agencies beyond those funded during the EU's current budget period (paragraphs 2.25 to 2.30).

Future development of the settlement

17 **HM Treasury is considering the structures and processes it requires to ensure that payments to the EU are accurate.** The draft withdrawal agreement sets out how the UK's payments will be calculated after 2020. These payments, which the Commission will calculate, will not be subject to the established mechanisms for ensuring accuracy that apply to member states. Some payments, such as calculating liabilities as they fall due, could require new data systems to keep track of the UK's liability. Similarly, calculating the UK's share of the pension liability will require separate and complex calculations. HM Treasury needs to implement new processes for ensuring accuracy that are aligned with the complexity and subjectivity of the calculations, as well as ensuring it has access to the information used for those calculations. The draft withdrawal agreement includes provision for the UK to appoint auditors during the implementation of the financial settlement (paragraphs 3.2 to 3.3 and 3.7 to 3.9).

18 **The government can opt to pay off the pension liability early, but this will require careful consideration of the expected costs and benefits.** The draft withdrawal agreement provides an option for the UK to pay off its share of the pension liability early in a lump sum payment. This would be based on an actuarial valuation of the liability made in accordance with International Public Sector Accounting Standards. When deciding whether to opt for a lump sum payment, HM Treasury will need to have sufficient information on the likely costs and benefits of a one-off payment compared with ongoing payments. Any actuarial valuation includes significant assumptions, particularly the discount rate used. Changes to assumptions could adversely impact the buy-out value making this option unattractive to the government (paragraphs 3.4 to 3.6).

19 **The terms of the financial settlement mean that the Commission could skew future decisions so that they have a negative impact on the UK.** For example, the draft withdrawal agreement establishes 31 December 2020 as a key date for determining the UK's share of assets and liabilities. As with the principle of setting any cut-off date, there is a risk that this date will drive decisions on when to recognise a liability or dispose of an asset, which could affect the value of the settlement. This is mitigated to some extent by the arrangements governing EU budgets, which includes limits on what member states must contribute, and the terms of the withdrawal agreement. In particular, this states that the UK will only pay for liabilities that actually fall due and that it will not be affected by changes to general EU spending limits after its withdrawal (paragraphs 3.10 to 3.13).

Conclusion

20 We have reviewed the reasonableness of HM Treasury's published estimate of the cost of the financial settlement. This estimate, a range of £35 billion to £39 billion, was intended to provide some monetary understanding of what had been agreed in the joint report. HM Treasury based the estimate on published data and made assumptions around which costs related to the financial settlement, such as excluding payments for the European Development Fund. Given these parameters, we found the estimate to be reasonable. However, there are some qualifications that it is important to understand.

21 Future events will determine significant elements of the settlement's cost including the value of the EU's future liabilities and commitments, and what share of those the UK will pay. It is understandable therefore that the range of uncertainties were not fully reflected in HM Treasury's estimate. This means relatively small changes in events could push the cost of the settlement outside HM Treasury's published range.

22 This report seeks to increase understanding of HM Treasury's estimate and the uncertainties within it. We will do more work as the ongoing negotiations continue and details of the settlement are finalised. We have identified below a number of issues HM Treasury will need to consider to ensure that the interests of the UK taxpayer are protected as it implements the settlement.

Issues to consider

23 Our review has highlighted a number of issues that HM Treasury needs to consider when managing the risks attached to the settlement, including:

a How it will update Parliament with revised estimates of the settlement value as new information becomes available.

b The options it has available to mitigate the risks of exchange rate movements. For example, agreement could be reached to offset payments to the EU with receipts that fall in a similar period.

c The information it needs to collect and maintain to make informed decisions on future payment arrangements. For example, it needs to be able to appraise the value of different payment schedules for long-term liabilities, particularly pensions.

d The structures and processes it requires for confirming the accuracy of future payments. This will need to be determined by the extent to which calculations are complex and potentially subjective. The greater the complexity and subjectivity, the more robust structures and processes need to be to mitigate the risk that the UK pays out more than is due.

e How the arrangements for the UK to appoint auditors for the implementation of the financial settlement will be applied in practice.

f The access it will require to specific information that the EU uses to calculate different elements of the settlement.

g How disputes will be resolved should the government challenge the value of payments that the EU calculates.

Part One

Why the government agreed the financial settlement

1.1 This part of the report explains the background to the financial settlement, the settlement's role in the wider negotiations about the UK's withdrawal from the European Union (EU) and how much HM Treasury expects the settlement to cost.

Origins of the settlement

The wider negotiations

1.2 The financial settlement that the UK will pay on withdrawing from the EU was part of the first stage of negotiations, along with citizens' rights and the impact of the withdrawal on the Northern Ireland border. Both sides of the negotiations agreed that sufficient progress needed to be made on these issues before the next stage of talks, which would consider the UK's future relationship with the EU (**Figure 2**).

Government and EU statements about the settlement

1.3 Since the referendum in June 2016, the UK government has stated its intention to negotiate a financial settlement with the EU. It has stated that the settlement should be fair and in accordance with the law and spirit of continuing partnership with the EU and that the UK would honour the commitments that it has made while it was a member state. The government has also stated that other member states should not need to pay more or receive less during the current EU budget period as a result of the UK's withdrawal. The EU stated in its June 2017 position paper on the financial settlement that the UK must honour its share of obligations undertaken while it was a member state (**Figure 3** on page 14).

Figure 2

Timeline for negotiations over the UK's withdrawal from the EU

The financial settlement was part of the first phase of negotiations

2016

23 Jun 2016

Referendum in the UK on EU membership – majority (51.9%) voted to leave the EU

2017

29 Mar 2017

Prime Minister's letter to Donald Tusk, President of the European Council, triggering Article 50

22 May 2017

General Secretariat of the European Council publishes a document authorising the opening of negotiations with the UK for an agreement setting out the arrangements for its withdrawal from the EU

12 Jun 2017

European Commission issues paper on the essential principles on the financial settlement – setting out the main principles of the EU position

19 Jun 2017

Phase 1 of negotiations begin, to include negotiations on the financial settlement: UK and European Commission agree terms of reference of the Article 50 negotiations

22 Sep 2017

Prime Minister's Florence speech: *a new era of cooperation and partnership between the UK and the EU.*

8 Dec 2017

European Commission and UK issue joint report setting out the agreed methodology for the financial settlement

The European Commission recommended to the European Council that 'sufficient progress' had been made in 'phase 1' of the negotiations enabling the next phase of the negotiations to begin; 'phase 2'. Phase 2 is expected to continue to October 2018 where the UK and EU will finalise the draft agreement

2018

24 Jan 2018

Chancellor writes to the Chair of Treasury Select Committee explaining the details of the agreement as set out in the joint report and setting out an estimate for the settlement value

28 Feb 2018

European Commission draft withdrawal agreement sets out the EU's position on the arrangements for the withdrawal of the UK

19 Mar 2018

Draft withdrawal agreement highlighting the progress made in the negotiation round with the UK of 16-19 March 2018 and including further detail on how the settlement will be calculated

Late 2018

UK Parliament votes on withdrawal agreement

Late 2018/ early 2019

The European Parliament must give its consent to any draft withdrawal agreement agreed between the EU and the UK. Consent required by a simple majority

2019

29 Mar 2019

The UK leaves the EU

Source: National Audit Office analysis of UK Government and European Union information

Figure 3

Timeline of UK government and EU statements about a financial settlement for exiting the EU

The government and the EU both stated that the UK should honour commitments made while it was a member state

29 March 2017

Prime Minister's letter to Donald Tusk, President of the European Council, triggering Article 50

UK obligations:

"We will fulfil our responsibilities as a member state while we remain a member of the EU."

"We should work towards securing a comprehensive agreement. We will need to discuss how we determine a fair settlement of the UK's rights and obligations as a departing member state, in accordance with the law and in the spirit of the United Kingdom's continuing partnership with the EU."

Continuing relationship:

"The deep and special partnership we [UK] hope to enjoy – as your closest friend and neighbour – with the European Union once we leave."

"It is in the best interests of both the UK and the EU that we should use the forthcoming process to deliver these objectives in a fair and orderly manner, and with as little disruption as possible on each side …we [UK] want to make sure that Europe remains strong and prosperous…"

12 June 2017

Position paper – essential principles on financial settlement (European Commission)

UK obligations:

"The United Kingdom must honour its share of the financing of all the obligations undertaken while it was a member of the Union. The United Kingdom obligations should be fixed as a percentage of the EU obligations calculated at the date of withdrawal in accordance with a methodology to be agreed in the first phase of the negotiations."

UK benefits:

"On this basis, the United Kingdom should continue to benefit from all programmes as before the withdrawal until their closure under the condition that it respects the applicable Union legal rules."

22 September 2017

Prime Minister's Florence speech: *a new era of cooperation and partnership between the UK and the EU*

UK obligations:

"The UK will honour commitments we have made during the period of our membership."

"So that other member states shall not… need to pay more or receive less over the remainder of the current budget plan as a result of our decision to leave."

"We would want to make an ongoing contribution to cover our fair share of the costs involved."

UK benefits:

"We will also want to continue working together in ways that promote the long-term economic development of our continent. This includes continuing to take part in those specific policies and programmes which are greatly to the UK and the EU's joint advantage, such as those that promote science, education and culture – and those that promote our mutual security."

Source: National Audit Office analysis of UK government and European Union public statements

Legal position

1.4 HM Treasury took legal advice in 2016 and 2017 on the UK's rights and obligations on leaving the EU. It has been strongly represented to us by HM Treasury that it would be damaging to the national interest to publish the legal advice that it obtained in any detail. We accept that this is so at present. However, we think that there is some useful clarification that we can provide at present without damaging the national interest.

1.5 We confirm that HM Treasury took legal advice in 2016 and 2017, and that we have been provided with the "key advice" on what appears to us to have been a comprehensive range of issues related to the UK obligations and rights on leaving the EU. We consider that the basis on which the advice was sought, and the questions asked were robust and designed to provide a useful baseline for HM Treasury in approaching their negotiations.

1.6 The advice preceded the Prime Minister's Florence speech, in which she proposed a transition period following the UK's withdrawal. The advice is primarily concerned with the UK's rights and obligations in the absence of a withdrawal agreement. The advice indicates that a withdrawal agreement will fall to be interpreted on its own terms. The UK government and the European Commission (the Commission) subsequently published a draft withdrawal agreement in March 2018, which sets out what the UK will pay and the benefits that it will receive in return during the transition period. The draft withdrawal agreement includes terms of a wider deal than just the financial settlement, such as the arrangements for the transition period. This is important because, as indicated earlier, the legal advice on rights and obligations taken by HM Treasury before the agreement was based on termination of the UK membership of the EU without a withdrawal agreement or transition period.

1.7 Both sides of the negotiations have been clear that 'nothing is agreed until everything is agreed'. This means the provisions of the draft withdrawal agreement will not be enforceable until the UK and EU agree the final withdrawal agreement at the end of all negotiations over the UK's withdrawal. There is a substantial amount of ground to cover before that point is reached.

The joint report

1.8 On 8 December 2017, the UK government and the Commission published a joint report on progress during the first stage of negotiations. This formalised both sides' intentions for the financial settlement. The joint report states that the UK will participate in the EU's annual budgets until 2020 and that it will take a share of the EU's outstanding budgetary net commitments and liabilities at the end of 2020. In return, the UK will be entitled to participate in the EU programmes financed by the current budget period (2014–2020). The government has stated it may also wish to participate in some of these EU programmes after 2020, as a non-member state.

1.9 The financial settlement comprises primarily of three components:

- As a member state, the UK contributes to the EU's annual budgets. Member states agree budgets over seven-year terms known as multiannual financial frameworks (MFF) (**Figure 4**). The current MFF runs from 2014 to 2020. The UK government passed the European Union (Finance) Act 2015 in July 2015, which enables the UK to contribute to EU budgets under the current MFF. To ensure that member states would not need to pay more or receive less during the current budget period, the UK therefore needs to continue contributing to the EU's annual budgets until 2020.
- The UK will pay a share of the EU's liabilities and receive a share of the EU's assets that have accrued at the end of 2020. Many of the EU's liabilities have corresponding assets, which means they are not included in the settlement. The largest liability to which the UK will contribute is the EU's pension liability.
- The government will make payments after 2020 to honour its share of commitments that the EU has made while the UK was a member state. The EU budget operates with a system of commitments and payments. Commitments are the total cost of legal obligations in each financial year, such as contracts and grant agreements. Payments are the expenditure due in the current year. There can be a time lag before commitments become payments, meaning there is normally a balance of outstanding commitments (known as the 'reste à liquider') at the end of any budget period, which are then paid off during the following budget period.

1.10 The joint report outlined the principles according to which the EU would calculate financial settlement payments and when they would become due. These were that:

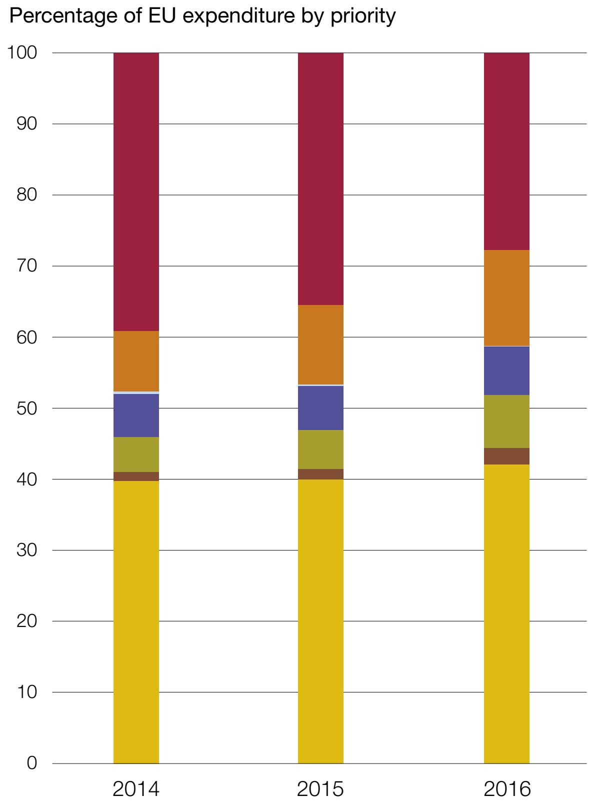
- the UK will not finance any commitments that do not require funding from member states, and will receive a share of any financial benefits that would have fallen to it had it remained a member state;
- the UK's share of the EU's net commitments and liabilities that are outstanding at the end of 2020 will be based on the UK's contributions to the EU budget as a proportion of the contributions from all member states between 2014 and 2020; and
- payments arising from the financial settlement will become due as if the UK had remained a member state: therefore, the UK will not be required to pay for any component of the settlement earlier than if it remained a member state, unless it requests to do so.

1.11 The commitments detailed in the joint report will not be enforceable until the UK and EU agree the final withdrawal agreement at the end of all negotiations on the UK's withdrawal. As such, the document reflects a political, not legal, agreement between the UK and EU. The joint report also made clear that further discussion is required on how payments would be calculated and their timing. In March 2018, the government and the Commission published a draft withdrawal agreement, which provided additional detail on how settlement payments will be calculated. We cover the draft withdrawal agreement in more detail in Part Three.

Figure 4
EU expenditure to date in the current budget period

The EU spends its budget on: farming and development of rural areas; regional economic development and improving employment opportunities; research; support to countries wishing to join the EU; and aid for neighbouring and developing countries

EU spending in the multiannual financial framework 2014–2020



	2014 (€bn)	2014 (%)	2015 (€bn)	2015 (%)	2016 (€bn)	2016 (%)
Economic, social and territorial cohesion	54.1	39	51.0	36	37.8	28
Competitiveness for growth and jobs	11.8	9	15.6	11	18.5	14
Special instruments	0.4	0	0.3	0	0.1	0
Compensation	0	0	0	0	0	0
Administration	8.3	6	8.6	6	9.3	7
Global Europe	6.9	5	7.6	5	10.3	8
Security and citizenship	1.7	1	2.0	1	3.1	2
Sustainable growth: natural resources	55.1	40	56.6	40	57.4	42

Note

1 Categories are based on how EU expenditure is categorised within its financial reports, which is by 'priority', representing different initiatives funded by the EU.

Source: National Audit Office analysis of European Union data

How HM Treasury estimated the settlement's value

HM Treasury's public estimate

1.12 In January 2018, the Chancellor of the Exchequer wrote to the Treasury Select Committee stating an estimate of the settlement's value of between £35 billion and £39 billion (**Figure 5**).[1] He described this as a 'reasonable central estimate' using publicly available data. With this estimate, HM Treasury intended to provide some understanding in monetary terms of what had been agreed in the joint report. It agreed with the Commission's negotiating team that the estimate would be derived as far as possible from published sources.

Figure 5

HM Treasury's public estimate of the UK's EU exit settlement value

HM Treasury's public estimate is that the financial settlement will cost between £35 billion and £39 billion

Period payments relate to	Settlement component	HM Treasury's estimate (€bn)	HM Treasury's estimate (£bn)
Before the end of 2020	Contributions to the EU's budget	17-18	
After the end of 2020	Contribution to outstanding budgetary commitments	21–23	
	Share of the EU's liabilities[1]	2–4	
Total		**40–45**	**35–39**[2]

Notes

1 Includes €3.5 billion repaid capital to the UK from the European Investment Bank.

2 HM Treasury converted euro amounts using an exchange rate on the date of the joint report. This was €1.13 to £1.

3 Figures may not sum due to rounding.

Source: National Audit Office analysis of the Chancellor of the Exchequer's letter to Treasury Select Committee Chair, 24 January 2018

1 HM Treasury, *Correspondence from the Chancellor of the Exchequer relating to the UK's EU withdrawal financial settlement*, January 2018. Available at: www.parliament.uk/documents/commons-committees/treasury/Correspondence/2017-19/Correspondence-from-the-Chancellor-of-the-Exchequer-relating-to-the-UK-EU-Withdrawal-financial-settlement-dated-24-January.pdf

HM Treasury's internal modelling

1.13 HM Treasury's public estimate of the settlement's value, which it provided to the Treasury Select Committee, was consistent with its internal modelling. During the negotiations over the settlement, HM Treasury estimated the value of the various payments and receipts that make up the settlement's net value. These combined to give a central estimate of the settlement's value of £37.5 billion, which was within its publicly stated range of £35 billion to £39 billion (**Figure** 6 overleaf). While negotiating the joint report with the Commission, HM Treasury only agreed the actual cash flow for one element of the settlement: the €3.5 billion (£3.1 billion) payment to the UK of the capital it has paid into the European Investment Bank.[2] For the remainder of the settlement, HM Treasury had to make assumptions about future events to estimate the value of payments. To calculate its internal estimate, HM Treasury used a combination of audited Commission accounts, Commission forecasts and its own projections of the future based on historical trends, as well as unpublished Commission data.

The 'financing share'

1.14 The 'financing share' is a key component of HM Treasury's estimate as it determines the UK's share of outstanding net commitments and liabilities after 2020. The financing share will be based on the ratio of the UK's budget contributions to all member states' contributions over the period 2014-2020. For its published estimate, HM Treasury used the Commission's forecast that the UK's share of contributions to the EU budget in 2018 will be 12.7%, and assumed that it will remain at this level in 2019 and 2020. It estimated that the resulting average of the financing shares between 2014 and 2020 was also 12.7% (**Figure 7** on page 21). We consider the sensitivity of the estimate to changes in the financing share in Part Two.

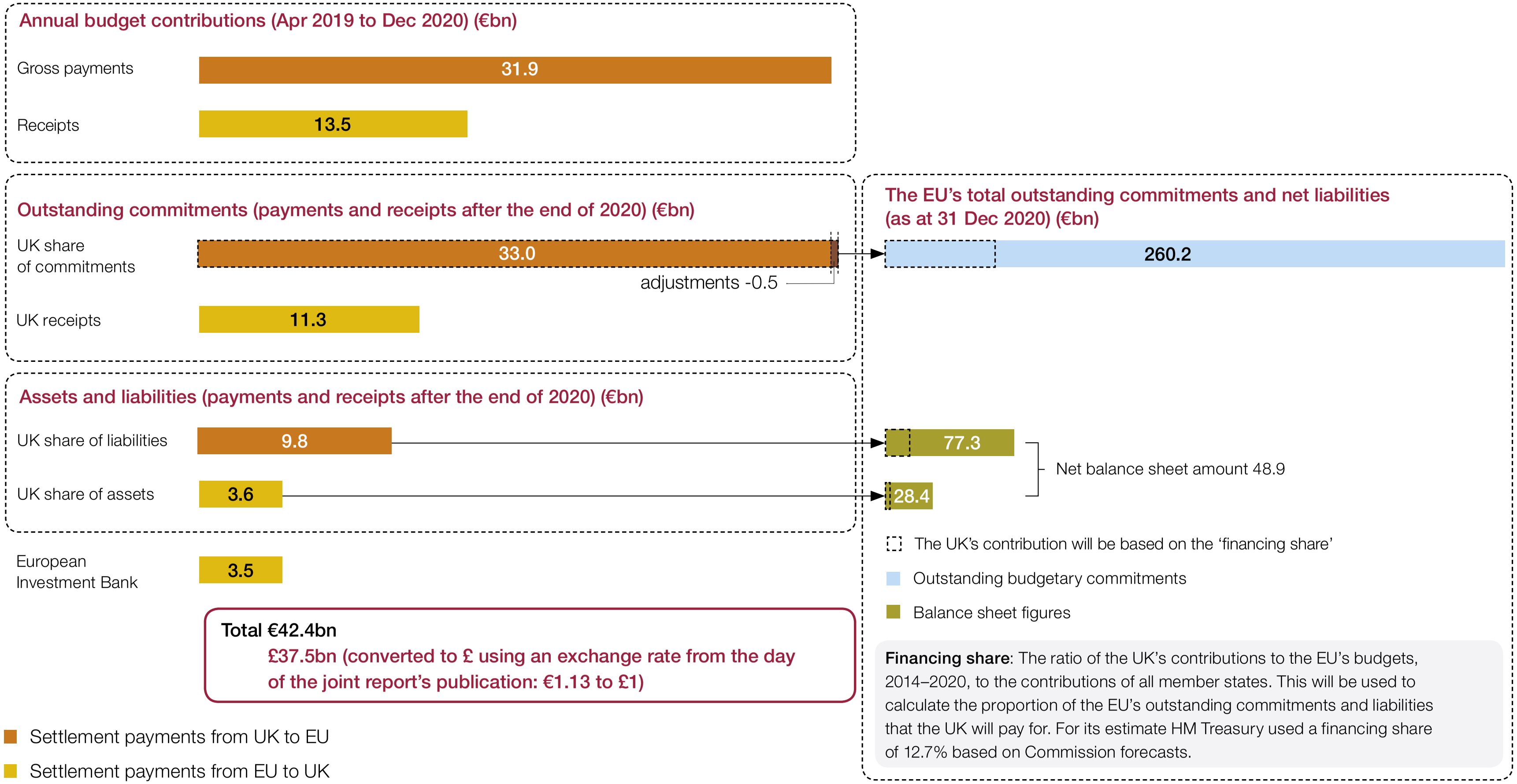
UK receipts

1.15 HM Treasury's estimate of the settlement's value is net of UK receipts from the EU. HM Treasury estimates that the UK will receive €13.5 billion through EU programmes before the end of 2020 and €11.3 billion from the balance of outstanding commitments at the end of 2020 over the remaining life of those programmes. To make this estimate, HM Treasury has calculated the UK's share of receipts from EU expenditure in 2015 and 2016 and assumed that receipts will continue at the same rate for each programme.

2 The euro figure has been converted to pounds using the exchange rate that HM Treasury used to convert its settlement estimate, which is €1.13 to £1. We have used this exchange rate throughout the report where we have converted a euro figure into pounds, unless otherwise stated.

Figure 6
HM Treasury's internal estimate of settlement payments and receipts

HM Treasury's estimate of the settlement comprises payments to, and receipts from, the European Union



Notes

1 Outstanding commitments as at 31 December 2020 include a deduction for post-2020 de-commitments (see paragraph 1.17).

2 Gross payments in 2019 and 2020 are net of the UK's rebate, which HM Treasury estimates will be worth €8.1 billion. The UK receives a rebate (or abatement) on its contribution through a mechanism designed to correct contributions by certain member states deemed excessive as compared to their national wealth. The cost of the UK rebate is divided among the other EU member states.

3 Adjustments that deduct €0.5 billion from the UK's share of commitments are for non-implemented commitments and commitments funded by assigned revenue: both of which reduce the UK's share of outstanding commitments.

4 Figures are rounded to one decimal place.

Source: National Audit Office analysis

Figure 7

UK contributions to the EU budget compared with the total EU budget for the 28 member states between 2014 and 2020

HM Treasury has calculated the UK's financing share, 2014-2020, using a range of final and draft EU data

	2014	2015	2016	2017	2018	2019	2020
EU budget contributions							
UK (€m)	14,590	21,592	15,921	13,648	18,267	18,267	18,267
EU28 (€m)	132,961	137,335	132,174	115,484	143,571	143,571	143,571
Figures based on	EU financial report	EU financial report	EU financial report	EU budget 2017	EU draft budget 2018	EU draft budget 2018	EU draft budget 2018
UK financing share	11.0%	15.7%	12.0%	11.8%	12.7%	12.7%	12.7%
Average financing share				12.7%			

Notes

1 HM Treasury has forecast contributions from the UK and from the 28 member states in 2019 and 2020 based on the 2018 EU draft budget. This is different to how it calculated the UK's contributions to the EU's budget in 2019 and 2020 for its internal modelling of the settlement's cost, as shown in Figure 6.

2 UK budget contributions are net of the UK's rebate (see note 2 on Figure 6).

Source: National Audit Office analysis of European Union data

1.16 HM Treasury makes budget payments to the EU on behalf of the UK government. These are accounted for in the HM Treasury's consolidated fund, which is the government's general bank account. Receipts from the EU that go to the public sector are recorded in the government department accounts to which they relate and then consolidated into the Whole of Government Accounts.[3] Receipts from the EU that go directly to the private sector do not come into government accounts, but HM Treasury have not distinguished between public and private receipts in its estimate of the settlement's value. The exact split of receipts between the public and private sectors is uncertain because some EU programmes are open to both private and public organisations, such as government departments and public research organisations. However, we estimate that HM Treasury's settlement value includes receipts worth £7.2 billion (€8.1 billion) that go directly to the private sector.

3 The Whole of Government Accounts consolidates the accounts of over 6,000 organisations across the public sector, including central and local government as well as public corporations such as the Bank of England, to produce an accounts-based picture of the UK public finances.

Balance of outstanding commitments, December 2020

1.17 HM Treasury estimates that the EU's balance of outstanding commitments at the end of the current budget period for which the UK will be liable for a share will be €260.2 billion. There are a number of different assumptions underpinning this estimate (**Figure 8**):

- HM Treasury has taken the known balance of the EU's outstanding commitments that the UK will pay a share of at the end of 2017, which was €265.5 billion.
- It has then added new commitments and taken off future payments over the rest of the budget period, using the Commission's forecasts. These forecasts indicate there will be net additions to the balance of €28.9 billion before the end of 2020.
- HM Treasury has deducted from the balance a portion of commitments that it expects will not result in payment. This could arise if, for example, potential recipients do not claim payments in time, or fail to meet the necessary criteria. The Commission has forecast the rate of this, known as 'de-commitments', up to 2020. For 'de-commitments' after 2020, HM Treasury has assumed the rate will mirror what happened after the end of the last budget period (2007-2013). In total, HM Treasury has deducted €34.2 billion from the estimated outstanding commitment balance.

Net balance sheet liabilities

1.18 HM Treasury estimates that the EU's net balance sheet liabilities of which the UK will pay a share will be €48.9 billion at the end of 2020 (**Figure 9** on page 24). The largest component is the EU's liability in respect of its defined benefit pension scheme for EU officials. HM Treasury has estimated the value of this liability at the end of 2020 based on its value in the 2016 EU accounts. It has projected this forward, assuming that it will continue to grow at the same rate as it has done since 2014, excluding the impact of changes to discount rates. HM Treasury has estimated the value of the other components, investment and budgetary reflows, based on the average of these balances over recent years in the EU's accounts.

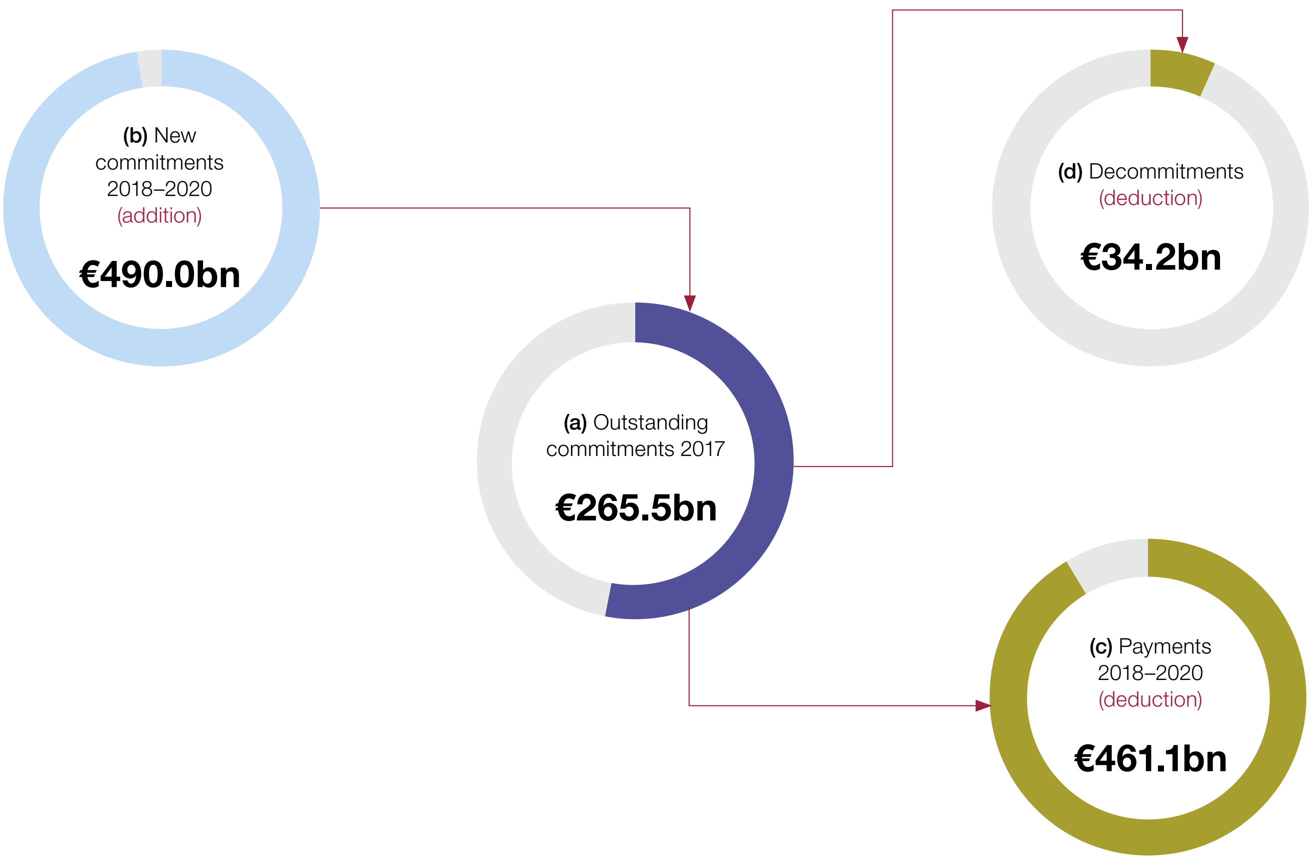
1.19 During the negotiations, HM Treasury agreed with the Commission that not all balance sheet items would be included in the settlement:

- The UK will not contribute to liabilities that have corresponding assets. This includes borrowings for financial assistance, most provisions (except those relating to fines, legal proceedings and financial guarantee liabilities) and building- and property-related liabilities.
- Assets and liabilities relating to the operation of the budget (such as cash, receivables and payables) were not included as these would be covered in the reconciliation of the UK's contributions to the EU's annual budget.
- Some areas, such as inventories, were not included because they did not have an economic value that could be recognised in settlement payments or receipts.

Figure 8

HM Treasury's estimate of the EU's outstanding commitments as at 31 December 2020

HM Treasury has estimated outstanding commitments at 31 December 2020 as €260.2 billion, of which the UK will pay a share



HM Treasury forecasts the outstanding EU balance to which the UK will contribute a share is

(a)+(b)-(c)-(d) = €260.2bn

Note

1 De-commitments include those incurred pre and post 2020. New commitments and 2018-2020 payments exclude programmes not funded by the UK.

Source: National Audit Office analysis of HM Treasury's internal modelling

Figure 9

HM Treasury's estimate of the EU's balance sheet assets and liabilities as at 31 December 2020

Pension and other employee benefit liability is reduced by investment and budgetary reflows

Balance sheet item	HM Treasury's estimate of value in EU's accounts in 2020 (€bn)	Description
Pension and employee benefits	76.1	Forecast liability in December 2020 of the defined benefit pension scheme for EU officials and the post-employment sickness benefits scheme.
Other liabilities	1.2	Includes provisions relating to fines, legal proceedings and financial guarantee liabilities.
Investment reflows	(17.7)	Cash paid in by member states as a provision against potential losses incurred on EU programmes. The funds will be repaid to the UK and other member states when they are no longer needed.
Budgetary reflows	(10.6)	Money the EU receives from non-investment related sources, such as fines levied on member states for non-compliance.
Total	**49**	

Source: National Audit Office analysis of HM Treasury figures

Timing of payments

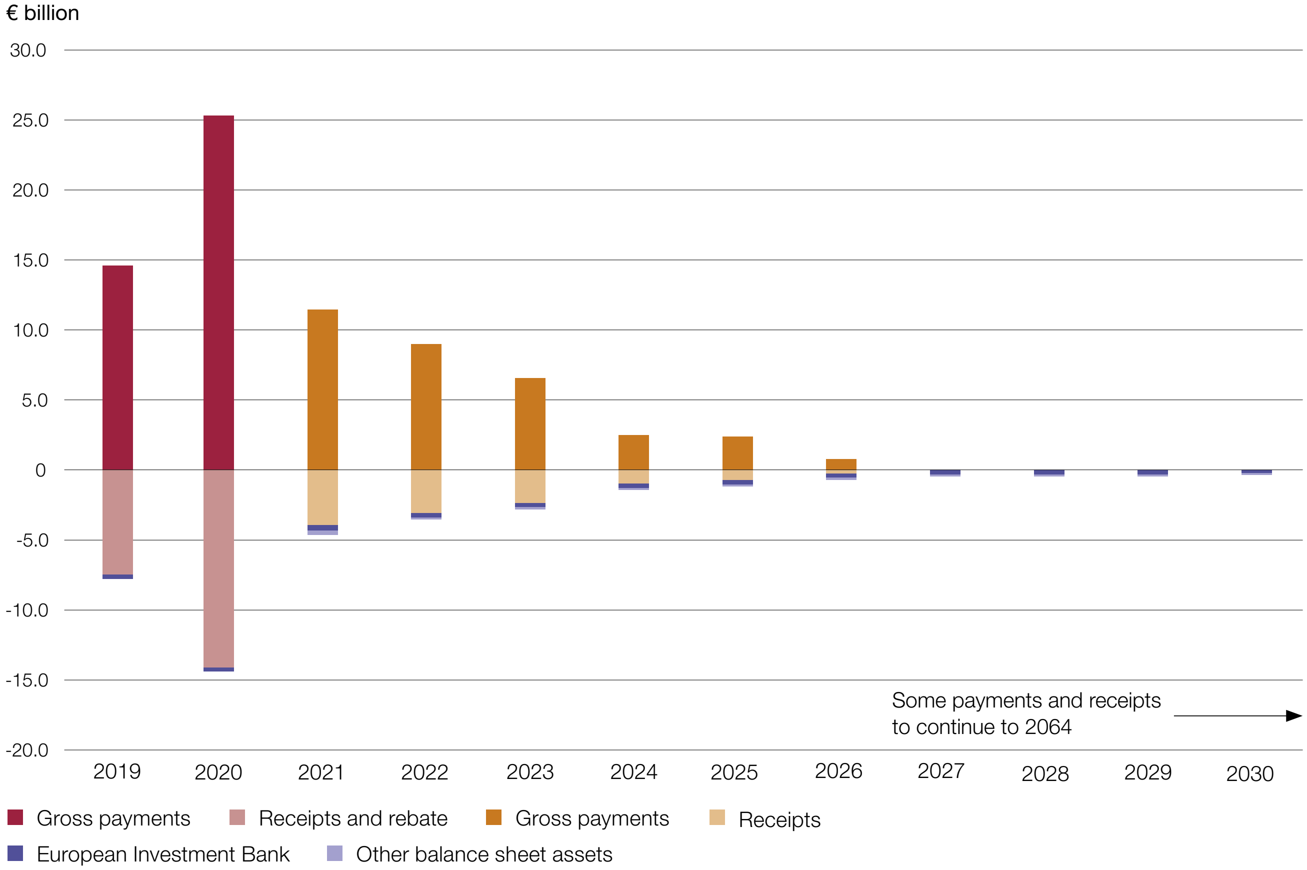
1.20 The joint report states that payments will become due as if the UK had remained a member state. This means the UK will not be required to pay off liabilities until they fall due, unless it makes use of the early payment provisions set out in the draft withdrawal agreement (paragraph 3.4). HM Treasury has modelled the UK paying off liabilities as they fall due to the EU. This shows the majority (around 60%) of settlement payments will fall due by 2021 (**Figure 10**).[4] The modelling predicts that the UK will pay off the vast majority of its share of outstanding commitments that are outstanding at the end of 2020 between 2021 and 2026 and that it will contribute to the EU's pension liability until at least 2064, though there could be a small amount of payments after this date. The UK will receive its share of paid-in capital in the European Investment Bank, worth €3.5 billion (£3.1 billion), in 12 annual instalments between 2019 and 2030.

4 The calculation of 60% of payments falling due by 2021 assumes that €6.2 billion net balance sheet liabilities and assets will not be paid or received by 2021. These comprise mainly of pension liabilities. Timings for these payments are uncertain.

Figure 10

Timeline of expected payments by, and receipts to, the UK on exiting the European Union

The UK will make the majority of settlement payments before 2022



	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Budget contributions (€bn)												
Gross payments	14.6	25.4										
Receipts and rebate	-7.5	-14.1										
Net	**7.1**	**11.2**										
Outstanding budgetary commitments (€bn)												
Gross payments			11.5	9.0	6.6	2.5	2.4	0.8				
Receipts			-3.9	-3.1	-2.3	-1.0	-0.7	-0.2				
Net			**7.5**	**5.9**	**4.2**	**1.5**	**1.7**	**0.5**				
Assets and liabilities (€bn)												
European Investment Bank	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.2
Other balance sheet assets			-0.4	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2

Notes

1 Numbers are rounded to one decimal place and therefore may not agree with other figures in the report.

2 'Other balance sheet assets' includes fines, investments, 2020 surplus and repayment of European Central Bank paid-in capital.

3 A total of €1.6 billion of 'other balance sheet assets' are estimated by HM Treasury to be received between 2031 and 2040, spread evenly across all years, and are not included above.

4 The graph does not include the €8.7 billion of pension liabilities estimated by HM Treasury to be paid between 2021 and 2064 or €1 billion post-employment sickness benefits scheme liabilities.

Source: National Audit Office analysis of HM Treasury data

Part Two

Assessment of HM Treasury's estimate

2.1 This part of the report explains the key uncertainties in HM Treasury's published estimate of the settlement value and how different scenarios could affect this. It also outlines other potential costs that are not included in HM Treasury's estimate.

Settlement value uncertainties

2.2 As with any estimate, HM Treasury's estimate of the settlement's value is sensitive to changes of assumptions about future events. This includes the impact of wider economic factors, forecasting European Union (EU) expenditure and estimating changes in the rate of EU expenditure that goes to the UK. The UK will not make some settlement payments until many years into the future, which also makes their value difficult to forecast accurately.

2.3 We have considered the impact of changes to some of HM Treasury's key assumptions on the relevant aspects of the settlement. Our intention is to illustrate the sensitivity of the settlement estimate to changes in the main assumptions in isolation. In practice, it is unlikely that any of these changes would occur in isolation as different aspects of the settlement interact. Therefore, we do not intend for this analysis to be used to calculate a new range of potential values of the financial settlement.

Wider economic factors

Economic growth

2.4 The UK's economic growth rate will partly determine the value of the financial settlement. This is because member states' contributions to the EU's annual budgets, including the UK's contributions in 2019 and 2020, are partly determined by their relative economic performance (**Figure 11**). The UK's economic performance will, in turn, partly determine the share of the EU's outstanding net commitments and liabilities at the end of 2020 that it will pay for. This is because the 'financing share' will be the ratio of the UK's budget contributions to all member states' contributions over the period 2014–2020.

Figure 11

How member states' contributions to the EU budget are calculated

The EU budget is financed almost exclusively through member states' contributions. These are based on each country's gross national income (GNI), value added tax (VAT) and levies and custom duties:

- A standard percentage (0.3%), agreed by all member states at the beginning of the budget period, is levied on the harmonised VAT base for each member state.[1]
- Member states collect sugar levies and customs duties on behalf of the EU. Member states' governments retain 20% of these to cover the cost of their collection, and pass 80% to the European Commission. These contributions are classified as Traditional Own Resources (TOR).
- The EU forecasts its total budgetary requirements and deducts the expected receipts from VAT and TOR to calculate the remaining budget to be funded through GNI contributions. It uses this to estimate the percentage of each member state's GNI it needs to collect.

Approximately 75% of EU budget revenue comes from GNI-based contributions, while VAT-based resources and the sum of customs duties and sugar levies contribute just over 10% each respectively. The total amount that member states contribute to the EU's budget cannot exceed 1.2% of the gross national income of the EU.

Annual budgets are prepared in advance of, and amended throughout, the year to which they relate. The final amendment to a budget determines member state contributions, based on forecast economic and budgetary information. Subsequent annual revenue adjustment exercises finalise prior year member state budget payments, upon receipt of relevant economic outturn data.

In 2016, the UK's contribution, taking into account the UK's rebate, represented 12.0% of all member states' contributions to the EU budget, behind Germany (20.7%) and France (16.0%). The UK received 5.9% of all payments from the EU budget to member states.

Note

1 Germany, the Netherlands and Sweden have negotiated temporary reductions to their VAT call rates, fixed at 0.15%, for the period 2014–2020, as set out in the 2014 Own Resources Decision

Source: National Audit Office analysis

2.5 The actual budget contributions until 2020, and consequently the financing share, could be different from the forecast, which would impact on the value of the settlement. For its public estimate, HM Treasury used the Commission's forecast of the UK's share in 2018 to estimate that the average contribution between 2014 and 2020 will be 12.7%.

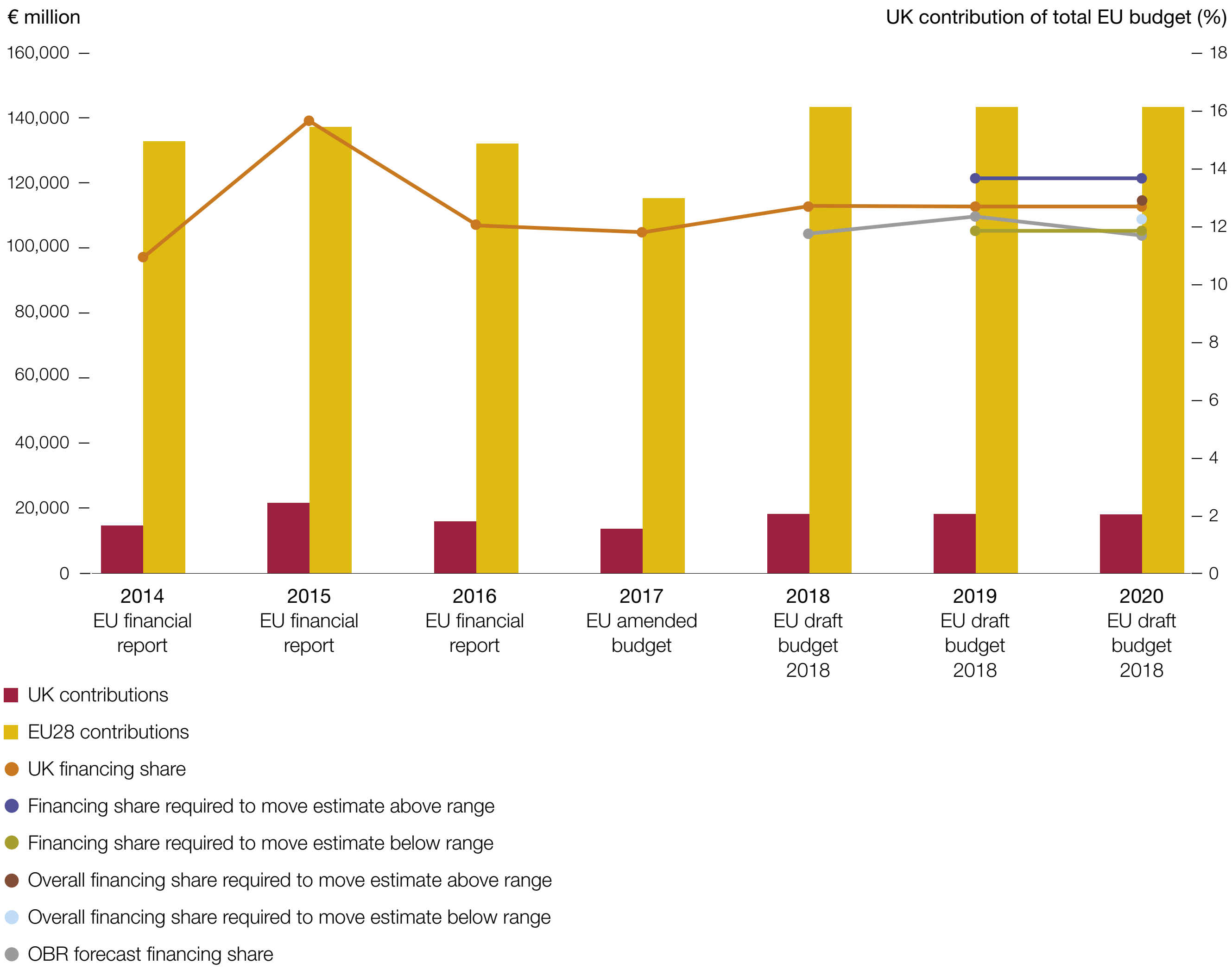
2.6 HM Treasury's own estimate of the financing share is slightly lower than what it estimated using the Commission's forecast. It uses the Office for Budget Responsibility's (OBR) forecast from the March 2018 Budget that the UK's share of contributions to the EU's budget in 2019 and 2020 will be 12.3% and 11.7% respectively, resulting in an average financing share between 2014 and 2020 of 12.4%. Applying this financing share to HM Treasury's estimate but leaving all other variables constant reduces the total settlement value to £35.6 billion. This is a reduction of £1.9 billion, compared with HM Treasury's central estimate using the Commission's forecast. This reduction in the value of the settlement reflects both the impact of lower 2019 and 2020 contributions, and the lower post-2020 share of outstanding commitments and balance sheet liabilities, when compared with the Commission's forecast of financing shares.

2.7 We estimate that for HM Treasury's internal estimate of the settlement to fall outside the range of £35 billion to £39 billion, the UK's average contribution to the EU budget in 2019 and 2020 would need to decrease to 11.9% or rise to 13.7% (**Figure 12**). In the ten-year period between 2007 and 2016, the UK's financing share fell outside of this range five times, four of which were below an 11.9% share. Such changes would cause the average financing share between 2014 and 2020 to fall to 12.3% or rise to 12.9% respectively from HM Treasury's current estimate of 12.4%.

Figure 12

Illustration of sensitivity of settlement estimate to changes in UK share of EU budget in 2019 and 2020

HM Treasury's estimate of the financial settlement is susceptible to changes in the UK's contribution to the EU in 2019 and 2020 relative to remaining member states



Note

1 In 2014 the UK was presented with a bill for a revenue adjustment payment with a net value of £0.8 billion, reflecting changes to economic data for all member states dating as far back as 2002 for the UK. The UK paid this (net of the rebate) in 2015. It had started to receive refunds reflecting the result of other member states' revenue adjustment payments through the 2014 budget. This timing difference increased the UK's financing share in 2015 and reduced the share in 2014.

Source: National Audit Office analysis using HM Treasury and European Union data

2.8 The Commission is able take action to recover contributions from member states that it finds should have been paid into the EU budget in previous years. This could impact member states' share of contributions to the EU's budget. If this occurred before December 2020 it could impact the UK's financing share.

Exchange rates

2.9 As the settlement will be drawn up and paid in euros, HM Treasury's estimate of the settlement's value is also sensitive to changes in the value of the pound against the euro. For its published estimate, HM Treasury used an exchange rate from the date of the joint report of €1.13 to £1. The actual value of settlement payments in sterling will depend on the prevailing exchange rate on the dates that payments are made.

2.10 It is not straightforward to isolate the potential impact on the settlement of exchange rate fluctuations. Changes in exchange rates interact with other elements of the settlement estimate. A strengthening of the pound against the euro before 2020 would reduce the sterling value of the UK's contributions to the EU's budget, but it would also increase the financing share. This is because it would mean the UK's gross national income, which partly determines its contribution to the EU's budgets, is higher once converted into euros. Exchange rate changes would also impact the valuation of the UK's receipts from the EU, which it receives in euros. Despite these interactions, changes in the exchange rate could have a significant impact, particularly after 2020, when over half of the settlement will remain to be paid. For example, applying Bloomberg forward exchange rates, rather than an exchange rate from the date of the joint report's publication, to payments and receipts after 2020 would increase HM Treasury's estimate by £1.1 billion to £38.6 billion.[5]

Inflation

2.11 Similarly, forecasting the future value of settlement payments depends on how the impact of inflation is accounted for. Inflation means that future payments expressed in cash terms are worth less now in real terms. HM Treasury's estimate of the settlement is largely expressed in cash terms; only the pension liability is expressed as a real value. HM Treasury has not discounted any other components of its estimate to account for inflation, despite expectations that some payments will be made far into the future, such as payments to the UK of its capital in the European Investment Bank, which will not finish until 2030. This is because it wanted its estimate to be consistent with publicly available data, including where forecasts are expressed in cash terms. But we estimate that adjusting for inflation consistently across the whole settlement would have resulted in a central estimate of approximately £36 billion (compared to HM Treasury's central modelling figure of £37.5 billion).[6]

5 We have calculated the figure using HM Treasury's estimates of the timings of future receipts and payments relating to the financial settlement. HM Treasury's estimate of the pension liability does not project the timing of future cash flows. In 2016, Eurostat forecast the future cash flows for pensions and HM Treasury have used this to calculate the pension entitlement accrued by 2020, adjusted for inflation. We applied this to HM Treasury's estimate of the pension liability and post employment sickness benefit scheme liability which in total sums to €9.7 billion. Cash flows forecast for 2019–2020 have been converted to pounds using an exchange rate of €1.13 to £1.

6 To convert future cash flows (in current prices) to "constant year" or real prices we used OBR forecasts for the Consumer Price Index (CPI) and the GDP deflator up to 2022 and the government's target inflation rate of 2.0% thereafter. We have not further converted the real values of settlement payments into net present values (i.e. adjusting for the time value of money). There are a range of discount rates that could be applied to do this based on different assumptions about real interest rates and other factors.

Forecasting EU expenditure

2.12 HM Treasury has relied on the Commission's forecasts for significant components of its estimate. HM Treasury used the Commission's forecast of its expenditure in 2019 and 2020 from its 2017 mid-term review to estimate that the UK's gross contributions, net of the rebate, in those years will be €31.9 billion. HM Treasury has also used Commission forecasts to project the value of outstanding commitments at the end of 2020, of which it forecasts the UK's share will be worth €33 billion. As with any forecast, there is a possibility that the actual figures may vary. For example, commitments in 2012 and 2013 were 0.4% higher and 0.7% lower than forecast in 2011 respectively.

2.13 There is particular uncertainty over how much the UK will pay in budget contributions after its withdrawal in 2019. The UK is expected to withdraw from the EU on 29 March 2019, meaning there will be nine months of that year when it is not a member state. However, HM Treasury assumes the UK will have paid five months' worth of annual contributions before the end of March 2019, so only seven months' worth fall within its settlement estimate. This is because the EU is entitled to request up to five months' of annual contributions before the end of the first quarter of the calendar year, to pay for programmes that spend more in the earlier months of the year. It has done this in four of the past eight years.

2.14 If the EU requests fewer than five months of contributions before the end of the first quarter of 2019, the value of payments made after the UK's withdrawal would be higher than HM Treasury has estimated. This would be offset by an equivalent reduction to the UK's contributions to the EU's budget prior to withdrawal. The largest potential difference is around £3 billion based on the EU only requesting three months' worth of contributions. However, only twice in the past eight years did it request fewer than four months' worth of contributions in the first quarter.

2.15 HM Treasury has used previous events to predict the future where the Commission does not produce its own forecasts. HM Treasury has estimated that 9.3% of all outstanding commitments after 2020 will be de-committed. The estimate is based on the de-commitment rate from outstanding commitments after 2013, the end of the last budget period. But this rate has fluctuated in previous budget periods. During the previous budget period (2007–2013) the de-commitment rate was 11.9%. If HM Treasury assumed the rate is going to be this high after 2020, its estimate would have decreased by €0.6 billion (£0.5 billion).

UK receipts

2.16 The UK will continue to participate in EU programmes, such as Horizon 2020 and the European Agricultural Guarantee Fund after the date of withdrawal. Similarly, the UK will receive a share of outstanding commitments relating to programmes it currently participates in after 2020 as the EU's funding commitments relating to those programmes unwind. HM Treasury assumes that UK receipts as a share of EU expenditure up to and after 2020 will continue at the same rate at a programme level as in 2015 and 2016. It estimates that the UK will receive 4.8% of the remaining EU budgetary expenditure in the current EU budget period and of the balance of outstanding commitments at the end of 2020.[7]

7 This is lower than the rate the UK has received between 2014 and 2016, which is 5.7%, because HM Treasury expects remaining receipts to be from programmes from which the UK receives a smaller share. HM Treasury forecasts that the UK will receive an average of 5.4% of the total EU expenditure in 2019–2020, and 4.3% of the total EU expenditure arising from outstanding commitments at 2020.

2.17 But there is a risk that the UK's withdrawal from the EU will cause changes to the rate of the UK's receipts. For example, the UK's receipts may be lower if UK-based beneficiaries decide not to apply for EU funding or if their funding applications are not approved by the EU at the same rate as when the UK was a member state. HM Treasury considers this risk to be mitigated because allocations have already been agreed for the largest programmes and the government has communicated to stakeholders that access to funding in the current EU budget period is unaffected by the UK's withdrawal.

2.18 However, HM Treasury's estimate of the settlement value is sensitive to changes in the rate of EU expenditure that comes to the UK. HM Treasury's internal modelling estimates that the UK will receive 4.8% of EU receipts after the date of withdrawal. Its internal sensitivity analysis gives a potential range of 4.4% to 5.4%, which would result in settlement values of £36.2 billion and £39.2 billion respectively.

Pension liability

2.19 The cost of the UK's future contributions to the EU's pension scheme is a particularly uncertain part of the settlement. This is because it is based on a number of assumptions about future events that are difficult to predict, especially over such a long period of time – payments are forecast to extend until at least 2064. Such uncertainty is common to all valuations of pension liabilities. In the joint report, HM Treasury and the Commission recognised that the liability has a long time-span and the forecast of its value depends on a number of assumptions. Variations to these assumptions would impact the payments the UK is expected to make in respect of the pension liability. This includes:

- **Mortality rates:** A key driver of forecast pension costs is the life expectancy of the scheme members, which is difficult to predict. This also determines how long the liability will last.
- **Scheme rules:** The valuation is based on the current rules of the schemes, for instance on retirement ages. The Commission could change these rules in the future.
- **Expected rate of salary increases:** Because the pension payments are based on recipients' final salary, the valuation of the scheme liability is based on an expectation of the rate at which salaries will increase. The actual increase may be higher or lower than the 1.2% assumed.

2.20 The estimated value of the pension liability is sensitive to changes in the discount rate used to convert future payments to a present value. The value of the pension liability in the EU accounts, on which HM Treasury based its estimate, uses a historically low discount rate of 0.3%: it was 1.8% as recently as 2013. If all other variables are held constant, a 0.5% and 1% increase in the discount rate would reduce the UK's share of the EU's pension liability by £1 billion and £1.9 billion respectively. Changes to the discount rate would not impact on the value of payments the UK makes when they fall due, as indicated by the draft withdrawal agreement. It does, however, create risks and opportunities for paying off the liability early based on a discounted value (paragraph 3.6).

How uncertainty is reflected in HM Treasury's estimate

2.21 According to HM Treasury guidance, uncertainty should be expressed as a range of possible outcomes and their likelihoods, taking account of the reasons why outcomes may differ and the impact of different uncertainties.[8] Using a single estimate of future payments would overstate the certainty of payment amounts when they are subject to uncertain future events.

2.22 HM Treasury published an estimate of the settlement's value to provide some understanding of the monetary value of what had been agreed in the joint report, which included only principles for calculating settlement payments rather than actual payment amounts. It derived its estimate from publicly available data where possible so that it did not set out assumptions outside published Commission forecasts.

2.23 Although HM Treasury was aware of the uncertainties described above, it did not include all of them for its calculation of the £35 billion to £39 billion range (**Figure 13**). For example, its estimate does not adjust the financing share from the Commission's estimate to take account of the fact that it could be different if relative growth rates are different to forecast. Additionally, where HM Treasury has adjusted assumptions, it did this using basic variances, such as adding 0.5% or €0.5 billion either side of its central estimate, or using different assumptions to its internal modelling. Overall, the range in HM Treasury's estimate is narrow given the degree of uncertainty. Relatively small changes to some key assumptions could cause its central estimate to fall outside the published range.

Payments not included in the estimate

European Development Fund

2.24 According to the joint report, the UK will honour its share of commitments made under the previous European Development Fund (EDF) and the current EDF, which ends on 31 December 2020. The EDF is the EU's main instrument for providing development aid. HM Treasury expects remaining costs at the date of withdrawal to be €3.3 billion (£2.9 billion) in nominal terms with payments forecast to continue until 2026. The EDF also has some assets, including its investment facility, a share of which will be returned to the UK at the end of the current EDF period. HM Treasury estimates these are worth around €0.5 billion (£450 million). HM Treasury did not include these payments or receipts in its settlement estimate because the EDF is not established under the EU treaties and sits outside the EU budget.[9]

8 HM Treasury, *The Aqua Book: Guidance on producing quality analysis for government*, March 2015.

9 The UK will also honour its pre-withdrawal bilateral obligations for the Facility for Refugees in Turkey and the European Union Emergency Trust Fund. These bilateral commitments are estimated to be worth €15 million but are not included in HM Treasury's estimate.

Figure 13

Uncertainties reflected in HM Treasury's published estimate

HM Treasury's presentation of the settlement range does not take account of all the uncertainties of which it was aware

Components of the settlement for which HM Treasury calculated a range in its estimate

Component	Range HM Treasury applied	NAO commentary on uncertainty and impact on settlement estimate
EU budget contributions 2019 and 2020	€0.5 billion either side of central estimate to reflect uncertainty about how much the EU will request in Quarter 1 2019 before the UK's withdrawal	It is uncertain how much the UK will have paid in the first three months of 2019, prior to the UK's withdrawal. The EU can require payment of up to five months' worth of contributions, which HM Treasury has assumed will happen. If the EU only requests three months' worth of contributions, payments after the UK's withdrawal will be around £3 billion higher than HM Treasury estimates. However, only twice in the past eight years did it request fewer than four months' worth.
De-commitments	7–8% (post-2020 only)	De-commitment rates have varied in previous budget periods, but would need to change significantly to impact the settlement estimate (e.g. a 1 percentage point variance would change the value of the estimate by €0.2 billion).
UK receipts	4–5% (post-2020 only)	There is potential uncertainty around UK receipts being sustained at expected levels due to the UK's withdrawal. The UK's share of receipts would need to fall to 3.7% or increase to 5.4% (from central estimate of 4.3%) for the estimate to be outside HM Treasury's range. These bounds were outside the ranges in HM Treasury's internal sensitivity analysis.
Assets and liabilities after 2020	Pension and other employee benefit liabilities: €8.5 billion–€9.7 billion Investment reflows: €1.1 billion–€2.2 billion Budgetary reflows: €0.6 billion–€1.1 billion	Pension liability: this is subject to significant uncertainty because of its long-term nature and because it is based on a number of assumptions such as salary increases and mortality rates. The valuation is also influenced by the discount rate used. The EU's accounts estimate of the pension liability uses a discount rate of 0.3%, which is a historically low rate. An increase of 0.5% in the discount rate would reduce the UK's expected liability by €1.1 billion. Investment reflows: Actual return will depend on default rate on investments. Budgetary reflows: This figure is subject to volatility. The lower end of HM Treasury's range is based on what it expects to be a normal budgetary surplus figure in 2020 as it considers the 2016 surplus to be an anomaly.

Figure 13 *continued*

Uncertainties reflected in HM Treasury's published estimate

Components of the settlement for which HM Treasury did not apply a range

Component	Reason HM Treasury did not apply a range	NAO commentary on uncertainty and impact on settlement estimate
Financing share	Estimate uses the Commission's forecast of UK financing share in 2018 (12.7%). No other estimates available from public data at the time of the estimate.	We estimate if the financing share is less than 12.3% or more than 12.9% the estimate would be outside HM Treasury's range. HM Treasury's own estimate is that the financing share will be 12.4%.
Exchange rates	Spot rate from date of Joint report considered to be a reasonable estimate of future exchange rates.	Exchange rate changes impact all components of the settlement as all payments and receipts will be in euros. Exchange rate changes before 2020 will partly be offset by changes to the financing share. Applying Bloomberg forward exchange rates, rather than an exchange rate from the date of the joint report's publication, to future payments and receipts after 2020 would increase HM Treasury's estimate by £1.1 billion to £38.6 billion.
Outstanding commitments, end of 2020	Estimate uses Commission's forecast of additional commitments and payments between 2017 and 2020. Variances from this would introduce new estimates that are not in the public domain.	Biggest potential variance on outstanding commitments is how many payments take place before and after the end of 2020. However, given that payments made before 2020 are deducted from the balance of outstanding commitments at the end of 2020, it makes little difference to the overall financial settlement which side payments fall.

Source: National Audit Office analysis of HM Treasury internal documents

Other payments for which the UK may be liable

Contingent liabilities and guarantees

2.25 The EU is exposed to a number of contingent liabilities and the joint report states that the UK will take on a share of that exposure when it leaves the EU. Contingent liabilities are liabilities and potential liabilities that are not currently expected to result in the EU having to make a payment, and so, in line with accounting rules, are not shown as liabilities on its balance sheet. This is consistent with HM Treasury's existing treatment of those contingent liabilities in its published accounts. Because of this, HM Treasury has assumed that the UK will not have to make any payments in respect of these contingent liabilities in addition to amounts already factored into the settlement estimate as provisions.

2.26 HM Treasury's forecast of the contingent liabilities that the UK will be exposed to on withdrawal is €14 billion. This is made up of:

- €7 billion relating to the EU financial assistance programme, which issues loans to member states and partner countries to preserve financial stability. If a loan recipient were to default on a loan, then the UK would bear a share of the cost.
- €6 billion relating to guarantees given to the European Investment Bank (EIB) for certain types of loans and investments. The UK will pay a share of any losses that the EIB suffers on these loans and investments.

- €1 billion relating to legal cases if, contrary to its expectations, the EU loses any of these cases. The UK will be liable for a share of the resulting payments.

2.27 The precise set of contingent liabilities and their values for which the UK will be liable is not yet known. The UK will be exposed to a share of contingent liabilities relating to the financial assistance programme and EIB guarantees that the EU incurs up to the date of withdrawal. For legal cases, the UK's exposure will be for contingent liabilities that relate to events that occur before December 2020, even if the legal claim is not made until after that date.

2.28 In addition, on withdrawal from the EU, the UK will give the EIB a guarantee worth €35.7 billion, which will decline as the EIB stock associated with this guarantee decreases. The UK will also remain liable for some or all of the €3.5 billion capital that it has paid in until it has no exposure arising from EIB's operations outstanding as at the date of withdrawal. The EIB's capital structure means that it can call on member states to pay some or all of their uncalled capital if the EIB requires this to settle its obligations. The bank has a high credit quality loan portfolio, which is characterised by low rates of impairment and default. HM Treasury has assumed the most likely outcome to be that the UK guarantees will never be called upon. The joint report states that the UK considers there to be a mutual benefit from a continuing relationship between the UK and the EIB, the terms of which would need to be negotiated separately in the future.

Other costs

2.29 The withdrawal agreement states that the UK will contribute to the financing of the European Defence Agency, the European Union Institute for Security Studies, and the European Union Satellite Centre until 31 December 2020. These payments, which HM Treasury has estimated to be worth €14 million, were not outlined in the joint report and therefore not included in HM Treasury's estimate of the financial settlement.

2.30 There are other areas where there could be additional costs to the UK, including:

- The joint report commits the UK government to discussing with EU agencies located in the UK how it help them to relocate, in particular with regards to withdrawal costs. However, the joint report does not commit the UK to paying these costs. According to HM Treasury, the largest cost relates to the lease on the European Medicines Agency's headquarters, which it estimates could cost around €0.5 billion to break.

- There are potential costs should the UK wish to retain access to specific funds and agencies in future budget periods following its withdrawal from the EU.

- The Commission is able to take action to recover contributions from member states that it finds should have been paid into the EU budget in previous years. The UK may also remain liable for any fines and penalties due to infringements related to the transposition of EU law, or the application of single market rules, incurred during the period that it was a member of the EU.

Part Three

Implementation of the financial settlement

3.1 In this part of the report we set out the residual risks to the UK from its agreement with the European Union (EU) over the financial settlement. This includes how the UK government will ensure that payments are fair and accurate and the other potential risks that the government must manage.

How financial settlement payments will be calculated

3.2 On 19 March 2018, the government and the European Commission (the Commission) published a draft withdrawal agreement. This translated the commitments in the joint report into a draft legal agreement, as well as providing further details on how the UK's settlement payments will be calculated and the timing of those payments. The UK will continue to contribute to the EU's annual budgets in 2019 and 2020 as if it had remained a member state. This is in accordance with the planned transition period, during which the UK will no longer be a member state but new arrangements between the EU and UK will not yet have begun (April 2019 to December 2020). As is the case for the UK's contributions whilst a member state, its contributions in 2019 and 2020 can be corrected or adjusted after December 2020.

3.3 The other components of the settlement will require new mechanisms of calculation and payment, which are set out in the draft withdrawal agreement:

- The Commission will calculate the financing share percentage in February 2022. This will determine the share of the EU's outstanding commitments at the end of 2020 and balance sheet liabilities that the UK will pay for. This timing will enable the Commission to take account of adjustments to member states' shares of the EU budget in 2020 once outturn gross national income (GNI) figures are available.

- The EU will calculate the outstanding budgetary commitments as at 31 December 2020, which it will communicate to the UK government by 31 March 2021. The EU will then give the UK government by 31 March of each subsequent year an updated amount of commitments outstanding, along with the expected contribution of the UK in that year.

- The EU will inform the UK government by 31 March each year the payments it has made corresponding to liabilities outstanding at 31 December 2020 and the UK's share. It will also inform the UK government of its share of assets to be returned.
- The EU will provide a specific document on pensions, including the amount the UK must pay, by 30 June each year. This will relate to pension payments made in the preceding year. It will be calculated on the basis of the net payments made from the EU's budget for pensions multiplied by the UK's financing share and by a percentage specific to each beneficiary, being the ratio between pension rights acquired by 31 December 2020 and the pension rights at the date of retirement.

3.4 The draft withdrawal agreement also indicates that there is flexibility in when the government can pay off the outstanding net commitments and liabilities. After December 2028, the government can ask to pay off the outstanding commitments in a lump sum. The EU will calculate the lump sum based on an estimate of future de-commitments. The UK can also request at any time to pay off the outstanding pension liability, based on an actuarial valuation of the liability made in accordance with International Public Sector Accounting Standards.

3.5 The accounting valuation of the pension liability is subject to interpretation of the accounting standards as well as significant assumptions such as the choice of discount rate (paragraph 2.20). While a change in the discount rate would not impact the cash amount the UK would pay if it were to meet its liabilities as they fell due, it does affect the net present value of the liability used in the accounts which would be used to calculate a lump sum if the UK chose to pay off the liability early.

3.6 Consequently, the option for the UK government to pay off its pension liability early presents risks and opportunities. HM Treasury will need to ensure that it has sufficient information on the expected costs and benefits of an early repayment. The high level of uncertainty involved in forecasting future pension cash flows will make it difficult to calculate a reliable estimate of the cost of ongoing payments to compare to a lump-sum settlement. Furthermore, HM Treasury is exposed to the risk that future changes to actuarial techniques and/or accounting standards adversely impact the buy-out value, making this option less attractive to the government.

Ensuring payments are accurate

3.7 Member states have never before been required to meet the cost of liabilities separately from the normal budgeting process in the way that the UK will for the financial settlement. Payments after 2020 will be outside the existing payment mechanism that the UK uses to contribute to the EU's budget and their associated structures for ensuring accuracy.

3.8 HM Treasury needs to implement new processes for ensuring accuracy so the UK does not pay out more than is due. HM Treasury will need to ensure the processes are aligned with the complexity and subjectivity of how payments are calculated. If the method of calculation is relatively simple and open to little interpretation then the processes may be less complex and require less specialist input. But if payments are based on future events and complex calculations there could be a high level of judgment involved, meaning the process may need highly skilled specialists with technical and negotiating skills.

3.9 HM Treasury's processes for ensuring accuracy will need to include:

- **Ensuring it has the right to access the information used to calculate settlement payments.** The draft withdrawal agreement states that the EU will provide information and assistance that the UK government might reasonably request on its rights and obligations relating to the financial settlement. What it is reasonable to request may be open to different interpretations;
- **Obtaining sufficient assurance over the calculation of the payments and the quality of the underlying information.** The draft withdrawal agreement states that the UK government can inform the EU about auditors it has appointed to review the calculation of settlement payments and that the EU will provide those auditors with the information they request to perform this role. HM Treasury will need to set out how this will operate in practice; and
- **Agreeing with the EU a mechanism for resolving any disputes on the amount due.**

Other financial settlement risks

EU decisions that increase payments

3.10 There is a risk that the terms of the financial settlement will allow scope for the Commission to take decisions that increase the value of the UK's payments. For example, the Commission could reclassify liabilities so they are included in the calculation of settlement payments. The cut-off point at the end of 2020 also presents risks. The Commission may choose to add additional liabilities, such as provisions, before the end of 2020, or dispose of assets shortly after the end of 2020. The draft withdrawal agreement does limit the scope for this to happen. For example, it sets out that the UK will only be liable for provisions within certain categories (fines, legal proceedings and financial guarantee liabilities) and that the UK will only pay for liabilities if they fall due.

3.11 The UK's liability for outstanding commitments after 2020 could also be influenced by the Commission's actions. For example, applications towards the end of the current budgetary period could be fast-tracked to ensure that the commitment is made in time for the UK to contribute to its cost.

3.12 Before the negotiations on the draft withdrawal agreement began, HM Treasury considered how the EU might make decisions or take actions that would increase settlement payments. It identified some minor risks and emphasised the need for good management information and robust assurance arrangements to ensure fairness and accuracy. It also considered that many risks, such as the rate of de-commitments reducing, are not in the interest of remaining member states, which would also incur a share of the resulting additional costs.

3.13 As the UK exits the EU there is a risk that it may no longer benefit from programmes that it funded as a member state. The Commission may take actions that would have the effect of limiting UK-based beneficiaries' access to programmes, which may either directly impact on receipts or reduce the benefits to the UK of its participation. For example, the current terms of the draft withdrawal agreement prevent the UK government and entities based in the UK from accessing certain sensitive information after withdrawal, which could have the effect of restricting UK access to certain programmes.

Appendix One

Our audit approach

1 This study examines HM Treasury's estimate of the value of the financial settlement that the UK will pay upon leaving the European Union. We reviewed:

- how HM Treasury made its estimate, the sources that it used and the modelling assumptions it applied;
- the reasonableness of HM Treasury's assumptions, their potential sensitivity to change based on future events and the completeness of the estimate; and
- how HM Treasury plans to manage the residual risks of the settlement to the UK, such as how it will ensure that settlement payments are accurate.

2 Our audit approach is summarised in **Figure 14**. Our evidence base is summarised in Appendix Two.

Figure 14
Our audit approach

The objective of the government

HM Treasury made its estimate of the settlement's value to provide some understanding in monetary terms of what the government had agreed with the European Commission.

How this will be achieved

HM Treasury's estimate was derived as far as possible from publicly available data and includes payments to and receipts from the EU. The estimate is of the cost of the settlement to the UK as a whole.

Our study

This report assess the basis for HM Treasury's estimate of the financial settlement's value. It is intended to support Parliamentary scrutiny of HM Treasury's estimate and its ongoing management of the risks associated with the settlement.

Our evaluative criteria

What are the key modelling assumptions and uncertainties underpinning HM Treasury's estimate?

Did HM Treasury ensure it used robust modelling and appropriate skills to make its estimate?

Is HM Treasury managing future risks and opportunities associated with the settlement?

Our evidence
(see Appendix Two for details)

We analysed HM Treasury's models to understand the nature of the estimate, and applied various sensitivities to understand the potential for change in the value of the settlement.

We reviewed the robustness of HM Treasury's models using the NAO's model review framework and interviewed HM Treasury officials responsible for producing them.

We interviewed HM Treasury officials to understand its plans to manage residual risks. We reviewed the joint report and draft withdrawal agreement to understand the arrangements for making settlement payments.

Our conclusions

We have reviewed the reasonableness of HM Treasury's published estimate of the cost of the financial settlement. This estimate, a range of £35 billion to £39 billion, was intended to provide some monetary understanding of what had been agreed in the joint report. HM Treasury based the estimate on published data and made assumptions around which costs related to the financial settlement, such as excluding payments for the European Development Fund. Given these parameters, we found the estimate to be reasonable. However, there are some qualifications that it is important to understand.

Future events will determine significant elements of the settlement's cost including the value of the EU's future liabilities and commitments, and what share of those the UK will pay. It is understandable therefore that the range of uncertainties were not fully reflected in HM Treasury's estimate. This means relatively small changes in events could push the cost of the settlement outside HM Treasury's published range.

This report seeks to increase understanding of HM Treasury's estimate and the uncertainties within it. We will do more work as the ongoing negotiations continue and details of the settlement are finalised. We have identified below a number of issues HM Treasury will need to consider to ensure that the interests of the UK taxpayer are protected as it implements the settlement.

Source: National Audit Office

Appendix Two

Our evidence base

1 Our independent conclusions on HM Treasury's estimate of the financial settlement were reached following our analysis of evidence collected between February and April 2018.

2 We applied an analytical framework with evaluative criteria, which considered the reasonableness of HM Treasury's estimate, uncertainties within the estimate, and its managements of the remaining risks.

3 We assessed the key modelling assumptions and uncertainties in HM Treasury's estimate.

- We conducted interviews with HM Treasury officials to understand how it had modelled the settlement's value, the assumptions it had applied and how it considered the key uncertainties.
- We reviewed HM Treasury's modelling to understand how it applied its assumptions and to understand the source data used to make calculations.
- We reviewed the source documents to ensure they matched to HM Treasury's modelling, such as European Commission forecasts, financial reports and the European Investment Bank's accounts.

4 We evaluated the quality of HM Treasury's modelling and considered the skills and resources it applied to making its estimate:

- We reviewed HM Treasury's models against the National Audit Office's framework for reviewing models. This considers whether models have appropriate governance and assurance arrangements, the model concept and design, the testing of models' sensitivity and assessing how the results of modelling are used.
- We interviewed HM Treasury officials to understand how it approached making its estimate of the settlement value, including ensuring it had the right skills and access to external advice where required.

5 We assessed how HM Treasury plans to manage the residual risks of the settlement:

- We interviewed HM Treasury officials to understand how it plans to put in place the necessary structures and processes for ensuring that the UK's settlement payments are fair and accurate.
- We reviewed the draft withdrawal agreement, which sets out how the European Commission will calculate settlement payments.

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