HM Treasury

The Asset Protection Scheme

Appendices Three to Seven and Glossary

DECEMBER 2010

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Appendix Three

Options analysis

1 This Appendix considers the Treasury's analysis of options ahead of announcing the Scheme in January 2009 and its reappraisal in November 2009. Three options were examined:

- inject further capital;
- take one or more UK banks into temporary public ownership; or
- underpin assets on banks' balance sheets.

Recapitalisation

2 Recapitalisation was the most straightforward option. An immediate injection of capital could have been achieved in a combination of ways, including issuing ordinary shares and/or non-voting shares. Alternatively, the Treasury could have promised to inject capital in the future, if a troubled bank's core capital fell below a predetermined level.

3 A key difficulty in early 2009 was judging how much capital would be needed if economic conditions continued to deteriorate. In the short and medium-term, the Treasury faced significant doubt about the amount of capital the banks would need to cover losses from opaque, uncertain and impaired assets. Furthermore, the taxpayer's ownership of Lloyds and RBS was already sizeable, and further taxpayer recapitalisations risked nationalisation of these banks. Recapitalisation would also have an immediate impact on the Government's debt issuance programme.

4 Taking account of all the factors and the immediate fiscal consequences, the Treasury decided against recapitalisation in isolation from other measures.

Temporary public ownership

5 Full public ownership of a major bank entailed risks as well as benefits. Among the risks were:

- The potential to trigger market uncertainty about the stability of other banks. Taking a large, systemically important bank such as RBS into public ownership risked longer-term reputational damage to the UK's financial sector. A domino effect might have ensued with the next weakest bank falling prey to funding outflows and downward movement in its share price. Ultimately, the Treasury might have had to nationalise the majority of the banks to stabilise the markets.

- During 2008, the Treasury had already seen a flight to safety into government bonds, National Savings and Investments and Northern Rock. A large nationalised bank, with a nationwide high street presence, could have drained deposits from other banks and destabilised their funding.
- The best managers and clients might leave a nationalised bank, damaging its underlying business.
- Future disposal of a publicly owned bank would require a relisting of the shares on the stock exchange or through selling the business directly to strategic investors. By ensuring that the proportion of shares held by minority shareholders was sufficient to avoid delisting, the Treasury would retain the option to sell shares into the market directly.

6 Public ownership offered:

- A greater ability to direct a bank to take actions such as improving governance, constraining remuneration and increasing lending.
- A means by which the rights of subordinated debt[1] holders could be changed to ensure that they would bear losses alongside private shareholders.

7 The Treasury was concerned, however, that imposing losses on subordinated debt might have negative funding consequences for other UK banks. It was concerned that losses incurred by holders of subordinated debt, particularly insurance companies, might affect wider financial stability, although the Treasury had little information before summer 2009 on who held this type of debt.

8 The Treasury, therefore, considered public ownership to be a last resort, although it continued to plan for such action, should other options fail.

Underpinning assets

9 By early January 2009, the Treasury believed that dealing with the impaired assets of troubled financial institutions was needed to address systemic weaknesses. By taking responsibility for these assets, the Government could set a limit on the losses borne by the banks.

10 Previous crises suggested that impaired assets could be resolved in one of two ways. One option is to buy the assets from banks, commonly by splitting a bank into a good bank and a bad bank. The second option provides protection against losses on a specific set of assets. Appendix Seven summarises the schemes used in other countries.

1 Subordinated (or hybrid) debt ranks after other debts should a bank become insolvent and provides a higher rate of return to compensate investors for the risk involved.

Asset purchase

11 A well-designed and implemented asset purchase scheme offered some attractions including a potentially decisive break with the past and a cleansing of balance sheets.

12 The Treasury was concerned that, if it were to purchase complex assets, it would have to build up specialist asset management capacity. The Treasury considered that the physical split of assets for Lloyds could take at least two years, while RBS operated with an even more complex structure. This view about the time taken to purchase troubled assets was supported by the fact that the Treasury took the best part of a year to restructure Northern Rock into a “good” bank and a “bad” bank, and this bank had a smaller, less complicated asset base than the larger UK banks. The Treasury was also conscious of experience in the United States, where initial difficulties faced by US authorities in implementing the Troubled Asset Relief Program had unnerved the markets.

13 The weak capital positions of Lloyds and RBS were also constraints and there would have been difficulty in establishing prices in market conditions at the time. Selling assets to the Treasury at depressed market values would have forced, not only these two banks, but others also to record losses on their balance sheets, further eroding their core capital. Asset purchases would therefore necessitate an immediate call for cash to fund purchases of assets and further recapitalisation to offset losses.

Asset protection

14 Under a protection scheme, a participating bank would continue to own, fund and manage covered assets, but its exposure to losses would be limited to an agreed first loss and a share of any further losses. The Treasury considered that such an intervention would provide the certainty that markets were seeking, while avoiding commitment of taxpayer cash until losses on the covered assets exceeded the first loss, potentially some years ahead.

15 Such a scheme, however, carried sizeable implementation risks which might only become evident over time. Given the variety of assets to be covered, particularly in RBS, whose operations spanned dozens of countries and many asset classes, any scheme would be highly complex. Once operational, the scheme rules would have to close as many loopholes as possible to reduce potential gaming by participating banks.

Lloyds' exit and the decision to proceed with an Asset Protection Scheme for RBS

16 On 19 January 2009, the Chancellor announced that an Asset Protection Scheme would be developed as part of a wider package of measures to address capital shortfalls and maintain lending to the economy.

17 In February and March 2009, in the midst of deteriorating economic conditions, the Treasury announced that it had reached in-principle agreements with RBS and Lloyds. The Treasury then began negotiations with these banks to agree detailed Scheme rules and commissioned more due diligence into the asset pools proposed by the two banks. As part of the early negotiations, Lloyds and RBS made commitments to maintain lending to households and businesses and to restrict bonus payments.

18 In early summer 2009, in parallel with continuing negotiations over the Scheme, Lloyds began developing a proposal to raise additional capital through a rights issue. The Financial Services Authority assessed Lloyds' plan and considered that the bank could raise sufficient capital to pass a severe stress test without additional support through the Scheme. The Treasury concluded that the proposal was deliverable, offered better value for money than the alternative of keeping Lloyds in the Scheme. While it allowed the rights issue to go ahead in November 2009, the Treasury charged Lloyds an exit fee of £2.5 billion. On exit from the Scheme, Lloyds' minimum core tier 1 capital ratio was expected to be 4.2 per cent under the Financial Services Authority's stress test.

19 Prior to reaching final agreement with RBS, the Treasury re-examined the available options. By late 2009, the performance of the economy was mixed but the risk of more extreme downturns had begun to ease. Although the fall in GDP proved greater than expected in late 2008, the projected decline in UK house prices had been less severe. Money markets stabilised and improved confidence was reflected in a period of equity gains. With the extreme risks perceived to be lower and the Authorities having better knowledge of what was on banks' balance sheets, the Treasury considered there was scope to rebalance the support in favour of further recapitalisation.

20 To ensure that RBS could absorb further losses, the Treasury agreed to inject additional capital of £25.5 billion. To continue trading on the London Stock Exchange, the UK Listing Authority's rules required some RBS shares to remain in the open market. As a result of the additional capital injection, the taxpayer's economic interest in the bank increased from 70 per cent to 84 per cent[2], a level of ownership below the upper limit of 90 per cent that would require de-listing. The Treasury also committed to provide up to a further £8 billion of contingent capital in a stress scenario.

2 In March/April 2010, RBS conducted capital management transactions to exchange and convert subordinated debt into core capital and issue new shares to fund deferred 2009 employee awards. These transactions increased the number of RBS shares in issuance and reduced the government's share ownership from 84 per cent to 83 per cent.

21 The decision to proceed with the Scheme in November 2009 was finely balanced. The Treasury considered replacing the Scheme by increasing the contingent capital from £8 billion to £17 billion. Analysis of this proposed change indicated a small saving of around £200 million under the base case scenario and a potential saving of the order of £4 billion in the stress case. In a stress case:

- Under the Scheme, the taxpayer would have injected cash into RBS totalling £86 billion in the form of capital (£54 billion) and payments, net of fees, of around £32 billion to cover second losses. As the second loss payments protect RBS's capital, the value of the taxpayer and minority private shareholdings would be shielded from the full impact of losses. However, the share price would fall in a stress case and the taxpayer's holding, when eventually sold, might raise only £25 billion, leaving a net cost for the taxpayer of about £61 billion.

- Without the Scheme, there would be no second loss payments but additional capital of £9 billion would be provided. After deducting fees, the total cash injection to RBS would have been some £59 billion. As RBS's capital would not have been shielded by second loss payments, the taxpayer's shareholding would have declined in value to a greater extent and might have been worth as little as £2 billion when sold, leaving a net cost for the taxpayer of £57 billion.

22 A larger capital injection also offered the possibility of avoiding some of the risks and drawbacks associated with the Scheme, including:

- a misalignment of incentives whereby RBS, after exhausting the first loss, might be less concerned to minimise further losses; and

- the cost of administering the Scheme which, although relatively small and borne by RBS, would reduce the value of the taxpayers' shareholding.

23 The Treasury decided to proceed with the Scheme as:

- further consideration of alternatives risked prolonging negotiations with RBS into 2010 and might be misinterpreted by the markets as a signal that problems at RBS were worse than expected;

- the Scheme provided more certainty that RBS could survive a severe economic downturn without further contingent capital and risking de-facto nationalisation; and

- there would be some benefits in bringing the Scheme into operation and having it available to other banks if needed.

Appendix Four

Overview of how the Asset Protection Scheme works

1 The Scheme provides protection against exceptional losses on defined portfolios of RBS's assets, such as loans to businesses and individuals (see **Figure 1**). For example, if a business that RBS had made a loan to becomes insolvent, then the Treasury will protect RBS from part of the loss it would otherwise have faced.

Figure 1
Types and location of assets covered by the Scheme

Types of Covered Asset	(£bn)
Loans	80.0
Consumer and small business finance	54.5
Commercial real estate finance	39.9
Derivatives	39.0
Leveraged finance	27.7
Structured finance	19.2
Residential mortgages	15.4
Lease finance	2.4
Project finance	2.2
Bonds	1.6
Total	281.9
Location of Covered assets	
United Kingdom	114.5
Other EU	75.4
United States of America	43.6
Other	48.4
Total	281.9

Source: HM Treasury

Loss triggers and amounts covered

2 Protection is provided to the extent that losses net of recoveries on the covered assets exceed a first loss – similar to the “excess” under a conventional insurance policy. RBS will bear all losses on its covered assets up to a first loss of £60 billion. If total losses exceed £60 billion, then the Treasury would pay 90 per cent of the outstanding principal amount of an asset for which a credit “trigger” had occurred. The triggers are:

- a counterparty to a covered asset has failed to pay an amount due on the covered asset after a specified grace period;
- a counterparty to a covered asset has become bankrupt, insolvent or is subject to enforcement proceedings over any security provided; and
- a covered asset is restructured (for example, through the implementation of a debt for equity swap) and has been or ought to be subject to a specific accounting impairment.

3 These triggers mean that the Scheme is targeted at credit risk on the covered assets (i.e. the risk that businesses and individuals with outstanding loans from RBS are unable to maintain payments). The Scheme does not provide protection against general accounting impairments or write-downs caused by changes in market conditions.

4 The Scheme provides protection for losses on the outstanding principal amount of the asset on the trigger date. This amount excludes interest, fees, premiums or any other non-principal sum which had accrued or was payable. Where the Treasury has made a payment for losses on covered assets, it will receive 90 per cent of any subsequent recoveries associated with those assets.

Deferral of payments

5 Once the first loss is exceeded, a single net amount is added at the end of each calendar quarter to the balance of an account established by the Treasury (the “Pending Account”). This net amount is equal to:

- 90 per cent of cumulative losses in the quarter in excess of the first loss; less
- 90 per cent of cumulative recoveries received in that quarter on triggered assets.

6 Interest accrues on the balance of the Pending Account at the “Sterling General Collateral Repo Rate” (a wholesale market rate for secured short-term borrowing, using UK government securities as collateral). The detailed rules for the operation of the Pending Account ensure that:

- there is a two year deferral period between a loss on a covered asset and a payment from the Treasury;

- during this deferral period, any pending payment from the Treasury will be reduced by the amount (if any) by which recoveries received on triggered assets exceed losses; and
- if total recoveries exceed total losses, then RBS will reimburse immediately any previous payments made by the Treasury.

7 The deferral period is designed to protect the taxpayer by allowing the Treasury's Asset Protection Agency to arrange to have loss claims audited. The deferral also ensures that RBS does not use the Scheme as an immediate source of funding and provides incentives to manage the covered assets on a longer-term basis. In addition, the deferral period creates a smoother payment profile as recoveries on triggered assets will be netted against pending payments for losses.

RBS's management of the covered assets

8 Assets included in the Scheme remain on RBS's balance sheet. However, RBS must manage the covered assets in line with detailed requirements designed to protect the taxpayer and ensure that RBS's customers are fairly treated. RBS has to:

- maximise the value of the APS assets by minimising any losses and maximising any recoveries;
- ensure that there is no discrimination against the covered assets when compared with RBS's other assets, which are not in the Scheme;
- comply with an agreed internal framework for the management and governance of covered assets and ensure that any conflicts of interest are avoided or appropriately managed; and
- comply with various monitoring, reporting, governance and oversight conditions set out in the Scheme rules.

9 The Scheme rules specify certain monitoring and reporting conditions, including:

- the provision of detailed data on the covered assets, which RBS is required to update at specified time intervals;
- the obligation on RBS to provide a wide range of other information, including quarterly information on triggers, losses and recoveries for the covered assets and if requested reports on, for example, the performance of the covered assets and any events affecting the level of losses and recoveries; and
- a provision for the Treasury's Asset Protection Agency to arrange for an audit, investigation or review to ensure compliance with the Scheme rules and of the performance of the covered assets.

Governance arrangements

10 The Scheme rules also specify a number of higher level governance and oversight conditions. These are designed to ensure that RBS has an appropriate governance framework in place so that the covered assets are managed in a way that gives the Asset Protection Agency sufficient oversight over its management. These conditions include the requirement on RBS to:

- establish a Senior Oversight Committee of RBS's managers to develop a strategy for compliance with the Scheme and reviewing the business strategies and governance arrangements of RBS in connection with the Scheme. The Asset Protection Agency also appoints one or more non-voting observers to the committee; and
- appoint a Scheme Head as the Asset Protection Agency's primary point of contact in RBS.

11 The rules also include conditions covering the remuneration of RBS's staff, senior management and directors involved in managing assets covered by the Scheme. These conditions require RBS to establish and implement a remuneration policy to ensure that:

- RBS personnel working on the Scheme are remunerated at an equivalent level to those working on non-Scheme assets; and
- any incentives for senior executives and Scheme personnel are linked to performance targets and measures of compliance with the Scheme.

Other protections for the taxpayer

12 The rules also include certain other provisions that, for example, provide the Asset Protection Agency with remedies in the event that RBS does not comply with the requirements of the Scheme. These include:

- rights to suspend or terminate payments following a breach by RBS of certain obligations under the Scheme agreement;
- rights to require RBS to appoint special advisers to the Senior Oversight Committee to advise on the management of specified asset classes, such as commercial real estate, as well as all impaired or triggered assets;
- rights to take a more active role in the management of an asset by requiring the appointment of one or more "Step-In Managers" to oversee or directly manage covered assets, again in certain defined circumstances as set out below; and
- an indemnity from RBS covering any non-Scheme losses and damages suffered by the Treasury or other government bodies, for example, as a result of RBS breaching specified obligations under the Scheme.

13 A set of Step-In Rights ensure that the Treasury can take action if it appears that losses, recoveries or other relevant matters are not being effectively controlled. The Treasury can appoint one or more "Step-In Managers" where:

- materially incorrect or incomplete information is provided by RBS, or there is a failure to manage the assets in accordance with Scheme requirements;
- aggregate net losses exceed 125 per cent of the first loss;
- losses on specified asset portfolios exceed certain thresholds; or
- RBS has breached specified Scheme provisions.

14 Once appointed, a Step-In Manager may have certain oversight, investigation, approval and other rights as specified in the terms of appointment. For example, the Step-In Manager may determine that certain decisions may not be taken in relation to a covered asset without approval. The Step-In Manager may also require modification or replacement of any of the systems, controls, processes and practices of RBS. In addition, the Step-In Manager may have extensive rights in relation to the direct management and administration of the covered assets. These rights would mean that the Step-In Manager would have the ability to exercise the decision-making powers of RBS for the relevant covered assets along with, for example, the authority to sell covered assets.

Termination of the Scheme

15 The duration of Scheme cover for each asset is generally expected to be for the remaining maturity of that asset, the latest of which is set at 31 December 2099. However, RBS can terminate the Scheme at any time provided that the Financial Services Authority confirms that it has no objection to the proposed termination. On termination, RBS must pay an "exit fee" which is an amount equal to the shortfall (if any) between:

- the aggregate annual fees paid by RBS; and
- the greater of (a) £2.5 billion and (b) 10 per cent of the annual aggregate reduction in core tier 1 capital requirement, calculated using the Financial Service Authority's rules, in respect of the covered assets up to the time of exit.

16 The "exit fee" is payable in cash or, subject to Treasury consent, by the waiver of UK tax reliefs that are treated as deferred tax assets. RBS would also be required to refund to the Treasury any payments in respect of losses on triggered assets.

17 Providing flexibility for termination ensures that RBS participates in the Scheme only for so long as is necessary. It will also reduce the length of time for which the taxpayer is exposed under the Scheme, since RBS may be able to leave the Scheme earlier than it would have been able to if a fixed termination date had been specified. On the other hand, constraints on RBS's freedom to terminate will help maintain financial stability by reducing the possibility of RBS seeking to leave the Scheme before it is in a strong enough position to do so.

Appendix Five

Analysis of the fees to be paid by RBS for membership of the APS

1 This Appendix sets out our financial analysis of the fee structure agreed with RBS. In setting the annual and minimum fees, the Treasury also considered a range of other factors beyond the scope of this appendix and which are considered in our main report.

The agreed fee structure

2 In finalising the Scheme in October 2009, the Treasury agreed with RBS three significant changes to the February 2009 in-principle agreement:

- The Treasury repackaged its capital injections of £25.5 billion and added an extra £8 billion of contingent capital;
- The first loss was increased from £42 billion to £60 billion, the expected loss; and
- The fee structure was revised from an up front issue of £6.5 billion in non-voting shares and the surrender of some £10 billion in tax relief, to an annual fee, with the cumulative payments subject to an overall minimum.

3 The agreed annual fee is £700 million a year for three years starting January 2009 and, thereafter, £500 million a year, reflecting expected reductions in protected assets as borrowers pay off their loans. By moving to an annual fee structure, the Treasury provided RBS with a better incentive to exit the Scheme, if favourable economic conditions prevailed. When RBS exits the Scheme, if the sum of the annual fees paid by the bank is less than £2.5 billion or 10 per cent of the capital relief provided, it will have to pay the difference. The Treasury set the minimum fee of £2.5 billion to equal the fee agreed with Lloyds when it decided to exit the Scheme.

4 The increase of the first loss to equal the expected loss removed the need to set a high fee that compensated the Treasury for exposure to losses between the first loss and the expected loss. The £25.5 billion capital injection improved RBS's core capital position under the stress case to such an extent that the bank could afford to pay the annual fees in cash.

Analysis of final fee structure

5 To test the final fee structure we:

- analysed the Treasury's calculation of a theoretical fee if RBS had been able to exit the Scheme in November 2009;
- analysed the cash flows for the life of the Scheme under the base case and stress case scenarios;
- examined the Treasury's financial modelling of how the base and stress cases would impact on RBS's capital position between 2009 and 2013;
- tested whether a minimum fee of 10 per cent of capital relief on exit was likely to be triggered; and
- examined the capital uplift reported by RBS for 2009.

The Treasury's calculation of a theoretical exit fee for RBS

6 When Lloyds sought to exit the Scheme, the Treasury decided that it should charge the bank an exit fee based on the capital benefit provided by the Scheme between March and November 2009. The Treasury considered that the implied capital benefit was £23.5 billion, comprising £15.6 billion in shares as a fee payment and £7.9 billion of capital benefit associated with a £194 billion reduction in the bank's risk weighted assets, less regulatory deductions. The £2.5 billion exit fee negotiated with Lloyds was equivalent to an annual return of 16.4 per cent on the capital benefit.

7 Using the same methodology, the Treasury calculated that, if RBS had been able to leave the Scheme in November 2009, the exit fee would have been between £1.0 billion and £1.5 billion. The basis of this calculation was that the support provided by the Scheme was equivalent to £8.75 billion of capital (£6.5 billion in shares as a fee payment, with the remainder being the capital benefit associated with a £150 billion reduction in risk weighted assets, less regulatory deductions). With the markets perceiving RBS to be weaker than Lloyds, the Treasury was concerned that, if it set RBS's minimum fee below the exit fee charged to Lloyds, the markets might see the lower fee as signalling greater than expected weaknesses in RBS's financial position. The Treasury therefore set RBS's minimum fee to equal the Lloyds' exit fee.

8 Our analysis indicates, however, that the Treasury could legitimately have included in its analysis of the potential exit fee, the benefit to RBS of £19 billion of the repackaged £25.5 billion capital injection provided under the Scheme. If this element of the capital injection had been included, RBS's hypothetical exit fee for the tax payer support between February and November 2009 would have been £3.5 billion.

Discounted cash flow analysis

9 After discussing, with the Treasury and the Asset Protection Agency, the applicability of market prices in February 2009 for protecting the value of various tranches of RBS's assets, we concluded that these prices, if they were available, would have been unduly pessimistic. We were also aware that RBS's hypothetical exit fee described above did not capture the value of taxpayer support for risks beyond November 2009. The alternative we therefore adopted, to estimate RBS's minimum fee over the whole life of the Scheme, was a discounted cash flow analysis.

10 Our analysis assumed that there would be two possible economic outcomes, either the economy would track the base case or it would track the stress case:

- In the base case, the lifetime loss was expected to be £60 billion and RBS can be expected to exit from the Scheme by 2012-2013.
- In the stress case, we took the arithmetic average of losses, which is £92 billion. We assumed that RBS, for financial reasons, would remain in the Scheme through to 2099, paying the fee of £500 million a year, but avoiding having to repay the Treasury nearly £30 billion of cumulative second loss payments, plus interest.

11 As losses in both scenarios had not been profiled over time, we adapted a profile of estimated net losses published in 2010 by the Asset Protection Agency as a representation of the base case. We used the same loss and recovery profiles for the stress case, but factored up the losses and factored down the recoveries such that the life time losses amounted to the £92 billion average estimated loss.

12 Our analysis showed that in the base case, the net present value of the Treasury's cash flow would be positive, amounting to approximately £2.4 billion, while under the stress case the present value of the net cost to the Treasury would be over £12 billion. We discounted both cash flows at four per cent, our assumed input for the Government's cost of long-term borrowing.

13 We used Gross Domestic Product (GDP) projections from the Bank of England's Inflation Report of May 2009 to help assess probabilities of the two outcomes. After plotting GDP movements under the stress case onto the Bank's projections, we found that, for the first half of 2009, the Bank's projections suggested that there was a 65 per cent possibility that the UK's economy would exceed the stress case. Thereafter, the Bank projected a sharper economic recovery than that in the stress case. Giving weight to the fact that actual economic performance in February 2009 was worse than the stress case and that the Bank of England's May 2009 projections took account of a sustained improvement in the economy from the second half of March 2009, we concluded that in February/March 2009 (the trough of the crisis), the possibility of the economy tracking the stress case, or worse, was between 20 per cent and 25 per cent.

14 We assumed that, had the Treasury conducted a similar cash flow analysis, it would have designed a fee structure that recovered all costs in the expected case. The Treasury would, therefore, have set RBS's minimum fee so that the discounted expected cash flow equated to zero. On this basis, our analysis showed that the Treasury could reasonably have set the minimum fee within a range of £3.3 billion and £4.4 billion. If, in late February 2009, an assumption had been made that there was only a 10 per cent possibility of the economy performing equal to or worse than the stress case, our model suggests that a minimum fee as low as £1.4 billion would have been reasonable (**Figure 2**).

Financial modelling of RBS's capital position

15 The Treasury and its advisers modelled the agreed terms of the Scheme against forecasts of RBS's performance between 2009 and 2013 to test whether the bank would meet minimum capital requirements. These requirements were set by the Financial Services Authority to ensure that UK banks maintained core tier 1 capital of at least 4 per cent of risk weighted assets, after applying the Financial Service Authority's own stress tests which anticipated large future losses after taking account of actual economic performance through the first three quarters of 2009.

16 Our analysis of the Treasury's modelling indicated that, in a base case scenario, RBS's core capital ratio would remain in the region of 8-9 per cent over the five years to 2013, even if the Treasury had set the minimum fee at the top of our calculated range of £4.4 billion. In the Financial Service Authority's stress case scenario, a £4.5 billion minimum fee would have reduced RBS's core tier 1 capital to a minimum of 4.2 per cent of risk weighted assets in 2011.

Figure 2
Range for minimum fee

Probabilities for the two outcomes	Minimum fee if NPV of expected cash flow is zero (£ million)
95 per cent probability of base case & 5 per cent probability of stress case	700
90 per cent probability of base case & 10 per cent probability of stress case	1,400
85 per cent probability of base case & 15 per cent probability of stress case	2,300
80 per cent probability of base case & 20 per cent probability of stress case	3,300
75 per cent probability of base case & 25 per cent probability of stress case	4,400
50 per cent probability of base case & 50 per cent probability of stress case	13,500

Source: National Audit Office

Minimum fee of 10 per cent of capital relief

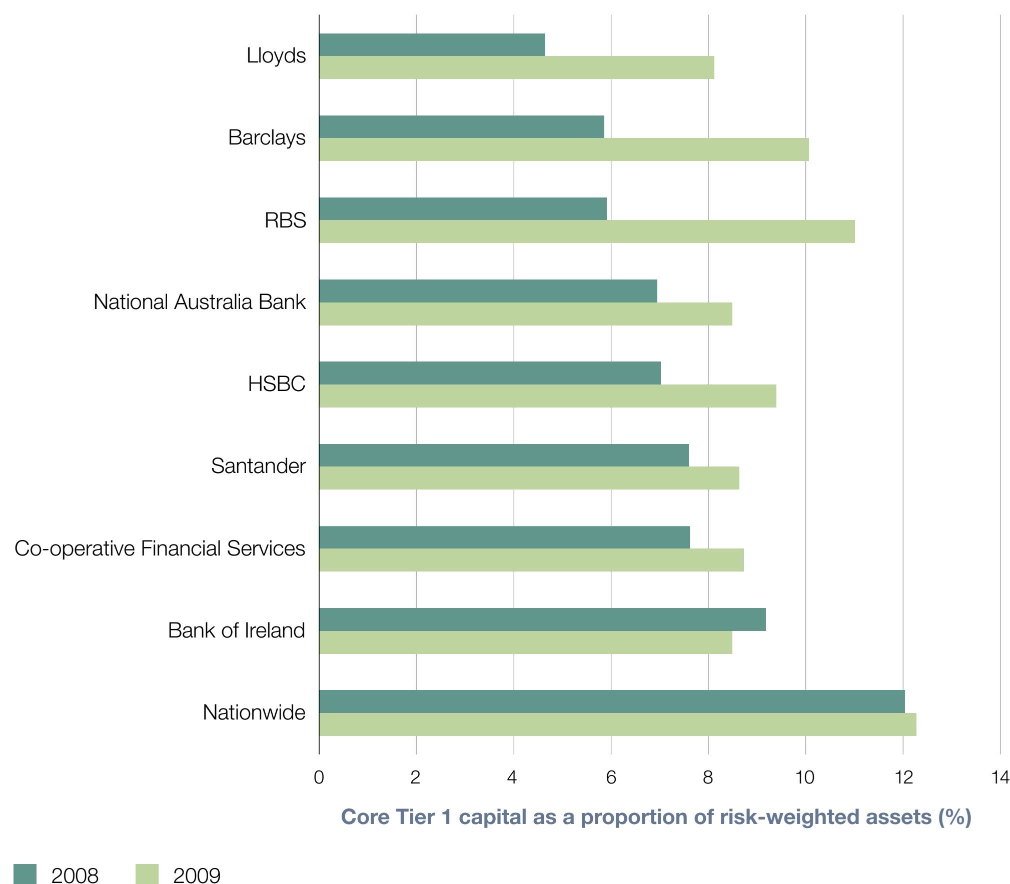
17 In the event of a severe economic downturn, the Scheme provides a floor to credit losses on protected assets and RBS's regulatory capital remains above the Financial Service Authority's minimum ratio of 4 per cent. In such circumstances, RBS's exit fee would be no less than the 10 per cent of the capital relief received, calculated using Financial Service Authority's rules, which would be just under £10 billion. On the current performance of the economy, it is therefore highly unlikely that 10 per cent of capital relief would exceed £2.5 billion.

Capital benefit for RBS during 2009

18 To achieve the core capital ratio of 11 per cent that RBS recorded in its 2009 accounts without the Scheme, the bank would have needed an additional £9 billion of core capital. This increase in the core capital ratio gave RBS the advantage of being one of the highest capitalised banks operating in the UK (**Figure 3**).

Figure 3

At the end of 2009, RBS was one of the best capitalised UK financial institutions



Source: HM Treasury

Appendix Six

Procurement of external advisers and recovery of costs from the banks

1 Our reports on the nationalisation of Northern Rock and maintaining financial stability across the United Kingdom's banking system found that the Treasury's staff resources had been stretched, putting at risk the efficiency and effectiveness of responses. During the design and development of the Scheme, the Treasury improved its capacity and capability by:

- retaining key personnel who had experienced the earlier interventions;
- bringing in additional staff as the work progressed;
- establishing a Steering Board to oversee the project; and
- using a Challenge Group, drawn from staff in other parts of the Treasury.

2 Resource requirements were initially defined in mid-January 2009 and refined as work progressed. There were 59 people working on the Scheme by end March 2009. The number of staff working on the project peaked at 118 in May 2009. The team was supported, when needed, by other Treasury teams, in particular the policy, legal and finance teams.

3 Despite a good mixture of skills in the individuals tasked with developing the Scheme, the team lacked sufficient expertise in project management and so initially outsourced this area to PricewaterhouseCoopers. Using a central department 'project pool', the Treasury recruited, in April 2009, a project leader experienced in leading public projects to give a public sector steer to the work of PricewaterhouseCoopers.

Procurement of Advisers

Legal Advice

4 Slaughter and May were appointed in September 2007 to provide legal advice on Northern Rock. The Treasury decided to extend the contract for further work on recapitalising RBS and Lloyds in October 2008 and the Scheme in January 2009. This decision was based on the quality of the work done and experience gained by the firm and its lack of conflicts of interest. In October 2009, the Treasury put in place a framework for appointing a panel of legal advisers following bids in an open competition. Slaughter and May, Herbert Smith and Lovells were appointed.

Accountancy and other professional advice

5 Following an invitation to tender, Ernst & Young, KPMG and PricewaterhouseCoopers, were engaged during early 2009. PricewaterhouseCoopers was appointed to support the Treasury in its overall management of the project. It also provided general advice on the structure of the Scheme and the implementation plan. KPMG won a contract to conduct due diligence on RBS's asset pool, while Ernst and Young won a similar contract for due diligence on Lloyds' assets.

Investment Banking Advice

6 Due to urgent need for investment banking advisers to help implement the recapitalisations of RBS and Lloyds in October 2008, the Treasury did not advertise for the work given to Credit Suisse and Deutsche Bank. Instead, the Treasury invited six suitable banks to tender. A panel of three senior officials discussed the proposals against evaluation criteria set out in the tender document. Similarly, the tender for Citigroup was not advertised due to urgent need to hire structured credit expertise. Its experience, together with its third place position in October 2008 during the earlier tender process made it the leading candidate for the role.

7 With Accounting Officer approval and in line with procurement procedures, the Treasury appointed BlackRock in February 2009 on a single tender agreement. In addition to BlackRock's specialist expertise in asset valuation, the Treasury also took account of the firm's international experience, in particular, the support BlackRock provided to authorities in the United States when developing the Asset Guarantee Program.

Advisers' fees

Legal

8 Slaughter and May charged on a time basis. The fee rates were negotiated directly with the Treasury.

Accountancy and other professional advice

9 PricewaterhouseCoopers, Ernst & Young and KPMG were engaged in accordance with HM Revenue and Custom's Speciality Consultancy Framework. All three worked on the Scheme under two separate contracts over the period of their engagement and charged on a time and materials basis using hourly rates set under the framework, discounted to reflect the volume of work involved.

Investment Banking

Credit Suisse

10 Credit Suisse received an initial fee of £5 million for work on the Scheme up to 31 May 2009, which included a discretionary component. When it became clear that work on the Scheme would continue beyond 31 May 2009, Credit Suisse's fees were amended to a retainer of £300,000 per month and an additional discretionary fee. The Treasury paid Credit Suisse the retainer from 1 June to the end October 2009 totalling £1.5 million.

Deutsche Bank

11 The initial agreement with Deutsche Bank in October 2008 consisted of a retainer of £200,000 a month and a discretionary fee of £110,000 a month, payable on completion of the work. Deutsche Bank was paid a discretionary fee for the period from October 2008 to January 2010. This decision was made following an assessment by the Treasury of the quality of the work provided by the investment banks against a range of criteria. Discretionary fees were, however, not paid to Deutsche Bank for February 2010 to May 2010, due to a reduction in the volume and complexity of work required.

12 The use of retainers and discretionary fees for Credit Suisse and Deutsche Bank reflected the uncertain scope and duration of the work that would be required.

Citigroup

13 Citigroup were engaged to perform financial advisory and investment banking services for the Scheme and were paid a fee of £5 million.

BlackRock

14 The Treasury agreed to pay BlackRock £5 million plus expenses. Subsequently, BlackRock's expertise was required to undertake further due diligence work beyond that outlined in the original contract and the Treasury paid the firm a further £0.9 million.

Recovery of Costs from the Banks

15 The Treasury recovered just over £68 million of costs from RBS and Lloyds, including advisers fees, staff costs and just under £13 million of costs for setting up and running the Asset Protection Agency.

Figure 4
Cost of advisers for the Scheme

Adviser	Scope of work	Fees (£m)
Slaughter and May	Scheme design, documentation, legal diligence, Lloyds' exit, state aid support and general advice	11.5
KPMG	Due diligence on RBS	7.8
Credit Suisse	Expected loss projections	6.5
BlackRock	Assurance on expected loss projections	6.2
PricewaterhouseCoopers	Advice on Scheme design, project management, due diligence and state aid	6.2
Ernst & Young	Due diligence on Lloyds	5.8
Citigroup	Expected loss projections	5.0
Deutsche Bank	Capital position analysis	5.1
Total		**54.1**

Source: HM Treasury

Appendix Seven

Asset purchase and protection schemes in other countries

Asset Protection Schemes

Country/ Scheme Name	Date Announced	Supported Banks	Eligible Assets
UK – Asset Protection Scheme (APS)	19 January 2009	Lloyds Bank Group (LBG) – £260 billion Royal Bank of Scotland (RBS) – £282 billion	Multiple Asset Classes
Belgium	14 May 2009	Kredietbank ABB Insurance CERA Bank (KBC) – €20 billion	Single Asset Class – Structured asset backed securities such as Collateralised Debt Obligations.
Netherlands – Liquid Assets Back-up Facility (IABF)	26 January 2009	International Netherlands Group (ING) – $31 billion	Single Asset Class – US retail mortgage backed securities (in between sub-prime & prime mortgage)

Fees	Risk Sharing	Length of Scheme
LBG decided not to participate further in the APS, but instead raised additional capital from shareholders and paid an exit fee of £2.5 billion to the UK Government. RBS pays £700 million a year for the first three years, reducing thereafter to £500 million a year, subject to an overall minimum fee of £2.5 billion or, if higher, 10 per cent of the capital relief provided by the APS.	**1** RBS bears the first £60 billion of losses. **2** The UK Treasury meets 90 per cent of losses incurred thereafter. **3** If RBS exits the APS before December 2099, it must repay what it has received plus interest.	December 2099
Total guarantee premium of €1.3 billion payable in 12 semi-annual instalments. KBC also pays a fee of €120m a year for the right to an equity injection if the first loss is exceeded.	**1** First loss of €3.2 billion borne by KBC. **2** Up to €2.0 billion losses beyond the first loss, Belgian State is committed to buy new KBC shares at market value for an amount equalling 90 per cent of the loss. KBC has an option to opt out of this equity guarantee. **3** Third loss of €14.8 billion shared by the State (90 per cent – Cash) and KBC (10 per cent).	At least 6 years.
ING pays a guarantee fee of 1.37 per cent a year on $31.2 billion. In turn it receives, from the Dutch government: (1) management fee of 0.10 per cent a year on $31.2 billion (equivalent to NPV of €0.7 billionn); (2) Funding fee of fixed rate of 3 per cent on 57 per cent of $31.2 billion and floating rate of LIBOR for 43 per cent of $31.2 billion (both equivalent to NPV of €0.5 billion) and (3) risk-free cash flows of principal, as portfolio is redeemed, eventually totalling $28 billion, 72 per cent of the portfolio. To qualify for EU approval of the IABF (adjusting an earlier agreement with the Dutch State), ING had to make an additional payment of €1.3 billion in October 2009	No first loss, but all profits or losses on the assets are shared between the government (80 per cent) and the bank (20 per cent).	Up to 2047

Country/ Scheme Name	Date Announced	Supported Banks	Eligible Assets
US – Asset Guarantee Program (AGP)	24 November 2008	Bank of America – $118 billion CitiGroup – $301 billion	Single Asset Class – Loans and securities backed by residential and commercial real estate and related assets, corporate debt and derivative transactions that reference such securities, loans and associated hedges

Asset Purchase Schemes

Country/ Scheme Name	Date Announced	Supported Banks	Eligible Assets
Germany – Special Purpose Vehicles (SPV) Program	9 April 2009	Up to an estimated €230 billion	Single Asset Class – Structured securities
Ireland – National Asset Management Agency (NAMA) Scheme	7 April 2009	Up to €77 billion	Single Asset Class – Property and related assets
Switzerland – Swiss National Bank Stabilization Fund (SNB StabFund)	16 October 2008	UBS – $38.7 billion	Single Asset Class – Primarily US and European residential and commercial mortgage-backed securities
US – Public-Private Investment Program	23 March 2009	Several – up to $22.4 billion	Commercial mortgage-backed securities and residential mortgage-backed securities

Fees	Risk Sharing	Length of Scheme
Bank of America terminated its participation in AGP in May 2009 and subsequently paid the US Government a termination fee of $425 million. Citigroup issued $7.059 billion of preferred stock to the US Government and a warrant to the US Treasury to purchase 66,531,728 million shares of common stock at $10.61 per share. The US Government cancelled $1.8 billion of preferred stock upon Citi's termination of the AGP in December 2009.	**1** First loss of $39.5 billion borne by Citigroup. **2** Losses more than the $39.5 billion shared by the US Government (90 per cent) and Citigroup (10 per cent); the US government share paid first by the US Treasury up to $5 billion, then the Federal Deposit Insurance Corporation up to $10 billion, and lastly, Citigroup would have been able to obtain a one-time recourse loan from the Federal Reserve Bank of New York secured by the remainder of the asset pool.	5-10 years (although terminated in December 2009)
1 Each bank bears set-up costs of its own "bad bank" – SPV. **2** The bad bank must pay a fair market fee to a Financial Market Stabilisation Fund (SoFFin) for guaranteeing the bonds issued by SPVs in exchange of impaired assets.	**1** During the lifetime of the guarantee, banks must compensate government for difference between transfer price and underlying value determined by SoFFin, out of future distributable profits on equal annual instalments. **2** A bank will have to use any future annual surplus to compensate SoFFin for any payments made under the guarantee.	20 years
Initially 35 per cent discount or "haircut" on long term economic value of assets for the scheme. Fees are embedded in purchase price as a margin added to risk-free rate (Irish government bond yield for the relevant maturity) used to discount assets' expected long-term cash flows.	Income from loans & proceeds from sale of underlying assets from defaulting borrowers accrue to the taxpayer. If NAMA makes a surplus when its work is finished, the taxpayer keeps all of it. In case of a loss, the subordinated debt securities (5 per cent of the purchase price) are not redeemed & a levy will also be applied to the banks to cover the shortfall.	7-10 years
1 The fee paid was the $1 billion difference between the transfer price and UBS's valuation of the portfolio. **2** UBS will also have to pay a premium to exercise the option, priced at $1billion plus 50% of the amount by which the equity value exceeds $1billion at time of exercise.	**1** StabFund's capital is funded 10 per cent by UBS, which serves as primary loss protection, and 90 per cent by SNB's $35 billion non-recourse Swiss National Bank (SNB) loan – collateralized by the assets of the fund. **2** If, upon the fund's termination, SNB makes a loss on its loan it has it will be entitled to receive 100 million UBS ordinary shares. **3** Management compensation for UBS will only be paid after the loan has been repaid in full.	8-12 years
The Public-Private Investment Fund managers receive management fees from private investors and the US Treasury.	In each Public-Private Investment Fund (PPIF), the US Treasury matches Private sector equity capital and provides debt financing up to 100 per cent of total equity. The private investors and the US Treasury share profits on a pro rata basis based on their partnership interests. They also share losses on a similar basis up to the amount that each has invested. The US Treasury also received warrants in the PPIFs to benefit further should the funds make a profit.	8-10 years

Glossary

Term	Definition
Asset	An item of economic value which could be converted to cash. For a bank, its outstanding loans to individuals and businesses represent the majority of assets. Securities, such as holdings of government debt, usually make up the second largest component.
Asset purchase scheme	A scheme through which the impaired assets held by a bank are identified and purchased by the government. Under such a scheme, the government may choose to establish a self-standing institution (often referred to as a "bad bank") to purchase and hold the impaired assets.
Capital	In accounting terms, the difference between a bank's assets and its liabilities. Capital includes initial payments for shares by shareholders and any profits retained by the bank. Losses will occur in the normal course of business. For instance, when making a loan, a bank will take account of expected losses when determining the interest rate to be paid by the borrower. The bank's interest income should therefore cover expected losses, as well as any other costs associated with the day-to-day running of the business. Unexpected losses are by their nature unforeseen, so banks will need to hold enough capital to act as a buffer against these losses and to support them during periods of financial stress The main liabilities in a bank's capital structure are (in order of which will be eroded first in an insolvency): Core Tier 1, **shareholder equity (including undistributed profits)**. Other Tier 1 and Innovative Tier 1: hybrid Tier 1 securities, particularly **preference shares**, which have debt and equity characteristics. For these to be considered Tier 1 capital, they must be permanent, flexible in payments (i.e. payment depends on performance) and loss absorbing. Upper Tier 2: **undated subordinated debt**. This is perpetual debt which pays a regular coupon but there is no date on which principal is paid back. Lower Tier 2; **dated subordinated debt**. This is subordinated debt with a maturity date of more than five years. ("Hybrid capital instruments" usually refers to all non-equity Tier 1 and Tier 2 instruments with both debt and equity characteristics, although the term hybrid is often applied only to preference shares. "Subordinated debt" often refers only to dated and undated Tier 2 instruments. This report uses "subordinated debt" as a general term for all non-equity capital instruments.)

Term	Definition
Capital ratio	The amount of capital relative to the value of a bank's loans and other assets, adjusted for the risk that the expected value of assets may not be realised (for example, if a borrower becomes unable to pay off a loan). Under international agreements, regulators require banks to have sufficient capital to remain solvent in an economic downturn.
Capital relief	The Asset Protection Scheme (APS) reduces the risk associated with protected assets, resulting in the capital ratio being better than it would otherwise have been.
Contingent capital	Capital that would be made available by the government if a specific contingency (such as a severe economic downturn) occurs and a bank's capital ratio falls below a set percentage of risk-weighted assets.
Core Tier 1 capital (or core capital)	Ordinary shares and retained profits. This form of capital absorbs unexpected losses while the bank is solvent, thus reducing the probability of a bank failing. Other forms of capital (such as subordinated debt) act as a buffer in protecting depositors' and other creditors' claims in insolvency.
Discounted cash flow analysis	A technique to adjust future cash flows to derive a present value (for instance, how much is £100 to be received or spent in two years time worth now).
Due diligence	An investigation of a potential investment by a potential acquirer. The investigation is intended to confirm all material facts in regards to an acquisition. Due diligence normally includes economic analysis to test the validity of assumptions about market conditions, investigation of the other party's accounts, as well as a legal investigation.
First loss	Similar to the "excess" amount paid by an insured party in an event of a claim on an insurance policy. Under the APS this is the first £60 billion of losses, net of recoveries, which RBS bears out of the £282 billion pool of its covered assets.
Impaired Asset	An asset whose value has fallen. The balance sheet value of the asset is revised down to the impaired value and reduces the bank's annual profit.
Liability	A bank or a company's legal debts or obligations that arise during the course of business operations. For banks, the main liabilities are deposits in the form of customers' current and savings account balances. The liabilities also include funds raised from bonds that the bank sells to investors and loans from other financial institutions.
Liquidity	The extent to which financial assets can be sold at market value on short notice. Injecting liquidity in a single bank or the whole banking system refers to providing banks with readily exchangeable assets (e.g. cash, UK government bonds) in exchange for assets that are not so readily exchangeable at short notice (for example, mortgage loans).

Term	Definition
Rights issue	A way of raising additional capital through selling new shares. The price of the newly offered shares is usually lower than the current share price, with the first priority given to existing shareholders. If they do not buy the new shares, the value of their holding is reduced (diluted).
Second loss	Under the Scheme, losses net of recoveries incurred after the first £60 billion, of which 90 per cent are borne by the Treasury and the residual 10 per cent by RBS.
Solvency	The degree to which a financial institution is capable of meeting its financial obligations, usually measured by the extent to which assets exceed liabilities.
Stress test	A form of scenario analysis to assess a bank's ability to withstand shocks in times of extremely harsh but possible business and economic conditions. Stress testing ensures that banks have adequate capital to absorb potential losses during such harsh economic conditions.
Subordinated debt	Debt that is ranked below other forms of debt in order of priority for payment but higher than ordinary shares (equity). Due to the low priority of subordinate debt, it carries a relatively higher risk for investors and consequently a higher rate of return than other, less risky, forms of debt.
Sub-prime mortgage	Loans for house purchases provided to individuals with poor credit histories.