

## UK Special Liquidity Scheme (SLS)

Kaleb Nygaard<sup>1</sup>

March 20, 2020

### Abstract

Following the collapse of Bear Stearns in early 2008, it became clear that there was no immediate prospect that the Asset Backed Securities (ABS) markets would start to operate as they had previously. Financial institutions relied heavily on ABS as collateral in the interbank lending market for funding and liquidity. The Bank of England (BoE) introduced the Special Liquidity Scheme (SLS) in April 2008 as a temporary measure to address the immediate liquidity problems facing the UK banking system at the time. Under the SLS banks could exchange high-quality assets that had temporarily become illiquid for liquid UK Treasury bills. In turn, banks could use these Treasury bills in private markets to obtain cash. During the nine months that the SLS was open 32 banks and building societies, representing 80% of the sterling balance sheets of eligible financial institutions, exchanged a total of £185 billion of eligible collateral for Treasury bills.

**Keywords:** Bank of England, market liquidity, Her Majesty's Treasury, mortgage backed securities, asset backed securities, treasury bills, gilt

---

<sup>1</sup> Research Associate, New Bagehot Project. Yale Program on Financial Stability. [kaleb.nygaard@yale.edu](mailto:kaleb.nygaard@yale.edu).

# UK Special Liquidity Scheme (SLS)

## At a Glance

Following the collapse of Bear Stearns in early 2008, it became clear that there was no immediate prospect that the Asset Backed Securities (ABS) markets would start to operate as they had previously. Financial institutions relied heavily on ABS as collateral in the interbank lending market for funding and liquidity.

The Bank of England introduced the Special Liquidity Scheme in April 2008 as a temporary measure to address the immediate liquidity problems facing the UK banking system at the time. Under the SLS banks could exchange high-quality assets that had temporarily become illiquid for liquid UK Treasury bills. In turn, banks could use these Treasury bills in private markets to obtain cash.

During the nine months that the SLS was open 32 banks and building societies, representing 80% of the sterling balance sheets of eligible financial institutions, exchanged a total of £185 billion of eligible collateral for Treasury bills.

## Summary Evaluation

Academic reviews of the SLS's effectiveness have not been conducted. However, the Bank of England was encouraged by the results such that they, "drew on a number of the features of the SLS in designing a new, permanent bilateral liquidity insurance facility, the Discount Window Facility (DWF), which was launched in October 2008." (Cross, 2010).

### Summary of Key Terms

<b>Purpose:</b>	To increase liquidity in the banking system and confidence in financial markets
<b>Announcement Date</b>	April 21, 2008
<b>Operational Date</b>	April 21, 2008
<b>Drawdown window closed</b>	January 30, 2009
<b>Program end</b>	January 2012
<b>Aggregate Treasury Bills lent</b>	£185 billion
<b>Administrator</b>	Bank of England and Her Majesty's Treasury
<b>Eligible Assets</b>	Covered Bonds, ABS, Sovereign Debt, US GSE Debt

## Table of Contents

<b>I. Overview</b> .....	<b>1</b>
Background.....	1
Program Description.....	1
Outcomes.....	3
<b>II. Key Design Decisions</b> .....	<b>5</b>
<b>III. Evaluation</b> .....	<b>12</b>
<b>IV. References</b> .....	<b>12</b>
<b>V. Key Program Documents</b> .....	<b>14</b>
Summary of Program.....	14
Press Releases/Announcements.....	14

## I. Overview

### Background

After the crash of the U.S. subprime mortgage market began, rising defaults on mortgage loans and falling house prices raised the prospect of investors incurring losses on mortgage-backed securities (MBS). This triggered a general reassessment of the risks inherent in such securities and increased uncertainty in the value of such securities. This uncertainty spread from just MBS to all asset-backed securities (ABS) markets. Liquidity in these ABS markets dried up in the second half of 2007. In such an environment, it became increasingly difficult for banks to sell securities backed by mortgages or other assets, or to use them as collateral to borrow cash, making such assets illiquid. As a result, banks were left with an “overhang” of these assets on their balance sheets. (SLS Info 2008)

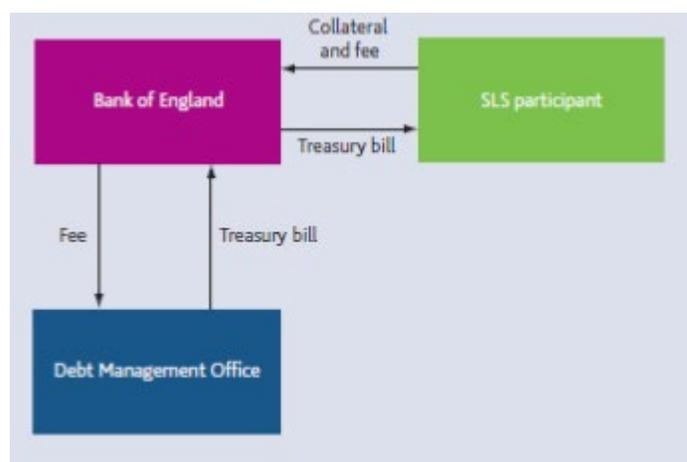
Following the collapse of Bear Stearns in early 2008, it became clear that there was no immediate prospect that the Asset Backed Securities (ABS) markets would start to operate as they had previously. Financial institutions relied heavily on ABS as collateral in the interbank lending market for funding and liquidity. The Bank of England (BoE) felt that, unless the overhang of illiquid assets on banks’ balance sheets was dealt with, banks might further curtail their lending to each other, and, more importantly, to the wider economy. The BoE, therefore, launched the Special Liquidity Scheme (SLS) on April 21, 2008 to deal with this overhang of illiquid assets by exchanging them temporarily for more easily tradable assets, which the banks could use to finance themselves. (SLS Info 2008)

### Program Description

SLS was set up to provide liquidity for temporarily illiquid legacy assets. It aimed to improve the liquidity position of the banking system and increase confidence in financial markets. Mervyn King, then Governor of the BoE stated that “The Bank of England's Special Liquidity Scheme is designed to improve the liquidity position of the banking system and raise confidence in financial markets while ensuring that the risk of losses on the loans they have made remains with the banks.” (SLS News Release April 2008). King also emphasized that SLS was not a bail-out and it was not designed to kick-start the mortgage market. He said that the BoE did not have an interest in the financial position of the banks; but it was concerned about the ability of the banks to finance growth in the rest of the economy. The rest of the economy was the ultimate objective of SLS. (King 2008)

King put the proposal of SLS to the Chancellor, whose approval was required since the SLS involved the issuance of UK treasury bills to be swapped with “the less liquid securities of the banking system”. (King 2008) SLS allowed banks to temporarily swap their high-quality assets, including AAA-rated securities backed by UK and European residential mortgages for UK treasury bills. The BoE, in its original announcement of SLS, stated that it expected use of the SLS to be around £50 billion based on discussions with banks. The Debt Management Office supplied the BoE with the necessary treasury bills. (Figure 1) (SLS News Release April 2008) These treasury bills were new issues specifically for the SLS. (John p 60). The BoE also made it clear that SLS was to be ring-fenced and independent of its regular money market operations. (SLS News Release April 2008)

Figure 1. SLS Collateral Swap



Source: John 2012

Banks were allowed to enter into a swap at any point during the six-month drawdown window starting April 21, 2008 and scheduled to end on October 21, 2008. (SLS News Release April 2008) However, on September 17, 2008 the BoE extended this window an additional three months to January 20, 2009. (SLS News Release September 2008) SLS eligible institutions were able to access the SLS repeatedly during this nine-month

drawdown window. (John 2012) During the lifetime of an asset swap, banks were required to pay a fee based on the 3-month London interbank interest rate (Libor). (SLS News Release April 2008). The fee, “was initially fixed on the date of the drawdown. It was subsequently refixed every three months thereafter based on the Libor-GC spread prevailing at the time.” (John, p61).

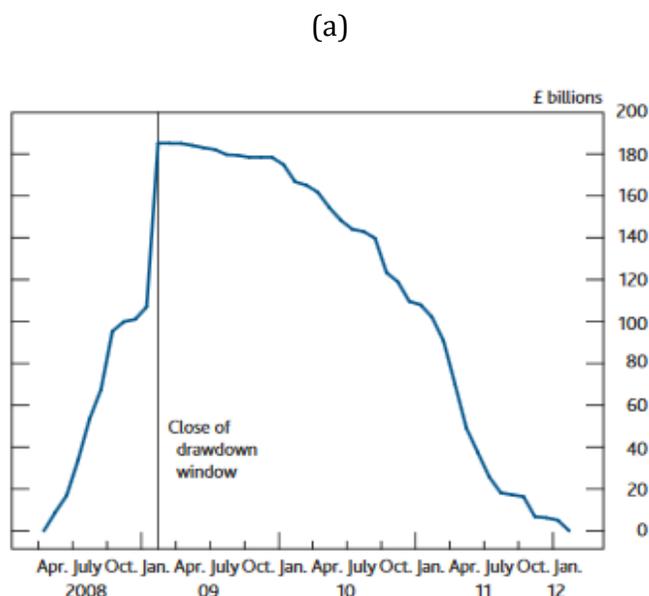
Three key features of SLS were: (i) the asset swaps would be for long terms, where each swap was for a period of 1 year with an option to renew at the BoE’s discretion for a total of up to 3 years; (ii) the risk of losses on the swapped assets would remain with the banks; and (iii) the swaps would be available only for assets existing at the end of 2007 and could not be used to finance new lending. (SLS News Release April 2008)

### Outcomes

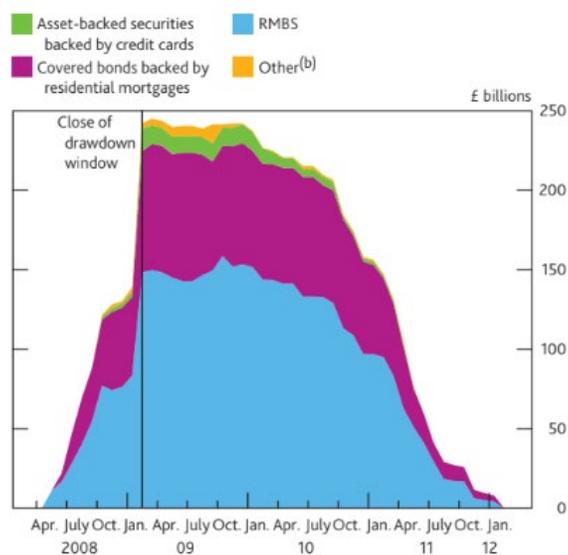
As seen in Table 1, overall use of the SLS increased steadily during the drawdown window period. Treasury bills worth £75 billion in face value had been borrowed by the time the original six-month window was extended on September 17, 2008 for four months. Thirty-two institutions used the SLS, accounting for “over 80% of the sterling balance sheets of the financial institutions eligible to participate in SLS” (John 2012, p59). By the time the drawdown window period concluded on January 30, 2009, these institutions had swapped a total of £185 billion of Treasury bills. “This was more than twice the size of the BoE’s balance sheet prior to the financial crisis.” (John 2012)

Most of the collateral received in the SLS were MBS and covered bonds backed by UK residential mortgages. The Bank of England imposed haircuts of 20-25% on these securities. In total, the Bank of England took securities worth £242 billion as collateral in return for £185 billion in Treasury bills, for an average haircut of 22% (Table 2).

Table 1. Treasury bills borrowed in SLS<sup>(a)</sup> Face value of Treasury bills borrowed in SLS<sup>(b)</sup>



(b)



(a) Market value of securities pledged as collateral and margin in the Scheme.  
 (b) 'Other' includes UK government debt, UK government-guaranteed bank debt, government-guaranteed agency debt, and other government and supranational debt.

Source: John 2012

Table 2. Collateral Used in the Special Liquidity Scheme as of January 30, 2009

Collateral type	Nominal value <sup>(a)</sup> (£ billions)	Market value (£ billions)	Haircut-adjusted value (£ billions)	Average implied haircut
UK prime RMBS	160.3	132.3	103.9	21%
Other UK RMBS	11.3	7.8	6.0	24%
European RMBS	11.5	8.2	6.3	23%
Covered bonds backed by residential mortgages	84.1	75.9	59.2	22%
Asset-backed securities backed by credit cards	15.9	14.1	10.6	25%
UK government-guaranteed bank debt	0.3	0.3	0.3	9%
UK government debt <sup>(b)</sup>	2.9	2.9	2.9	1%
Other government and supranational debt	0.4	0.4	0.4	4%
<b>Total</b>	<b>286.7</b>	<b>242.0</b>	<b>189.6</b>	<b>22%</b>

Note: The 'haircut-adjusted value of collateral' is the amount the Bank would be prepared to lend against, following the application of the haircut.

(a) Nominal is factored nominal.  
 (b) All UK government debt given as collateral was given as margin.

Source: John 2012

## II. Key Design Decisions

### 1. **The purpose of the facility was to provide liquidity to banks and building societies so that they would be able to support the real economy.**

Governor King said the SLS was intended to help banks support the real economy. He denied that it was intended to “bail out” banks or revitalize the mortgage market directly. “If the scheme works, then it will have an effect on the mortgage market indirectly, but it was not designed to intervene directly into the mortgage market” (King, 2008, p. EV17).

The Bank of England had already tried to use the Sterling Monetary Framework (SMF), its traditional monetary policy implementation tool, to restore liquidity to the financial sector. The SMF had capacity to provide a certain amount of liquidity to the financial sector, but the market need for liquidity quickly out paced its capacity. Despite extending SMF operations and “undertaking a number of extraordinary longer-term open market operations against a broader range of collateral,” the steep increase in liquidity demand could not be met by SMF. To satiate this demand, the SLS was created (John, p63).

### 2. **Banks were only able to enter into new collateral swaps with the BoE within a predetermined period, known as the “drawdown window.”**

A fixed six-month period from the date of the SLS announcement was set for eligible institutions to enter into the collateral swap agreements with the BoE. This time period was called the “drawdown window”. The six-month period was chosen, “to be long enough to allow banks to package up portfolios of legacy loans into a form that would be accepted in the SLS” (John 2012). The participants in SLS were able to access the SLS repeatedly during the nine-month drawdown window and no new drawings could be undertaken once the drawdown window closed. (John 2012)

The original six-month time period, from April 21, 2008 to October 21, 2008, was extended an additional three months. On September 17, 2008, the BoE announced that the program would remain open until January 30, 2008. The announcement cited “the current disorderly market conditions” that had resulted from the September 15, 2008 bankruptcy of Lehman Brothers (John 2012).

Participants were required to sign the pro forma documentation prepared by the BoE. The documentation was available on request to those institutions eligible to participate. Once the legal documentation was signed, and following pre-positioning of eligible securities with the BoE, authorized drawdown requests were made to the BoE’s Sterling Markets Desk in order to conduct a transaction. (Market Notice April 2008)

### 3. **Institutions eligible to participate were banks and building societies, which were eligible to sign up for the BoE’s Standing Facilities.**

Institutions eligible to sign up to the BoE’s existing bilateral Standing Facilities were all banks and building societies that were required under the Bank of England Act 1998 to place cash ratio deposits at the BoE. (Market Notice April 2008) Cash ratio deposits are non-interest bearing deposits lodged with the BoE by eligible institutions (i.e. banks and building societies), who have reported average eligible liabilities of over £600 million over a calculation period. (FAQ)

King explained that the reason for this design was to ensure that SLS could operate with the BoE's normal market operations. Under SLS, about one half of building societies in the UK were eligible; the others didn't meet the minimum liability size requirement. The two reasons King cited in justifying this design are that by tradition, the smaller building societies had been able to access liquidity from larger building societies and banks. Second, the smaller building societies had not been involved in securitizing mortgages and were not facing the same potential losses as the larger building societies and banks eligible for SLS. (King 2008)

**4. Transactions in the SLS were initially for a one-year maturity, with the option to renew up to three years.**

In an information document published along with the press release announcing the SLS, the BoE outlined the timing of the swaps as follows: "To provide banks with the certainty about liquidity that is needed to boost confidence, assets will, unless they mature within one year, be swapped for one year and banks will have the opportunity, at the discretion of the Bank of England, to renew these transactions for a total of up to three years." (SLS Info 2008, p3)

The term of the treasury bills being swapped for the illiquid assets was nine months, therefore, the treasury bills had to be exchanged regularly during the life of the swap under SLS. To enable such rollovers, participants holding soon-to-mature treasury bills had to return these to the BoE once the residual maturities of the bills were between ten and 20 days. The BoE would then return these old treasury bills to the Debt Management Office in exchange for new nine-month treasury bills, which the BoE would in turn pass back to the participant on the same day. (John 2012)

**5. Securities eligible to be swapped with the treasury bills under SLS were highly rated bonds, asset-backed securities, and debt from loans existing before December 31, 2007.**

SLS was set up to provide liquidity for temporarily illiquid legacy assets. (SLS News Release April 2008) The BoE required each participant to certify compliance with criteria set forth below, and reserved the right to seek independent verification of compliance, at the cost of the participant. The BoE also reserved the right to reject any security offered for any reason. (Market Notice April 2008)

The eligible securities comprised of:

- I. UK and European Economic Area (EEA)<sup>2</sup> covered bonds rated AAA, including those issued by the institution, or entities in the same group as the institution, entering into the transaction. The underlying assets of these covered bonds had to be either mortgages or public sector debt.
- II. AAA-rated tranches of UK and EEA residential mortgage-backed Securities (RMBS) backed by UK and EEA mortgages. The underlying assets were not allowed to be synthetic (i.e. not derivatives). RMBS backed by mortgages originated by the

---

<sup>2</sup> The EEA includes European Union member nations and several non-EU member nations.

institution, or entities in the same group as the institution, entering into the transaction were permitted.

- III. AAA-rated tranches of UK, US and EEA asset-backed Securities (ABS) backed by credit cards, including those originated by the institution, or entities in the same group as the institution, entering into the transaction. The underlying assets could not be synthetic (i.e. not derivatives).
- IV. Debt issued by G10 sovereigns rated Aa3 or higher, excluding securities eligible in the BoE's normal Open Market Operations, subject to any settlement constraints.
- V. Debt issued by G10 government agencies explicitly guaranteed by national governments, rated AAA; and
- VI. Conventional debt issued by the US government sponsored enterprises (Freddie Mac, Fannie Mae, and the Federal Home Loans Banks), rated AAA.

**(Market Notice April 2008)**

Additionally, the collateral that was previously eligible in the BoE's open market operations (UK and German government debt) was also eligible for SLS. (John 2012) On October 8, 2008, in support of the Government's actions to recapitalize the UK banking system, the BoE announced that UK government-guaranteed bank debt would also be considered eligible securities. (Market Notice October 2008)

Eligible securities were denominated in sterling, euro, US dollars, Australian dollars, Canadian dollars, Swedish krona or Swiss francs or, in the case of Japanese government bonds, only yen. Credit ratings were provided by two or more of Fitch, Moody's, and Standard and Poor's. (Market Notice April 2008) However, the ratings requirement was used as a "broad indicator of standards of credit quality expected, but the BoE exercised its own discretion, avoiding any mechanical reaction to changes in external ratings." (John 2012)

In an answer to concerns on failings of rating agencies revealed during the crisis, King said that the real weaknesses with the ratings applied less to the standard instruments eligible for SLS and more to the very complex products, like collateralized debt obligations (CDOs) that bundled the riskier tranches of US Mortgage-backed securities (MBS). He said there was not much loss in confidence regarding ratings of the standard instruments which were used by all central banks in their market operations. (King 2008)

US MBS - including MBS guaranteed by the GSEs and private-label MBS issued by the private sector - were not eligible.

Securities eligible for the SLS had to be held on the participant's balance sheet as of December 31, 2007. The purpose of the SLS was to "deal with the overhang of existing assets on banks' balance sheets, not to finance new lending directly" (John 2012).

There was one exception to the December 31, 2007 cut off rule. Certain securities "were issued from revolving structures, meaning that the underlying pools of loans backing the securities accepted as collateral (mostly covered bonds and some RMBS) could be topped up by loans originated after December 31, 2007." (John 2012). The BoE did not disqualify this collateral from the SLS, but rather "decided to limit the value of such securities that could be delivered into the SLS by a single institution." (John 2012)

Over the three-year life of SLS, the BoE set forth “amortization limits.” For RMBS issued through a Master Trust where the pool of assets included mortgages originated after December 31, 2007, 100% of the level of such securities or underlying loans outstanding on balance sheet as of December 31, 2007 were considered eligible in the first year of SLS. In year 2, two-thirds of those securities were eligible. In year 3, one-third of those securities were eligible. (John 2012; Market Notice April 2008)

Eligible securities were to be deliverable via: (i) Euroclear or Clearstream, for instruments issued directly into the International Central Securities Depositories; (ii) international links maintained by Euroclear; or (iii) such other delivery mechanism as the BoE specified. Eligible securities had to be pre-positioned with the BoE in advance of a drawdown. (Market Notice April 2008)

Substitutions of collateral were permitted even after the end of the drawdown period. If the substitution made after the drawdown period, “had a shorter maturity than the underlying collateral swap, the term of the collateral swap was similarly reduced.” (Market Notice April 2008).

#### **6. Participants in SLS paid fees set forth by the BoE.**

In testimony to Parliament a week following the announcement of SLS, Mervyn King, Governor of the Bank of England, stated that the fee was one of the intentional design principles to protect against moral hazard. (King 2008, p EV1) Per the Market Notice that accompanied the SLS announcement, “The fee payable on borrowings of treasury bills was the spread between 3-month LIBOR and 3-month general collateral gilt repo rate, as observed by the BoE, subject to a floor of 20 bps. The fee also was to vary at the BoE’s discretion.” (Market Notice April 2008)

The fee structure was specifically designed to “reduce over reliance...Higher fees [were charged] for higher levels of usage relative to the size of each institution’s balance sheet.” (John 2012).

The reason for the use of the general collateral (GC) gilt repo rate was that if SLS participants wanted to obtain cash they had to repo the treasury bills; this would have cost banks approximately the general collateral gilt repo rate. Moreover, the floor of 20 bps was higher than the LIBOR and general collateral gilt repo rate spread prior to the financial crisis and designed to make SLS relatively unattractive if market interest rates fell to pre-crisis levels, incentivizing the banks to exit SLS. The floor also ensured that the BoE’s administrative costs were covered, including the fee paid to the Debt Management Office for borrowing the treasury bills. (John 2012)

In order to, “reduce incentives for banks to time their drawings under SLS according to prevailing market interest rates,” (John 2012) the “spread was fixed on the date of a drawdown and was re-fixed thereafter every 3 months.” The fee was based on the mark-to-market value of the treasury bills at the closing Debt Management Office reference prices. (Market Notice April 2008).

The fee was paid every 3 months at the end of the re-fix period, or upon termination. (Market Notice April 2008) “Because the fee was payable in arrears, it resulted in the haircut-adjusted

market value of collateral to being greater than the sum of the market value of treasury bills and the fee owed to the BoE.” (John 2012)

Moreover, the BoE charged back to the participants specific legal costs associated with checking the eligibility of collateral as discussed below, and custody fees incurred by the BoE in holding eligible collateral, including where securities had been pre-positioned with the BoE, were charged back to participants. (Market Notice April 2008)

**7. Haircuts were applied to eligible securities and re-margining took place daily based on updated valuations of the eligible securities provided.**

In addition to fees, King stated that by imposing haircuts on the assets being swapped the BoE ensured that the credit risk on these assets stayed with the banks and prevented any moral hazard concerns. (King 2008) Haircuts were also intended to protect the BoE against loss in the event that a bank participating in SLS defaulted. (John 2012) Eligible securities were valued by the BoE using observed market prices that were independent and routinely publicly available. The BoE reserved the right to use its own calculated prices. If an independent market price was unavailable, the BoE used its own calculated price and applied a higher haircut. The BoE’s valuation was binding. (Market Notice April 2008)

The total haircut applied to an eligible security comprised of two elements: (i) a standard base haircut for that asset type and (ii) haircut add-ons to protect against additional risk specific to that security. (John 2012)

The daily mark-to-market value of securities ensured that, “if the value of the assets pledged fell, after adjusting for haircut, below the value of the treasury bills lent, banks either had to provide more assets to the BoE or return some of the treasury bills borrowed.” (John 2012)

Annex: Haircuts

The following haircuts will be applied to eligible securities and may be varied at the Bank of England’s discretion.

<u>Haircuts for Scheme operations</u>	OMO eligible and G10 Sovereign paper	G10 Government guaranteed agencies	US GSEs	RMBS, covered bonds and Credit card ABS
Credit rating (on Moody’s scale)	Aa3 or higher	AAA	AAA	AAA Not own-name
All floating rate	1	3	3	12
Fixed interest rate, under 3 years to maturity	1	3	3	12
Fixed interest rate, 3-5 years to maturity	1.5	4	4	14
Fixed interest rate, 5-10 years to maturity,	3	8	8	17
Fixed interest rate, 10-30 years to maturity	5.5	14	14	22

Additional notes:

An additional 3pp will be added to haircuts to allow for currency risk when securities are non-sterling.

An additional 5pp will be applied to own-name eligible covered bonds, RMBS and credit card ABS.

An additional 5pp will be applied to securities for which no market price is observable.

Note on calculation: adjusted collateral value (post-haircut) = collateral value x (100 – haircut) %.

Source: Market Notice April 2008 Annex

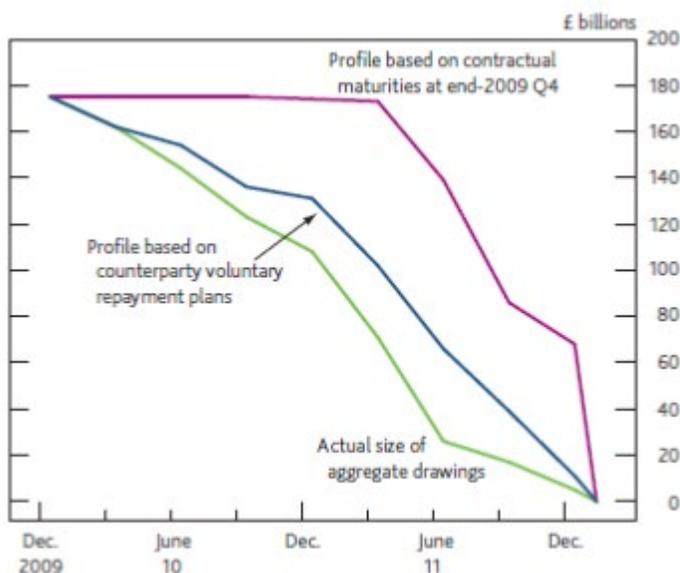
**8. The Treasury indemnified the Bank of England against losses.**

The Treasury indemnified the Bank of England against any net loss it incurred. The Treasury would only be exposed to loss if a counterparty defaulted; the value of the collateral provided by the counterparty fell by more than the size of the haircuts; and the remaining exposure exceeded any retained SLS fee income (John, 2012, pp. 58-9).

**9. Early exit from SLS was allowed and the BoE coordinated with individual banks on the exit process.**

Participating institutions were allowed to “mature, or partially mature” the collateral pledged at the SLS before their contractual maturity date, “against surrender of the treasury bills.” (Market Notice April 2008).

As shown in the top line in the chart below, “almost all of the £185 billion of Treasury bills borrowed in the SLS were contractually due to be returned to the BoE in the nine months to end-January 2012, with almost £70 billion due to be returned in the final month.” (John 2012) The BoE wanted a more gradual end to the SLS so there weren’t market disruptions with an abrupt end.



(a) Face value of Treasury bills borrowed in the Scheme.

The problem with a significant concentration of maturities in the last few months of the SLS was that, “the market could have found it difficult to absorb this issuance, which in turn, may have pushed up the overall funding costs of banks.” (John 2012)

Knowing that this would be an issue, the BoE, in late 2009 and early 2010, began discussing with the major participants how to ensure that the size of the SLS tapered more smoothly as it approached the January 2012 end date. “Following those discussions, banks were asked to submit individual voluntary repayment schedules consistent with what they considered to be credible funding plans” (John 2012). These plans, in aggregate, can be seen in the middle line in the chart above.

As seen in the bottom line in the chart above, the actual, realized taper was even smoother than the voluntary plans predicted. One cited reason was “the relatively favourable conditions in long-term funding markets in the second half of 2010 and first half of 2011.” (John 2012).

**10. To mitigate stigma, banks’ individual usage of the program was kept confidential, and the larger banks were persuaded to participate.**

Stigma was a key concern for the Bank of England. For this reason, individual institutions were subject to strict confidentiality clauses under the terms of the program. The Bank also persuaded the largest banks to participate so that if there were any accidental disclosures of individual participation, the market would not take usage of the program as a weakness (Winters, 2012, p. 52).

**11. No conditions were attached for shareholders or management.**

The Bank of England did not attach any conditions, such as dividend restrictions on shareholders or compensation limits on management. This was typical of crisis-era market-liquidity programs; such conditions became common later in the crisis as governments introduced programs that posed greater risks to taxpayers, such as credit guarantees and capital injections. In response to a question in Parliament, King said that “this was a central banking operation which I think would have failed if it had been thought that there were hidden political agendas attached to it.” He noted that the SLS program was “similar in kind” to the Fed’s Term Securities Lending Facility and Primary Dealer Credit Facility, announced shortly before the SLS, and that these programs also had attached no nonfinancial conditions (King, 2008, p. EV15).

### **III. Evaluation**

While the three CP operations may have had a collective effect on the overall market, an analysis by Hirose and Ohyama show that the outright purchase measure may have lowered the CP rate by 25 bps in January and 11 bps in February. (Hirose and Ohyama 2010) Nevertheless, they found that the participation of banks in the measure was unrelated to the interest rate levels. Instead, banks found that the transfer of credit risk from their balance sheets to the BOJ allowed them to issue new, less-risky CP. (Ibid.) Following the improvement of the CP market in March 2009 and afterwards, the incentive to utilize the measure declined as banks could rely on the other CP operations, which they saw as less expensive options. (Ibid.)

The BOJ conducted an analysis of all its money market operations aimed at the CP market and found that operations contributed to lower rates for CP rated a-1 than CP rated a-1+. Issuance rates for lower-rated CP, which was not eligible for purchase, only felt limited effects from the monetary policies. (BOJ Markets Report August 2009)

### **IV. References**

Bank of England. “Market Notice.” April 21, 2008.

<https://webarchive.nationalarchives.gov.uk/20090825161811/http://www.bankofengland.co.uk/markets/money/marketnotice080421.pdf>

Bank of England. “News Release.” April 21, 2008. <https://www.bankofengland.co.uk/-/media/boe/files/news/2008/april/special-liquidity-scheme>

- Bank of England. "Special Liquidity Scheme: Information." April 21, 2008. <https://webarchive.nationalarchives.gov.uk/20090825161812/http://www.bankofengland.co.uk/markets/sls/sls-information.pdf>
- Bank of England. "SLS Addendum." August 14, 2008. <https://webarchive.nationalarchives.gov.uk/20091010191000/http://www.bankofengland.co.uk/markets/sls/sls-addendum080814.pdf>
- Bank of England. "News Release." September 17, 2008. <https://www.bankofengland.co.uk/-/media/boe/files/news/2008/september/special-liquidity-scheme>
- Bank of England. "Market Notice." October 8, 2008. <https://webarchive.nationalarchives.gov.uk/20090825160535/https://www.bankofengland.co.uk/markets/marketnotice081008.pdf>
- Bank of England. "Market Notice." October 13, 2008. <https://webarchive.nationalarchives.gov.uk/20090825164059/http://www.bankofengland.co.uk/markets/marketnotice081013b.pdf>
- Bank of England. "Market Notice." February 3, 2009. <https://webarchive.nationalarchives.gov.uk/20090825164059/http://www.bankofengland.co.uk/markets/marketnotice081013b.pdf>
- Bank of England. "News Release." February 3, 2009. <https://www.bankofengland.co.uk/-/media/boe/files/news/2009/february/special-liquidity-scheme>
- Bank of England. "Market Notice." September 25, 2009. <https://webarchive.nationalarchives.gov.uk/20091010174831/https://www.bankofengland.co.uk/markets/marketnotice090925sls.pdf>
- Bank of England. "Sterling Monetary Framework". Accessed April 2, 2019. <https://www.bankofengland.co.uk/markets/the-sterling-monetary-framework>
- Cross, Michael; Fisher, Paul; Weeken, Olaf. "The Bank's balance sheet during the crisis". Quarterly Bulletin 2010 Q1. <https://www.bankofengland.co.uk/-/media/boe/files/quarterly-bulletin/2010/the-banks-balance-sheet-during-the-crisis.pdf?la=en&hash=19538FB5CCCF711DEC9BD98365654C91801232B3>
- John, Sarah; Roberts, Matt; Weeken, Olaf. "The Bank of England's Special Liquidity Scheme". March 27, 2012. <https://www.bankofengland.co.uk/quarterly-bulletin/2012/q1/the-bank-of-englands-special-liquidity-scheme>
- King, Mervyn. "Oral Evidence," in "Re-appointment of Mervyn King as Governor of the Bank of England". House of Commons Treasury Committee. Tenth Report of Session 2007-08. Volume II. April 29, 2008. <https://publications.parliament.uk/pa/cm200708/cmselect/cmtreasy/524/524ii.pdf>

Winters, Bill. "Review of the Bank of England's Framework for Providing Liquidity to the Banking System." October 2012. <https://www.bankofengland.co.uk/-/media/boe/files/news/2012/november/the-banks-framework-for-providing-liquidity-to-the-banking>

## V. Key Program Documents

### Summary of Program

The Bank of England's Special Liquidity Scheme  
<https://www.bankofengland.co.uk/quarterly-bulletin/2012/q1/the-bank-of-englands-special-liquidity-scheme>

### Press Releases/Announcements

Market Notice – April 21, 2008  
<https://webarchive.nationalarchives.gov.uk/20090825161811/http://www.bankofengland.co.uk/markets/money/marketnotice080421.pdf>

News Release – April 21, 2008 <https://www.bankofengland.co.uk/-/media/boe/files/news/2008/april/special-liquidity-scheme>

SLS: Information – April 21, 2008  
<https://webarchive.nationalarchives.gov.uk/20090825161812/http://www.bankofengland.co.uk/markets/sls/sls-information.pdf>

SLS Addendum – August 14, 2008  
<https://webarchive.nationalarchives.gov.uk/20091010191000/http://www.bankofengland.co.uk/markets/sls/sls-addendum080814.pdf>

News Release – September 17, 2008 <https://www.bankofengland.co.uk/-/media/boe/files/news/2008/september/special-liquidity-scheme>

Market Notice – October 8, 2008  
<https://webarchive.nationalarchives.gov.uk/20090825160535/https://www.bankofengland.co.uk/markets/marketnotice081008.pdf>

Market Notice – October 13, 2008  
<https://webarchive.nationalarchives.gov.uk/20090825164059/http://www.bankofengland.co.uk/markets/marketnotice081013b.pdf>

Market Notice – February 3, 2009  
<https://webarchive.nationalarchives.gov.uk/20090825164059/http://www.bankofengland.co.uk/markets/marketnotice081013b.pdf>

New Release – February 3, 2009  
<https://webarchive.nationalarchives.gov.uk/20090825145214/https://www.bankofengland.co.uk/markets/marketnotice090203c.pdf>

Market Notice – *September 25, 2009*

<https://web.archive.nationalarchives.gov.uk/20091010174831/https://www.bankofengland.co.uk/markets/marketnotice090925sls.pdf>