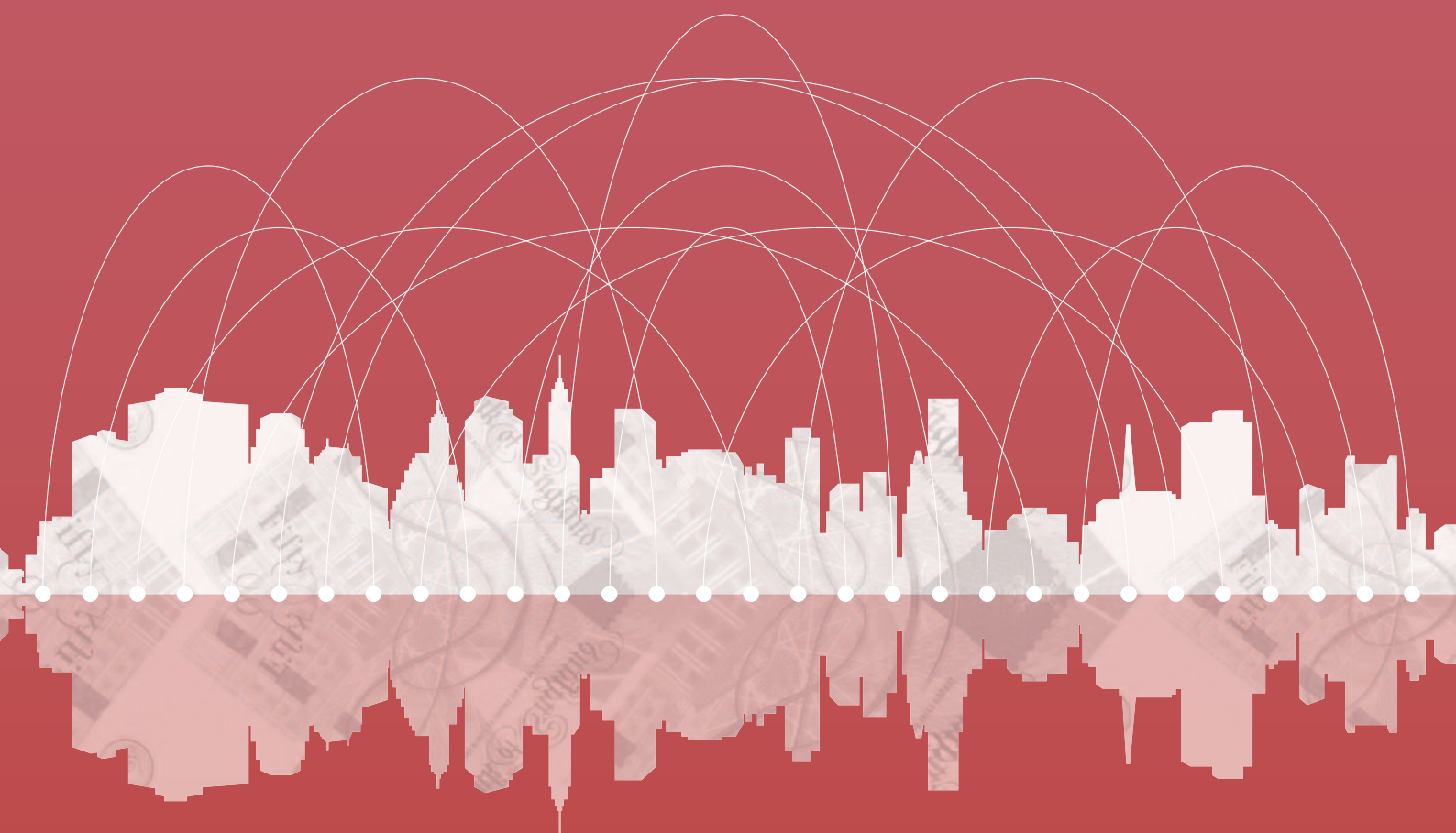


The Money Market Liaison Committee Sterling Money Market Survey

Survey results | 2015 H2



BANK OF ENGLAND





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The Sterling Money Market Survey is conducted by the Bank of England on a biannual basis, on behalf of the Money Market Liaison Committee (MMLC). Established in 1999, the MMLC comprises representatives from market participants, trade associations and the authorities, and provides a forum for discussion of structural issues in the money market.

The sterling money market brings together banks, other financial institutions and non-financial companies looking to borrow or lend money, and enables them to manage their liquidity. Transactions can be secured or unsecured and include deposits, loans, repo and the sale and purchase of tradable financial instruments such as commercial paper (CP) and certificates of deposit (CDs). The market plays a central role in the Bank's pursuit of its monetary and financial stability policy objectives, and is the market in which the Bank implements the interest rate decisions of the Monetary Policy Committee and provides liquidity insurance to the banking system.

The Money Market Survey gathers quantitative and qualitative information on developments in the sterling money market. Launched in May 2011, it adds to existing data sources available for different segments of the market and supplements the Bank's market intelligence. It complements similar surveys conducted by other central banks. Over time, the survey is intended to increase public understanding of the sterling money market, identify emerging trends, and help policymakers assess the impact of their actions on the behaviour of market participants. This report presents the data from the survey and provides a brief commentary.

The survey sample comprises 37 commercial banks, building societies and investment banks active in the sterling money market. The list of participants is detailed in the annex. Selection is based on the scale of institutions' involvement in the sterling money market and is kept under active review.

Additional background information on the survey can be found in the 2011 Q3 *Quarterly Bulletin* article, 'The Money Market Liaison Group Sterling Money Market Survey'.

The 2015 H2 report covers sterling money market transactions that took place during November 2015. The 2015 H1 report can be found at www.bankofengland.co.uk/publications/Documents/other/markets/mmlc/smms2015h1.pdf.

This report is available on the Bank's website, along with copies of the questionnaire and data tables from the annex in Excel format, at www.bankofengland.co.uk/publications/Pages/other/mmlg/default.aspx.

Detail on data definitions and interpretation is included alongside the data tables in the annex.

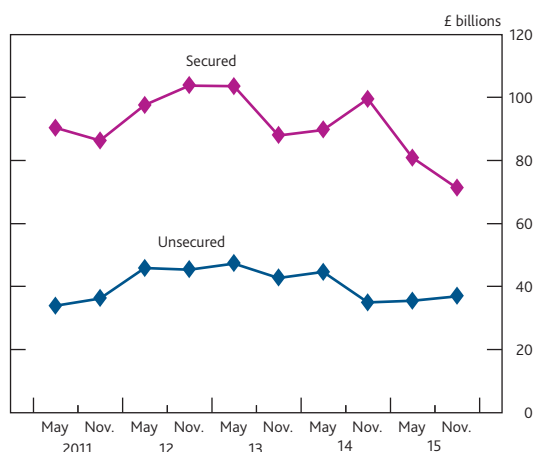
The Money Market Liaison Committee Sterling Money Market Survey

The 2015 H2 report covers sterling money market transactions that took place during November 2015. The total value of sterling money market transactions fell 7% since the previous survey in May 2015. Secured activity continued to fall and made up 66% of total reported transactions, while unsecured activity had increased slightly. The majority of both secured and unsecured activity continued to be carried out at overnight maturities. Perceptions of the functioning of the unsecured sterling money market remained negative on balance but were slightly improved from the previous survey, while perceptions of liquidity in the secured market further deteriorated and were deemed negative overall, consistent with the headline fall in activity. An update on the Bank's new Sterling Money Market Data Collection, including the results of the first Sterling Money Market Annual (SMMA) return are discussed in the box on pages 6–7.

The overall sterling money market

The total value of average daily flows in the sterling money market fell 7% since May 2015. There was a 12% decrease in secured turnover relative to the previous survey, while unsecured turnover increased by 4% (**Chart 1**). Secured transactions constituted 66% of overall money market turnover, the lowest proportion since the survey was introduced in May 2011.

Chart 1 Reported daily average transactions in the sterling money market^{(a)(b)}

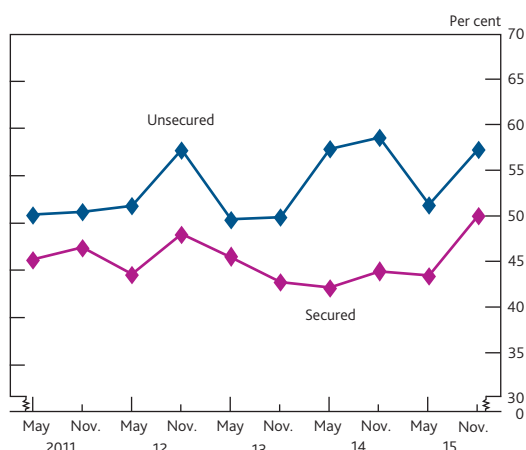


Sources: MMLC Sterling Money Market Survey and Bank calculations.

- (a) Daily average flows are reported as the value of sterling money market transactions in the survey month divided by the number of working days during that period.
 (b) The calculation adjusts for the double counting of matched interbank borrowing and lending flows. See note v in the data annex for more detail.

Activity in the sterling money market continued to be relatively concentrated. The top five survey respondents in the unsecured market accounted for around 60% of unsecured transactions; up from the previous survey

Chart 2 Concentration of top five respondents

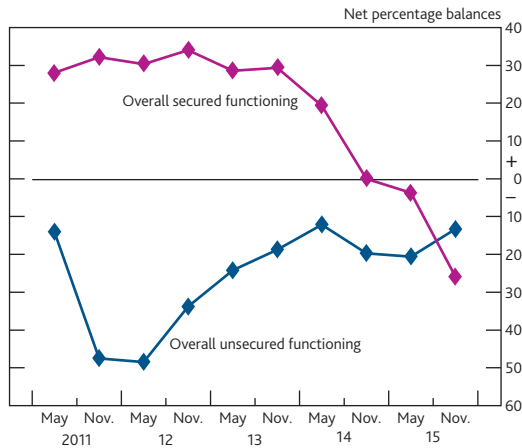


Sources: MMLC Sterling Money Market Survey and Bank calculations.

(**Chart 2**). The secured market was relatively less concentrated and the top five respondents accounted for around half of transactions, also an increase on the previous survey. The increase in secured market concentration was driven by reduced activity from smaller respondents, rather than the largest five increasing their activity.

Overall perceptions of secured market functioning have further declined since the previous survey, with the market deemed to be functioning poorly overall in November 2015 (**Chart 3**). Respondents reported that unsecured market functioning remained poor, but had improved since the previous survey, consistent with the slight increase in headline activity.

Chart 3 Respondents' views of overall market functioning^(a)



Sources: MMLC Sterling Money Market Survey and Bank calculations.

(a) 'Net percentage balance' is calculated as the difference between the balance of lenders reporting that, on a scale of 1-5, the market was functioning very poorly (1) to very well (5). The net percentage balances are scaled to lie between ±100: more extreme responses (1 and 5) attract a weight of 100%, less extreme responses (2 and 4) attract a weight of 50% and central responses (3) attract a weight of zero.

The secured sterling money market

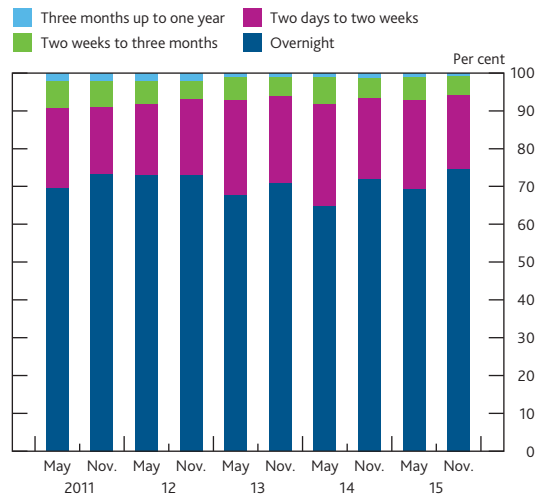
The value of secured transactions had fallen since the previous survey in May 2015 (Chart 1). The total secured turnover reported in the November 2015 survey is the lowest in any survey since it was first collected in May 2011, despite the survey sample expanding.⁽¹⁾ Contacts thought the main driver continued to be pressure to reduce balance sheet size due to regulatory reporting requirements, such as the leverage ratio. There were expectations that this would continue to evolve, with some commenting that the cost of the Net Stable Funding Ratio (NSFR) was starting to be passed through into repo pricing, and would make repo less attractive in future. Another more recent development which was also thought to have reduced activity was a lower availability for collateral, in part due to it being increasingly used for margining.

In November 2015, the majority of secured borrowing turnover took place at an overnight maturity (Chart 4), and the share had risen, compared to the previous survey, to 75%. There was a decrease in turnover at two days to two weeks' maturity, while turnover at maturities of two weeks and beyond remained small at around 6%.

There was a small increase in the proportion of secured borrowing taking place via central counterparties (CCPs) relative to that taking place bilaterally or via tri-party repo (Chart 5). The reverse was true for secured lending, where the share conducted via CCPs fell slightly.

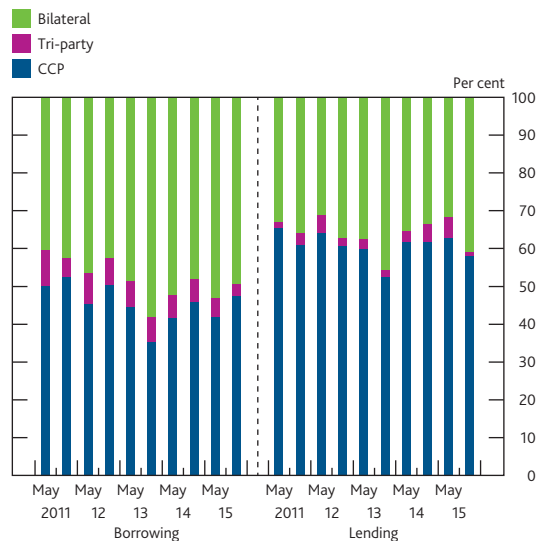
Consistent with previous surveys, over 90% of secured transactions were collateralised by UK government debt in November 2015 although this proportion fell slightly when compared to the previous survey.

Chart 4 Maturity of secured borrowing transactions



Sources: MMLC Sterling Money Market Survey and Bank calculations.

Chart 5 Distribution of secured transaction types^(a)



Sources: MMLC Sterling Money Market Survey and Bank calculations.

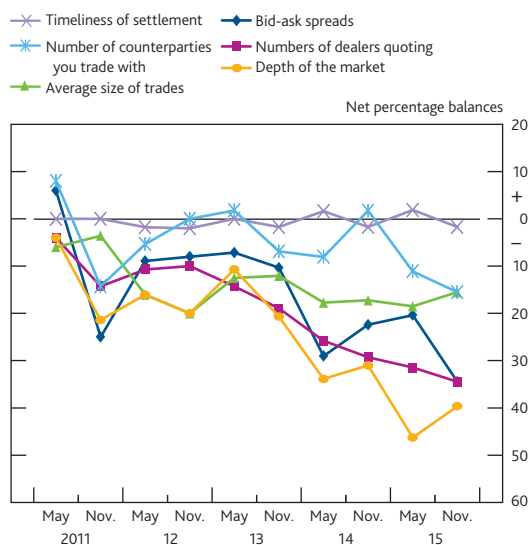
(a) All transactions via CCPs are assumed to be interbank. Other interbank transactions are captured as a subset of bilateral and tri-party transactions. See Table A5 of data annex for more detail.

Participants reported a decline in overall secured market functioning with most individual indicators of liquidity deemed to have deteriorated further when compared to the previous survey (Charts 3 and 6).

Some respondents reported a continued deterioration in the capacity of the secured market, citing less market depth, wider bid-ask spreads, smaller average trade size and fewer dealers quoting. Consistent with previous surveys, contacts reported conditions were worse at longer maturities. This decline in liquidity was perhaps reflected in the widening of bid-ask spreads.

(1) There were 33 participants in May 2011 and 37 in the current survey.

Chart 6 Change in secured market functioning indicators^(a)



Sources: MMLC Sterling Money Market Survey and Bank calculations.

(a) 'Net percentage balance' is calculated as the difference between the balance of lenders reporting that, on a scale of 1–5, the market was functioning much worse than six months ago (1) to much better than six months ago (5). A negative balance reflects worsening conditions when compared to six months ago. The net percentage balances are scaled to lie between ± 100 : more extreme responses (1 and 5) attract a weight of 100%, less extreme responses (2 and 4) attract a weight of 50% and central responses (3) attract a weight of zero.

Wider bid-ask spreads could reduce appetite to participate in the secured market, hampering liquidity. Most of these indicators of liquidity had been negative on balance over the past few surveys, indicating worsening conditions.

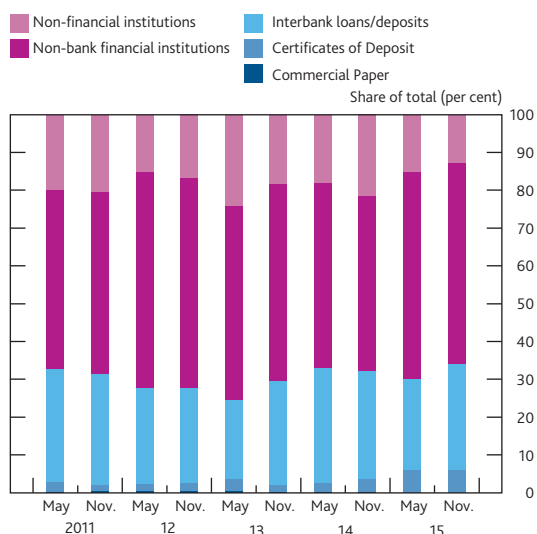
The unsecured sterling money market

The value of unsecured transactions rose 4% compared to the value reported in the previous survey (Chart 1), perhaps reflecting, in part, that it had become increasingly attractive to acquire sterling funds to swap into other currencies. Contacts also noted that volumes in the unsecured brokered market had increased over the last year. Despite small headline changes in activity, the composition of the unsecured money market was thought to have evolved in the previous few years, as banks less constrained by the leverage ratio became more active in the market.

The vast majority of unsecured activity reported in the survey is borrowing, at 97% in November 2015, up from 95% in the previous survey. This reflects a continued decline in unsecured lending reported in the November 2015 survey to less than £1 billion a day, from nearly £5 billion in the inaugural May 2011 MMLC survey.⁽¹⁾ This may be driven in part by wider access to Bank of England facilities and reserves accounts, meaning more survey respondents have the option to deposit at the Bank of England, rather than lend to other banks who already had a reserves account.

Loans from non-bank financial institutions constituted 53% of total unsecured borrowing (Chart 7). The share from non-financial institutions decreased to 13% and the share of

Chart 7 Source of unsecured borrowing^(a)



Sources: MMLC Sterling Money Market Survey and Bank calculations.

(a) Chart shows borrowing by reporting institutions from bank and non-bank institutions.

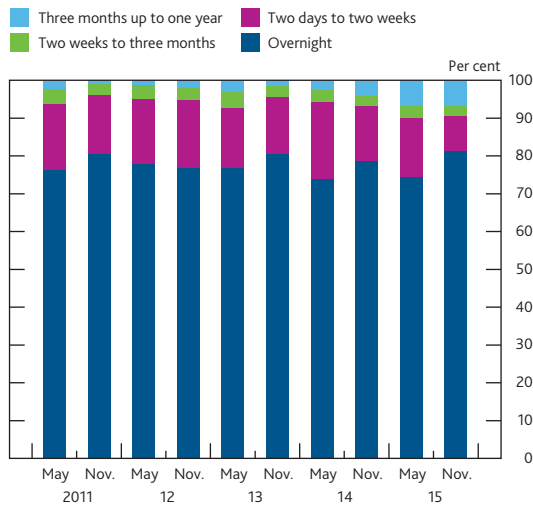
interbank deposits increased to 28% in November 2015. The amount of Certificates of Deposits (CDs) issued by survey respondents remained around 6%. Contacts continued to report increased appetite for CDs relative to earlier survey periods.

The overnight share of unsecured market turnover increased to 81% of overall unsecured market turnover, the highest share reported since the survey was introduced. Contacts reported market liquidity was particularly poor at longer terms, which forced more transactions to occur at overnight. The share of unsecured borrowing at maturities of three months or more remained at 7% in November 2015, while the share at maturities between two days and two weeks fell from 16% in May 2015 to 9% in November 2015 (Chart 8). A higher share of trades of overnight and three months or more could reflect the mismatch between banks and depositors. Regulations incentivise banks to increase the maturity of their funding profiles, while wholesale depositors are thought to prefer shorter maturity deposits to avoid tying up funding for longer periods. Contacts note that as a result some banks are more willing to accept overnight deposits from counterparties who also offer term funding.

Overall perceptions of unsecured market functioning were slightly improved but remained poor on balance (Chart 3). Despite this, individual indicators of unsecured market functioning were broadly unchanged or slightly worse since the last survey, with depth of the market and number of dealers deemed to have slightly worsened when compared to the previous survey (Chart 9). Contacts thought this suggested the increase in activity would only be temporary.

(1) See Notes to Annexes iv for a full explanation of why the borrowing and lending amounts reported are not equal.

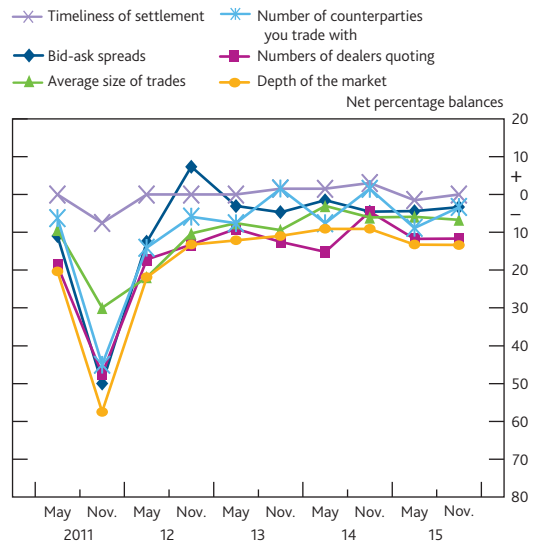
Chart 8 Maturity of unsecured borrowing transactions



Sources: MMLC Sterling Money Market Survey and Bank calculations.

Since May 2013, survey participants have been asked how the number of credit limits in the unsecured market had changed since the previous survey, following structural changes to the market since the crisis. A slightly lower proportion of respondents reported that there had been no further change in the number of credit limits held in the past six months. A small minority reported a further modest fall. As in the previous two surveys, no respondents reported that credit limits were 'much lower'.

Chart 9 Change in unsecured market functioning indicators^(a)



Sources: MMLC Sterling Money Market Survey and Bank calculations.

(a) 'Net percentage balance' is calculated as the difference between the balance of lenders reporting that, on a scale of 1-5, the market was functioning much worse than six months ago (1) to much better than six months ago (5). A negative balance reflects worsening conditions when compared to six months ago. The net percentage balances are scaled to lie between ±100: more extreme responses (1 and 5) attract a weight of 100%, less extreme responses (2 and 4) attract a weight of 50% and central responses (3) attract a weight of zero.

Update on the new sterling money market data collection

In March 2015, Chris Salmon, the Bank's Executive Director for Markets, announced the Bank would collect each day, from institutions active in sterling money markets, data on their transactions. The purpose of this data collection is to secure and improve the information available to the Bank on conditions in money markets, benefiting the Bank's analysis of both monetary and financial conditions. The Bank consulted on the detail of its approach over Summer 2015⁽¹⁾ and published its final position in November 2015.⁽²⁾

The data collection is split into three parts (Table 1).

Table 1 Data collection

Annual return (Form SMMA)	Summary statistics on all activity in the sterling money markets.
Daily return (Form SMMD)	Transaction level data reported by those active in the sterling money markets.
Half-yearly return (Form SMMH)	Replacing the current MMLC survey.

Findings from the first SMMA return

The first SMMA return was completed for November 2015. The intention of the annual return is to capture all activity in the unsecured and secured sterling money markets.⁽³⁾ In practice, its scope does not include some offshore transactions, nor secured transactions entered into between non-banks. Nonetheless, we believe these remain representative (and responses to the consultation reflect this).

SMMA data shows the daily average size of the unsecured sterling money market (trades with a maturity of one year or less) to be around £45 billion, with 88%, or £40 billion, being overnight transactions. Of the 351 SMMA respondents, 100 institutions reported activity in the overnight market while an additional 52 institutions reported activity at longer maturities (up to one year).

For the secured sterling money market, the SMMA data shows the daily average size of the secured sterling money market to be around £102 billion, with 72%, or £73 billion, being overnight transactions. Of the 351 SMMA respondents, 34 institutions reported activity in the overnight market while an additional 30 institutions reported activity at longer maturities.

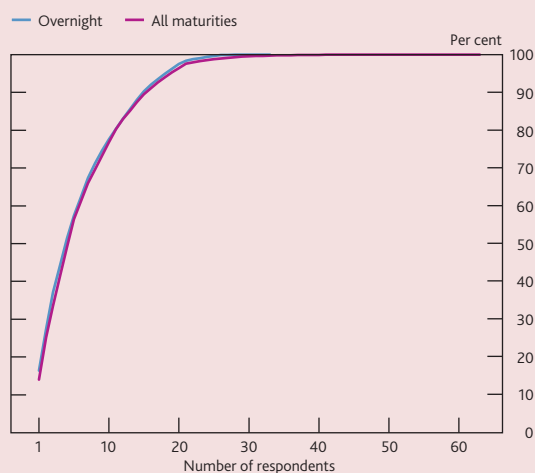
Reporting population for daily reporting

As well as providing information on the shape of the sterling money markets, the SMMA returns have been used to identify the firms that will be required to report their transaction data to the Bank on a daily basis (Form SMMD).

In the original public consultation and response, the Bank discussed a presumptive 90% coverage threshold — initially estimated to capture 50–100 institutions. This target threshold was designed to try and balance the Bank's objective to capture the majority of the sterling money market, against ensuring the data collection employed a cost efficient and proportionate approach, to avoid imposing a disproportionate reporting burden on a long tail of reporting institutions. However, it was noted that the threshold used would be informed by the distribution of activity across reporting institutions as reported in the SMMA.

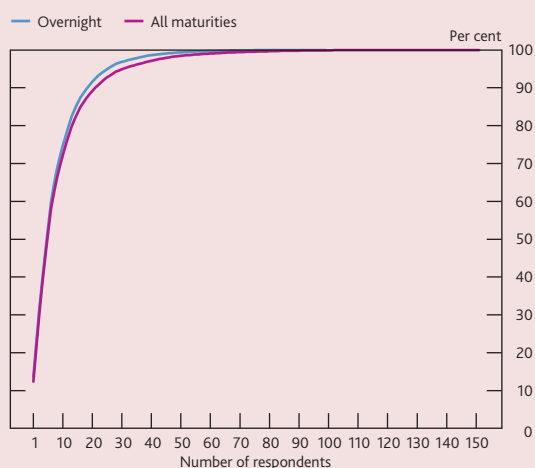
In fact, the SMMA data has shown greater than expected concentration in both the secured and unsecured market (see Charts A and B).

Chart A Distribution of secured activity



Sources: SMMA data and Bank calculations

Chart B Distribution of unsecured activity



Sources: SMMA data and Bank calculations

(1) www.bankofengland.co.uk/markets/Documents/cpsonia0715.pdf.

(2) www.bankofengland.co.uk/markets/Documents/sonia1115.pdf.

(3) The SMMA reporting population include: banks incorporated in the United Kingdom; banks incorporated outside the United Kingdom authorised to accept deposits through a branch in the United Kingdom; building societies; and PRA-designated investment firms.

In the light of this, the Bank has decided to set a higher threshold for identifying daily reporters. The policy is therefore:

- To capture all institutions whose activity at either overnight or all maturities (up to one year) falls within the top 95% of activity. This applies to the secured and unsecured sterling money markets separately.
- In addition, at the Bank's discretion, other SMMA reporters not otherwise captured, may be required to report on a daily basis in order to support the Bank's understanding of the sterling money market.

The Bank does not judge this higher threshold to impose a disproportionate set of costs on less active institutions and the overall number of daily reporters is significantly below that estimated in the consultation process. In total 47 institutions have been informed that they will report the SMMD. 34 institutions will report unsecured data and 22 will report secured data; of these, 9 institutions will be providing both data sets.

Under the Bank's policy, the daily reporting population for the unsecured market would represent around £43 billion of activity at all maturities, with £39 billion of transactions with overnight maturities. Similarly, for the secured market, the daily reporting population would represent around £99 billion of activity at all maturities, with £72 billion of transactions with overnight maturities.

The Bank will review the population of daily reporters annually, with reference to the results of the SMMA survey. However to avoid firms entering and exiting the sample too frequently the Bank anticipates that changes to the daily reporting population will usually only be made every three years, unless there is a strong case to make changes prior to that.

The future of the MMLC survey

It is not currently possible to directly compare all the SMMA results with the MMLC survey results in a meaningful way. On one hand there are currently some definitional differences, eg the secured element of the MMLC survey includes stock lending and borrowing which is excluded from the SMMA, biasing the results of the MMLC survey upwards. On the other hand there is the difference in reporting populations across each survey with the MMLC survey currently including 37 institutions compared to SMMA with 351, but as set out above, the SMMA is intentionally designed to capture all activity. These factors help to explain the differences in the headline activity reported in each return. Nevertheless, it is possible to compare the returns in certain specific segments: for example the total SMMA returns for the unsecured overnight deposit market are an average of £40 billion a day compared to £30 billion reported in the MMLC survey. This is expected given the aim of the SMMA return, but also suggests that the MMLC survey has been a good reflection of activity in the sterling markets since its inception.

As discussed in the public consultation response, the MMLC Survey reporting population will be aligned with the SMMD reporting population from November 2016, and the scope of the MMLC Survey will be reconfigured to eliminate duplication between the quantitative parts of the existing survey and the SMMD return. This will ensure the Bank will have both quantitative and qualitative input from those most active in the sterling money markets. Further information will be provided to those affected by this change in due course.

Notes to annexes

- i. The survey sample comprises 37 commercial banks, building societies and investment banks that are active in the sterling money market. The list of participants is detailed in Annex C. The MMLC survey reporting population will be aligned with the SMMD reporting population from November 2016.
- ii. Sterling money market transactions are defined as wholesale borrowing and lending of a maturity no longer than one year. Non-sterling and intra-group trades are excluded.
- iii. Participants are asked to exclude trades with the Bank of England but, from May 2012, to include transactions with the UK Debt Management Office (DMO). This change was based on feedback from survey participants that suggested they may not be able to identify the ultimate counterparty to transactions made in the secured market via a central counterparty when using an automated trading system. So, to the extent that such transactions included those with the DMO, survey respondents may not have been able to exclude them. For more details on the DMO's money market activity see www.dmo.gov.uk.
- iv. Borrowing and lending figures are not equal because the survey only captures the survey participants' side of each transaction. In common with other central banks' money market surveys, there are likely a number of lenders who do not participate in the survey, and whose lending therefore is not captured in the survey lending figures, but is nonetheless captured in survey participants' borrowing returns. In particular, this affects the MMLC survey interbank data, yielding a discrepancy whereby interbank borrowing is larger than interbank lending. Discussions with a subgroup of survey participants indicate that this is likely to be because the survey sample excludes a range of, particularly foreign-based, banks that are regular net lenders.
- v. Reported daily average transactions in the sterling money market (**Table A1 and Chart 1**) are calculated by adjusting for the double counting of matched interbank borrowing and lending flows (double counting occurs because respondents are asked to record both borrowing and lending, so the same transaction appears as lending in one participant's return and as borrowing in another). The calculations are as follows:
 - Secured transactions: secured borrowing (**Table A2**) + secured lending (**Table A2**) – secured interbank lending (CCP and interbank excluding CCP, **Table A5**).
 - Unsecured transactions: unsecured borrowing + unsecured lending – unsecured interbank lending (**Table A7**).

Annex A: Data tables for quantitative survey questions

Table A1: Reported daily average transactions in the sterling money market (£ billions)^(a)

	2011		2012		2013		2014		2015	
	May	Nov.	May	Nov.	May	Nov.	May	Nov.	May	Nov.
Unsecured	34	36	46	45	47	43	45	35	35	37
Secured	90	86	98	104	104	88	89	100	81	71

Table A2: Borrowing and lending (daily averages, £ billions)^(b)

	2011		2012		2013		2014		2015	
	May	Nov.	May	Nov.	May	Nov.	May	Nov.	May	Nov.
Unsecured borrowing	34	37	45	45	47	42	44	35	35	37
Unsecured lending	5	4	4	3	3	2	2	2	2	1
Secured borrowing	78	75	85	90	88	72	74	81	68	59
Secured lending	57	63	66	60	65	51	51	62	50	42

Table A3: Average borrowing and lending transaction size (£ millions)

	2011		2012		2013		2014		2015	
	May	Nov.	May	Nov.	May	Nov.	May	Nov.	May	Nov.
Unsecured borrowing	19	21	25	16	28	30	30	24	22	35
Unsecured lending	54	53	39	22	43	19	22	15	26	46
Secured borrowing	39	44	43	36	32	36	26	35	27	33
Secured lending	28	31	34	16	17	26	26	31	31	25

(a) Reported daily average transactions in the sterling money market (Table A1 and Chart 1) are calculated by adjusting for the double counting of matched interbank borrowing and lending flows (double counting occurs because respondents are asked to record both borrowing and lending, so the same transaction appears as lending in one participant's return and as borrowing in another). The calculations are as follows: secured transactions: secured borrowing (Table A2) + secured lending (Table A2) – secured interbank lending (CCP and interbank excluding CCP, Table A5); unsecured transactions: unsecured borrowing + unsecured lending – unsecured interbank lending (Table A7).

(b) Borrowing and lending do not sum to the totals in Table A1. This is because the totals in Table A1 are adjusted for the double counting of matched interbank borrowing and lending.

Table A4: Maturity distribution of borrowing and lending (per cent)

	2011							
	May				Nov.			
	Overnight	Two days to two weeks	Two weeks to three months	Three months up to one year	Overnight	Two days to two weeks	Two weeks to three months	Three months up to one year
Unsecured borrowing	76	17	4	2	80	16	3	1
Unsecured lending	79	12	7	1	81	12	6	1
Secured borrowing	69	21	7	2	74	18	7	2
Secured lending	68	19	10	2	76	16	6	2
	2012							
	May				Nov.			
	Overnight	Two days to two weeks	Two weeks to three months	Three months up to one year	Overnight	Two days to two weeks	Two weeks to three months	Three months up to one year
Unsecured borrowing	78	17	4	1	77	18	3	2
Unsecured lending	72	20	6	2	63	24	8	5
Secured borrowing	73	19	6	2	73	20	5	2
Secured lending	71	20	7	2	69	20	9	2
	2013							
	May				Nov.			
	Overnight	Two days to two weeks	Two weeks to three months	Three months up to one year	Overnight	Two days to two weeks	Two weeks to three months	Three months up to one year
Unsecured borrowing	77	16	4	3	81	15	3	1
Unsecured lending	80	14	3	3	78	14	5	4
Secured borrowing	67	25	6	1	71	23	5	1
Secured lending	69	23	7	2	70	22	6	2
	2014							
	May				Nov.			
	Overnight	Two days to two weeks	Two weeks to three months	Three months up to one year	Overnight	Two days to two weeks	Two weeks to three months	Three months up to one year
Unsecured borrowing	74	20	3	2	79	15	3	4
Unsecured lending	77	15	4	4	68	26	4	2
Secured borrowing	65	27	7	1	72	22	5	1
Secured lending	63	27	8	2	69	21	8	2
	2015							
	May				Nov.			
	Overnight	Two days to two weeks	Two weeks to three months	Three months up to one year	Overnight	Two days to two weeks	Two weeks to three months	Three months up to one year
Unsecured borrowing	74	16	3	7	81	9	3	7
Unsecured lending	53	18	14	15	74	15	6	6
Secured borrowing	69	23	6	1	75	20	5	1
Secured lending	64	25	8	2	71	21	7	2

Table A5: Distribution of secured borrowing and lending by type of transaction (per cent)

	2011				2012				2013			
	May		Nov.		May		Nov.		May		Nov.	
	Borrowing	Lending	Borrowing	Lending	Borrowing	Lending	Borrowing	Lending	Borrowing	Lending	Borrowing	Lending
Tri-party	10	1	5	3	8	5	7	2	7	2	7	2
Bilateral	40	33	43	36	46	31	42	37	48	38	58	46
Central counterparty (CCP)*	50	66	53	61	46	64	51	61	45	60	35	53
Interbank excluding CCP	18	14	23	20	22	16	16	17	18	16	17	16
	2014				2015							
	May		Nov.		May		Nov.					
	Borrowing	Lending	Borrowing	Lending	Borrowing	Lending	Borrowing	Lending				
Tri-party	6	3	6	5	5	6	3	1				
Bilateral	52	35	48	33	53	32	49	40				
Central counterparty (CCP)*	42	62	46	62	42	63	47	59				
Interbank excluding CCP	14	9	11	8	16	12	11	12				

* All transactions via CCP are assumed to be interbank.

Table A6: Distribution of secured borrowing and lending by type of collateral (per cent)

	2011				2012				2013			
	May		Nov.		May		Nov.		May		Nov.	
	Borrowing	Lending	Borrowing	Lending	Borrowing	Lending	Borrowing	Lending	Borrowing	Lending	Borrowing	Lending
UK government debt and Bank bills	82	78	87	95	89	90	90	93	93	95	94	96
Other sovereign and central bank debt from selected issuers	5	2	9	2	8	5	5	5	2	1	2	0
Other securities	13	20	4	3	3	5	5	2	5	4	4	4
	2014				2015							
	May		Nov.		May		Nov.					
	Borrowing	Lending	Borrowing	Lending	Borrowing	Lending	Borrowing	Lending				
UK government debt and Bank bills	96	95	92	95	94	88	92	91				
Other sovereign and central bank debt from selected issuers	1	0	1	0	1	3	1	4				
Other securities	2	4	7	5	5	8	7	5				

Table A7: Source/destination of unsecured borrowing and lending (per cent)

	2011				2012				2013			
	May		Nov.		May		Nov.		May		Nov.	
	Borrowing	Lending	Borrowing	Lending	Borrowing	Lending	Borrowing	Lending	Borrowing	Lending	Borrowing	Lending
Non-financial institutions	20	3	20	1	15	2	17	6	24	4	18	7
Other financial institutions	47	5	48	9	57	8	55	6	51	7	52	7
Interbank:												
Interbank loans/deposits	30	85	29	85	25	82	25	81	21	81	27	82
Certificates of deposit	2	1	2	1	2	2	2	1	3	4	2	2
Commercial paper	0	6	0	4	1	6	0	6	0	5	0	2
	2014				2015							
	May		Nov.		May		Nov.					
	Borrowing	Lending	Borrowing	Lending	Borrowing	Lending	Borrowing	Lending				
Non-financial institutions	18	7	21	6	15	2	13	12				
Other financial institutions	49	7	46	9	55	13	53	25				
Interbank:												
Interbank loans/deposits	30	81	29	74	24	52	28	60				
Certificates of deposit	3	0	4	2	6	25	6	3				
Commercial paper	0	3	0	9	0	8	0	0				

Annex B: Data tables for qualitative survey questions

Table B1: Respondents' views of secured market functioning (per cent)

	2011		2012		2013		2014		2015	
	May	Nov.	May	Nov.	May	Nov.	May	Nov.	May	Nov.
1 (very poor)	0	0	0	0	0	0	0	0	4	7
2	4	0	11	4	7	14	16	31	30	52
3	40	36	25	44	43	28	39	41	37	28
4	52	64	57	32	36	45	35	24	30	14
5 (very good)	4	0	7	20	14	14	10	4	0	0

Table B2: Respondents' views of unsecured market functioning (per cent)

	2011		2012		2013		2014		2015	
	May	Nov.	May	Nov.	May	Nov.	May	Nov.	May	Nov.
1 (very poor)	3	45	31	21	15	9	9	6	6	3
2	41	15	38	32	27	28	24	39	41	37
3	41	30	28	41	48	53	48	43	41	43
4	13	10	3	6	9	9	18	12	12	17
5 (very good)	3	0	0	0	0	0	0	0	0	0

Table B3: Change in secured market functioning indicators during previous six months (per cent)

	2011					2012					2013					2014					2015				
	Nov.					May					Nov.					May					Nov.				
	Better	Slightly better	Same	Slightly worse	Worse	Better	Slightly better	Same	Slightly worse	Worse	Better	Slightly better	Same	Slightly worse	Worse	Better	Slightly better	Same	Slightly worse	Worse	Better	Slightly better	Same	Slightly worse	Worse
Bid-ask spreads	0	7	43	43	7	0	7	71	18	4	0	4	76	20	0	0	4	42	48	6	0	3	31	59	7
Number of dealers quoting	0	0	71	29	0	0	4	75	18	4	0	0	80	20	0	0	0	55	39	6	0	0	31	69	0
Average size of trades	0	14	64	21	0	0	11	46	43	0	0	4	56	36	4	0	10	45	45	0	0	3	62	34	0
Timeliness of settlement	0	0	100	0	0	0	4	89	7	0	0	0	96	4	0	0	3	97	0	0	0	0	97	3	0
Number of counterparties you trade with	0	0	71	29	0	0	11	68	21	0	0	12	76	12	0	0	10	65	26	0	0	7	55	38	0
Depth of the market	0	7	57	21	14	0	11	54	29	7	0	4	56	36	4	0	6	42	29	23	0	0	28	66	7

Table B4: Change in unsecured market functioning indicators during previous six months (per cent)

	2011					2012					2013					2014					2015										
	Nov.					May					Nov.					May					Nov.										
	Better	Slightly better	Same	Slightly worse	Worse	Better	Slightly better	Same	Slightly worse	Worse	Better	Slightly better	Same	Slightly worse	Worse	Better	Slightly better	Same	Slightly worse	Worse	Better	Slightly better	Same	Slightly worse	Worse						
Bid-ask spreads	0	0	30	40	30	0	6	63	31	0	0	6	21	62	6	6	0	9	79	9	3	0	9	75	13	3	0	6	82	9	3
Number of dealers quoting	0	0	25	55	20	0	3	59	38	0	0	3	72	22	3	0	0	85	12	3	0	3	72	22	3	0	0	79	18	3	
Average size of trades	0	10	35	40	15	0	3	53	41	3	0	9	70	18	3	0	9	70	18	3	0	6	76	18	0	0	6	76	18	0	
Timeliness of settlement	0	0	85	15	0	0	0	100	0	0	0	3	97	0	0	0	0	100	0	0	0	0	97	3	0	0	0	97	3	0	
Number of counterparties you trade with	0	15	5	55	25	0	22	34	38	6	0	28	50	19	3	0	21	52	18	9	0	28	50	19	3	0	18	53	24	6	
Depth of the market	0	0	15	55	30	0	13	38	44	6	0	9	63	25	3	0	6	67	24	3	0	9	63	25	3	0	0	76	21	3	

Table B5: Changes in unsecured credit limits during previous six months (per cent)

	2013										
	May					Nov.					
	Much higher	Somewhat higher	The same	Somewhat lower	Much lower	Much higher	Somewhat higher	The same	Somewhat lower	Much lower	
Compared with six months ago, is the number of banks with which you hold credit limits to lend unsecured...	0	3	76	18	3	0	6	72	19	3	
	2014										
	May					Nov.					
	Much higher	Somewhat higher	The same	Somewhat lower	Much lower	Much higher	Somewhat higher	The same	Somewhat lower	Much lower	
Compared with six months ago, is the number of banks with which you hold credit limits to lend unsecured...	0	3	78	19	0	0	6	81	13	0	
	2015										
	May					Nov.					
	Much higher	Somewhat higher	The same	Somewhat lower	Much lower	Much higher	Somewhat higher	The same	Somewhat lower	Much lower	
Compared with six months ago, is the number of banks with which you hold credit limits to lend unsecured...	0	3	85	12	0	0	0	81	19	0	

Table B6: Coverage questions

	2012				2013			
	May		Nov.		May		Nov.	
	Respondents	Average	Respondents	Average	Respondents	Average	Respondents	Average
Approximate percentage of your institution's global unsecured sterling money market transactions not conducted via your main London (or UK) desk(s)	32	6%	34	8%	33	6%	32	7%
Approximate percentage of your institution's global secured sterling money market transactions not conducted via your main London (or UK) desk(s)	28	3%	28	5%	28	1%	29	1%
Approximate percentage of turnover where there is uncertainty over the nature of the counterparty	–	–	33	2%	37	1%	32	2%
	2014				2015			
	May		Nov.		May		Nov.	
	Respondents	Average	Respondents	Average	Respondents	Average	Respondents	Average
Approximate percentage of your institution's global unsecured sterling money market transactions not conducted via your main London (or UK) desk(s)	33	6%	33	5%	34	7%	31	7%
Approximate percentage of your institution's global secured sterling money market transactions not conducted via your main London (or UK) desk(s)	31	1%	29	1%	21	1%	30	8%
Approximate percentage of turnover where there is uncertainty over the nature of the counterparty	33	1%	30	2%	25	1%	29	4%

Annex C: 2015 H2 MMLC Sterling Money Market Survey participants

Bank of America Merrill Lynch
Bank of New York Mellon
Bank of Tokyo Mitsubishi UFJ
Barclays
BNP Paribas
BPCE Group
Citigroup
Clydesdale
Commerzbank
Co-operative Bank
Coventry Building Society
Crédit Agricole CIB
Danske Bank
Debt Management Office
Deutsche Bank
Goldman Sachs
HSBC
ING UK
JPMorgan Chase
Lloyds Banking Group
Mizuho Bank
Morgan Stanley
Nationwide
Nomura
Nord LB
Northern Trust
Rabobank
Royal Bank of Canada
Royal Bank of Scotland
Santander
Société Générale
Standard Chartered
State Street
Svenska Handelsbanken
UBS
UniCredit
Yorkshire Building Society