

What can be gleaned from the Sterling Money Market Data (SMMD) published by the Bank of England?

Under SMMD, the Bank of England has been collecting daily data on the number and value of transactions in the UK money market, including gilt repo. Currently, the SMMD sample is believed to be about 33 financial institutions, mainly banks. As of today, SMMD has been the sole source for Bank research on the UK repo market. UK SFTR data has not been used in any published work.

This note looks at the complete run of SMMD to date, which is from 2016 to 2023. Unfortunately, the Bank only publishes quarterly numbers, which means this analysis has to be broad-brush. The Bank has also been very parsimonious in providing breakdowns. But at least SMMD is in one currency and largely in one type of collateral (mainly or entirely UK gilts).

Summary

- Activity in gilt repo and reverse repo trended up until 2020, stalled over Q4 2020 and 2021 and contracted in 2023.
- At the beginning of the period covered by SMMD, the Brexit referendum shock fuelled growth in gilt reverse repo, probably to cover the short-selling of gilts. This ended with the Covid “dash for cash” that followed the introduction of the Covid lockdown in March 2020. The Growth Budget crisis in 2022 appeared to have had little impact.
- The Covid “dash for cash” fed a final surge in gilt repo until cut short by Bank of England intervention.
- Gross repo grew rapidly in 2022 as rising interest rates and the steepening of the money market curve following the pivot to QT attracted new cash. However, this ended with Bank of England intervention in response to the Growth Budget crisis and the gilt repo market contracted thereafter despite the continued expansion in gilt issuance. Diminished LDI fund activity might have been a factor.
- Most turnover in gilt repo and reverse repo over the period was for one day but activity shifted from overnight (ON) to tom/next (TN), particularly in reverse repo. This suggests a migration in activity from funding in the GC market (more ON than TN) to securities-driven trading (more TN than ON), reflecting the excess liquidity and collateral scarcity created by QE.
- Gilt reverse repo has a longer average term-to-maturity than gilt repo, reflecting maturity transformation by the SMMD sample.
- There is a net repo flow from the SMMD sample to the rest of the market. Net repo peaked following the Brexit referendum shock, the “dash for cash” and the Growth Budget, usually because of pick-ups in gross repo.
- The net repo flow was largely in ON, implying it was cash-driven, whereas TN repo and reverse repo were almost balanced, suggesting matched-book trading by the SMMD sample.
- Since 2020, growth spurts in turnover were driven by TN transactions (securities-driven) and contractions by ON (cash-driven).
- The outstanding balance of gilt repos was dominated by short-dates, principally at 1-month, and has tended to become even more short-term. Gilt reverse repos had a longer average remaining term-to-maturity than repo but has also shortened.
- Growth in average deal size was reversed by the “dash for cash” and the Growth Budget crisis, and subsequently trended down, particularly for TN repos. These became, on average, less than half the size of ON repos. However, ON and TN reverse repos were similar in size.

What is SMMD?

SMMD is the Bank of England’s equivalent to the ECB’s Money Market Statistical Reporting (MMSR). The Bank relies on SMMD to inform decision-making by its Monetary Policy Committee (MPC) and Financial Policy Committee (FPC), for monitoring money market functioning and for calculating SONIA.

SMMD measures transactions in the unsecured and secured sterling money markets by *wholesale market participants* (anyone not classified under UK CRR as retail or a SME). SMMD excludes any intra-group transactions, auto-collateralisation and monetary policy interactions with the Bank. Unlike MMSR, SMMD

does not encompass short-term securities (CD and CP), money market derivatives or FX swaps. There are 33 data fields required for secured transactions.

Money market under SMMD means an original term to maturity of up to and including 375 days. Eligible transactions have to be reported by 07:00 on T+1.

The *unsecured* market means sterling deposits of at least GBP 1 million borrowed by the reporting parties from *wholesale* counterparties for up to and including 375 days, excluding cash taken and held in call or nostro accounts.

The *secured* market means:

- repo and reverse repo (repurchase transactions and buy/sell-backs) but not securities lending, although it can include secured loans;
- cash value of at least GBP 1 million;
- for fixed term repos --- tenor is measured between the value date and maturity date;
- for forward repo --- tenor is measured between transaction date and value date;
- open repos are reported as a series of one-day transactions;
- collateral in the form of unstripped UK gilts, Treasury bills and (if any) Bank of England bills (that is, any security that qualifies for the *Unstripped British Government Stock DBV (UBG-DBV)* basket at Crest) but reporting parties are free to report sterling repo against other sterling-denominated fixed-income securities.

Eligible transactions are in scope of SMMD on the basis of where they are booked (not where they are originated or executed), specifically, where the booking entity is a legal entity incorporated in the UK or a branch located in the EEA of a UK-incorporated entity. It does not include the UK branches of foreign legal entities.

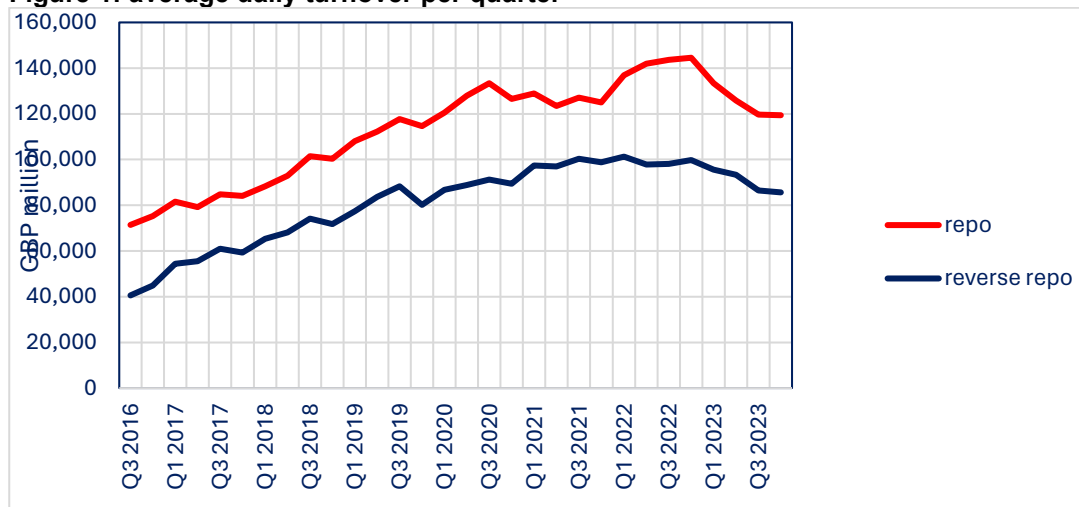
The Bank aims to capture at least 95% of the activity in its targeted segments of the sterling money market. It tries to ensure that its coverage is sufficient by means of an annual survey of all UK institutions. It also tries to ensure that it is covering all instruments of importance through a semi-annual survey.

Prior to SMMD, between 2011 and 2018, the Bank's Money Market Liaison Committee used to collect sterling money market data and, until 2016, published a Sterling Money Market Survey. More data was published than under SMMD, including the share of triparty and CCP-cleared repo and the number and type of reporting parties (38 in May 2018 --- 23 banks and 15 non-bank financial institutions --- down from a high of 92 in 1998). The previous data collection also captured sterling-denominated collateral other than gilts. And the unsecured data included money market securities.

Turnover in gilt repo and reverse repo

Average daily turnover in gross gilt repo grew continuously from 2016 (when SMMD started) until Q3 2020, interrupted only by seasonal end-year relapses. The impetus for the final spurt of growth in this uptrend came from the "dash for cash" which followed the introduction of the Covid lockdown in March 2020. But this surge in demand for liquidity was quickly sated by the intervention of the Bank of England (net asset purchases expanded rapidly to reach an all-time peak in Q1 2022). After this, gross repo fluctuated sideways for the rest of 2020 and 2021. Gilt repo resumed its previous trend growth in 2022 to reach a new peak in the last quarter, probably on the back of new cash being attracted into the repo market by rising interest rates, a steepening money market curve resulting from the pivot from QE to QT and increasing issuance of gilts. However, repo activity was then dampened by renewed Bank of England intervention, this time after the Growth Budget of September 2022. Gilt repo dropped to a new low in 2023, notwithstanding the continuing rapid increase in gilt issuance. Diminished activity by LDI pension funds after the Growth Budget turmoil may have contributed.

Figure 1: average daily turnover per quarter

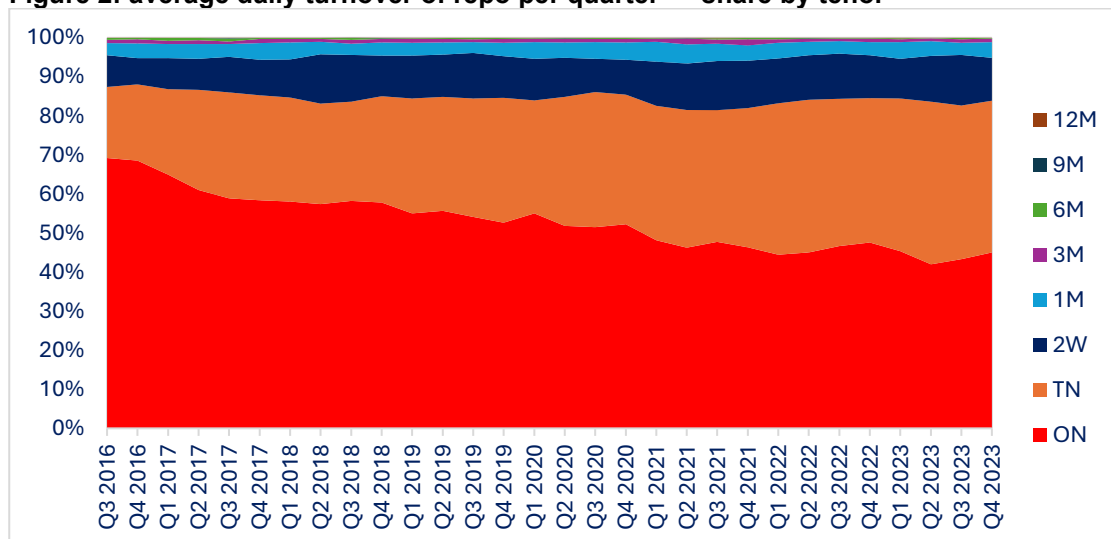


The average daily turnover of gross gilt reverse repo followed a fundamentally similar path to repo. Until Q2 2017, reverse repo grew more strongly than repo, perhaps reflecting the borrowing of gilts to cover short-selling in the aftermath of the Brexit referendum shock. Growth then decelerated, particularly during the “dash for cash, and turnover fell during 2023. The Growth Budget turmoil had little discernible impact on gross reverse repo.

Maturities

The most common tenor for gilt repo was one -day. However, the share of one-day repo has been slowly shrinking (from 87.4% in Q1 2016 to 83.9% in Q4 2023) and the predominant form has shifted from ON to TN, with shares crossing over in Q2 2023. Given that ON tends to be the preferred tenor for one-day GC repo and TN for one-day specifics, the growth in TN would seem to reflect the migration of the market from cash-driven to securities-driven trading in response to the excess liquidity and collateral scarcity resulting from QE.

Figure 2: average daily turnover of repo per quarter --- share by tenor

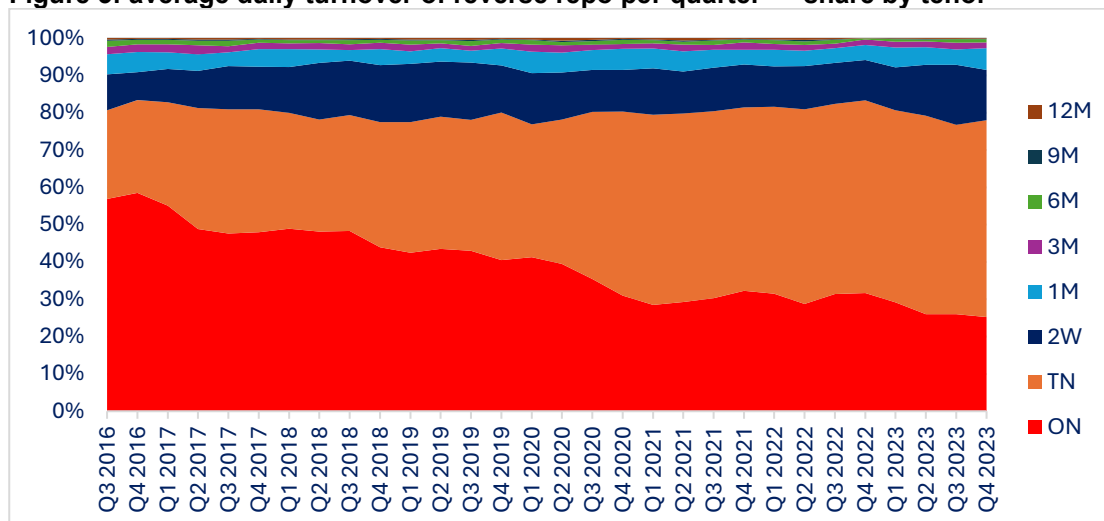


The most common tenor for gilt reverse repo was also one-day but there were more term transactions than in repo, reflecting maturity transformation by the SMMD sample.

The share of one-day reverse repo changed much less than in repo (from 80.7% to 78.0%). However, the shift from ON to TN has been faster. This would suggest that the SMMD sample has been increasing its

securities lending faster than its securities borrowing. The growth of TN accelerated in Q1 2017 after the Brexit referendum but the Covid lockdown and the Growth Budget crisis had little apparent impact.

Figure 3: average daily turnover of reverse repo per quarter --- share by tenor



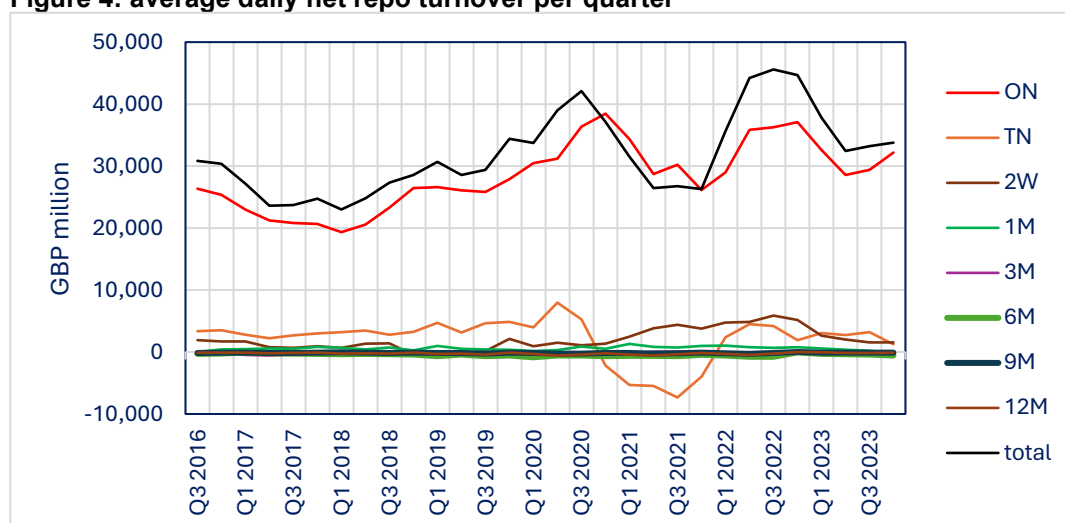
From Q1 2020, the growth phases in repo were largely driven by TN repo and, after Q3 2020, the contraction phases (especially during 2022) mainly reflected reduced activity in ON repo and, to a lesser extent, in 2-week repo. These underlying patterns were clearer in reverse repo, where the Covid “dash for cash” clearly boosted TN reverse repo at the expense of ON.

Net repo

Until Q2 2017, reverse repo grew more strongly than repo, perhaps reflecting the borrowing of gilts to cover short-selling in the aftermath of the Brexit referendum shock. This had the effect of reducing the net repo flow from the SMMD sample in the second-half of 2016 and first-half of 2017. Gilt reverse repo then slowed down and, although it recovered in Q4 2018, it lagged behind gross repo, particularly during the “dash for cash”, thus allowing the net repo flow to rebuild itself.

From 2021, the size of the net repo flow fluctuated widely. First, weakness in gross repo and a revival in gross reverse repo reduced the net repo flow from the SMMD sample. Then, in 2022, gross reverse repo stalled while gross repo recovered on the back of new cash attracted into the repo market by rising interest rates and a steepening money market curve as monetary policy started to swing from QE to QT. Increased gilt issuance may also have contributed. These factors took net repo to new highs in the second-half of 2022. However, Bank of England intervention in response to the Growth Budget turmoil dampened gross repo more than gross reverse and deflated the net repo flow during the first-half of 2023.

Figure 4: average daily net repo turnover per quarter



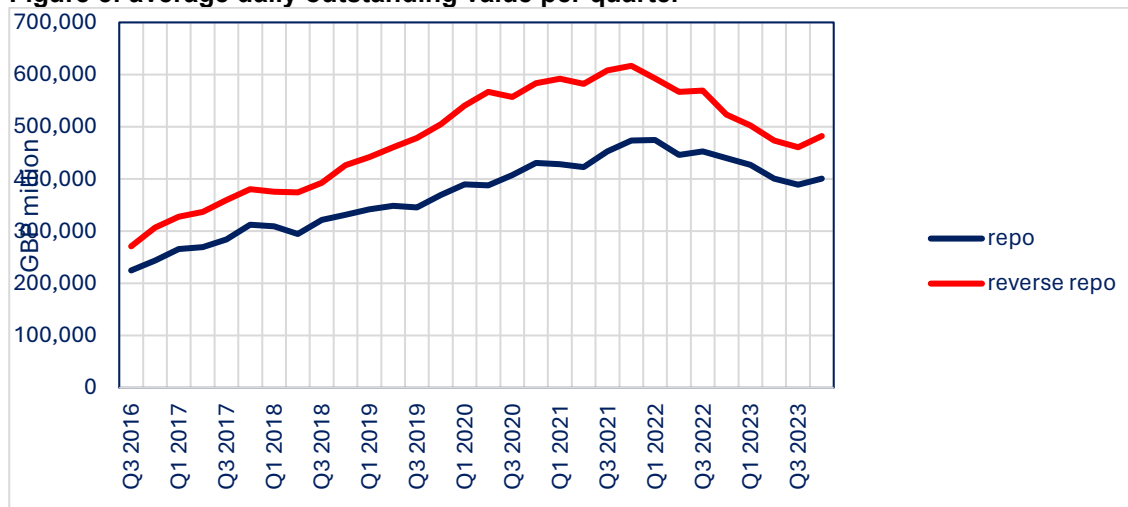
Net repo flow was largely through ON transactions, while TN activity was only modestly in the direction of net repo. Given that ON is preferred for one-day GC repo and TN for one-day specifics, the data would appear to suggest that the SMMD sample was drawing net funding from the GC market but undertaking matched-book trading of specifics. However, between the twin peaks seen in gross turnover during the “dash for cash” in Q2 2020 and the Growth Budget turmoil in Q3 2022, there were deviations from the near-balance in TN activity. Thus, the net repo bias of TN activity increased dramatically during the two crises --- suggesting the net lending of specifics, perhaps to feed short-selling --- but swung into a net reverse repo flow --- the borrowing of specifics --- in the interval.¹

Outstanding repo and reverse repo

Outstanding repo took a smoother path than turnover: a fairly linear uptrend to a peak in Q4 2021 and then a downtrend to Q3 2023. The growth in the stock of reverse repo was similar but started to decelerate earlier (after Q2 2020). The smoothness of outstanding value compared to the fluctuations seen in turnover reflected the heavy bias towards very short-term transactions.

¹ A recent Bank of England Working Paper (Fatouh et al, WP 1055) looked at the impact of quantitative easing (QE) following the Brexit referendum and the Covid “dash for cash”. In the case of Brexit QE, it found that reverse repo was unchanged in size but repo rates rose as the SMMD sample banks rationed long-term lending and increased repo borrowing (especially short-term) in order to meet increased short-term demand through increased intermediation. In the case of the Covid “dash for cash”, QE was found to have supported increased reverse repo, especially short-term lending, without, in contrast to Brexit QE, any cut in long-term lending. The lesser effect of QE Brexit compared to QE Covid was ascribed, in part, to the introduction of the Leverage Ratio and the fact that QE Covid was more generous. e conclusion on QE Brexit cannot be seen in the published SMMD data whereas that on QE Covid is discernible.

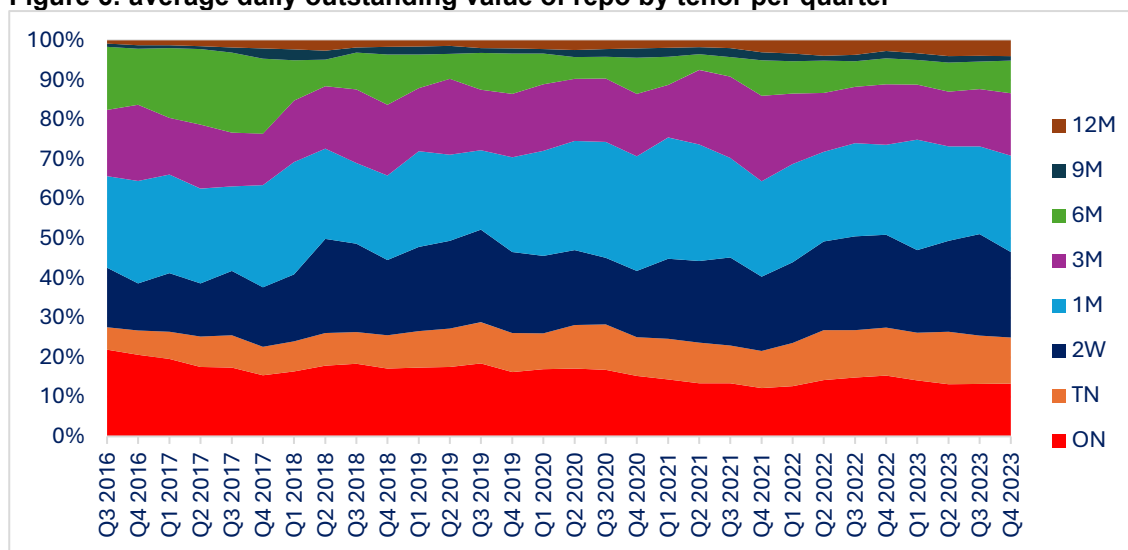
Figure 5: average daily outstanding value per quarter



Maturities

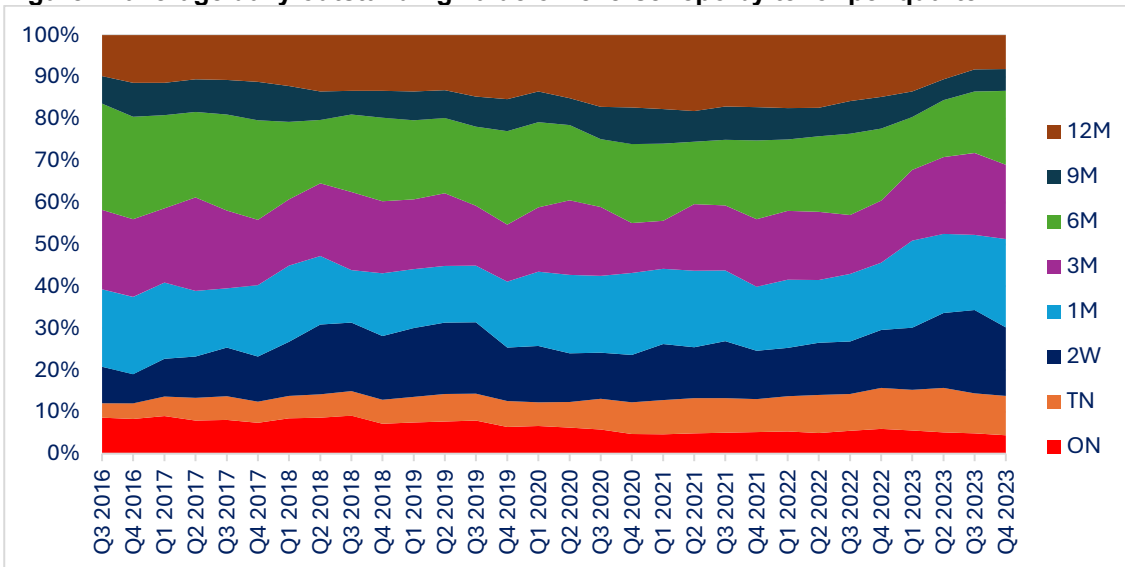
The outstanding value of gilt repo was dominated by short-dates, the share of which trended up from 66% to 71%. The maturity distribution peaked at 1-month (20-31%). In 2018, there was a rapid shift in outstanding value from 6 months down to 2 weeks and, to a lesser extent, 3 months but, in 2020, 2-weeks lost ground to 1-month. There was a gradual accumulation of 12-month repo, albeit at modest levels (to finish at 4%).

Figure 6: average daily outstanding value of repo by tenor per quarter



The maturity distribution of gilt reverse repo in terms of outstanding value was less skewed to the short term than repo. Short-dates ranged between 38% and 53% but jumped in 2018 and again from H2 2022. There was a significant accumulation of 12-month reverse repo until Q2 2022, when this maturity ebbed as the shares of TN, 2-week, 1-month and 3-month reverse repos expanded.

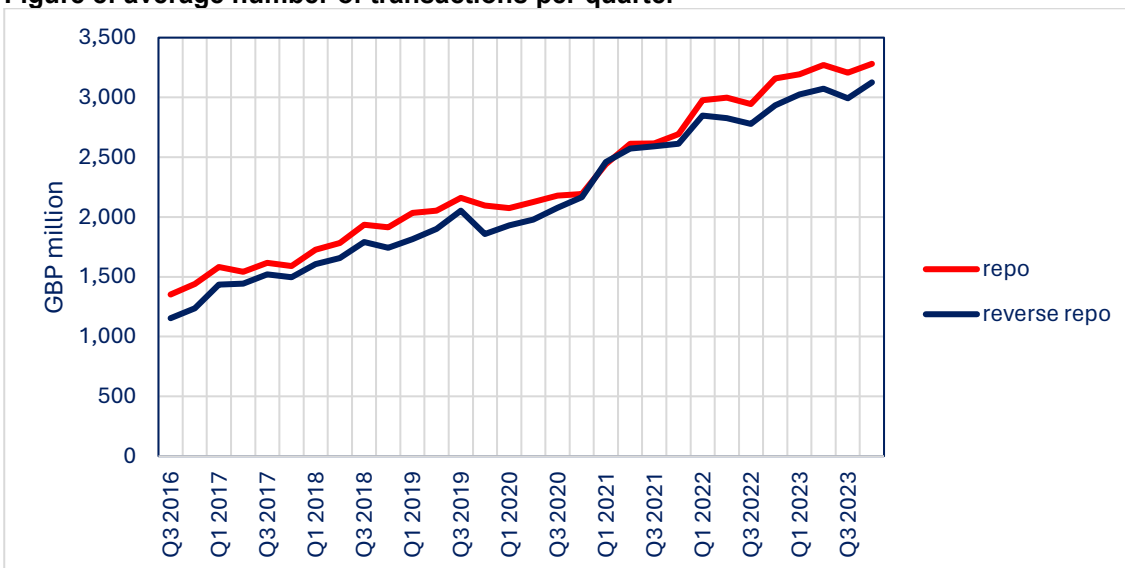
Figure 7: average daily outstanding value of reverse repo by tenor per quarter



Number of repo and reverse repo

In contrast to measures of value, the numbers of gilt repos and reverse repos have been on a continuous upward trend since 2016, interrupted only by seasonal dips in activity.

Figure 8: average number of transactions per quarter



The growth in the numbers of both gilt repo and gilt reverse repo largely reflected the growth in the number of TN transactions and, to a much lesser extent, growth at 2-weeks.

Divergences between the turnover value and number of trades imply changes in deal size. Average repo deal size grew until the Covid “dash for cash” (Q1 2020 to Q3 2020) and a subsequent recovery was reversed by the Growth Budget (Q1 to Q3 2023). The underlying trend since the “dash for cash” has been towards smaller deals in TN and term repos. ON repo grew from almost GBP 57 million to a peak of GBP 74 million in Q4 2020 but has since fallen back to GBP 56 million. Growth in the number of TN repos after the “dash for cash” outpaced their value so much that the average deal size, after growing from GBP 40 million to a peak of GBP 49 million in Q2 2020, dropped to almost GBP 24 million.

In the case of reverse repo, the average deal size of ON transactions rose to GBP 37 million by Q3 2018 and then trended down, albeit unevenly, to touch GBP 23 million by the end of 2023. TN reverse repo followed a similar path to finish at GBP 24 million, although it spiked up to GBP 40 million in Q3 2017 and GBP 45 million in Q1 2021, in the aftermath of the Brexit and Covid shocks, respectively.

SMMD vs UK SFTR

Comparing the SMMD repo data with UK SFTR (repo and reverse repo) data suggests a fairly close correlation between SMMD turnover and SFTR turnover on UK-based Trading Venues, where much gilt repo is traded (the role of the OTC market may be hidden by the fact that SMMD data is adjusted for double-counting but SFTR data is not).

The difference between SMMD and total SFTR turnover probably represents non-sterling repo traded in London. This may account for the faster rise in SFTR data.

Figure 9: SMMD vs SFTR

