



EBA REPORT ON LIQUIDITY MEASURES UNDER ARTICLE 509(1) OF THE CRR

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Abbreviations

BPS	Basic Points
CCP	central counterparty
CIU	collective investment undertaking
COREP	Common Reporting
CRR	Capital Requirements Regulation
DR	Delegated Regulation
EBA	European Banking Authority
ECB	European Central Bank
EHQCB	extremely high-quality covered bonds
ESRB	European Systemic Risk Board
EU	European Union
EUR	euro(s)
GBP	pounds sterling
GSII	global systemically important institution
HQCB	high-quality covered bonds
HQLA	high-quality liquid assets
LCR	liquidity coverage ratio
LTRO	long-term refinancing operation
NSFR	net stable funding ratio
O-SII	other systemically important institution
PSE	public sector entity
QE	quantitative easing
SME	small and medium-sized enterprise
TLTRO	Targeted longer-term refinancing operations
USD	United States dollar

Executive summary

The objective of the report is to monitor banks' short-term liquidity risk profiles. This report is provided under Article 509(1) of the Capital Requirements Regulation (CRR). The objective of the report is to monitor and evaluate the liquidity coverage requirements under Commission Delegated Regulation (DR) (EU) 2015/61. The analysis is based on the Common Reporting (COREP) data of December 2017.

On average, the LCR is well above the minimum requirements (both the minimum requirement of 80% in the interim phase and the minimum requirement of 100% under full implementation) and is increasing, driven by HQLA investment. The weighted average liquidity coverage ratio (LCR) across banks is 145% and it has increased since September 2016¹. The upward trend is driven by an increase in high-quality liquid assets (HQLAs), while net liquidity outflows have remained relatively stable. In December 2017, there were only four banks with LCR levels below 100%, as they monetised their liquidity buffers during times of stress². The LCR level of global systemically important institutions (GSIs) (140%) and other systemically important institutions (O-SIIs) (147%) is lower than that of other banks (165%). The breakdown by country shows that the average LCR level for the majority of the countries is within the 100-200% range, although there are some differences in terms of the dispersion of banks' LCR levels within countries. Banks are also well above the 100% requirement, regardless of their business models, but again the dispersion of banks' LCR levels within business models differs.

Level 1 assets (excluding covered bonds) form a large part of the liquidity buffer. The average share of liquid assets (after haircuts and before the cap) relative to total assets is approximately 16% of total assets. On average, liquid assets, before the application of the cap on liquid assets, consist mainly of Level 1 assets (91%, excluding extremely high-quality covered bonds), which are composed of cash and withdrawable central bank reserves (48%) and securities (43%). Level 1 assets are the main component of the liquidity buffer across countries, although their share of total assets does vary. The contribution of Level 2 assets to banks' liquidity buffer is relatively small.

Outflows are 16% of total assets. Non-operational deposits continue to be the Outflows from non-operational deposits, e.g. short-term unsecured funding from financial customers, continue to be, on average, the major component of total cash outflows. They make

¹ First reference date for which COREP data, based on the LCR DR, is available.

² The possibility of monetising liquid assets during times of stress (resulting in an LCR below 100%) is foreseen under Article 412(1) of the CRR (and Article 4(3) of the LCR DR) as maintaining the LCR at 100%, which, under such circumstances, could produce undue negative effects on the credit institution and other market participants.

main component of banks' outflows. Inflows are more than 5% of total assets.

up approximately 6% of total assets and 38% of total cash outflows. The share of retail deposits relative to total assets is nearly the same in all bank groups (2%).

The composition of cash inflows presents differences across the two groups of banks³ and across countries.

Banks finance their assets in different currencies. LCR levels considering items denominated exclusively in US dollars are, in general, lower.

Several banks tend to finance some of their assets in a different currency from the one in which they are denominated. There is an inherent currency risk in the LCR, and the regulation requires banks to ensure that the currency denomination of their liquid assets is consistent with the distribution by currency of their net liquidity outflows. Among the significant (foreign) currencies, the United States dollar (USD) is the one that shows lower LCR levels. As the ability of banks to swap currencies and to raise funds in foreign currency markets may be constrained during times of stress, significant currency mismatches are a major concern.

In applying Article 8(6) of the LCR DR, competent authorities may consider making greater use of their discretion to restrict currency mismatches by setting limits on an excess of net outflows denominated in a significant reporting currency.

³ All results are analysed by dividing banks into two groups: 'GSIIs and O-SIIs' and 'Others'.

1. Introduction

As part of the CRR mandate, the EBA monitors and evaluates the liquidity coverage requirements on an annual basis (pursuant to Article 415(1)). In this regard, the EBA takes into account the potential impact of these requirements on the business and risk profiles of banks, on the stability of financial markets, on the economy and on the stability of the supply of bank lending (Article 509(1) of Regulation (EU) No 575/2013). After consulting the relevant stakeholders, the EBA is mandated to communicate a report on its findings to the European Commission. The European Parliament and the Council shall be given the opportunity to state their views on the EBA report. The current report is the fifth publication of the EBA report under Article 509(1) and the third publication since the introduction of the minimum liquidity coverage standards in 2015⁴.

This report presents a detailed analysis of the short-term resilience of banks' liquidity risk profiles and the potential liquidity coverage and outflow risks that banks face in a specific significant foreign currency⁵. For the first time, the analysis is based on COREP data, as of December 2017, taken from a sample of 126 banks (158 banks including subsidiaries) within the 28 EU Member States and 1 EEA/EFTA state, which reports COREP data to the EBA on a regular basis⁶.

The sample covers both GSIs and O-SIs, as well as other banks, and provides breakdowns by different business models across the EU. In terms of total assets, the sample covers approximately EUR 29 trillion (EUR 30 trillion including subsidiaries) or, on average, 80% of the EU banking sector⁷. Country data should be interpreted with caution because of differences in the representativeness of the sample across countries, which affect data comparability.

The report covers the liquid assets held by the banks, short-term liquidity outflows based on outstanding liability balances and off-balance-sheet commitments, short-term liquidity inflows stemming from outstanding balances of contractual receivables, and the calculation of the regulatory LCR. In addition, the analysis of currency mismatch included in the report investigates whether the liquidity coverage of banks in a foreign (and significant) currency is different from their overall liquidity coverage.

Aggregated figures and charts in this report are based on COREP data reported at the highest level of consolidation, with the exception of the analyses concerning banks' business models and country

⁴ The EBA's previous reports: Report on impact assessment for liquidity measures under Article 509(1) of the CRR (December 2013); Second report on impact assessment for liquidity measures under Article 509(1) of the CRR (December 2014); Report on liquidity measures under Article 509(1) and review of the phase-in of the liquidity coverage requirement under Article 461 of the CRR (December 2016); and Report on liquidity measures under Article 509(1) (December 2017).

⁵ See definition of significant and foreign currency in section 4.

⁶ Banks included in the sample not only reported LCR COREP data but also Financial Reporting (FINREP) data (amount of total assets). If a bank has not reported the amount of total assets in FINREP, it has not been included in the analysis.

⁷ The information on total assets of the EU has been obtained from the Statistical Data Warehouse of the European Central Bank (ECB).

breakdowns⁸, which also include subsidiaries of an EU parent institution⁹. Unless stated otherwise, average figures are weighted.

⁸ To ensure confidentiality, figures by country breakdown are shown only if there are at least three banks that reported data in each specific country.

⁹ The number of banks by country breakdown included in the different analyses is provided in the Annex.

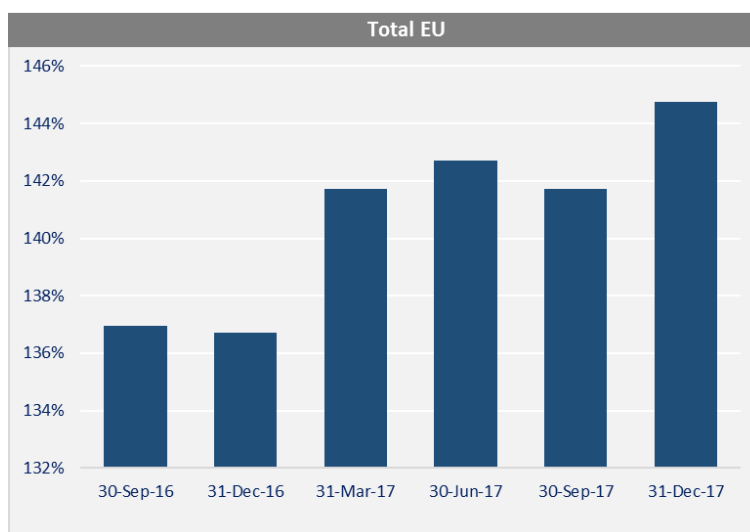
2. Analysis of the LCR and its components

Trends in the LCR

Liquidity coverage requirements are intended to ensure banks' short-term resilience to potential liquidity disruptions. Banks should hold liquid assets to cover net liquidity outflows over a stress period of 30 calendar days and should maintain an LCR of at least 100%¹⁰. The LCR minimum requirement has been set at 60% since 1 October 2015 and reached 100% in January 2018.

In December 2017, the weighted average LCR for the sample of banks used for this report was 145% (Figure 1). An analysis of the evolution¹¹ shows that banks have made significant efforts to increase the level of the LCR and to reduce the shortfall in liquid assets. The LCR, on average, has been above the 100% level since September 2016. At the same time, the liquidity shortfall has decreased from over EUR 26.7 billion in September 2016 to EUR 20.8 billion. The number of banks with a shortfall decreased from seven in September 2016 to four in December 2017.

Figure 1: LCR evolution (weighted average)



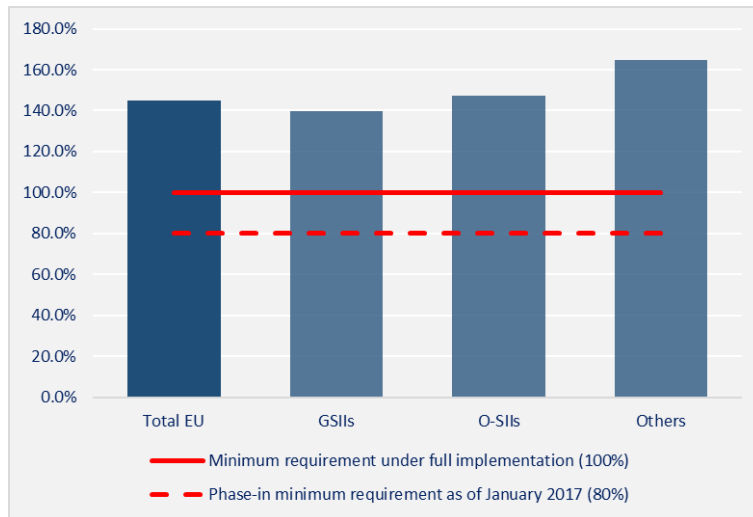
On average, GSIIIs and O-SIIIs have lower LCR (140% and 147%, respectively) than other banks (165%). In the sample, only four banks out of 126 (excluding subsidiaries) did not meet the 100% fully phased-in LCR minimum requirement. Moreover, the LCR dispersion across other banks is

¹⁰ In accordance with Article 412 of the CRR and Article 4(3) of the Commission Delegated Regulation (EU) 2015/61, credit institutions can make use of their liquid assets to cover their net liquidity outflows under stressed circumstances, even if such a use of liquid assets may result in their liquidity coverage ratio falling below 100 % during such periods. However, as further specified in Article 414 of the CRR and Article 4(4) of the Commission Delegated Regulation (EU) 2015/61, where credit institutions do not meet or expect not to meet the requirement, including during times of stress, they shall immediately notify the competent authorities and shall submit, without undue delay, to the competent authorities a plan for the timely restoration of compliance.

¹¹ Time-series analysis is based on a consistent sample of 115 banks (excluding subsidiaries, as results are shown for total EU, GSIIIs and O-SIIIs) when the analysis shows volumes or comparisons with previous references dates. In all other analysis, the sample is the one used in the cross-sectional analyses, which include all banks that submitted data on the latest reporting date.

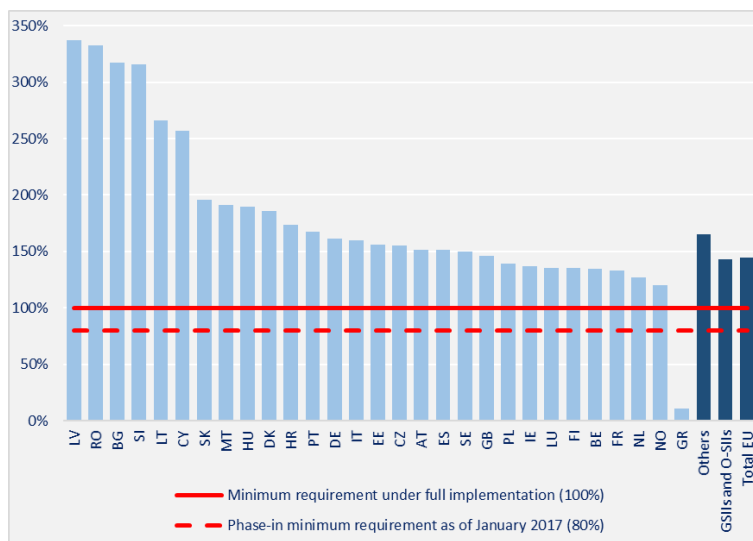
greater than across GSIs and O-SIs. This is a result of the heterogeneity of banks, classified as ‘Other’ in terms of size and business models.

Figure 2: Weighted average LCR across bank groups (GSIs, O-SIs and Others)



Differences are also found when analysing the weighted average LCR levels across countries. The majority of countries have LCR levels between 100 and 200%. Nevertheless, some countries present very high average LCR levels, such as Latvia, Romania, Bulgaria and Slovenia, with ratios above 300%, and Lithuania and Cyprus, with ratios above 200%. Only one country, Greece, presents LCR average levels below 100%¹².

Figure 3: LCR across countries



¹² Due to the sovereign debt crisis, Greek credit institutions monetised their LCR liquidity buffer, resulting in LCR levels below the 100% minimum requirement. The possibility of monetising liquid assets during times of stress (resulting in an LCR below 100%) is foreseen under Article 412(1) of the CRR (and Article 4(3) of the LCR DR) as maintaining the LCR at 100% under such circumstances could produce undue negative effects on the credit institution and other market participants. In accordance with Article 414 of the CRR (and Article 4(4) of the LCR DR), Greek credit institutions were required to submit plans for restoring compliance with the LCR requirement.

Figure 4: LCR dispersion across countries

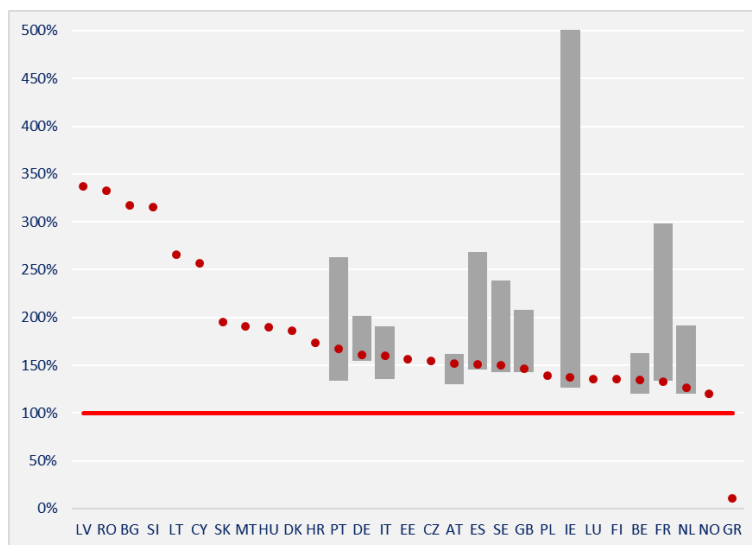
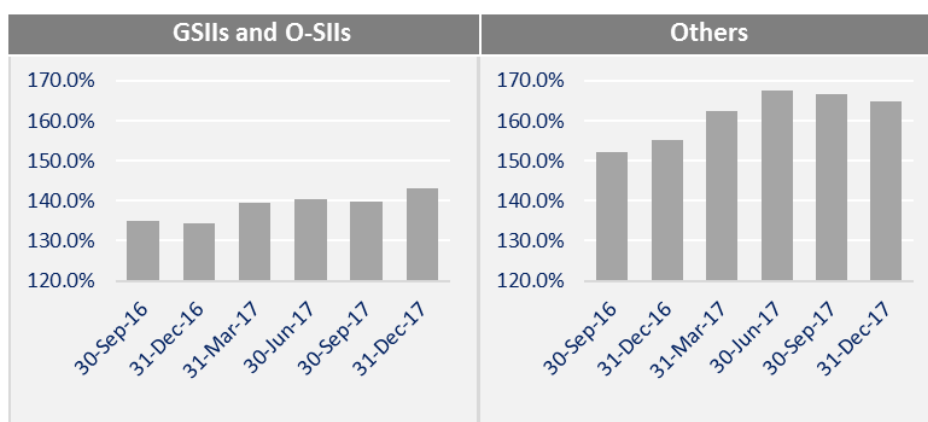


Figure 4 shows the dispersion of the LCR across countries. The top line of the box shows the 75th percentile, whereas the bottom line of the box is showing the 25th percentile¹³. The red point represents the weighted average LCR¹⁴. The figure shows that there is dispersion in the banks’ LCR levels within the same country. Ireland is the country where there is more dispersion, followed by France, Portugal and Spain. The dispersion in Ireland is caused by one bank that reported high LCR levels. In many countries, the weighted average point tends to be closer to the 25th percentile, meaning that larger banks within that country have lower LCR ratios.

During 2017, the increase in the LCR was lower for GSIs and O-SIs banks (+860bps) than for other banks (+963bps). Despite a positive evolution during the first three quarters of 2017, in the last quarter the other banks registered a negative evolution (-188bps). Conversely, GSIs and O-SIs registered a material increase in the last quarter of 2017 (+340bps).

Figure 5: Evolution of the LCR by bank group (weighted average)



¹³ A percentile is the value of a variable below which a certain percentage of observations fall. For example, the 25th percentile is the value below which 25% of the observations are found.

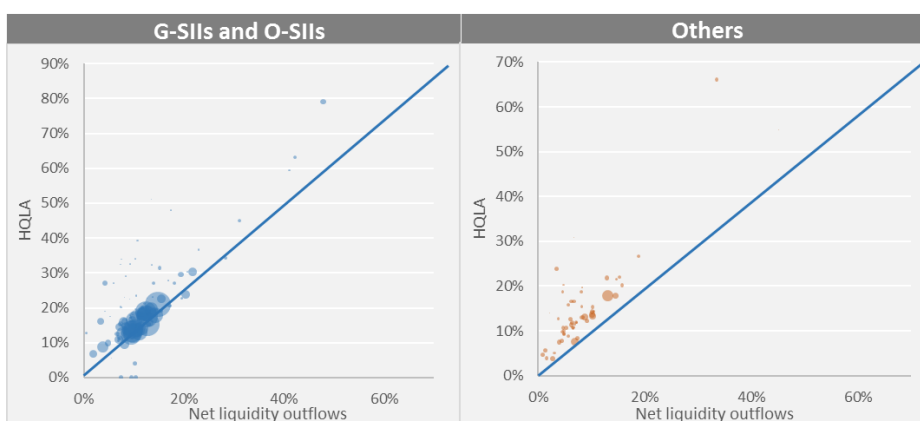
¹⁴ For confidentiality reasons, for countries with between three and four observations, only the weighted average LCR is shown.

Figure 6 shows the interaction between HQLA and net liquidity outflows at individual bank level. The parameters are expressed as a share of total assets and the size of the bubble indicates banks' weights in terms of total assets. The bigger the bubble, the larger the bank and the greater the weight it takes in the weighted average values. The 45° line indicates equality between HQLA and net liquidity outflows, i.e. when the LCR is 100%.

Most banks in the sample are located above the line, suggesting that they have LCR levels adequately above the minimum standards.

In terms of their position with respect to the 45° line, GSIs and O-SIs present a higher dispersion. Regarding the dispersion of HQLA as a percentage of total assets, the interquartile range for GSIs/O-SIs is 14-23%, whereas it is 10-19% for Others.

Figure 6: HQLA and net liquidity outflows (as a share of total assets) by group of banks



The efforts that banks have made to increase their LCR levels are also reflected in the evolution of the liquidity shortfall (Figure 7)¹⁵, which, based on the fully loaded LCR minimum requirement (100%), has decreased from over EUR 26.7 billion in September 2016 to EUR 20.8 billion)¹⁶. Consequently, the number of banks with an LCR below 100% at the latest reporting date also reduced from seven in September 2016 to four in December 2017¹⁷.

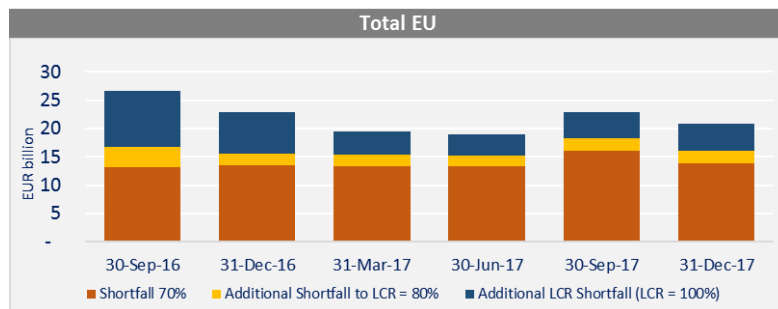
Since September 2016, banks already compliant with the LCR minimum requirement have further improved their surplus, indicating additional efforts in strengthening their liquidity profiles.

¹⁵ The shortfall calculated in this report is the sum of differences between the net liquidity outflows and the stock of HQLA for all banks with an LCR below the minimum requirement. The calculation of shortfall does not account for the offsetting effect of the aggregate surplus, arising from those banks that already meet or exceed the minimum requirement. Therefore, no reallocation of liquidity between individual banks or within the banking system is assumed.

¹⁶ Note that the time-series analysis showing volumes is based on a consistent sample of banks that submitted data for all reporting dates.

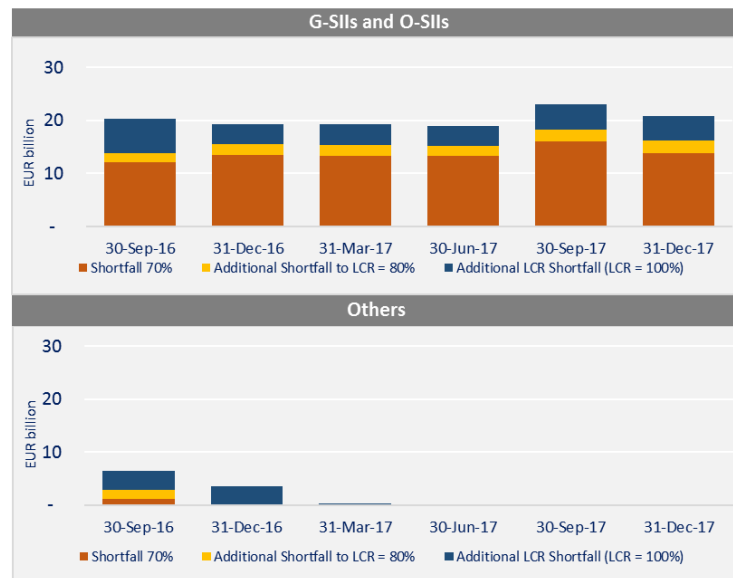
¹⁷ Last year's report (EBA Report on liquidity measures under Article 209(1) of the CRR 2016) presented a lower shortfall level in December 2016. The different results are a consequence of the different sample used in both reports, as the current report is based on the COREP sample (see further details about the sample in section 1 and in the Annex).

Figure 7: Evolution of the liquidity shortfall (EUR billion) — balanced sample



The four banks with a shortfall in December 2017 are GSIs/O-SIs. The number of non-GSIs/non-O-SIs banks with shortfall reduced from five in September 2016 to zero in December 2017.

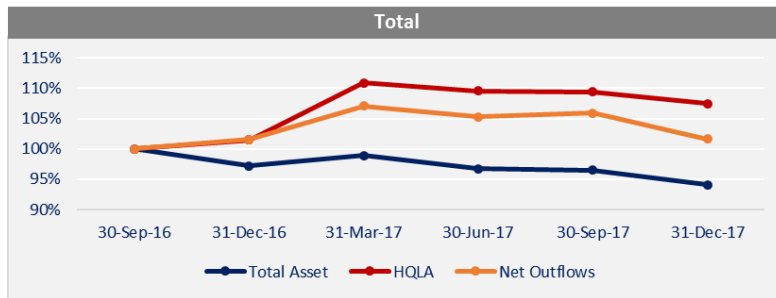
Figure 8: Evolution of the liquidity shortfall by bank group (EUR billion) — balanced sample



The increase in the LCR can be attributed mainly to an increase in liquid assets (HQLA), in particular during the first quarter of 2017, while the net liquidity outflows (denominator of the LCR ratio) have remained relatively stable (Figure 8). Banks have thus continued to improve their overall liquidity profile on the asset side. In line with previous EBA LCR reports, they invested in liquid assets and, more precisely, replaced non-eligible assets with eligible liquid assets¹⁸.

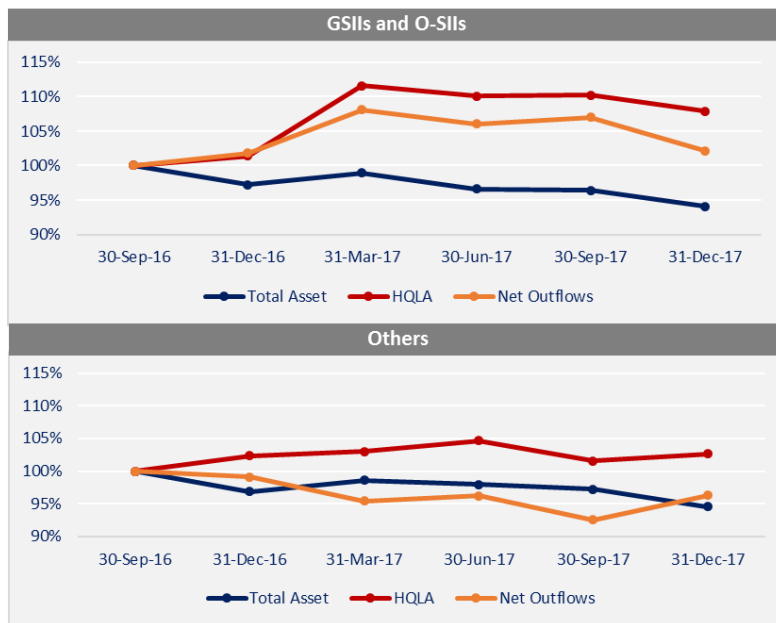
¹⁸ The EBA reports on impact assessment for liquidity measures under Article 509(1) of the CRR (2013, 2014 and 2017).

Figure 9: Evolution of the numerator and denominator of the LCR, September 2016 = 100% — balanced sample



Although the net liquidity outflows and the level of total assets showed a slight decrease for all categories of banks, the increase in HQLA was higher for GSIIIs and O-SIIIs.

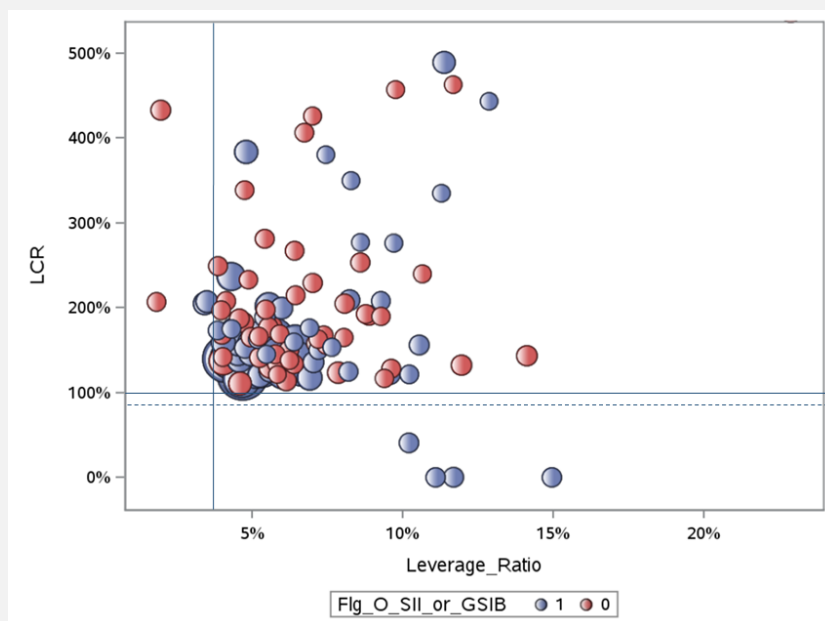
Figure 10: Evolution of the numerator and denominator of the LCR by bank group, September 2016 = 100% — balanced sample



Interaction between the LCR and the leverage ratio

The analysis of the data does not infer a correlation between the LCR and the leverage ratio. In fact, while some banks report high leverage ratios (well above the 3% requirement) and, at the same time, an LCR well below 100% (minimum requirement), there are also banks reporting a leverage ratio below 3% and, at the same time, an LCR well above the 100% (minimum requirement).

Figure 11 : Interaction between the LCR and other regulatory ratios



Note: solid lines indicate the minimum requirements for the regulatory ratios, including the LCR under full implementation (100%) and the proposed minimum requirement for the leverage ratio (3%). The dashed line indicates the LCR phase-in requirement as of January 2017 (80%).

Composition of liquid assets

Regulation differentiates between assets of extremely high liquidity and credit quality (or Level 1 assets), and assets of high liquidity and credit quality (or Level 2 assets). Level 1 assets may comprise, inter alia, cash and central bank reserves, as well as securities in the form of assets representing claims on or guaranteed by central or regional governments, local authorities or PSEs. EU regulation, unlike the Basel III framework, also considers promotional banks' assets in the Level 1 liquidity buffer. In addition, it provides for greater recognition of extremely high-quality covered bonds (EHQCB), which may be included in Level 1 assets (unlike the Basel III framework).

Level 2 assets are divided into Level 2A and Level 2B assets. Level 2A assets are considered more liquid than Level 2B assets and, therefore, are subject to lower haircuts. The EU framework allows Level 2 assets to include exposures in the form of high-quality covered bonds (HQCB), certain non-RMBS securitisations, as well as units or shares in collective investment undertakings (CIUs).

The largest part of liquidity buffers consists of Level 1 assets in the form of cash and central bank reserves and securities (also EHQCB). GSIs and O-SIs, on average, tend to hold higher shares of central bank reserves and lower levels of EHQCB in comparison with other banks. Overall, the liquidity buffer (before the application of the cap on liquid assets) is approximately 16.0% of total assets, 16.2% for GSIs and O-SIs (Figure 12).

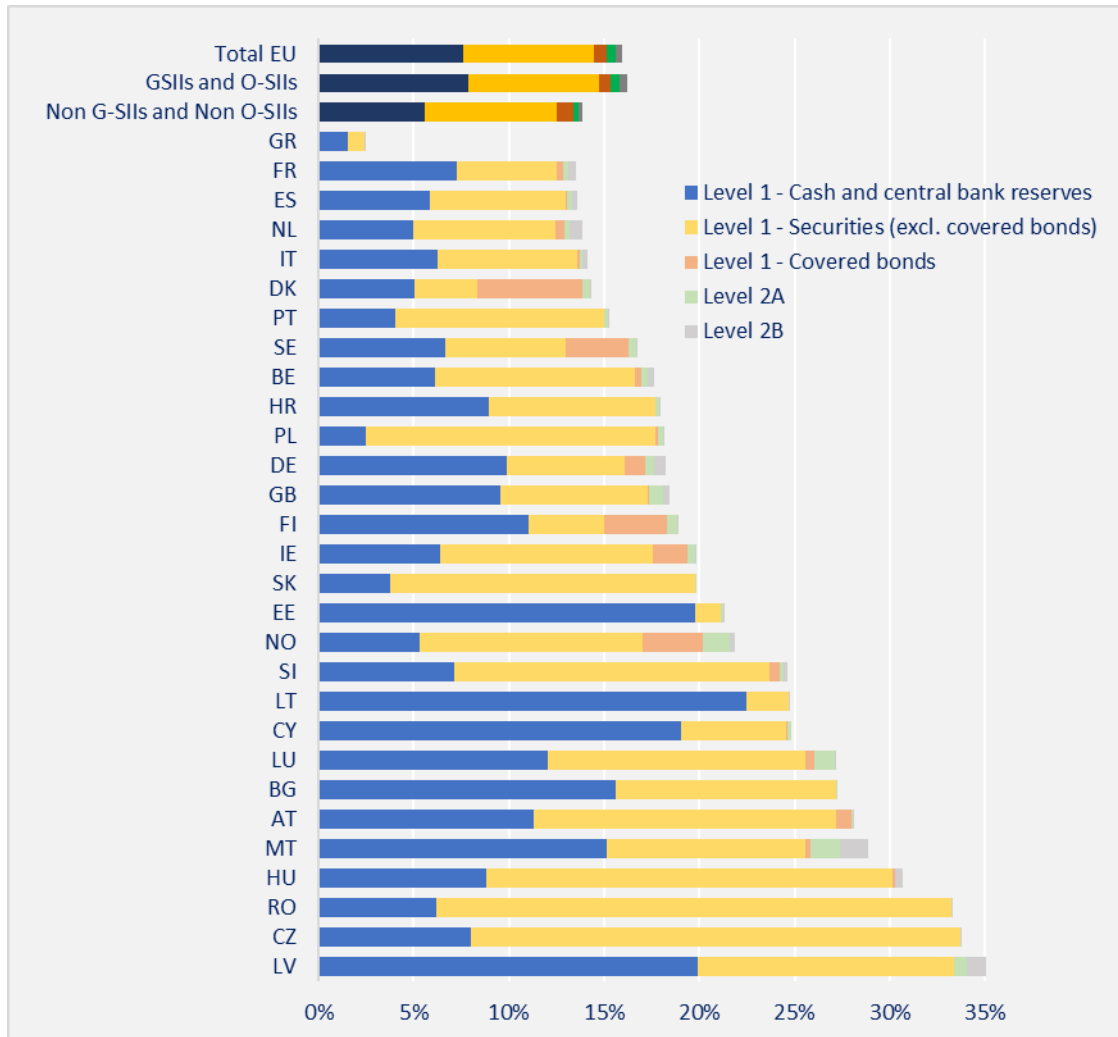
Article 17 of the LCR DR sets the minimum requirements for the composition of the liquidity buffer by asset level. A minimum of 30% of the liquidity buffer is to be composed of Level 1 assets, excluding EHQCB. Aggregate Level 2 assets should not account for more than 40% and Level 2B assets should not account for more than 15% of a bank's total stock of HQLA.

On average, liquid assets before the cap on liquid assets consist mainly of Level 1 assets (more than 95% or more than 91%, excluding EHQCB, of the total liquidity buffer).

Within Level 1 assets, the share of cash and central bank reserves (48%) is slightly higher than securities (43%) but only for GSIs and O-SIs. For other banks, securities (50%) are a higher proportion in comparison with cash and central bank reserves (40%), and EHQCB also represent a higher proportion of Level 1 assets (7%, compared with 4% for GSIs and O-SIs). Eligible assets in Level 2 assets represent only 5% (of the total liquidity buffer).

The composition of the liquid assets depends largely on the business models of the institution and also reflects differences across EU countries. While liquidity buffers comprise mainly Level 1 assets in all countries, banks in half of the countries rely largely on Level 1 securities (excluding covered bonds); the other half rely on cash and central bank reserves. On average, Lithuania, and Estonia are the countries with a larger share of cash and central bank reserves over their total liquidity buffer (around 92%), whereas Poland, Romania and Slovakia have the biggest share of Level 1 securities (around 82%). Covered bonds contribute significantly to the liquidity buffer only in Denmark (39% over the total liquidity buffer).

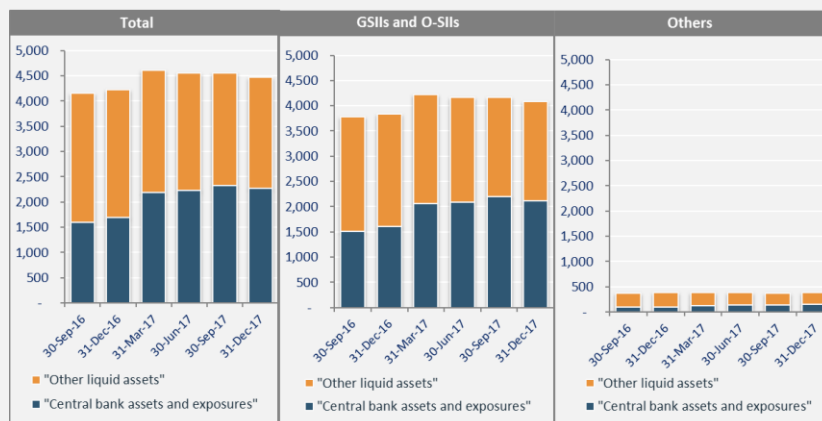
Figure 12: Composition of liquid assets (post-weight and before the cap) relative to total assets



Interactions between non-standard monetary policy measures and the LCR liquidity buffer

Monetary policies have direct implications on banks' liquid asset holdings, since exposures to central banks (in the form of withdrawable central bank reserves or other assets representing claims on or guaranteed by central banks) are one of the major components of banks' liquidity buffers. In the euro area, the ECB's TLTROs and asset purchase programme, as well as the quantitative easing (QE) or asset purchase programmes initiated by other central banks since 2015, are indeed reflected in the evolution of the liquidity buffer, with central bank assets and exposures continuing to increase, particularly for GSIIIs and O-SIIIs (Figure 13).

Figure 13: Evolution of central bank assets and exposures over time (EUR billion) — balanced sample



The potential impact of these unconventional central bank policies raise some questions in the way the level of liquid assets and the composition of banks' portfolios may be affected by changes in central bank policies in the future.

An end to full allotment tender procedures in central bank credit operations and the winding down or phasing out of asset purchase programmes would reduce the supply of central bank funding or central bank reserves, respectively. This would require banks to modify their funding strategy and, where necessary, the composition of their HQLA. Indeed, in the euro area, the redemption of the TLTROs area and the announcement by the ECB¹⁹ of a gradual reduction in the net purchases under its asset purchase programme until the end of 2018, could result in a decrease in banks' liquidity buffers if banks do not adapt their funding strategy to the new funding scenario. Nevertheless, the 2018 EBA report on funding plans, which provides more details about banks' planned funding structure, shows a reduction in public sector sources of funding in favour of further reliance on market-based funding for the years 2018 to 2020. In addition, the low interest rate environment in recent years may also have increased the value of liquid assets held by banks. In general, it is an expected (and intended) consequence of the shift in central banks' monetary policies that interest rates will rise, affecting the liquidity buffer via the valuation of liquid assets.

Composition of outflows and inflows

Net liquidity outflows are defined as the difference between liquidity outflows and liquidity inflows and are required to be positive²⁰. Liquidity outflows are calculated by multiplying the outstanding balances of various categories or types of liabilities and off-balance-sheet commitments by the rates at which they are expected to run off or be drawn down²¹. Liquidity inflows are assessed over a period of 30 calendar days. They comprise only contractual inflows from exposures that are not past due and for which banks have no reason to expect non-performance within 30 calendar days. To prevent banks from relying solely on anticipated liquidity inflows to meet their LCR, and to ensure a minimum level of liquid assets holdings, the amount of inflows that can offset outflows is

¹⁹ <http://www.ecb.europa.eu/press/pr/date/2018/html/ecb.mp180614.en.html>

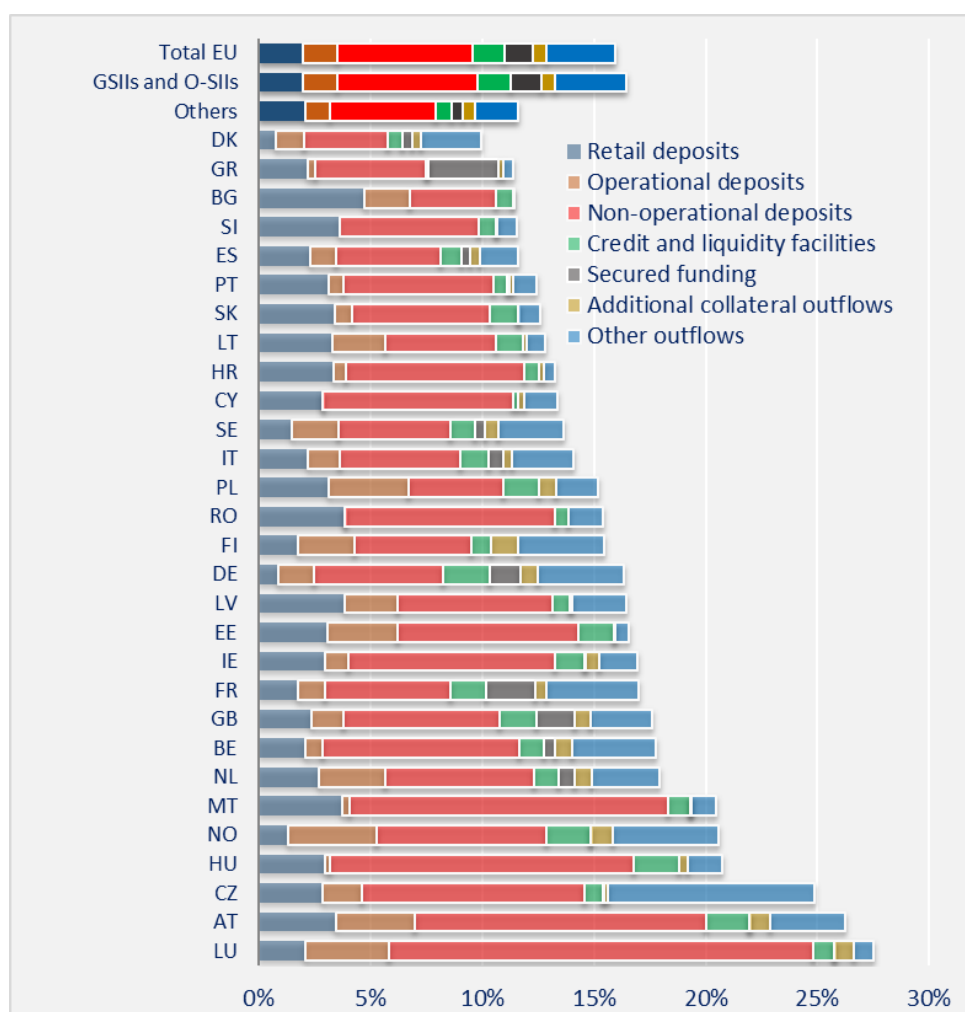
²⁰ Article 20 of the LCR DR.

²¹ Article 22(1) of the LCR DR.

generally capped at 75% of total liquidity outflows. However, unlike the Basel LCR standard, the EU LCR regulation provides certain exemptions to this cap, either full or partial, although these are subject to the prior approval of competent authorities²². This includes a potential exemption for intra-group and intra-institutional protection scheme flows and banks specialised in pass-through mortgage lending or in leasing and factoring. In addition, banks specialised in financing the acquisition of motor vehicles or in consumer credit loans may apply a higher cap of 90%.

On average, cash outflows (post-weight) represent approximately 16.0% of total assets. GSIs and O-SIs present a higher share (16.5%) than other banks (11.6%). The share of outflows from retail deposits in total assets is nearly the same in both groups of banks (around 2% of total assets). However, relative to total cash outflows, other banks present higher retail deposits (17.9% of total outflows compared with 11.9% of total cash outflows for GSIs and O-SIs). As expected, for both groups of banks, the main component of the cash outflows is non-operational deposits (e.g. short-term deposits from financial customers), which tend to have higher run-off rates and account for 6% of total assets. The same composition of outflows is shown when analysing results by country.

Figure 14: Composition of cash outflows (post-weight) relative to total assets



²² Article 33 of the LCR DR.

Furthermore, banks should take into account an additional outflow corresponding to the collateral needs that would result from the impact of an adverse market scenario on credit banks' derivative transactions and other contracts, if material²³. The same composition of outflows is shown when analysing results by country.

Figure 14 shows the share of additional collateral outflows in total assets (around 0.6% of the total assets for both groups of banks and 3.6%/4.9% of total cash outflows for GSIs and O-SIs/Others). When measured relative to liquidity buffers, the values of the indicator (additional collateral outflows over HQLA) vary from 0% to 8%. It is, however, unclear whether these variations are due to differences in the portfolios of the banks or to differences in the methodologies applied to calculate these additional outflows.

Banks should limit the recognition of liquidity inflows to 75% of total liquidity outflows²⁴. In this sample, nearly all inflows are limited to a 75% cap. Only less than 0.01% of the inflows, corresponding to four banks, is limited to 90% of total liquidity outflows or is fully exempt from the cap.

In addition, it is worth mentioning that the amount of outflows represented in Figure 14 is already net of inflows if they meet the conditions to be considered interdependent inflows and the approval of the competent authority is granted. This is because, in this specific case, the LCR DR allows to calculate outflows already net of these inflows²⁵. Bank by bank analysis shows that there are currently six banks with inflows that meet the conditions to be considered interdependent inflows and that reported the relevant amounts.²⁶

Assessment of secured funding transactions with central banks

Central bank-related funding transactions have to be backed by eligible collateral, so they are considered secured funding transactions that may affect the LCR if the remaining maturity is less than 30 calendar days. However, unlike the case of interbank secured funding transactions, no cash outflows will be assigned to transactions where the lender is a central bank. The underlying rationale is the assumption that, in times of stress, the central bank will roll over any secured funding transactions, as long as the relevant collateral is central bank eligible, disregarding the LCR liquidity quality of these assets. Still, these transactions affect the calculation of the unwinding of secured funding and lending transactions, which is relevant for the calculation of the cap on liquid assets (Annex I of the LCR DR)²⁷.

²³ Article 423(3) of the CRR and Article 30(3) of the LCR DR.

²⁴ Article 33 of the LCR DR (with the approval of the competent authority, specialised credit banks may be subject to a cap of 90% on inflows, and these banks may be fully exempt from the cap on inflows if their main activity is leasing and factoring business).

²⁵ Article 26 of the LCR DR.

²⁶ Note that the cell in COREP that contains the information about the amount of interdependent inflows, is a memo item. This number represents the number of banks with interdependent inflows that provided this information.

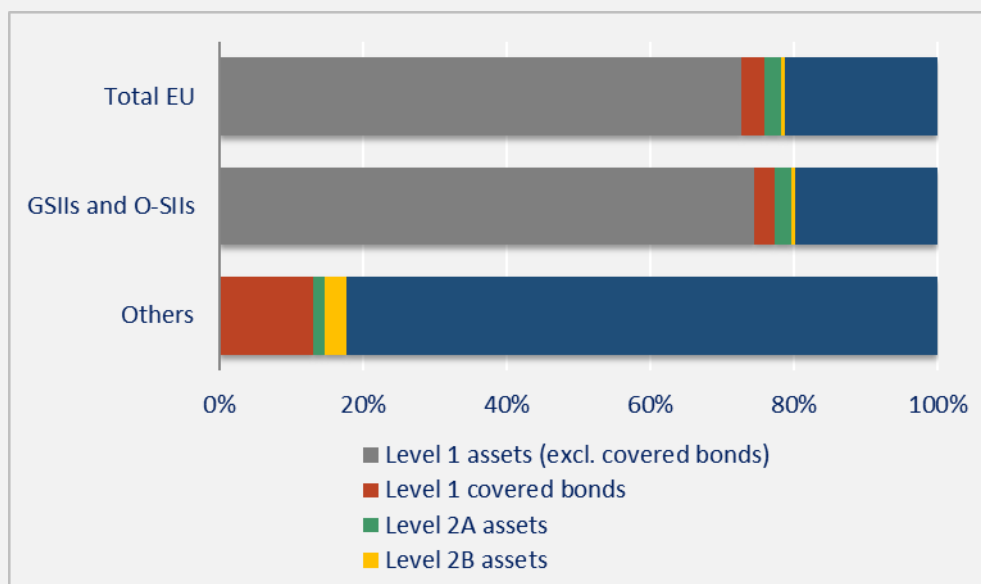
²⁷ The cap on liquid assets (Annex I to the LCR DR) may be relevant if the bank is conducting a significant amount of short-term central bank operations, if the bank is providing less liquid collateral and if the bank has reinvested the cash received into liquid assets.

At the December 2017 reporting date, there were 100 banks that reported secured funding transactions with any type of counterparty, 59 of which reported secured funding transactions with a central bank, namely 42 GSIs and O-SIs and 17 classified as other banks.

Given the preferential treatment of secured funding transactions with central banks in the determination of the net cash outflows, some banks may benefit from the difference between the list of central bank eligible assets for collateral and liquid assets in terms of liquidity coverage requirements. Banks that benefit from this treatment are those that use non-liquid assets as collateral to draw central bank funding. While an outflow rate of 0% is applied to those transactions with central banks, an outflow rate of 100% of the amount due is calculated in the case of transactions with other counterparties (point (g) of Article 28(3) of the LCR DR). However, transactions backed by Level 1 assets (excluding covered bonds) receive an outflow rate of 0%, irrespective of the transaction's counterparty.

In line with previous reports, the composition of collateral posted for secured funding transactions with central banks present material differences across banks. For GSIs and O-SIs, a large part of the collateral posted for these transactions is Level 1 assets, excluding EHQCB (74% of the total). The Level 1 covered bonds and the non-liquid collateral represent only 3% and 20%, respectively. On the contrary, for other banks a large part of the collateral posted is non-liquid collateral (82% of the total) and Level 1 covered bonds (13%).

Figure 15: Composition of collateral posted for secured funding transactions with central banks



Consequently, these banks would report higher cash outflows if they were to conduct secured funding transactions via interbank repo markets. However, as the total amount of repo transactions relative to total assets is small, the overall impact of such a change would still be limited.

Cash inflows relative to total assets for GSIs and O-SIs are 5.2% of total assets. This proportion is higher than it is for other banks (3.3%). (Figure 16)

The results by country show heterogeneity in the composition of inflows, with 14 countries showing a higher share of financial customer cash inflows and 11 countries showing a higher share of other inflows. Malta shows the highest share of financial customer inflows (90.5% of total inflows), whereas Denmark, Belgium and Latvia are the countries with the highest share of other inflows (over 50%).

Figure 16: Composition of cash inflows (post-weight and before the cap) relative to total assets

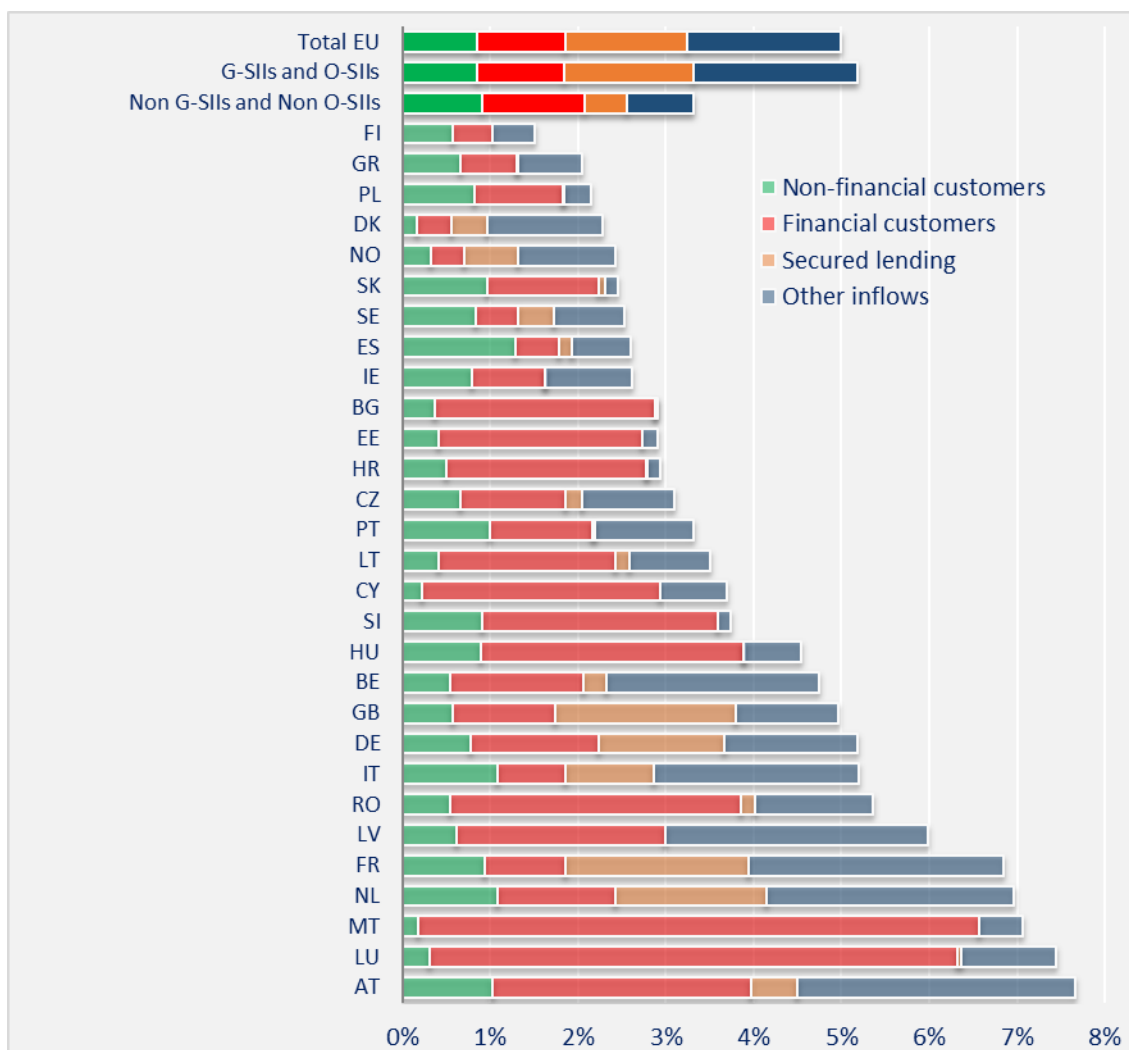


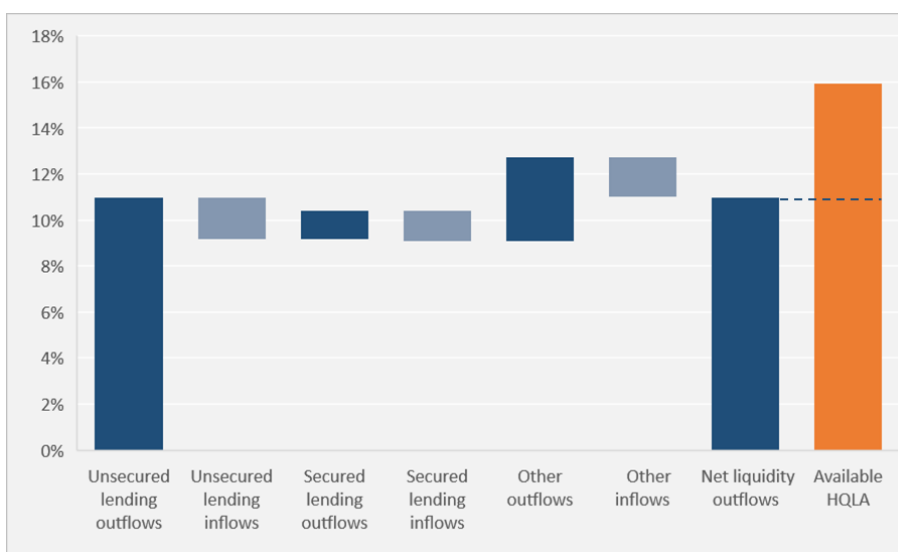
Figure 17 summarises the parameters of the LCR. It first presents offsetting between outflows (indicated in dark blue) and inflows (indicated in light blue) and then illustrates the extent to which the liquidity buffer covers or exceeds the level of net liquidity outflows (portion above the dotted line).

The largest element that reduces the LCR is outflows stemming from unsecured lending. This is in line with expectations for two reasons: unsecured funding, especially in the form of non-operational deposits, is a large part of banks' outflows; and the applicable outflow rates for these financial products are high.

In particular, outflows stemming from unsecured lending amount to over 11% of total assets. Within this category, non-operational deposits (which have high run-off rates)²⁸ are the most important category (6% of total assets). Operational and retail deposits (which have lower run-off rates) account for only 3.49% of total assets.

Only about two percentage points of unsecured lending as a share of total assets are offset by inflows in the same category. Proportionally, the offsetting in this category is much lower than in the secured lending category. This could be a consequence of the different proportions of secured/unsecured lending and funding but also of the different haircuts applicable to the different sources of inflows, as they are in general higher for unsecured lending.

Figure 17: Dynamics of the liquidity buffer, outflows and inflows (as a share of total assets)



The low share of outflows from secured funding relative to total assets (1.3%) is driven by two aspects:

- Secured funding transactions that are conducted with the central banks receive a 0% outflow rate (irrespective of the liquidity quality of the underlying collateral), hence the column in Figure 17 for outflows from secured lending represents only secured transactions in the interbank market.
- In addition, on average, most secured funding transactions that are conducted with other counterparties (and that fall into the LCR time horizon) are secured by liquid assets, with those transactions being subject to lower outflow rates (e.g. 0% outflow rate for secured

²⁸ Article 28 of the LCR DR.

funding transactions backed by Level 1 assets, 15% outflow rate for secured funding transactions backed by Level 2A assets).

Outflows from secured lending transactions are completely offset by inflows of the same category (1.4%). These results may be a partial consequence of the lower haircuts applicable to inflows from secured lending.

The final column represents the liquidity buffer that banks hold to meet their net liquidity outflows and also shows that banks hold an excess liquidity buffer of 5% of their total assets.

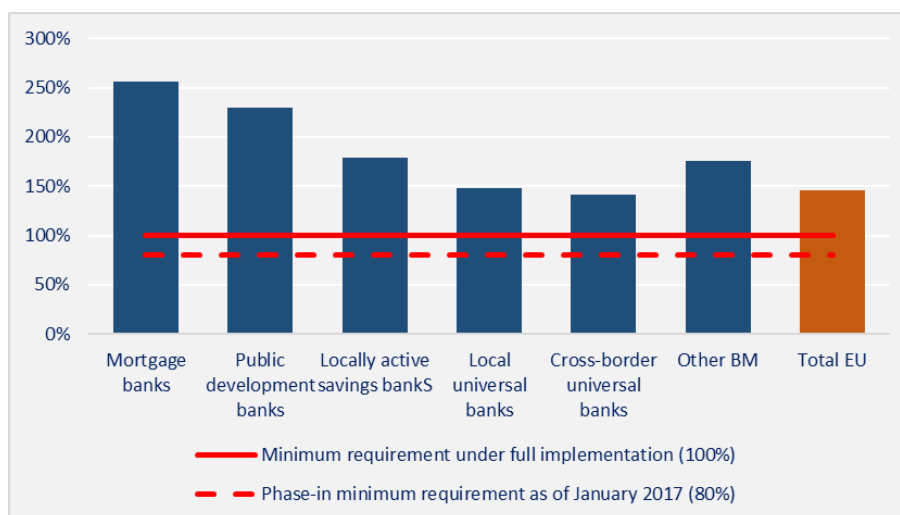
3. Analysis of the LCR by business models

The impact of the LCR may differ depending on banks' specific business models. In fact, data confirm that there is a wide dispersion in the LCR across different business models in the EU banking sector (Figure 18).

A sample of 154 banks was used to analyse the impact of the LCR requirement on a number of business models. All subsidiaries are included in the analysis to take into account the diversity of business models within the overall banking groups. One caveat to the analysis is the representativeness of the sample, since there is a high concentration of banks in two business models²⁹. Results should therefore be interpreted cautiously and should be checked against the sample size of the relevant business model category.

For all business models, the LCR exceeds, on average, the minimum requirement of 100%. Mortgage banks and public development banks present the highest LCRs (an average LCR of 256% and 229%, respectively), well above the EU average. Locally, active savings banks also show a LCR (179%) above the EU average, whereas local universal banks show a similar LCR around the EU average. Cross-border universal banks (composed of large banks) show the lowest LCR³⁰.

Figure 18: LCR across business models



²⁹ These are (i) cross-border universal banks and (ii) local universal banks. In aggregate, these banks make up 77% of the total sample. The sample broken down by business model category is shown in Table 3 in the Annex. The definitions of the business models are presented in Table 4 in the Annex.

³⁰ The category 'Other' banks contains 12 banks. This category includes automotive and consumer credit banks (LCR of 168%), custody banks (167%), merchant banks (169%), building societies (155%), security trading houses (237%) and other specialised banks (199%) .

Figure 19: LCR dispersion across business models

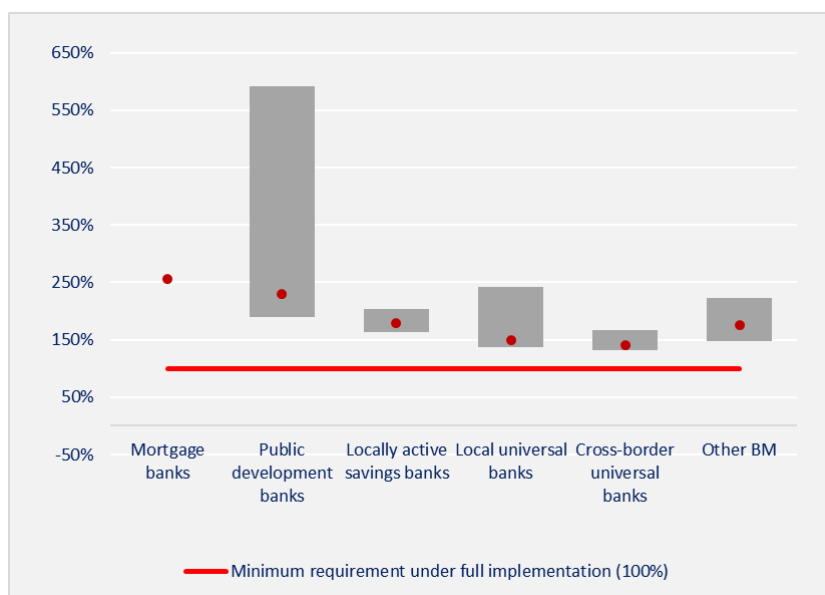


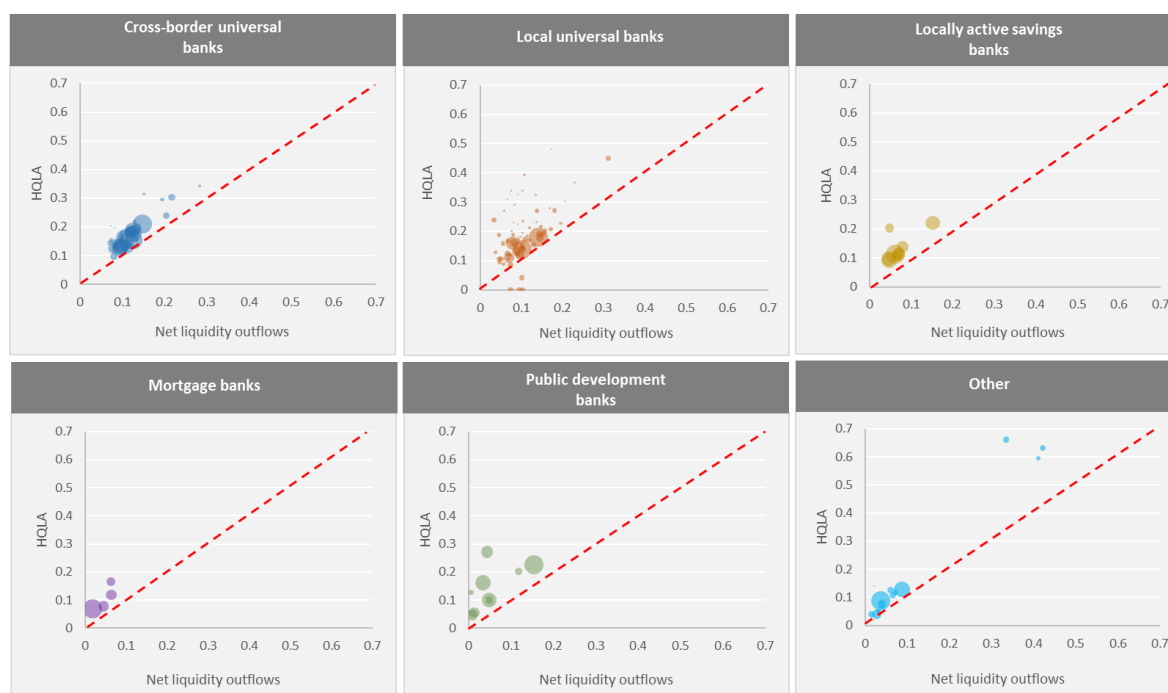
Figure 19 shows the dispersion of the LCR across countries. The top line of the box indicates the 75th percentile, whereas the bottom line of the box indicates the 25th percentile³¹. The red point represents the weighted average LCR³². The figure shows that there is higher dispersion of LCR within public development banks and local universal banks.

A comparison between HQLA and net liquidity outflows as proportions of total assets shows that, throughout the different business models, the level of HQLA ranges from 10% to 20% of total assets. It is highly concentrated for cross-border universal banks (with a weighted average of 16%) and more dispersed for local universal banks and public development banks (Figure 20).

³¹ A percentile is the value of a variable below which a certain percentage of observations fall. For example, the 25th percentile is the value below which 25% of the observations are found.

³² For confidentiality reasons, for countries with less than three observations, only the weighted average LCR is shown.

Figure 20: HQLA and net liquidity outflows (as shares of total assets), per business model³³



Note: 'Other' includes automotive and consumer credit banks, custody banks, merchant banks, building societies, security trading houses and other specialised banks.

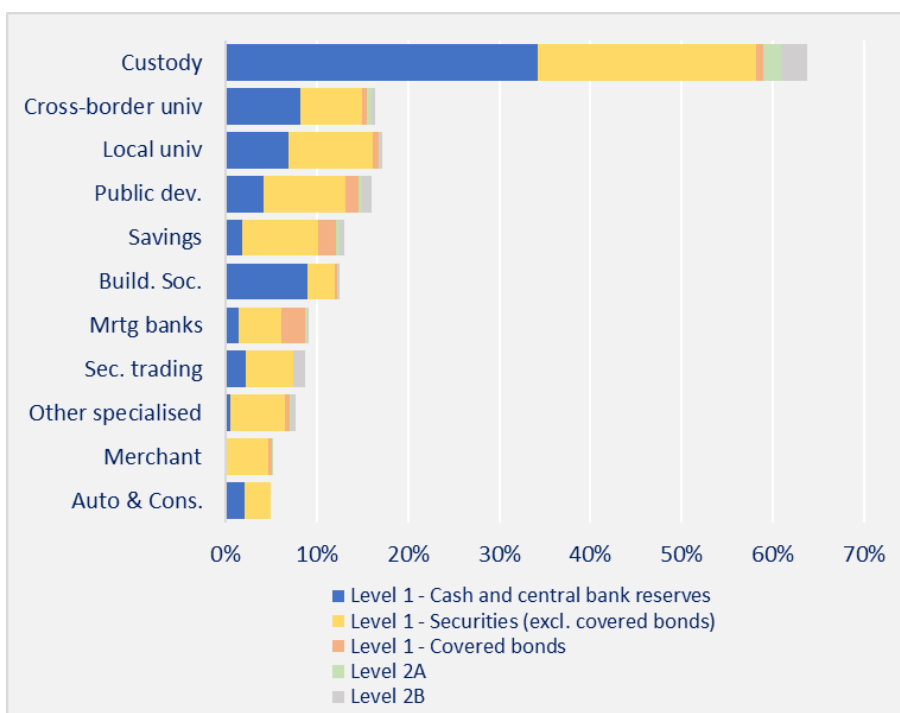
Following recent trends, the gradual increase in the stock of HQLA, together with relatively constant total assets and net liquidity outflows, pushed banks up on the y-axis and over the dashed line representing the target LCR of 100%. Other than some business models with extreme values, such as custodian banks, which show very high HQLA to net liquidity outflows ratios, there is no clear indication that different business models lead to different HQLA to net liquidity outflows ratios, although merchant banks as well as automotive and consumer credit banks show slightly reduced HQLA (around 5%) and net liquidity outflows (3%) ratios (over total assets).

The composition of liquid assets per business model (Figure 21) and the overall high level of the LCR confirm that the liquidity buffer is of high quality (as defined in the CRR). The composition of HQLA shows a high share of Level 1 assets in all business models, and HQLA constitute a similar share (from 5% to 16%) of total assets across most business models (excluding custody banks with a share of 64% percent of total assets).

Custodian banks use liquid assets in the form of central bank reserves and eligible securities to cover a larger share of short-term funding relative to total assets. However, the share of liquid assets relative to total assets for automotive and consumer credit banks is the smallest (5%). This finding was one of the reasons for the introduction of the 90% cap on inflows for banks involved in such business activities. Mortgage banks and savings banks use a higher proportion of Level 1 covered bonds than the remaining business models.

³³ The size of the bubble indicates banks' weights in terms of total assets. The bigger the bubble, the larger the bank and the greater the weight it takes in the weighted average values within the same business model.

Figure 21: Composition of liquid assets (post-weight and before the cap), relative to total assets, per business model



In contrast to the observations regarding the structure of liquid assets, liquidity flows seem more affected by business models, reflecting the inherent differences in the various business strategies (Figure 22 and Figure 23).

Regarding the composition of cash outflows relative to total assets (Figure 22), custodian banks report much higher shares of outflows related to non-operational interbank deposits (36%), as well as operational deposits (13%). For custodian banks, this results in much higher cash outflows (52% relative to total assets) than the EU average due to higher run-off rates for financial non-operational deposits. Conversely, some business models present very low levels of cash outflows relative to total assets, namely merchant banks (4%), mortgage banks (6%), automotive and consumer credit banks (7%). Outflows related to non-operational deposits are also an important element of total outflows for cross-border universal banks (7% of total assets), local universal banks (6%) and savings banks (5%). Outflows related to retail deposits are important to some business models, namely building societies (4%), local universal banks (3%) and savings banks (3%).

The share of cash inflows (post-weight and before the cap) relative to total assets, on average, is less than 10% across business models, except for custodian banks (14%) and security trading houses (11%). For custodian banks, the higher share is caused by inflows from financial customers (11% relative to total assets, much higher than the remaining business models). For secure trading, the higher share is due to secure lending (8%). This can be attributed to specific characteristics of their business models. Some business models present a level of cash inflows relative to total assets lower than 3%, namely building societies (0.5%), merchant banks (1.4%), mortgage banks (2.3%) and local universal banks (2.7%) (Figure 23).

Figure 22: Composition of cash outflows (post-weight) relative to total assets, per business model

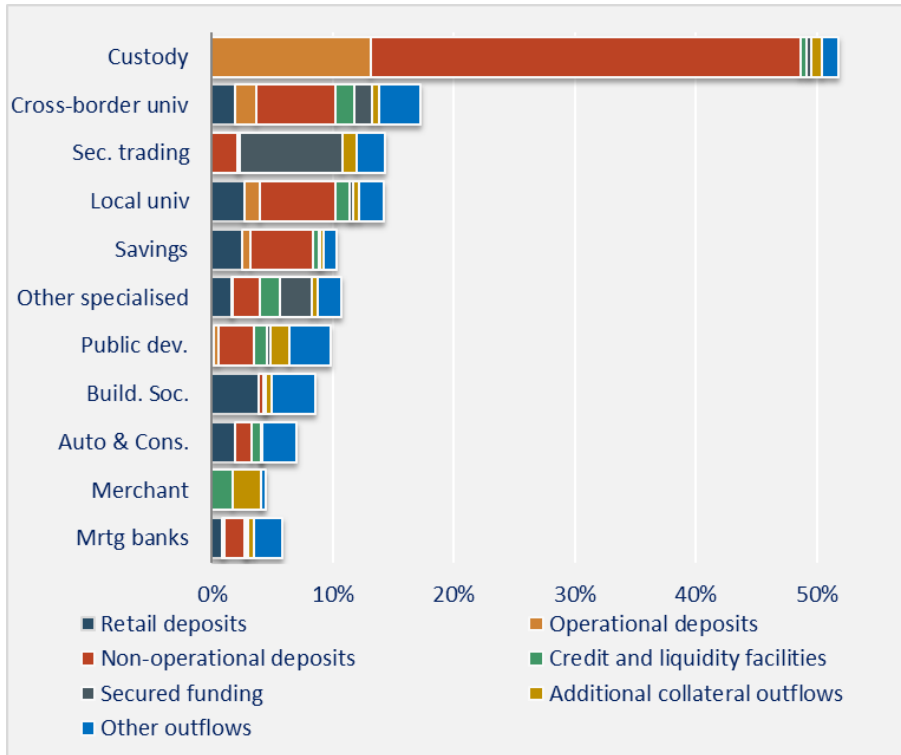
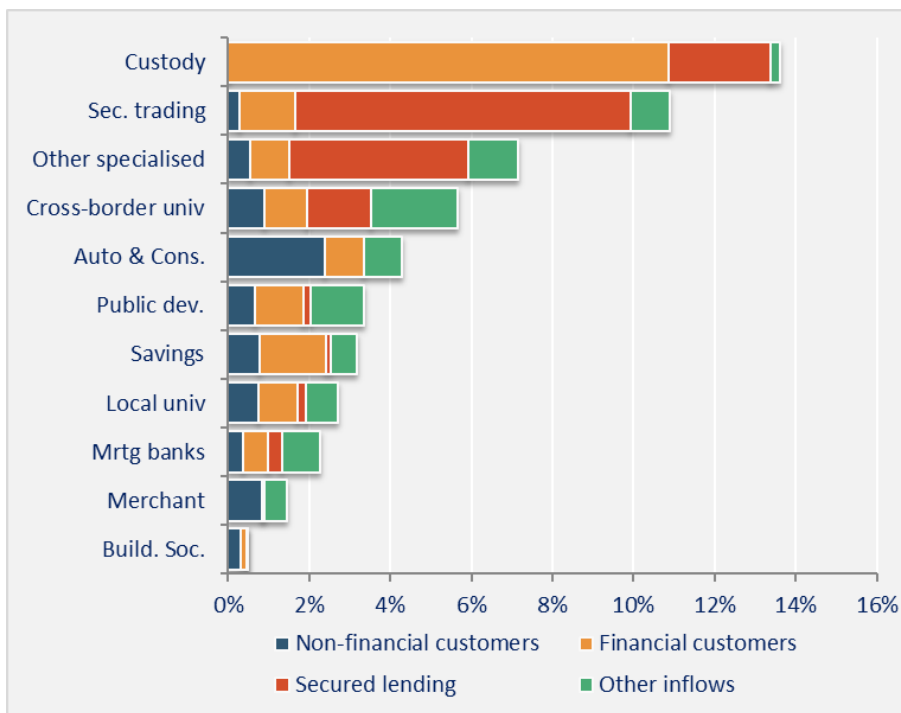


Figure 23: Composition of cash inflows (post-weight and before the cap) relative to total assets, per business model



4. LCR — analysis of currency mismatch

Rationale for the analysis

Banks regularly finance their assets in a currency different from that in which the assets are denominated. There are several reasons for this, ranging from diversification and supply factors to structural drivers.

In the aftermath of the global financial crisis, currency mismatch in funding and the liquidity of asset buffers became important aspects to take into account. In 2011, the European Systemic Risk Board (ESRB) published two recommendations focusing on foreign lending (ESRB/2011/1) and significant currency-denominated funding of credit banks (ESRB/2011/2). In addition, Article 8(6) of the LCR DR requires banks to ensure that the currency denomination of their liquid assets is consistent with the distribution by currency of their net liquidity outflows. Where appropriate, competent authorities may require credit institutions to restrict currency mismatch by setting limits on the proportion of net liquidity outflows in a currency that can be met during a stress period and by holding liquid assets not denominated in that currency.

In normal times, it is expected that banks can easily swap currencies and can raise funds in foreign currency markets. However, the ability to swap currencies may be constrained during stressed conditions (as seen during the financial crisis). For instance, counterparty credit risk and currency-specific liquidity risk can cause significant dislocation in foreign exchange (FX) swaps markets, not allowing anything else to use the liquidity buffer from one currency to another³⁴. Therefore, it is useful to study whether currency-related liquidity risk exists in the EU banking sector.

The analysis of the overall maturity mismatch and liquidity coverage between assets and liabilities across all currencies is useful to disentangle and assess possible large funding/outflow risks for some specific currencies. The risk profile of an institution in a specific currency could be blurred by different maturity mismatches across currencies, and the LCR reports by significant currency allow monitoring of the inherent currency risk in the LCR. The CRR does not require separate reports for items denominated in the reporting currency; however, a relevant number of banks seem to do this.

The analysis uses a set of indicators to compare total figures across all currencies against figures per individual significant (foreign) currency³⁵ (limited to euros, US dollars and pounds sterling). The first indicator (the liquidity buffer over net cash outflows) is developed per significant currency and

³⁴ The EBA report on funding plans presents some data about the movements experienced by key variables in the FX swaps markets.

³⁵ Article 415(2) of the CRR indicates that a currency is considered significant if the currency-denominated liabilities are higher than 5% of total liabilities. The analysis is limited to foreign significant currencies, meaning that only significant currencies, different from the legal currency in the country of origin of each individual bank, are included, i.e. a UK bank with positions in euros, pounds sterling and US dollars over 5% of total liabilities, will be considered in the analysis only for euros and US dollars but not for pounds sterling.

studies any currency patterns in the liquidity profiles of banks. The second indicator assesses the relationship between three important components of the LCR (the liquidity buffer, inflows and outflows) and the total funding of the banks, across different significant currencies. This analysis sheds light on banks' liquidity coverage and stable funding by individual significant currencies³⁶.

Analysis of the parameters of the LCR by significant currencies

Indicator 1: liquidity buffer over net cash outflows

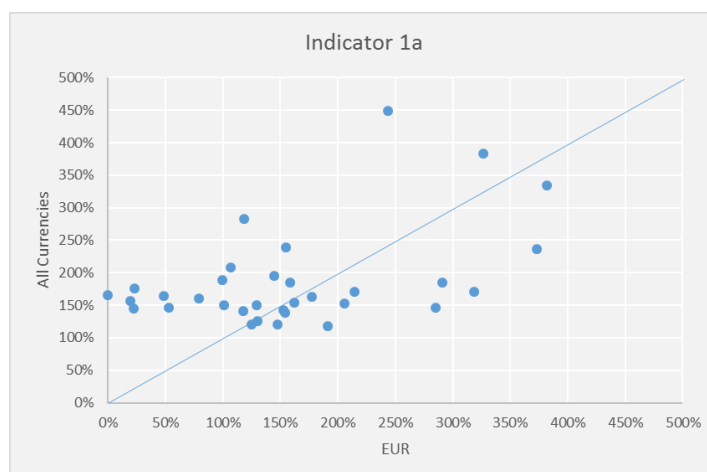
The objective is to test whether there are any currency-specific patterns in the liquidity profiles of banks. The indicator demonstrates whether the difference between the ratio of the liquidity buffer and net cash outflows for a specific foreign currency is more pronounced than the same ratio for all currencies.

$$\text{Indicator 1} = \frac{\text{Liquidity buffer}_{\text{currency}}}{\text{Outflows}_{\text{currency}} - \text{Min}(\text{Inflows}_{\text{currency}}, 0.75 \times \text{Outflows}_{\text{currency}})}$$

Where currency = reporting currency (all currencies), euros, US dollars, pounds sterling.

A total of 40 banks reported euros as a significant (foreign) currency. The weighted average LCR_{EUR} is 173, which is higher than the average LCR_{All currencies} for the same sample. There is some evidence of a different pattern when euros is the significant currency (i.e. there are many banks with an LCR_{EUR} lower than the LCR_{All currencies}), but the differences are not statistically significant. These banks are located above and distant from the diagonal line.

Figure 24: Liquidity buffer over net cash outflows where the significant currency is euros (x-axis) compared with the same indicator for the reporting currency (all currencies; y-axis)

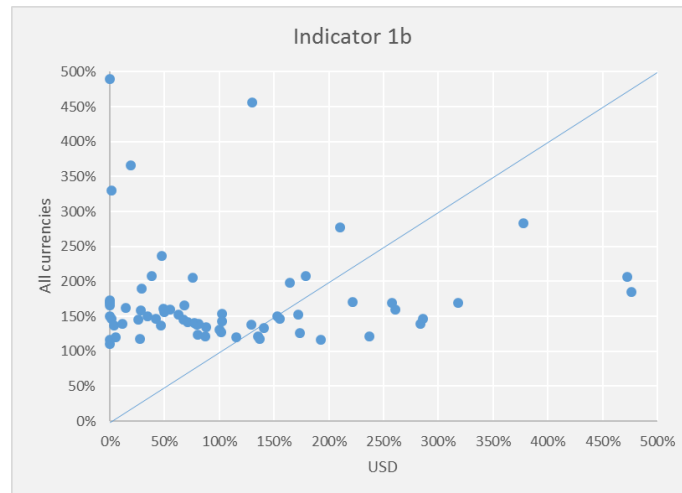


A total of 72 banks reported US dollars as significant (foreign) currency. The weighted average LCR_{USD} is 91%, which is below the 100% LCR requirement and is much lower than the average LCR_{All}

³⁶ The results are presented at an anonymised institution level. An institution is included in the analysis under a specific indicator only if the relevant data are available for the total figures in the reporting currency and in at least one of the significant (and foreign currencies).

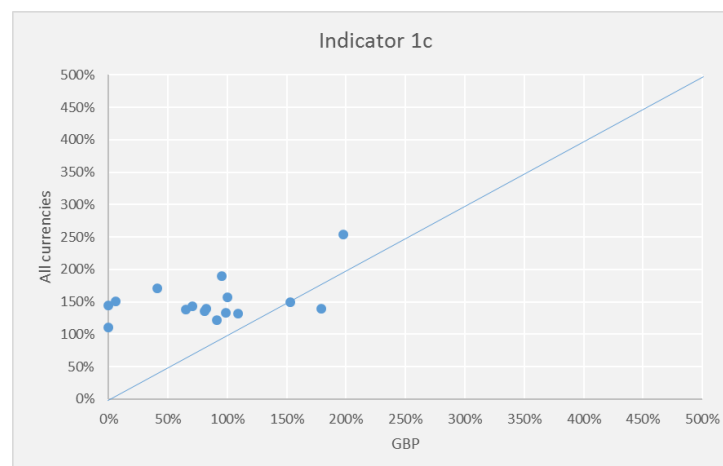
currencies for the same sample (143%). There is clear evidence of a different pattern when US dollars is the significant currency (i.e. there are several banks with an LCR_{USD} lower than the $LCR_{All\ currencies}$; many of them with an LCR_{USD} close to 0%), and the differences are statistically significant. These banks are located above and distant from the diagonal line.

Figure 25: Liquidity buffer over net cash outflows where the significant currency is US dollars (x-axis) compared with the same indicator for the reporting currency (all currencies; y-axis)



A total of 19 banks reported pounds sterling as significant (foreign) currency. The weighted average LCR_{GBP} is 95%, which is below the 100% LCR requirement and is much lower than the average $LCR_{All\ currencies}$ for the same sample (143%). There is some evidence of a different pattern when pounds sterling is the significant currency (i.e. there are several banks with an LCR_{GBP} lower than the $LCR_{All\ currencies}$, some of them with an LCR_{GBP} close to 0%), but the differences are not statistically significant. These banks are located above and distant from the diagonal line.

Figure 26: Liquidity buffer over net cash outflows where the significant currency is pounds sterling (x-axis) compared with the same indicator for the reporting currency (all currencies; y-axis)



For the majority of the banks, the ratio for total figures (reporting currency, i.e. across all currencies) is higher than the same ratio considering only each individual significant currency (euros, US dollars and pounds sterling). This implies that banks are likely to hold a higher liquidity buffer in relation to their net cash outflows in the national currency than in significant (foreign) currencies. Thus, at aggregate level, the surplus in liquidity coverage in all currencies offsets (or dominates) the liquidity shortfall in other significant currencies.

Banks need to ensure consistency between liquidity buffers and net outflows by currency. Low levels of LCR in one significant currency may create problems during stress periods when liquidity sources may be constrained and the FX swaps markets may become difficult to access. Therefore, Article 8 of the LCR DR states that competent authorities may limit significant excesses of net outflows denominated in a significant or reporting currency (Article 8(6) of the LCR DR). Possible specific limits or quantitative restrictions may be implemented to correct mismatches in material cases.

Indicator 2: assessment of liquidity buffer, inflows and outflows

This analysis provides insight into whether the banks present different liquidity risk profiles, depending on the significant (foreign) currency. It studies different components of the LCR (liquidity buffer, outflows and inflows) in comparison with the total funding³⁷ of the banks, across different currencies.

$$\text{Indicator 2a} = \frac{\text{Liquidity buffer}_{\text{currency}}}{\text{Total funding}_{\text{currency}}}$$

$$\text{Indicator 2b} = \frac{\text{Outflows}_{\text{currency}}}{\text{Total funding}_{\text{currency}}}$$

$$\text{Indicator 2c} = \frac{\text{Inflows}_{\text{currency}}}{\text{Total funding}_{\text{currency}}}$$

Where currency = reporting currency (all currencies), euros, US dollars, pounds sterling.

The values for Indicator 2a are higher for total figures across all currencies than for the significant currencies. The 45° line shows equality between the value measured on the y-axis and the value measured on the x-axis. For values above the 45° line, the graph indicates that the value measured on the y-axis (in this case the ratio expressed in all currencies) is greater than the value measured on the x-axis (i.e. the ratio expressed in the significant currency). The opposite is true when the values fall below the 45° line.

³⁷ Total funding includes all funding independent of its maturity (therefore, it includes both long-term and short-term funding). The amounts have been obtained from COREP as the sum of funding from the top 10 counterparties, each greater than 1% of total liabilities and all other funding (C67).

Figure 27: Indicator 2a liquidity buffer over total funding (all currencies vs euros as a significant currency)

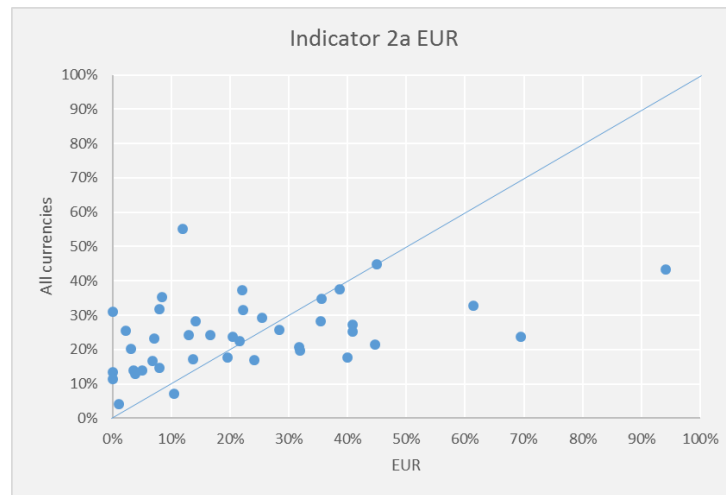


Figure 28: Indicator 2a liquidity buffer over total funding (all currencies vs US dollars as a significant currency)

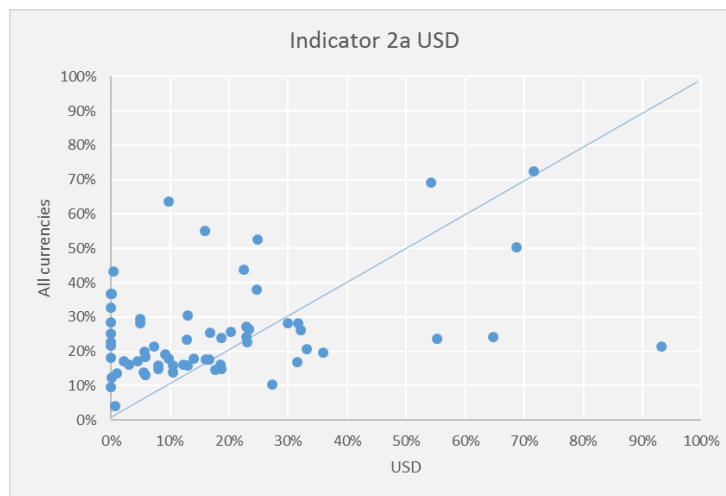
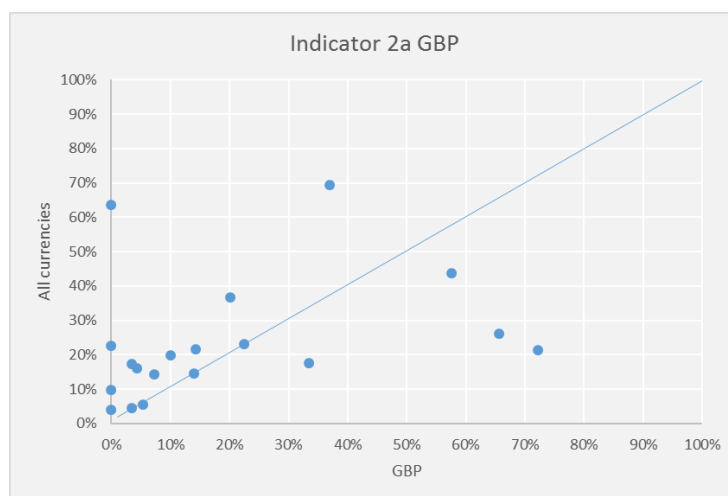


Figure 29: Indicator 2a liquidity buffer over total funding (all currencies vs pounds sterling as a significant currency)



The pattern of values higher for total figures across all currencies than in significant currencies is more pronounced (i.e. the all-currencies ratio is well above the US dollars ratio) when US dollar-denominated liquidity buffer and funding are considered (Figure 28). This means that banks present a higher proportion of liquidity buffer over total assets when considering all currencies than they do when solely considering US dollars. The lower proportion of liquidity buffer in US dollars is one of the factors behind the findings when calculating Indicator 1: banks present a lower liquidity buffer, in relation to their net cash outflows, in US dollars than in the national currency. Indicator 2a shows that banks could increase their liquidity buffer, in relation to their net cash outflows, in US dollars by increasing the liquidity buffer denominated in US dollars.

Indicator 2b (outflows vs total funding) provides information on short-funding, i.e. outflows, as described in the Implementing Technical Standards (ITS) data on liquidity coverage.

For US dollars, this indicator shows a different pattern in comparison with Indicator 2a (liquidity buffer vs total funding). That is, the values of Indicator 2b are higher in US dollars than in all currencies.

Figure 31 shows that the majority of values in the dataset for Indicator 2b US dollars fall below the 45° line. Therefore, when comparing it with Indicator 1 for US dollars (liquidity buffer over net cash outflows), the drivers of the respective lower values are both the limited liquidity buffer in US dollars and the large volume of US dollar-denominated short-term funding. In comparison with other significant currencies, the analysis does not support such a clear conclusion for euro and pound sterling denominated parameters of Indicator 2b.

This indicates that short-term funding is a more common phenomenon in US dollar-denominated funding than in national currencies.

Figure 30: Indicator 2b outflows over total funding (all currencies vs euros as a significant currency)

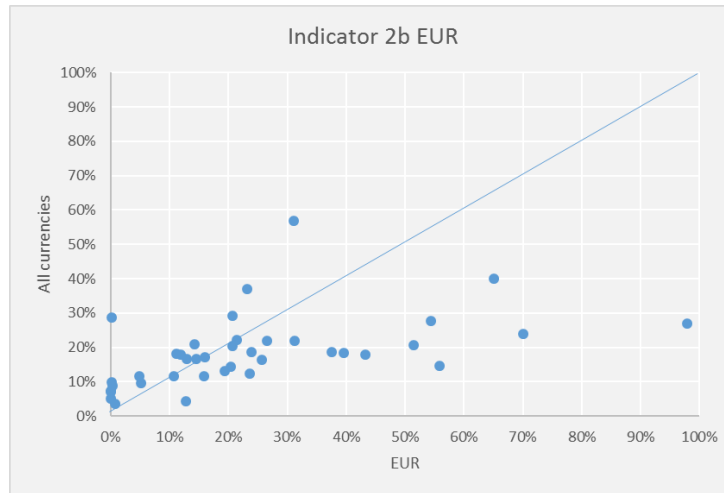


Figure 31: Indicator 2b outflows over total funding (all currencies vs US dollars as a significant currency)

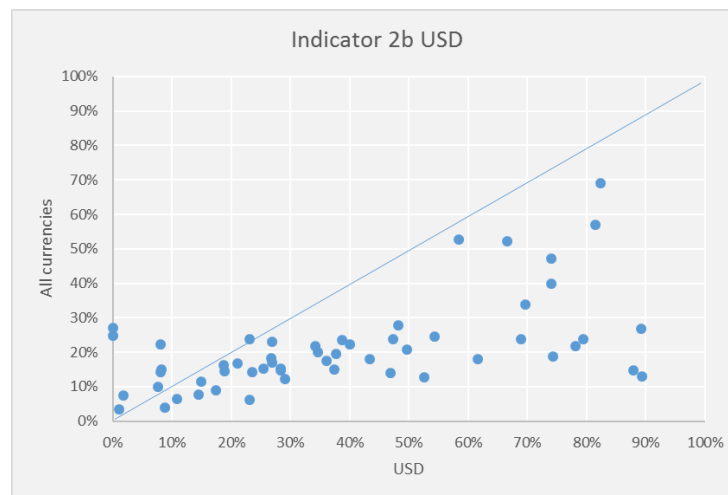
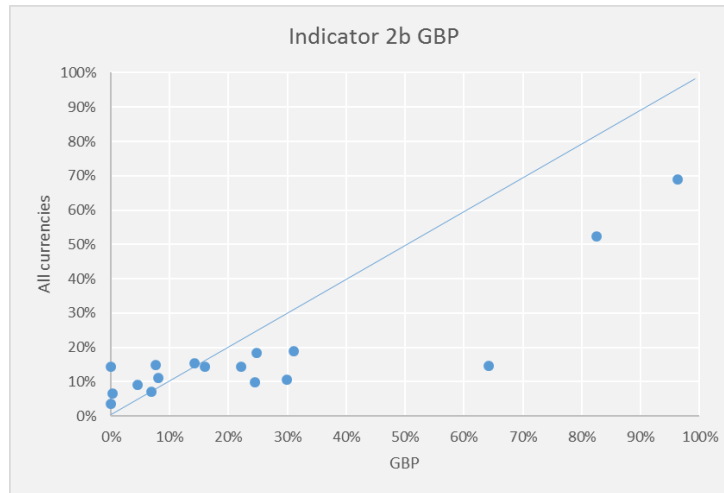


Figure 32: Indicator 2b outflows over total funding (all currencies vs pounds sterling as a significant currency)



Indicator 2c (inflows vs total funding) shows higher values in US dollar-denominated activities than in other significant currencies. In LCR terms, the short-term nature of exposures in US dollars is more prominent than the overall share of short-term exposures across all currencies.

The share is larger for both with respect to total US dollar-denominated balance sheet activities in general and to total inflows in the significant currency.

In this context, a possible measure could be to restrict the mismatches between liquid assets and net outflows denominated in a significant currency. Moreover, the LCR definitions, including caps on liquid assets and the definition of the net outflows, should be used.

Figure 33: Indicator 2c inflows over total funding (all currencies vs euros as a significant currency)

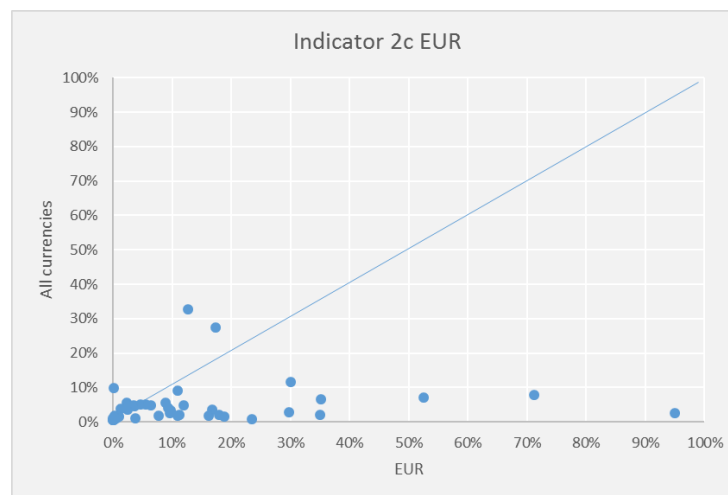


Figure 34: Indicator 2c inflows over total funding (all currencies vs US dollars as a significant currency)

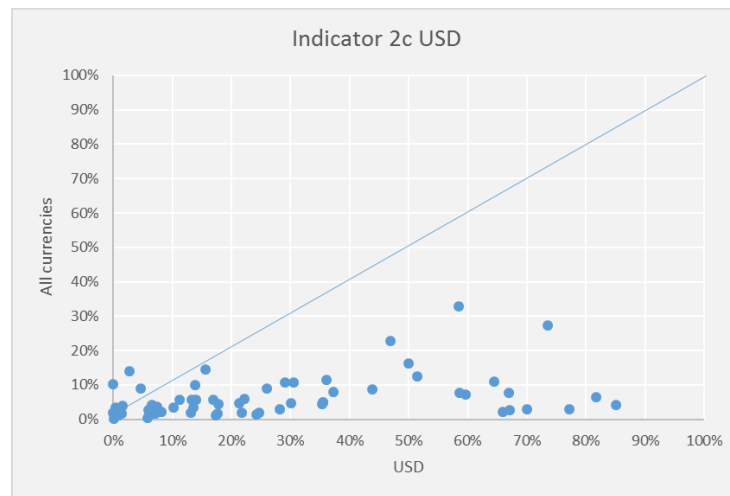
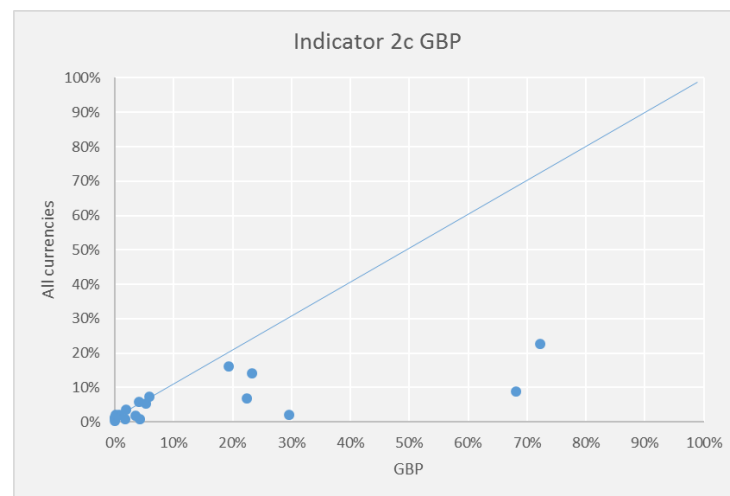


Figure 35: Indicator 2c inflows over total funding (all currencies vs pounds sterling as a significant currency)



It can be concluded that, among the significant (foreign) currencies, the US dollar is the currency that shows lower LCR levels and, when compared with LCR averages, the differences are statistically significant. Practically, this means that the surplus in liquidity coverage in all currencies offsets (or dominates) the liquidity shortfall in other currencies. As the ability of banks to swap currencies and to raise funds in foreign currency markets might be constrained during times of stress, significant currency mismatches are a major concern.

Against this background, competent authorities may consider making greater use of their discretion to restrict currency mismatches by setting limits on the proportion of net liquidity outflows in a currency that can be met during a time of stress by holding liquid assets not denominated in that currency (as envisaged under Article 8(6) of the LCR DR).

Conclusions

Liquidity coverage standards are an important aspect of the EU regulatory framework. COREP data show that banks have significantly increased their HQLA holdings since September 2016 and that this is the main driver behind the upward trend in the average LCR levels. Results show that, in general, both the average and bank-level LCRs are well above the requirement of 100% under full implementation. In December 2017, all except four O-SII banks, from the sample of 158 banks, had already met the 100% fully phased-in LCR minimum requirement. The level of shortfall, corresponding to those four banks, is EUR 20 billion, although the shortfall has demonstrated a downward trend since September 2016.

The average levels of LCR across different business model categories are also above the minimum requirements and, as expected, there are significant differences across business models in the composition of LCR and LCR parameters. Some variations can also be observed within categories.

Liquid asset holdings of banks make up 16% of total assets on their balance sheets. Level 1 assets make up 90% of the total liquidity buffer of banks. Central bank assets and exposures represent 51% of the total liquidity buffer. Reliance on these liquid assets has increased during the financial crisis and still plays a role in banks' liquidity risk profiles. Banks will have to find alternatives to maintain sustainable liquidity buffers to cover net outflows after the tapering of unconventional central bank policies and a shift towards a high interest rate environment. In this case, the opportunity cost of holding liquid assets is expected to increase for banks, having direct implications for liquidity buffers.

Finally, the analysis shows that banks are likely to hold a higher liquidity buffer, in relation to their net cash outflows, in their domestic currency than in other significant (foreign) currencies. Thus, at aggregate level, the surplus in liquidity coverage in all currencies offsets the liquidity shortfall in other significant currencies. Low levels of LCR in one significant currency may generate problems during stress periods when liquidity sources may be constrained and the FX swaps markets may become difficult to access. Banks need to ensure consistency between liquidity buffers and net outflows by currency. Against this background, competent authorities may consider making greater use of their discretion to restrict currency mismatches by setting limits on the proportion of net liquidity outflows in a currency that can be met during a stress period by holding liquid assets not denominated in that currency.

Annex

Table 1: Number of banks included in the December 2017 analysis³⁸

Country	ISO code	All banks	<i>Of which subsidiaries</i>	GSII/O-SII	<i>Of which subsidiaries</i>
Austria	AT	8	1	4	1
Belgium	BE	7	1	5	1
Bulgaria	BG	3	2	3	2
Cyprus	CY	3		2	
Czech Republic	CZ	3	3	3	3
Germany	DE	17		10	
Denmark	DK	4		4	
Estonia	EE	4	3	3	3
Spain	ES	12		5	
Finland	FI	3	1	1	
France	FR	10	1	6	
Great Britain	GB	11		7	
Greece	GR	4		4	
Croatia	HR	3	3	3	3
Hungary	HU	3	2	3	2
Ireland	IE	5		4	
Italy	IT	11		4	
Lithuania	LT	3	3	3	3
Luxembourg	LU	3	1	2	1
Latvia	LV	3	2	3	2
Malta	MT	3	1	2	1
Netherlands	NL	5		3	
Norway	NO	3		1	
Poland	PL	3	1	3	1
Portugal	PT	6	1	4	1
Romania	RO	3	2	3	2
Sweden	SE	8		4	
Slovenia	SI	4	1	3	1
Slovakia	SK	3	3	3	3
Total		158	32	105	30

³⁸ Results shown by total/group of banks (total EU/GSII, O-SII and Others) do not include subsidiaries. However, results by country do include subsidiaries.

Table 2: Number of banks included in the evolution analysis³⁹ if balanced sample criterion applies

Country	ISO code	All banks	GSII/O-SII
Austria	AT	5	2
Belgium	BE	6	4
Bulgaria	BG	1	1
Cyprus	CY	2	2
Germany	DE	16	10
Denmark	DK	4	4
Estonia	EE	1	
Spain	ES	11	4
Finland	FI	2	1
France	FR	9	6
Great Britain	GB	11	7
Greece	GR	4	4
Hungary	HU	1	1
Ireland	IE	3	2
Italy	IT	9	3
Luxembourg	LU	2	1
Latvia	LV	1	1
Malta	MT	2	1
Netherlands	NL	5	3
Norway	NO	2	1
Poland	PL	2	2
Portugal	PT	5	3
Romania	RO	1	1
Sweden	SE	7	4
Slovenia	SI	3	2
Total		115	70

³⁹ All evolution analyses are shown by group of banks (total EU/GSII, O-SII and Others) and, therefore, they exclude subsidiaries.

Table 3: Number of banks submitting liquidity coverage data (by business model)

Business model	All banks	<i>Of which subsidiaries</i>
Automotive and consumer credit banks	3	
Building societies	3	
Cross-border universal banks	46	1
Custody banks	3	
Local universal banks	73	29
Locally active savings and loan associations/cooperative banks	9	
Merchant banks	1	
Mortgage banks, including pass-through financing mortgage banks	4	
Other specialised banks	2	
Public development banks	9	
Security trading houses	1	
Total	154	30

Table 4: Definition of business models

Name	Description
Automotive and consumer credit banks	Banks specialising in originating and/or servicing consumer and/or automotive loans to retail clients.
Building societies	Banks specialising in providing residential loans to retail clients.
CCPs	Banks specialising in setting trading accounts, clearing trades, collecting and maintaining margin monies, regulating delivery and reporting trading data.
Cross-border universal banks	Cross-border banking groups engaging in several activities, including retail, corporate, investment banking and insurance.
Custody banks	Banks specialising in offering custodian services (i.e. they hold customers' securities in electronic or physical form for safe keeping so as to minimise the risk of loss). These banks may also provide other services, including account administration, transaction settlements, collection of dividends and interest payments, tax support and foreign exchange.
Local savings banks	Banks focusing on retail banking (payments, savings products, credit and insurance for individuals or SMEs) and which operate through a decentralised distribution network, providing local and regional outreach.
Local universal banks	Banks specialising in originating and/or servicing consumer loans to retail clients and SMEs.
Merchant banks	Banks engaging in financing domestic and international trade by offering products, such as letters of credit, bank guarantees and collection and discounting of bills.
Mortgage banks	Banks specialising in directly originating and/or servicing mortgage loans.

Name	Description
Other specialised banks	Other specialised banks, such as promotional banks and ethical banks.
Private banks	Banks providing wealth management services to high net worth individuals and families.
Public development banks	Banks specialising in financing public sector projects and/or the provision of promotional credit or municipal loans.
Security trading houses	Banks facilitating trading done in derivatives and equities markets by guaranteeing the obligations in the contract agreed between two counterparties and/or by holding securities and other assets for safe keeping and record keeping on behalf of corporate or individual investors.



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