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Dear Mr. Farkas

Deutsche Bank's response to the European Banking Authority's Discussion Paper on defining liquid assets in the LCR under the draft CRR

Deutsche Bank (DB) welcomes the opportunity to comment on the EBA's discussion paper on defining liquid assets in the LCR according to Article 481 of the draft CRR. We appreciate the complexity of the task and the difficulty in carrying out this research where there is little academic coverage.

Although we recognise the timing difficulties that the EBA faces in preparing and delivering this report by the end of this year, we believe it is very important that the discussion paper should be expanded to look at assets denominated in other significant non-EU currencies. Approximately fifty percent of DB's liquidity buffer is denominated in such currencies and this will likely be the case with many other European institutions. Assessing each asset class without this information would significantly impair any conclusions drawn in your analysis.

DB takes a holistic approach to determining asset liquidity in our own liquidity risk management methodology. At the core, we place emphasis on the inherent features of an asset which validate both the ability for it to be immediately converted into cash and to maintain a long run value during periods of both stressed and stable conditions. Specifically, we take into account exogenous asset features such as the underlying issuer's credit quality, the asset's eligibility with our secured financing counterparties, and a proven track record of being monetised through either outright sale or secured financing and repo transactions.

Secured financing and repo transactions play a critical role in originating and maintaining asset liquidity within the financial markets. Their fundamental role must not be overlooked when undertaking an analysis of asset liquidity. DB appreciates the constraints that the EBA has experienced in obtaining a sufficient data set, yet we strongly emphasise the need for data on collateral eligibility and haircut levels from central clearers, and the largest of EU institutions conducting these transactions, to be incorporated into the ultimate analysis. Only an incomplete picture of asset liquidity can be achieved without such information and this places any analysis at risk of being biased.

Furthermore, we recognise the importance that 'metrics' can have in indicating asset liquidity, including bid ask spreads, asset turnover, volume, and others, as identified in Annex five of the discussion paper. The difficulty, however, presents itself when determining the relevance of these metrics across asset classes. For instance, simply examining the bid ask spreads of five different asset classes and classifying the asset set experiencing the widest spreads as illiquid would be an ill-considered approach if the asset has a proven record of remaining a viable source of liquidity throughout periods of stress.



DB believes that such an approach would erroneously place a heavy reliance on measuring mark-to-market volatility as an indicator of asset liquidity. In reality, banks with sound risk management practices will hedge volatility risk away reasonably easily via interest rate swaps, futures, CDS, etc. Furthermore, most banks will margin transactions daily thereby ensuring that their net cash liquidity position, in relation to an asset, is flat day to day. This brings into question the usefulness of price volatility as a real liquidity indicator, when hedging practices are not taken into consideration.

Finally, it is important to note that asset liquidity is not determined entirely endogenously. An asset's liquidity can be certified by institutional recognition, and this effect is most prominently observed with central bank eligibility or, more recently, within international frameworks such as Basel III.

It is therefore essential that the report submitted to the European Commission as a result of the EBA's analysis is not divorced from the Basel process. Whilst European specificities should be accounted for, the EBA should strive to remain as consistent as possible with the international framework for the LCR set out by the BCBS in January. At the very least, those assets permissible under the Basel standard should be included within the EBA's assessment.

We would be happy to discuss further any of the points in our response.

Yours sincerely,

Andrew Procter

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Annex I Questions and Answers

Q1. Given the difficulties with obtaining transactional data outlined here, do you think a data sample covering 2008-2012 is sufficient for this analysis? Would you see merit in extending the sample in those countries where more data is available?

We appreciate the difficulties the EBA has faced in obtaining a sufficient data set for all assets over a substantial period of time. However, we would be wary in drawing conclusions regarding the liquidity quality of assets using data which i) is gathered during such a limited period i.e. 2008-2012 and ii) ignores the liquidity generating capacity of the secured financing and repo markets.

During the crisis, some assets suffered a reduced capacity to generate liquidity (e.g. as a result of haircut widening or price movements), but this did not mean that they ceased to be liquid. In fact, many assets experienced a *sustained* capacity to generate liquidity throughout the crisis. Although this was often at lower levels compared with pre-crisis that can largely be attributed to heighted risk management and increasingly prudent approaches to collateral management.

Therefore, data sets limited to a stressed period might imply that such assets are relatively illiquid even where the asset has a proven sustained capacity to generate liquidity at other points in time. This is particularly true of major index equities which experienced reduced liquidity, but were never illiquid during the crisis, and yet have a demonstrated sustained capacity to be liquid over a longer period of time.

Furthermore, we emphasise not only the importance of extending the analysis beyond the proposed time period, but also the need to look at the liquidity an asset generates through secured financing and repo markets, in addition to outright trading volumes.

Q2. Do you have additional data sources to suggest? Specifically, can you suggest a source of repo data and gold that would fit our needs?

Over time significant regulatory changes such as MiFID have led to improvements in the market data. Similarly, we would expect a number of regulatory initiatives underway to lead to improvements in market data for a number of asset classes.

We believe that there are a number of other data sources that the EBA should be considering.

Data on repo and secured financing transactions:

We ask the EBA to give consideration both to the ability to raise finance against an asset through secured funding or repo and to the ability to monetise an asset via outright sale. We appreciate the lack of available data is a constraint, however we suggest that the EBA seek information from the following triparty repo providers and clearers, who should be able to supply information on collateral eligibility, collateral use and haircut levels for their full programmes of both repo and secured financing:

- Euroclear
- Clearstream
- Bank of New York Mellon
- JP Morgan

Additionally, the European repo council may be able to provide further information.

Gold:

As most gold transactions are over the counter (OTC), data is extremely difficult to access. This should not, however, stand in the way of the EBA conducting a thorough analysis of the liquidity value of gold. The World Gold Council will undoubtedly have a range of sources that it can make



available. We would also highlight the efforts of the Bank for International Settlements (BIS), which has tried to compile derivative volumes globally, notably gold. Their studies (conducted triannually) offer detailed daily total amounts of OTC gold spot and swaps contracts etc.¹

Major Index Equities:

As recognised by the BCBS, Major Index (MI) Equities are an extremely viable source of liquidity for financial institutions. Their liquidity can be easily sourced via either the cash market or the secured financing and repo markets.

As a result of being listed and traded on regulated exchanges, MI Equities have a number of attributes which contribute to their transparency, enable data on their transaction volumes to be easily collected, and support the case for their inclusion as high quality liquid assets within the LCR, including:

- Instant price discovery
- Public availability of intraday pricing
- Observable bid-offer spreads
- Third party review and widely understood eligibility criteria

The presence of an extremely liquid and deep futures market in equities further enhances their viability as a source of liquidity, as the futures and cash markets are highly correlated. We therefore urge the EBA to source information on equities trading volumes in both the cash, OTC and futures market, all of which should be publically available information e.g. via Bloomberg.

Furthermore, MI Equities represent a significantly large proportion of the collateral used in secured financing and repo transactions. Information on collateral volumes is available from the sources listed under repo above.

Finally, we stress the important role that hedging plays in the inclusion of MI Equities in an institution's liquidity buffer, thus ensuring that price volatility does not result in a detrimental impact on the bank as a cash flat position is maintained. We suggest that the EBA should discuss the role that equities hedging strategies play, with a number of European financial institutions, to understand the risk management practice with respect to MI Equities.

Government bonds:

The following sources should be able to provide data on government bond repo transactions:

- The International Capital Market Association (ICMA): compiles a semi-annual reposurvey, amongst other data
- European Central Bank (ECB) and Bank of England: Money Market Surveys
- Various Central Securities Depositories (CSDs): including Eurex and LCH
- For Italy, France and Germany: BTEC and MTS compile repo funds rates
- The European Securities and Markets Authority (ESMA): data collected for the purpose of short-selling regulation may also prove to be a useful source

RMBS:

Volumes traded of US Agency residential mortgage back securities can be obtained from the Securities Industry and Financial Markets Association (SIFMA). RMBS eligibility at central bank discount window facilities and collateral margin data should be obtainable from the US Federal Reserve, ECB and European member state central banks.

^{1.} http://www.bis.org/press/p121004.htm and http://www.bis.org/press/p101201.htm



Q3. Do you agree with the list of liquidity metrics under consideration to be used in the EBA assessment, as mentioned in this section and Annex 5? Can you suggest further metrics the EBA should make use of, where information would be available?

We welcome the EBA's work in compiling the list of liquidity metrics under consideration for use in the liquid asset assessment. However, it is worth noting that many of academic papers cited start with qualifying assumptions that are not reflected in the real world. Therefore the list should be indicative but not exhaustive.

The EBA's report to the Commission should avoid using metrics that are so restrictive that they would eliminate assets which are generally considered liquid in the market, but fail to meet a 'litmus test' of metric compatibility. In particular, those metrics which focus on bid ask differentials will be a useful indicator of asset liquidity for some assets but not others, such as fixed income instruments.

We question the precise use of the "highest bid" and "lowest ask" as inputs into some of the metrics, and whether this will generate a truly representative view. An average bid ask indicator for specific time intervals might represent a more useful alternative. Furthermore, bid ask spreads are intended to be real time indicators of asset liquidity. Snap shot data is unlikely to offer a full picture.

We offer the following comments on specific indicators where additional caution may be necessary when drawing conclusions:

- Trading volume and turnover: although the trading volume of a specific security may be a useful indicator of how buoyant asset liquidity might be, it is important that the metric is used in the correct context. For example, a market for which there are 2 sellers and 2 buyers will have a trading volume of 2. A second market for which there are 4 sellers and 4 buyers will have a trading volume of 4. These markets have the same relative liquidity value attributed to that security, yet the absolute trading volumes differ substantially. Furthermore, when calculating the total trading volume metric, the time interval must be appropriately set so as to capture the liquidity effect of quarter end when many banks sell off large proportions of liquid inventory to meet balance sheet constraint requirements. For a more representative view of the turnover indicator, price ascertained should be an average traded price as opposed to end of period.
- **Dollar depth:** we question the meaning of this indicator and the value it adds in calculating the midpoint of the best bid and ask price.
- Number of transaction/order per time unit: we suggest extreme caution if using this metric; the number of transactions is not necessarily an indicator of asset liquidity. For instance, during periods of stress banks tend to stockpile liquid assets and the number of transactions will be comparatively low, due to reduced supply. The number of orders may be equally low as prices rise as a result of excess demand. This indicator would therefore be extremely difficult to normalise for comparability between asset classes. Furthermore, the metric is unlikely to add any depth to the analysis which is not already covered by indicators 1 and 2.
- Absolute spread/log absolute spread: the lowest ask and highest bid will be to some
 extent driven by limit orders and will not be representative of the levels at which assets
 can be traded.
- Relative or proportional spread calculated with mid price: with this indicator we fail to see the added value of using 2x bid-ask spread divided by the sum of the bid and ask prices.



Liquidity ratio 1 and 2: asset return and liquidity exert an inverse relationship i.e. the
most highly liquid of assets experience low returns due to their liquidity premium. We
therefore fail to see the usefulness of LR1 or LR2. Furthermore, these ratios will not
account for the effect of 'market jumps' i.e. where an assets trading levels are altered
following a public announcement.

Q4. Do you agree with the list of explanatory characteristics whose linkage to liquidity it is proposed to be tested in the EBA assessment? Can you suggest further characteristics the EBA should assess?

We believe that a greater emphasis should be placed on exogenous 'characteristics' as opposed to the metrics listed in Annex five. These characteristics are given due regard, as a matter of convention, in most institutions' own liquidity risk management. Furthermore, the characteristics do not risk including any data selection bias and are reliable indicators for asset liquidity on an ongoing basis (whereas metrics are only useful for point in time assessments).

In particular, we believe that collateral eligibility at a relevant central bank is a crucial characteristic which should be absolutely indicative (i.e. assets which are CB eligible in normal times are to be considered liquid), but not exhaustive (for example, the liquidity value of gold and equities should not be ruled out by central bank eligibility). However, if central bank eligibility is taken to be a key indicator of liquidity, there would need to be a formal process for ongoing dialogue between central banks and financial institutions on how the list of ISINs would evolve in reaction to market conditions.

An asset's credit rating is a universally accepted indicator of an asset's liquidity value, with a fundamental relationship between higher rating and ability to monetise a security being observed across all assets. Caution should, however, be taken when setting a credit rating parameter as many lower rated assets are considered relatively liquid. In particular, credit quality assessment on an instrument level should not be relevant for instruments that are issued by quasi government agencies as the credit rating should be based on the government, especially where there is no available external rating (as is the case with most US agency RMBS).

As a further characteristic, we suggest that the EBA should give consideration to the inclusion of an asset as a constituent of major market indices or the presence of active derivatives and index markets for the asset (e.g. Futures, CDX, ITRAXX, etc). This is an important perspective to include as, whilst some debt securities can appear to be less fungible than equities or commodities, their presence in collateral baskets or indices can allow them to trade on an equal footing basis.

Q5. Do you agree with the methodology proposed? Do you have alternative approaches that might be used?

We recognise the merit in having a consistent approach in defining liquid assets. Furthermore, a number of the liquidity metrics and asset characteristics set out in the discussion paper are ideal for indicating asset liquidity.

The appropriate use and availably of data is crucial. For the purpose of determining asset liquidity, data sets which include short term volatility jumps in asset price may not reveal the true longer time liquidity value of an asset. An approach which attempts to smooth data on asset prices might therefore be advisable.

Finally, we also recommend that the EBA should carry out a systematic data collection exercise from financial institutions, to gauge which assets were used to generate liquidity during stress,



rather than relying solely on external data sources. No matter what asset category the EBA proposes to assess, the best source of liquidity information lies within banks themselves.