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Mr. Wayne Byres
Secretary General
Basel Committee on Banking Supervision
Bank for International Settlements
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Dear Mr. Byres,

Deutsche Bank response to BCBS consultation, Basel III: The Net Stable Funding Ratio

We welcome the opportunity to comment on the Basel Committee on Banking Supervision's (BCBS or "Committee") consultation on the Net Stable Funding Ratio (NSFR). The Committee's objective of ensuring banks maintain stable funding during normally functioning markets is an important one. Deutsche Bank has had an internal mechanism similar to the NSFR, which assesses the long term funding needs of the bank, for a number of years. This was a key tool in ensuring our liquidity stability was maintained during the financial crisis.

Whilst we appreciate the Committee's stated desire to ensure simplicity in its regulatory framework, this cannot be prioritised over good regulation. Failing to acknowledge the steps banks take for the purpose of prudent risk management, such as high quality collateralisation and risk neutral hedging, can bring about an inaccurate understanding of liquidity positions and discourage best practice in risk management. As we wrote in our response to the BCBS discussion paper on 'Balancing risk sensitivity, simplicity and comparability,' simplicity should be an important, but secondary objective. Instead, a risk-based approach, recognising the inter-linkage of assets and liabilities on the balance sheet, should be pursued.

This is especially important as the NSFR will have a material impact on banks' liquidity management, funding structure and business strategy. Prioritising simplicity, may lead to unintended and undesirable impacts such as unnecessarily incentivising unsecured funding by failing to give recognition to high quality collateralisations; increasing sovereign debt exposure by applying unduly high term funding charges to less liquid assets; and reducing listed equities value through the application of severe haircuts. The impact of these changes will be felt not only by banks, but by their clients. We believe that finding simple solutions that maintain sensitivity and comparability whilst accurately representing the funding-risk the standard aims to capture, is the way to meet the stated regulatory objectives.

Perhaps the most evident example of the danger of oversimplification is where products with very different liquidity traits have been bundled into the same ASF and RSF categories. For example the broad category "loans to financial entities" captures a wide spectrum of different activities at 50% RSF for short term maturing assets. This is particularly noteworthy in the case of securities financing transactions where the collateral quality is not factored into the standard: a reverse repo transaction on an LCR level 1 government bond is as good as having the cash irrespective of the counterparty. In this context, a 50% term funding charge is extremely punitive. This type of trade is fully 'self financing'. Where it can be shown that certain products have significantly different liquidity traits, we urge the Committee to implement a more sensitive treatment. This can be achieved without losing the appropriate simplicity.



The NSFR needs to take into account that assets and liabilities cannot always be considered together. Market making would be severely impeded if liabilities and assets were not considered in tandem. There are multiple linked structures where an asset and liability are directly related, many are legally linked, and two legs of the same trade need to be treated in a symmetric fashion to promote legitimate and valuable market activity. In that context it should also be recalled that certain linked products are designed to be liquidity neutral.

As noted above, a properly designed NSFR is a very useful part of the regulatory toolbox. Whilst the Liquidity Coverage Ratio ensures sufficient liquidity resources are in place to survive a short-term stress scenario, the NSFR acts as a business as usual measure. This ensures banks fund their balance-sheets appropriately; not taking undue liquidity risk by controlling for maturity mismatches and ensuring riskier balance sheet items are appropriately term funded. It is important that the utility of this tool is not weakened by using it to meet other policy objectives. Distorting the effectiveness of the NSFR by attempting to alter the role of the shadow banking industry and constraining the size of the overall balance sheet is undesirable. Co-mingling different objectives, which, individually valid, may lead to unintended consequences. Most prominently, damaging the functioning of the secured financing market. We urge the Committee to keep in mind that the impacts will be felt equally by the counterparties with whom banks transact, such as insurance companies and QCCPs.

It is also important to highlight that the NSFR is intended to be a structural measure that assesses a bank's capacity to provide long-term financing. Calibrating the NSFR in an overly conservative way has a direct impact on a bank's ability to provide long-term financing to the real economy. Under the current proposals, some assets such as certain components of trading inventory, which are due to mature sooner than assets from real economy activity such as lending, are assigned near equal RSF requirements. This will incentivise banks to more selectively allocate where ASF is deployed.

The calibration of the NSFR should adequately recognise that there is a finite volume of contractual term funding available to banks. The supply of such funding is less a function of price, and more a function of a counterparty's willingness and ability to lock-up funding for a pre-determined period. Due to the restricted volume of this funding, a critical element of a banks' basic function is the aggregation of contractually short-term deposits, which can then be assessed on a portfolio basis. As part of prudent risk management, the resulting stable element is used to provide longer term financing capacity.

To put this into context, the aggregate volumes of bank capital market debt outstanding is estimated to be \$5-10 trillion. The most recent impact study identified an NSFR shortfall of €2trn¹ under the previous calibration. It is not realistic to assume that banks can attract such a significant percentage of their investor base. Given the more restrictive criteria in the January 2014 proposal, particularly for banks with large capital markets portfolios, this shortfall is only likely to increase.

Finally, we understand from the meeting with the Co-Chairs on 27 March that the intention of the Committee is to finalise the NSFR rules around September 2014. Given the complexity of the potential impacts of the NSFR, we are unclear on why such a tight timeframe is needed. Simply analysing the QIS, which does not seek to quantify the impacts of the proposals at a granular level, will take a number of months. We believe that a follow-up QIS, to inform final calibration of ASF and RSF level would be highly beneficial – particularly if it incorporates impacts on stakeholders such as pension funds and public sector issuers. Even allowing for a further year of work, finalising rules that could become minimum standards by 1 January 2018 should be possible.

¹ <http://www.bis.org/publ/bcbs262.pdf>



We provide below some more extensive analysis of the above points, and remain ready to discuss any of the points in our response.

Yours sincerely,

Andrew Procter
Global Head of Compliance, Government and
Regulatory Affairs

Specific Points

Reverse repo:

Banks engage in reverse repo for three main reasons: First, for covering short positions. These trades are fully self-financing and the default of a counterparty would be a credit risk event. This is not an event which should be provisioned for within a liquidity risk standard. Secondly, banks initiate reverse repo transactions as a way of investing excess cash. Where these trades are collateralised by high quality instruments, as we discuss below, they are largely liquidity risk neutral as the transaction could be terminated at short-notice or the collateral could be re-used. Lastly, some banks operate a match-book to facilitate market-making activity. We understand that the Committee has some concerns over 'Matched Book' activity. Matched Book amounts to less than 50% of the total reverse repo population and activity has shrunk significantly over last few years due to cost of trading and balance sheet constraints. Matched books are instrumental in providing continuing liquidity and depth to markets. Shorts coverage and excess cash re-investment are in fact the main drivers of reverse repo, and much of this is client facilitation.

In all three of these instances, a 50% RSF treatment is unnecessarily punitive. Based on the proposed calibration, we are concerned that the market for reverse repo would be substantially distorted. Banks will be forced to pass on much of the incremental cost of doing business with non-bank financials, and perhaps reduce activity to the minimum required to support their other businesses. This will particularly impact the role of market-makers for repo and cash. The latter will need to incorporate increased cost of funding which will inevitably lead to wider bid-offer spreads due to this asymmetric ASF/RSF treatment.

We understand that part of the rationale for the application of the 50% requirement on loans to all financial counterparties with a maturity of less than six months was to reflect franchise risk within the NSFR framework. We agree this can be important when banks determine their own funding profile, but we do not believe that requires the proposed treatment. A very significant proportion of securities financing transactions have no substantial franchise implication, particularly transactions secured by HQLA.

A preferable treatment could be achieved if some degree of simplicity was sacrificed within the framework for a trade-type based approach which recognised lower risk forms of secured financing activity. For example, lending which is facilitating client and firm short positions could be fully netted down; excess cash reinvestment should be fully excluded on the basis that it facilitates



liquidity within the market, and matched book activity could be treated on a more conservative basis, in line with the specific aims of the Committee.

For example, a bank engages in EUR 300mn of reverse repo: EUR 100mn is covering client and firm short positions, EUR 100mn is excess cash invested in government bonds and the remaining EUR 100mn is matched book repo activity (where funds are raised from an insurer and on-lent to a hedge fund). Proposed treatment:

- Short position: 100mn client/firm short netted by 100mn reverse repo = 0mn exposure
- Excess cash investment on Level 2b bonds: 0% requirement
- Match-book activity – multiplication of 50% factor by the LCR haircut.

We appreciate the Committee's valid aim of limiting prudentially regulated banks' exposure to the less regulated areas of the financial sector, but we respectfully disagree with the approach taken. Applying a 50% stable funding requirement to short-term (less than six month) secured financing transactions with non-bank financial counterparts will radically alter the functioning of the market. The secured financing market is of paramount importance to the functioning of the economy, and as such, policy impacting this area needs careful and thorough analysis. The importance of the secured funding market is recognised in the calibration of the LCR, which clearly sets out to incentivise banks to fund on a secured basis, rather than on an unsecured basis. It is therefore inconsistent and counterintuitive that the most recent calibration of the NSFR should not recognise this distinction.

Definition of 50% RSF exempt institutions:

We appreciate that the Committee revised its original thinking of applying a 50% RSF to all short term loans (with less than 6 month maturity), specifically due to the role of banks in the transmission of monetary policy. However it is important to recognise that not only banks fulfill this role. Broker-dealers and insurance companies also facilitate monetary policy, the latter being large suppliers of sovereign bonds to enable market making. We therefore suggest the 0% RSF category is extended to these counterparties. Furthermore, reverse repos under a Central Clearing Counterparty with a maturity less than six months also attract a 50% RSF requirement. This is a highly conservative assumption and seems to directly contrast with other prudential objectives of encouraging central clearing. We therefore suggest the 0% RSF category is further extended to CCPS.

Secured financing collateral recognition:

Underlying collateral quality is of greater importance in secured financing transactions (particularly in an EMIR and Dodd-Frank world), than the counterparty type. Counterparty risk is a more dominant risk indicator for unsecured wholesale funding. Creating asymmetry between RSF and ASF on a simultaneous reverse repo and repo transaction, against L1 HQLA makes little sense given the low-risk nature of this transaction. It should be recalled that these are predominantly short dated transactions (average maturity of one or two weeks) which are frequently unwound prior to the trades maturing.

Maintaining a 50% RSF (with 0% ASF on the other side) for reverse repo activity secured by L1 HQLA with non-bank financials will drastically increase costs. Whilst the exact increase in cost will vary according to a banks' cost of financing, the cost of overnight trading in US Treasuries is expected to increase by over 800%. Buyers of government paper who finance on repo would need to cover that cost or exit the market. Therefore the price and volume of sovereign financing will be materially and adversely impacted. This is also damaging in the context of LCR management and who would provide liquidity against such assets at time of stress.



Whilst we appreciate the committee's intention to encourage prudent funding via asymmetrical treatment in the NSFR, the current 50% calibration for reverse repo transactions with non-bank financials is overly conservative and potentially damaging. We suggest that a better method would be to reduce the RSF according to the collateral quality reversed in under the transaction. We therefore prefer the approach as suggested by the Institute of International Finance to multiply the 50% requirement by the appropriate LCR haircut. For example the calculation for a Reverse Repo with a non-bank insurer on level 1 collateral = $50\% * 5\% = 2.5\%$.

It is important that the Committee take into account the linkage between reverse repos and short positions which are essentially "self financing". Reverse repoing of short positions will by definition often result from providing liquidity to a host of clients such as central banks and pension funds who are putting excess cash to work in either cash or repo markets. In these particular scenarios, an imbalance of ASF/RSF is unjustified as the bank is at all times cash neutral.

Packaged and Linked structures:

As mentioned in the introductory comments the proposed NSFR treats ASF and RSF independently. There is a consequent lack of consideration for activities where the existence of assets and liabilities are intrinsically linked (i.e. one cannot exist without the other) – thus rendering them liquidity neutral.

In order to treat these products according to the liquidity stability that they provide, certain categories of activity should be treated on a 'packaged' or 'ring-fenced' basis. These activities are designed for client facilitation rather than banks taking an outright risk position. In doing so, a bank typically enters into an agreement (e.g. a swap/forward/secured financing or other agreement on a main index equity) with a client whereby it will pay the client the exposure returns according to the performance of the specific underlying. More detail can be found in Annex 1.

Similar structural, legal and operational provisions and market practices are in place for other instruments such as futures, options, forwards and other Inventory Trading and ETF facilitation operations. These ensure that a bank can divest itself of a position without suffering a loss or being left with a residual risk position which requires funding. Further detail can be found in Annexes 3 and 4.

Reverse repos/stock-borrows (irrespective of counterparty) should first be matched against shorts. Stock borrows/reverse repos are driven by the liability side (such as short covering) and there is no risk of an asymmetrical unwind. They should therefore be given special consideration when seeking to create asymmetry for secured funding transactions with non-bank financials.

A possible solution for addressing issues caused by such asymmetry can be solved via the proposal below. This illustrates possible avenues the Committee could use to define or identify 'Linked Transactions'.

Proposal: *Trading book activities where banks enter into outright positions and intrinsically linked equivalent and equal value risk mitigation positions for client facilitation or market making purposes, shall be deemed to have matching ASF and RSF (zero) values thus automatically satisfying NSFR requirements.*

Linkage between outright positions and risk mitigation positions shall be deemed met if the bank can demonstrate to its supervisor's satisfaction that these are correspondent and equivalent in value both during the life of the transaction and upon unwind via one or more of the following measures:



- i. *Legal or structural provisions allowing the bank to divest itself of the positions without suffering a loss (see Annex 3 for examples of such provisions)*
- ii. *Trading operation practices (such as market auctions) allowing the bank to minimize exposure difference between the hedge unwind and the outright position (see Annex 4 for examples).*
- iii. *Regulatory requirements that restrict a bank's ability to maintain one of the intrinsically linked positions in isolation (e.g. 15c3, UCITS and MIFID regulation etc.).*
- iv. *Other structural provisions protecting the bank's liquidity requirements in the transaction.*

Prime Brokerage/Margined Lending:

The NSFR, while calibrated to encourage prudent management of funding, is focused on a business-as-usual market environment. Margin lending transactions in such business-as-usual market environments will have RSF requirements approaching zero. It is important to note that the treatment of prime brokerage receives a very conservative assumption within the LCR stress scenario. Whilst this may be representative of the tail-end risk of the prime brokerage business unwinding in a stress, from a longer term funding perspective a 50% RSF requirement on margin-lending is extremely punitive.

Since margin loans are heavily over-collateralised, the bank extending the margin loan has a pool of securities to use for funding purposes or other permissible activities. For example, where a bank extends \$100 through a margin loan, the bank may receive in return \$140 of equity securities, which the bank could then use in repurchase transactions (to fund the original margin loan to the client) or use in firm or client short transactions. This eliminates the need to purchase or borrow such securities, reducing funding obligations. In case of default of the counterparty receiving the loan, the bank can enforce security clauses in the agreement which allow it to liquidate the equity securities in the market, making itself whole on the amount loaned out. This ensures that the bank does not incur any loss and also provides stability to the bank's funding of the transaction. Numerous examples were seen during the 2008/2009 stressed market scenarios where these clauses were fully enforced thus ensuring no loss. Market risk is managed on an on-going basis.

Under the NSFR, margin loans would receive the same treatment as uncollateralised extensions of credit. We believe that applying the same RSF factor to both categories of loans fundamentally distorts the funding and risk profiles of these two categories of transactions.

LCR Ineligible Assets:

The Committee generally takes the view that LCR ineligible assets should automatically default to a very high RSF factor. Given that LCR represents a 1 month stressed ratio, and the NSFR is intended as a structural ratio, this assumption is unjustifiably punitive. In particular, non-HQLA securities have varying degrees of liquidity based on their individual characteristics.

For example, the NSFR proposal does not fully reflect the distinction between main index listed equity instruments and non-listed/less liquid instruments. Consequently, there may be cases where liquid Main Index equity instruments which are not eligible for the LCR such as financials, or which are excluded due to price volatility criteria not being met, are given a more punitive measure than less fungible debt instruments².

Suitability of equities as a source of liquidity

² Major index equity markets have exhibited transaction volumes and turnover similar to Level 1 and Level 2 assets in both Business As Usual (BAU) and stressed conditions. Turnover of major index equities compare favourably with some fixed income markets during both BAU and stressed periods. [Annex 5]



Whilst in the LCR, Main Index equities being categorised as level 2b assets makes sense (reflecting their liquidity during a 30-day stress period), applying similar categorisation under the NSFR does not reflect the liquidity of these assets under normal conditions. This has been acknowledged to some extent in the NSFR, through the lifting of operational requirements and the cap on Level 2B unencumbered assets present in the LCR. However we do not believe these differences are sufficient to reflect the different objectives of the two measures. We believe that Prime Equities meet the most important criteria (transparency, market structure and depth, resilience in stress and risk management)³ for liquid asset attributes specified for many of the level 1 and level 2A assets in the BCBS framework which require either a 5% or 15% ASF.

Higher ASF Factor for Operational Deposits

Operational deposits, as defined by the Basel LCR, will receive an ASF factor of 50% regardless of the counterparty type. We appreciate that operational deposits are now recognised as a core source of stable funding within the NSFR. This aligns the ratio with the recognition banks attribute to operational deposits, as a source of stable funding beyond a one year horizon. However, we believe that an ASF factor above 50% would be appropriate for such highly stable deposits. Particularly when we consider that non-operational corporate (non-financial) deposits receive 50% ASF and operational deposits are an even more stable source of funding.

This treatment would be particularly justified in light of supervisors' individual approaches to ensuring a strict definition of operational functions is adhered to, in banks calculations of internal funds.

We would like to point out that the current proposed ASF for operational funds may discourage a bank from attracting the kind of client bank deposits that are reliable even in times of stress. A highly operational banking relationship leads to reliable core deposits even when stress situations occur and these deposits are also a reliable source of funding during normal course of business over the 12 month NSFR horizon.

Derivatives

We welcome the Committee's consideration of changes for dealing with derivatives and other assets/liabilities. We believe that the current suggested NSFR treatment of derivatives is inappropriate. The vast majority of centrally cleared and OTC derivatives are margined on a daily basis. This collateral significantly enhances the liquidity value of the transactions and, from a funding perspective, helps to keep the positions fully self-funded. In view of this prudent risk management of derivatives and impending regulations with respect to collateral management the European Banking Federation (EBF) recommends the following treatment with respect to variation margin:

- *Step 1: calculate the net derivatives payables and net derivatives receivables in accordance with ISDA agreements (or similar) where possible*
- *Step 2:*
 - *2a: calculate the net residual derivative payables amount by deducting the fair value of any variation margin posted from the payables amount calculated in step 1.*
 - *2b: calculate the net residual receivables amount by deducting the fair value of rehypothecable variation margin received from receivables amount calculated in step 1.*

³ When Lehman defaulted, major index equity liquidity value increased, as the increase in volume more than offset the drop in prices. Although volatility increased, and markets fell appreciably in the immediate aftermath of Lehman, this period was characterized by strong volumes, with several short rallies providing opportunities to reduce positions. [Annex 6]



- *Step 3: The amounts calculated in step 2a shall be subtracted from the amount calculated in step 2b*
 - *For residual net derivative payables, a 100% ASF factor should apply*
 - *For residual net derivative receivables, a 100% RSF factor should apply*

Initial Margin on the other hand, should be recognized symmetrically (e.g. equal ASF/RSF assumptions), depending on the maturity of the transactions they relate to:

- *0% RSF/ASF for transactions with a maturity below 6 months*
- *50% RSF/ASF for transactions with a maturity between 6 to 12 months*
- *100% RSS/ASF for transactions with residual maturity beyond 12 months.*
- *if the received initial margin is not re-hypothecable, ASF is set to 0%*

Finally, excess collateral should be considered specifically:

- *collateral that is in excess of contractual agreements should receive a 0% RSF/ASF*

RSF for Off-Balance Sheet Trade Finance Instruments

As with on-balance sheet trade finance lending, off-balance sheet Trade Finance (TF) instruments exhibit similar short-term, low risk, self-liquidating characteristics which differentiate them from other types of financial products. Clients have no incentive to refinance such transaction on a one-year basis, as these exposures naturally relate to much shorter periods and are directly connected to underlying real-market transactions. We therefore believe that these off-balance sheet Trade Finance instruments should receive an appropriately low RSF.

In this context, we believe a reasonable and realistic RSF for contingent TF exposures in the region of 0-5% for TF off-balance sheet obligations to be most appropriate.

RSF for TF Loans

We are concerned that the scope of paragraph 32 will negatively impact the supply of short-tenor on-balance sheet TF loans used to support international trade flows. TF loans have three main characteristics which differentiate them from standard corporate loans:

- a. **Short tenor:** TF related loans typically have loan tenors between 30-180 days. Setting a 50% RSF for these short-term assets, assumes that they exhibit the same term funding requirements and behavioral rollover assumptions as a corporate loan with initial tenor above six months.
- b. **Self-liquidating:** There is no automatic rollover for funded TF loans, as loans are considered on a transactional basis. TF loans are contractually linked to an underlying shipment or trade.
- c. **Low risk:** TF lending is as low risk with high recovery rates due to the possible sale of underlying goods. This differs from the credit quality of maturing commercial loans offered on either an unsecured basis or secured on illiquid fixed assets

As the underlying trade transactions of TF loans are discrete, short term events, we believe that the 50% RSF is inappropriate. It will increase the cost, and reduce availability of this vital source of finance made that support businesses' import and export requirements. We believe that it would be appropriate to consider a lower RSF than 50% for any TF lending with residual maturity below 6 months.



Annexes

Annex 1: How linked or packaged products operate

In order to provide for the performance of the agreement to the client, the bank needs to buy an equivalent amount of the main index equity underlying referenced in the agreement with the client. The bank will consequently go long the security as a “hedge” to a synthetic agreement (e.g. a swap forward etc.) written to the client.

The vast majority of these types of facilitation trades are documented under market standard agreements (e.g. ISDA, GMSLA and GMRA formats) which contain operational, legal and structural provisions ensuring that the asset side of the transaction cannot exist without the liability side.

In the specific case of Total Return Swaps (documented under ISDA – [further detail provided under Annex 3]), the following provisions are generally adopted.

- The client posts initial margin which ranges based on multiple factors - but is typically 20-30% of the notional. (This should be treated as ASF associated with the linked/package structure)
- Price risk of the cash equity hedge is mitigated by the client's requirement to post variation margin. Variation margin mitigates the risk that the value of the hedge in the secured funding market will change through price depreciation
- On expiry of the swap, the equity hedge is liquidated. The market price on the liquidation is fully passed through to the client.

Annex 2: Further considerations for margin loans

We believe that a realistic and accurate RSF measurement for margin loans should consider:

- the fact that margin loans are always over-collateralised
- the specific collateral quality posted by the margin loan borrower
- margin loans are extended against a portfolio of securities, taking into account the client's entire portfolio of long and short positions, rather than a single extension of credit against a single security
- the ability of the bank to use margin loan collateral to meet other requirements of the bank, such as using securities to cover firm or client shorts, thereby relieving the bank from the need to enter into other transactions to obtain securities; and
- the extensive regulation of margin lending transactions, which, among other areas, ensures that margin loans are always fully collateralised.

As clients reduce their long positions and repay the loans, the bank is able to simultaneously unwind the funding transactions that support the margin lending. In this sense, the “business as usual” funding profile of margin lending is not significantly disrupted in a crisis, since the bank's funding needs will likely drop in an orderly manner as clients reduce their long exposures.

Annex 3: Overview of typical legal provisions



Cash Settled Swaps: Further detail of typical legal provisions that provide Price, Liquidity and Funding risk protection upon unwind of cash settled swaps.

Under the Portfolio Swap Agreement (PSA) for cash settled swaps, the firm has the ability to pass any hedge unwind risk to the counterparty in most single stock (portfolio) cases and most Index cases. This is provided through a combination of protection clauses available in the legal documentation (e.g. Termination Date Adjustment, Final Price, Unwind Expenses and Market Disruption).

The section below summarises the main legal provisions available under both close-out scenarios which lead the firm to be materially price risk immunised for cash settled swaps under a PSA.

1. Termination Notice Provisions

a. Scheduled termination date

Termination happens at final Termination Date. The firm has the ability to move the final Termination Date if it cannot affect unwind of the hedge:

"[...] if the firm is unable to acquire, establish, re-establish, substitute, maintain, unwind or dispose of any transactions or assets it deems necessary to effect such termination or realise, recover or remit the proceeds of any such transactions or assets [...], it may, in whole or in part, move the Valuation Date, Termination Date and Cash Settlement Payment Date forward to the nearest dates as it is able to make such Termination Adjustments."

b. Optional Early Termination Process:

- i. Counterparty gives the firm termination notice
- ii. Notice period to be required for the counterparty to give notice.
- iii. The firm begins the un-wind of the hedge as soon as the notice is received.

2. Final Price determination

a. Final Price is per ISDA equity definitions and is typically one of:

- i. VWAP
- ii. Market Close
- iii. "Objective measure" determined by the Calculation Agent (the firm). (I.e. the market price at which the hedge is exited).

The firm has a "catch-all" provision for non-VWAP. If the Calculation Agent (the firm) determines that the full size cannot be unwound, **the Final Price is the weighted average of what can be executed on subsequent days.**

In addition to the Standard Equity definitions, the following also apply:

- i. VWAP for final Valuation Date. There is a small risk that the executed VWAP does not match the official VWAP. Typically, a few pennies on notional. Occasionally, the firm may commit to unwind a % of ADTV on each day which protects against this slippage.
- ii. **Unlisted** – best bid (client long)/offer (client short) respecting full size.
- iii. **Other** – official exchange close



- iv. **Index/Future** – official exchange closing price based off equity definitions. This is where the firm may take some economic risk between the hedge and swap execution

3. Unwind Expenses

The Expenses sections provides for the firm a right to adjust the unwind proceeds to reflect costs in unwinding the hedge.

“In determining the Final Price, Cancellation Amount, Payments on Early Termination or any other settlement amount, such amount shall[...] be adjusted to account for all costs, charges, fees, accruals, withholdings, expenses, fees and settlement delays or failures (“Expenses”) incurred by the Hedging Party in unwinding, establishing or re-establishing its hedge. In determining the Expenses, the Calculation Agent may take into account any factors it deems appropriate, including without limitation (a) the amount and timing of payments or deliveries that the Hedging Party would receive, (b) whether a hedge includes non-marketable assets (which may be valued at zero) and (c) whether the Hedging Party would be subject to contingent liabilities, including any requirement to return any distributions or otherwise make payments. In the event that a Transaction has been terminated and settled and the Hedging Party (or any of its hedging counterparties or their agents or affiliates) subsequently incurs a liability on any hedges relating to such Transaction, the Non-Hedging Party shall indemnify the Hedging Party with respect to such liability.”

4. Market Disruption Events

Disruption Events affect swaps that are struck with Termination provisions greater than one year. These are when something goes wrong and handled by the Determining Party which is always the firm (except very rarely). These follow ISDA and include:

- Nationalisation, Insolvency, Delisting
- Index Adjustments – Calc Agent Adjustment / Cancellation
- Change in Law – illegality / increased cost. Consequence allows the firm to Terminate on Cancellation Amount
- **Hedging Disruption** – can elect to terminate at Cancellation Amount.
- Increased Cost of Hedging – if there is an increased cost on the firm hedge, the firm can call it and client can a) accept re-price, b) pay fixed amount or c) terminate. Termination is on **Cancellation Amount**.
- Increased Cost of Stock Borrow
- Loss of Stock Borrow

The Cancellation Amount includes a “loss” concept under ISDA which is stronger than simply passing through out cost of unwinding the hedge.

Annex 4: Further detail of Market Operational Provisions

General market trading practices providing liquidity and funding risk protection for equity products. Typical Equities operational trading practices help ensure linkage and minimise liquidity and funding risk impact. The below section provides an overview of typical procedures available.



- Market-on-Open Orders (MOO):

Most markets have single-price auctions at the beginning ("open") and the end ("close") of regular trading. An order may be specified on the close or on the open, then it is entered in an auction but has no effect otherwise. There is often some deadline; for example, orders must be in 20 minutes before the auction. They are single-price because all orders, if they transact at all, transact at the same price, the open price and the close price respectively.

Combined with price instructions, this gives market on close (MOC), market on open (MOO), limit on close (LOC), and limit on open (LOO). For example, a market-on-open order is guaranteed to get the open price, whatever that may be.

- Must Be Filled (MBF):

"Must-Be-Filled Order" or "MBF Order" means a program trade that offsets a pre-existing expiring derivatives position that is traded in accordance with Exchange Requirements governing such trades.

- The Must Be Filled (MBF) Session:

The MBF (Must Be Filled) Session takes place on the Thursday immediately before the option expiry day. Option expiry day always occurs on the third Friday of every month so the MBF session is usually the third Thursday of the month unless the first day of the month was a Friday in which case the MBF session takes place on the second Thursday of the month (directly preceding the third Friday of the month). The MBF Session occurs during the Extended Hours Trading Session (4:15 pm-5:00 pm).

The MBF session is provided for entering MBF orders to offset expiring derivatives positions. For example, a trader must enter an MBF order when that trader has written an uncovered call to buy 5000 of ABC @ \$10.00 that will be exercised because ABC is currently trading at \$12 (i.e. - the call is in the money). The trader who wrote the call has an obligation to deliver the stock at \$10 when it is exercised upon expiry and since the call was not covered the trader who wrote the call must buy the stock to be in possession of the underlying security (5000 shares of ABC) upon expiry. To ensure possession of the stock the call writer must enter an MBF (Must Be Filled) order to purchase 5000 ABC @ "mkt". That order will then trade at the market opening on expiry day.

On the expiry day all the MBF orders are treated like pre-open market orders and are thus guaranteed a fill at the market's calculated opening price. The MBF orders are visible to market participants but the MBF condition on those orders is not public. Only the net MBF imbalance for a given stock is made public. This publicity ensures that market participants have a chance to respond with enough liquidity to satisfy the MBF orders. Imbalances less than 5000 shares are not publicised. A buy imbalance means there are excess MBF buy orders and a sell imbalance means there are excess MBF sell orders.

Traders and Trading Services staff can enter, change or cancel MBF Orders during the MBF session (the day before expiry) but cannot enter, change or cancel an MBF order on the expiry day. MBF orders must be in board lot multiples.

- Exchange for Physical (EFPs)



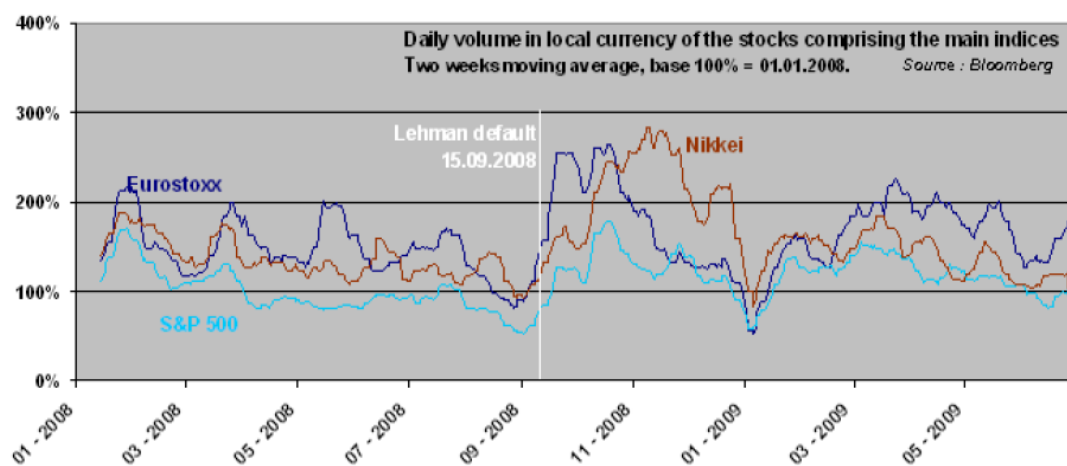
An EFP (also referred to as "basis") involves simultaneous transactions in the cash and futures markets.

In an EFP, one party buys an acceptable cash market position and simultaneously sells the futures contract while the other party sells this acceptable cash market position and simultaneously buys this futures contract. Acceptable cash components are described in the procedure prescribed by MX.

The parties to an EFP privately negotiate the price of the futures position and the value of the cash commodity to be exchanged. Once the price and quantity of the futures have been set by the parties and an EFP has been accepted for clearing, the futures margin and delivery or settlement obligations of the parties arising from an EFP are not distinguishable from those executed competitively on the trading platform.



Annex 5:



Annex 6:

