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Memorandum

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Eurozone Exit: Redenomination Risk and the Impact on Equity Derivatives

1 Eurozone Exit

As part of ISDA's continuing discussions with its members in relation to the Eurozone crisis, and in particular ISDA's Eurozone Contingency Working Group, ISDA has arranged for a number of product specific papers to be produced to assist members in their Eurozone contingency planning in the event that an EU member state were to exit from the Eurozone (the "**Exiting State**"). The papers highlight various issues that may arise as a result of redenomination legislation, capital and exchange controls and unscheduled bank holidays in relation to an Exiting State.

This paper discusses the 2002 Equity Derivatives Definitions (the "**Equity Definitions**").

One of the challenges in analysing the effects of a Eurozone exit is that there is no legal mechanism for such an exit in existing EU legislation. It is not clear to what extent such an exit would be consensual or unilateral, or would or would not be supported by EU legislation. For the purposes of the analysis in this paper, however, the following assumptions have been made:

(a) the Exiting State passes a law (the "**New Currency Law**") redenominating all obligations owed by and to it from the Euro into a new currency (the "**New Currency**");

(b) the Exiting State exits without EU consensus and over-arching EU legislation recognising the redenomination of debts effected by the Exiting State's New Currency Law (the "**Exit**");

(c) the Exiting State introduces new capital and exchange controls; and

(d) the Exiting State designates additional bank holidays for the purposes of accommodating the redenomination.

Parties should note that this guidance relates to transactions under an ISDA Master Agreement in relation to which the Equity Definitions have been incorporated. To the extent transactions have incorporated different or additional definitions, different issues and a different analysis may apply.

2 Executive Summary

- The general expectation is that shares of companies incorporated in the Exiting State will be redenominated into the New Currency under the New Currency Law.
- The effect of an Exit and the consequential redenomination of a company's share capital on an equity derivative transaction will depend, in part, on the terms of the relevant contract. In the case of derivatives that reference an equity index, the effect will also depend on the rules of the relevant index.
- Whilst obligations expressed to be payable in "euro" (as defined in Section 1.34 of the Equity Definitions) are unlikely to be redenominated, it is possible that the Exiting State will introduce currency controls which prohibit such payments.
- Other terms of derivative contracts may also be sensitive to a redenomination of the underlying shares – for example, triggers, thresholds and pricing which are expressed by reference to the traded price of the shares or indices that are subject to redenomination. The better view is that, for the purposes of the relevant determination, the New Currency would be converted into euro at the exchange rate prevailing on the date of determination (and not at any fixed conversion rate specified by the New Currency Law).
- Whether or not an Exit will give rise to a Disrupted Day under Article 6 (*Valuation*) or an opportunity to adjust the terms of the contract pursuant to an Index Modification or a Potential Adjustment Event under Article 11 (*Adjustments and Modifications Affecting Indices, Shares and Transactions*) or an Extraordinary Event under Article 12 (*Extraordinary Events*) will depend on the circumstances of the Exit. These provisions will require review at the time of any such Exit.
- Parties are advised to check the terms of relevant transactions in advance of any Exit and consider the likely consequences. To the extent that an Exit may alter the economic effect of the transaction or lead to potential ambiguity as to its terms, parties may wish to renegotiate particular provisions in advance of any such Exit.
- Parties should focus their review on equity derivatives transactions where (i) the counterparty is incorporated, domiciled or resident in a member state at risk of an Exit; or (ii) the underlying subject matter of that transaction is one or more shares of companies incorporated in such a member state or an index that includes any such shares.

3 Equity Derivatives

This memorandum considers issues that may arise in respect of equity derivative transactions that are documented under the Equity Definitions. It should be noted, however, that this memorandum does not address issues that may arise more generally in respect of the provisions of an underlying ISDA Master Agreement.

Terms used, but not otherwise defined in this memorandum will have the meanings given to such terms in the Equity Definitions. References to a “Section” are to the relevant section of the Equity Definitions.

Whilst this memorandum focuses on issues raised by the Equity Definitions, market participants should also be aware that there may be consequences for other products that reference euro denominated assets or liabilities that are subject to redenomination under the New Currency Law – for example, total return swaps that, rather than referencing specific calculated cashflows, reference amounts actually or hypothetically received on an underlying asset. Thus, a total return swap over a domestic bond would, in the event of a redenomination of that bond, be at a higher risk of redenomination itself were the Floating Amounts and Final Exchange Amounts expressed as a function of amounts paid or received under the bond, rather than as a separate Euribor Floating Rate and a euro Final Exchange Amount.

4 Effect on Equity Reference Assets

4.1 Shares

The general expectation is that shares of entities incorporated in the Exiting State will be redenominated into the New Currency under the New Currency Law. This is consistent with the fact that shares (unlike other securities, such as bonds and warrants) are creations of statute and governed by the companies legislation of the jurisdiction of incorporation of the relevant company. A consequence of this is that the *lex monetae* of a company’s share capital is likely to be that of the jurisdiction of incorporation (although some jurisdictions do permit share capital to be denominated in different currencies).

4.2 Indices

The position is slightly more complicated in respect of indices that contain any such shares, as indices are also subject to related index rules. Index rules are typically a set of stand alone rules that are not established under a contract between parties. An index sponsor is therefore generally free to amend the index rules unilaterally, including in order to account for any redenomination.

In the first instance, it is necessary to consider the impact of the Exit on the shares comprised in the index (which, in the case of issuers incorporated in the Exiting State, are likely to be redenominated as outlined above). Where such shares are redenominated, it is then necessary to consider the impact on the index itself, which will be primarily driven by the relevant index rules.

There are three broad categories of index to consider:

(i) those that reference euro-denominated shares having more than one jurisdiction of incorporation (e.g. Euro Stoxx 50) – here the index sponsor may choose to amend the rules to accommodate the redenomination by allowing the inclusion of non-euro denominated shares so as to avoid a rebalancing, with a conversion of the relevant share prices into euro, or may choose to exclude those shares from the index because they are no longer denominated in euro;

(ii) those that reference euro-denominated shares having only one jurisdiction of incorporation (e.g. DAX) – here the index sponsor will very likely accommodate the redenomination by redenominating the entire index; and

(iii) those that reference euro and non-euro denominated shares (e.g. Stoxx Euro 50) – here it is likely that the index rules will already accommodate a redenomination by virtue of recognising shares denominated in different currencies or, if not, will be amended in order to do so[1].

Finally, it is necessary to consider the impact on derivatives contracts that reference any such index. The analysis in this regard will depend on the terms of each such contract and whether the redenomination of the index (or, indeed, one or more of the underlying shares) will trigger related adjustment or modification events.

5 2002 Equity Derivatives Definitions

By default, the Equity Definitions only provide for the adjustment of the terms of a Transaction upon the adoption of the euro (see Section 11.3 (*Adjustments to Certain Share Transactions and Share Basket Transactions in European Currencies*)) but do not envisage the exit of a Eurozone member state from the Eurozone. There are therefore a number of separate provisions that parties will need to consider in the context of an Exit.

It is also common for the Equity Definitions to be subject to a high degree of customisation by parties, either on a bespoke basis or pursuant to one of the master confirmation agreements or general terms confirmations published by ISDA. This variation in terms makes it more difficult to generalise about the impact of an Exit on the equity derivatives market as a whole.

Where the parties have specified the euro as the currency of a particular payment obligation under a Transaction, such as the Settlement Currency under Section 1.33 (*Settlement Currency*), it is possible that such obligation may be redenominated into the New Currency of the Exiting State depending on, amongst other things, the New Currency Law, the intention of the parties when they entered into the Transaction (as evidenced by the Confirmation), the place of any such payment, the governing law of the Transaction and the existence of other currency related terms. However, where the relevant Transaction is governed by English or New York law (which are the two standard governing laws of the ISDA Master Agreement), there are no bespoke currency related terms and the definition of “euro” from Section 1.34 (*Euro*) is used, the prevailing view is that such payment obligation will not be redenominated.

Where parties have chosen to amend the default definition of “euro”, the analysis may be different and, where the revised definition refers to the currency of a particular state, may be subject to an increased risk of redenomination. Where payment obligations are redenominated, the payment dates may also be adjusted due to a change in the related “Currency Business Day” (Section 1.32 (*Currency Business Day*)). See, for example, “Prepayment Date” under Section 4.2(c) (*Prepayment Date*) and “Final Exchange Date” under Section 5.6 (*Final Exchange Date*).

Euro denominated payment obligations may, however, give rise to separate issues. It is possible that, in the event of an Exit, parties incorporated in the Exiting State may be subject to

1 References to Euro Stoxx 50, DAX and Stoxx Euro 50 are by way of example only. We have not reviewed the index rules of each such index for the purposes of this memorandum.

exchange controls which prohibit, or restrict their ability to make, payments in euro.

A detailed analysis of the continuity of contracts in the event of an Exit is outside the scope of this memorandum, however, the consensus view is that, in the absence of an express provision in the contract, a redenomination is unlikely to lead to a right to terminate (whether through the doctrine of frustration or otherwise).

5.1 Pricing, Triggers and Thresholds

There are a number of terms in the Equity Definitions that refer to the current listed, traded or quoted price of a particular share or index – examples include the Relevant Price, the Final Price and the Settlement Price. Redenomination of a share or index will therefore have an immediate impact on payment obligations that are determined as a function of these terms.

In some cases, however, redenomination may result in a calculation that no longer makes sense. For example, cash settled Option Transactions compare the Strike Price of the option with the Settlement Price of the relevant share or index. Where that share or index is redenominated during the term of the transaction, the methodology for determining the Strike Price Differential set out in Section 8.3 (*Strike Price Differential*) would require a comparison of a euro denominated Strike Price with a price published on the relevant exchange in the New Currency – a calculation which would require the direct comparison of two different currencies. This issue also arises in respect of a number of other provisions that may compare prices or levels pre and post redenomination – including the Rate of Return under Article 5 (*General Terms Relating to Equity Swap Transactions*) and the Averaging provisions under Article 6 (*Valuation*).

A similar issue arises in respect of share price or index level thresholds or triggers that are defined by reference to the current share price or index level prior to any redenomination. Typically, the events or circumstances which constitute Knock-in Events or Knock-out Events under Article 1 (*Certain General Definitions*) would be defined to include these types of threshold.

Where a calculation seeks to combine amounts denominated in euro with amounts denominated in the New Currency or a threshold or trigger is expressed in euro whilst the quoted share price or index level is redenominated into the New Currency, it is unclear how, in the absence of express provision in the contract, such mismatches will be resolved. The better view, however, is that, for the purposes of the relevant determination, the New Currency would be converted into euro at the exchange rate prevailing on the date of determination (and not at the fixed conversion rate specified by the New Currency Law).

Finally, there is a category of terms that, whilst they continue to refer to a price or level for the share or index expressed in euro, ultimately rely on a determination made by a third party. In these instances, it is likely to become a matter of construction as to whether the relevant provision continues to operate as intended post redenomination. An example of this type of provision is Automatic Exercise under Article 3 (*Exercise of Options*), which seeks to establish whether a particular Option Transaction is "In-the-Money" by comparing the Relevant Price with the price or level at which the Related Exchange would exercise a similar option with the same Strike Price. In this example, the analysis would depend on how the Relevant Exchange chooses to treat the exchange-traded contract post redenomination. This may mean that, following an adjustment made by the Relevant Exchange, such contracts become exercisable by reference to a price in the New Currency, however, as discussed above, the Equity Definitions do not themselves provide this solution.

5.2 Events and Adjustments

Many market participants will be interested to know whether a redenomination will result in the opportunity to make a corresponding adjustment to the terms of a Transaction pursuant to either the occurrence of a Disrupted Day under Article 6 (*Valuation*), an Index Modification or a Potential Adjustment Event under Article 11 (*Adjustments and Modifications Affecting Indices, Shares and Transactions*) or an Extraordinary Event under Article 12 (*Extraordinary Events*).

5.2.1 Disrupted Days

The events that may give rise to a “Disrupted Day”, being a “Trading Disruption”, an “Exchange Disruption”, an “Early Closure” or a failure to open, each refer to issues arising in respect of the relevant Exchange, whether it be a restriction or suspension of trading, a disruption of the ability to effect transactions, an early closure or a failure of the relevant Exchange to open for trading during its regular trading session. Although these events would not occur as a direct consequence of a redenomination, it is difficult to predict with any certainty whether one or more of these events will arise in conjunction with an Exit. They may arise due to operational issues, resulting from the change of currency, or they may arise due to particular controls imposed by the government of the Exiting State or the declaration of an impromptu public holiday. As such, these events would need to be reviewed as and when any such Exit occurred.

5.2.2 Index Modification

As discussed in paragraph 4.2 above, in relation to certain indices the index sponsor may amend the index rules following an Exit.

Under Section 11.1(b) (*Adjustments to Indices*), an announcement by the index sponsor of a material change to the formula for, or the method of calculating, the index (or any other material modification of the index) will, subject to certain exclusions, constitute an “Index Modification”.

“Index Modification” excludes modifications that are already prescribed by that formula or method to maintain the index in the event of changes in constituent stock and capitalisation *and other routine events*. This means that whether a change to the index constitutes an “Index Modification” will depend, in part, upon whether or not such modification is consistent with the existing index rules (i.e. whether the rules already envisage and provide for an adjustment or modification if a share ceases to be denominated in euro and, if they do, whether this could be described as a routine event).

5.2.3 Potential Adjustment Events

It is unlikely that the redenomination of shares will have a dilutive or concentrative effect on their theoretical value for the purposes of Section 11.2(e). It is not expected that one of the remaining events in that provision would occur as a direct consequence of a redenomination.

5.2.4 Additional Disruption Events

In addition to an Index Modification, discussed above, the following Additional Disruption Events may also occur as a result of a redenomination:

(i) Change in Law

Whilst it is unlikely that it will become illegal to hold, acquire or dispose of the shares issued by entities incorporated in the Exiting State as the consequence of an Exit (Section 12.9(a)(ii)(X)), it is possible that an Exit will result in a "materially increased cost" of performing a party's obligations under a Transaction. If this is the case, the parties to the relevant Transaction may, where Change in Law has been specified as applicable in the relevant Confirmation and limb (Y) of the definition of "Change in Law" has not been disapplied, be able to terminate the Transaction under Section 12.9(b)(i).

(ii) Hedging Disruption and Increased Cost of Hedging

Where an Exit results in a Hedging Party being prevented from entering into transactions that it deems necessary in order to hedge the *equity price risk* of entering into and performing its obligations under a Transaction (Section 12.9(a)(v)) or would incur a materially increased cost[2] in dealing with such hedge positions[3] or is prevented from realizing proceeds of such hedge positions (Section 12.9(a)(vi)), this would constitute a "Hedging Disruption" or "Increased Cost of Hedging", respectively.

(iii) Loss of Stock Borrow and Increased Cost of Stock Borrow

The occurrence of either a "Loss of Stock Borrow" (Section 12.9(a)(vii)) or an "Increased Cost of Stock Borrow" (Section 12.9(a)(viii)) as the result of an Exit will similarly depend on whether the events have been selected by the parties as part of the terms of the relevant Transaction and whether the Exit has prevented the Hedging Party, after using commercially reasonable efforts, from borrowing (or maintaining a borrowing of) the relevant number of shares with respect to a Transaction at a rate equal to or less than the Maximum Stock Loan Rate or would mean that the Hedging Party would incur a rate for borrowing the relevant shares that exceeds the Initial Stock Loan Rate (although, we would note that the illiquidity or increased cost may arise for any reason and need not be as a direct result of the event itself).

5.3 Equity Notional Reset

Where parties have specified "Equity Notional Reset" in the relevant Confirmation, the Equity Notional Amount of the Transaction will be adjusted in accordance with Section 5.10 (*Equity Notional Reset*) following each Cash Settlement Payment Date to include the Equity Amount calculated for such date. This will be problematic in the event of a redenomination of shares or indices because the existing Equity Notional Amount in respect of the Transaction will be denominated in euro, whilst each Equity Amount calculated post redenomination will be denominated in the New Currency. As highlighted in respect of similar pricing issues in

[2] Including tax, duty, expense and fee (other than brokerage commissions).

[3] Where such positions hedge the equity price risk, rather than the FX risk.

paragraph 5.1, above, the better view is that the New Currency would be converted back into euro at the exchange rate prevailing on the relevant Cash Settlement Payment Date.

5.4 Dividends

The reinvestment provisions under Section 10.4 (*Reinvestment of Dividends*) provide that, following the occurrence of a Dividend Payment Date, the related Dividend Amount will be added to the existing Equity Notional Amount. In the event of an Exit, it is reasonable to expect that dividends paid in respect of redenominated shares will also be paid in the New Currency, which would result in an amount in the New Currency being added to a euro-denominated Equity Notional Amount.

An issue may also arise in respect of the distinction between what constitutes an “ordinary” and an “extraordinary” dividend. As Section 10.6 (*Extraordinary Dividend*) provides little guidance on what will constitute an “extraordinary” dividend, it is common for parties to define “ordinary” dividends by reference to a schedule of expected dates and amounts and for the remaining dividends (or portion thereof) to be considered “extraordinary”.

In both of these instances, the better view is that dividends paid in the New Currency will be exchanged into euro at the prevailing rate at the time of calculation. However, where a party is obliged to pay through an amount received in respect of a dividend, it is likely that, where that amount has been received in the New Currency, the obligation to pay it through will also be denominated in that New Currency.

6 Other Issues

Where parties have entered into more complex derivatives, a redenomination of the reference asset may give rise to additional issues.

In particular, there is a commercial incentive for parties to scrutinise the terms of financing Transactions on the basis that the New Currency may devalue significantly against the euro. In the event that a particular leg is dependent upon the current market price of a redenominated share, the redenomination may result in a reduction of that repayment amount in real terms.

In the case of a dividend swap, one party would typically purchase an entitlement to dividends in respect of a particular share in exchange for payment of a floating amount based on EURIBOR. Following a redenomination of the share (and therefore the associated dividends), the EURIBOR payment flow may remain denominated in euro and would, assuming some devaluation of the New Currency, start to appear increasingly expensive relative to the redenominated dividend receipts. In that scenario, the relevant party would be incentivised to scrutinise the terms of the Transaction in order to seek to redenominate the floating rate payment obligations.

It is also likely that many Transactions will continue to operate under their original terms following an Exit and a consequent redenomination of shares or indices but that those terms may cease, arguably, to reflect the commercial deal made between the parties. For example, in respect of variance and volatility products, it is unlikely to have been within the original contemplation of the parties that the measure of volatility would also capture significant currency risk, rather than just market risk on the underlying issuer, and in respect of accreting strike call options, CPPI products and other transactions incorporating gap risk, the likelihood of such transactions “gapping” may be materially increased.