臺灣期貨交易所
TAIWAN FUTURES EXCHANGE

Introduction to Settled-to-market (STM) and Collateralized-to-market (CTM)

活絡期貨交易 服務實質經濟
避險增益 價格發現

臺灣期貨交易所

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1. Introduction

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- Over-the-Counter ("OTC") Derivatives contracts can be characterized as settled-to-market ("STM") or collateralized-to-market ("CTM").

- These two types of derivative contracts use different means to achieve a consistent purpose of mitigating or settling counterparty credit risk arising from movements in the mark to market value ("MTM") of a derivative in favor of one party or the other, otherwise the receiving party would have an unmitigated exposure to the paying counterparty.

This document is privileged and confidential and is intended only for reference. The content of this document is based on the following; "*Accounting Impact of CCPs' Rulebook Changes to Financial Institutions and Corporates May 2016*" published by the International Swaps and Derivatives Association Accounting Policy Committee, with minor amendments.

2. Analysis of the difference between CTM and STM

Analysis of the difference between CTM and STM

<table>
<tr><th></th><th>CTM</th><th>STM</th></tr>
<tr><td>Cash Flow</td><td colspan="2">1. The overall cash flows under CTM and STM for a derivative contract with the same terms would be exactly the same in amount and timing.
2. The daily payment or receipt of MTM movement does not result in any other change or reset of the contractual terms of the instrument. Take Vanilla IRS as an example, daily payment of MTM movement would not lead to reset of the fixed rate to prevailing market rate, and the fixed rate set at inception of the trade will continue to be the applicable rate throughout the term of the instrument.</td></tr>
<tr><td>Movements to market value</td><td>CTM model would require the out-of-the-money party to periodically transfer collateral with an amount equal to the cumulative MTM value to the in-the-money party. Such variation margin payments would be accounted for as collateral.</td><td>On determination of a MTM movement since the previous MTM calculation of the derivative, the gain or loss accruing becomes due and payable to the applicable party.
The MTM movement of the derivative is then reset to zero to reflect the periodic settlement in accordance with the contractual terms.</td></tr>
</table>

Analysis of the difference between CTM and STM

	CTM	STM
Legal determination of variation margin	The CTM contract will have a cumulative MTM with an equal amount of collateral posted by the counterparty holding the loss position.	1. Treated as settlement of the MTM exposure results in the payer having no right to reclaim cash flow in the future, and the receiver having no obligation to return cash flow in the future. 2. STM contract would reflect a MTM of zero and no collateral posted. 3. Upon novation from one CM to another CM, any amounts paid/received for MTM movement and PAI/PAA prior to novation would not be owed back to the original party who paid it to the recipient and would not be clawed back as collateral.

Analysis of the difference between CTM and STM

	CTM	STM
Default Management	Upon close-out of a derivative contract, the non-defaulting counterparty may set-off (where the legal rights and obligations support this right of set-off) collateral it has received from the defaulting party against amounts it owes to that party in respect of the derivative's MTM value.	1. Variation margin cash collateral is not provided for STM contracts and therefore set-off does not arise. 2. Upon closeout of a STM contract, the determining party would simply ascertain the unsettled MTM of the derivative contracts at the relevant point in time with the resulting amount being payable by one party to the other.

Analysis of the difference between CTM and STM

	CTM	STM
Accounting treatment depends on Legal characterization of variation margin	A Majority of entities have generally accounted for variation margin payments on swaps as collateral (i.e., the party posting collateral would record a receivable for the eventual return of the collateral).	1. Determination of the appropriate unit of account for STM contracts should primarily be based on the legal analysis. 2. It would not be appropriate for payments and receipts of MTM movement to give rise to the recognition of financial assets and financial liabilities related to those flows as separate units of account. The cash flows serve to settle and reduce the recognized asset or liability arising from the derivatives' MTM, and not to result in additional financial assets or liabilities being recognized.

Analysis of the difference between CTM and STM

<table>
<tr><th></th><th>CTM</th><th>STM</th></tr>
<tr><td>Price Alignment Interest (PAI)
and
Price Alignment Amount (PAA)</td><td colspan="2">1. PAI, which is also referred to as PAA for STM contracts by the LCH, is calculated identically and serves the same purpose, namely to address the basis risk between uncleared and cleared swaps .
2. The Party that receives collateral (generally cash) should compensate the party that posted the collateral for their interest loss.
3. Compensation is generally in the form of interest and is economically consistent with the calculation of PAI or PAA. Had PAI or PAA not been included in the calculation of MTM movement, there would be a difference in the contractual cash flows for a derivative contract that is cleared, versus collateralized but not cleared.</td></tr>
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