

Are you ready for uncleared derivatives margining?

In order to buttress financial markets against another 2008 crisis, mandatory margin rules are being introduced across the globe.

by BANU APERS

The risk mitigating effects of central clearing are being replicated by regulators with new rules extending to encompass all non-clearable OTC derivatives trades. Many vanilla products are now eligible to clear with a high proportion of them now voluntarily cleared in advance of the regulatory mandates.

The forthcoming rules for non-clearable swaps originate from a BCBS-IOSCO paper setting out a framework, which is currently being drafted into national regulations, the status of which is this:

Jurisdiction	Rules Status
US CFTC	Adopted in December 2015
Europe	Final draft rules published on March 8th 2016
Australia, Singapore, Japan, Hong Kong, Canada	Consultation completed, rules awaited

We can expect to see divergence in the rules, but hopefully not in a way that produces incompatibility between each set. The current draft rules in the EU align to those of the CFTC in many ways but use the Euro rather than the Dollar for inclusion thresholds - such as €8bn versus \$8bn - leading to difference due to exchange rates.

Timing

From September 2016 onwards, the largest firms will be obliged to exchange initial and variation margin (IM & VM) for all new trades. From March 2017, ALL firms with un-cleared OTC portfolios must exchange VM daily - quite new for many users of OTC products. The need to exchange IM is made mandatory in annual stages with a threshold of notional decreasing over time until September 2020.



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Figure 1: Regulatory timeline

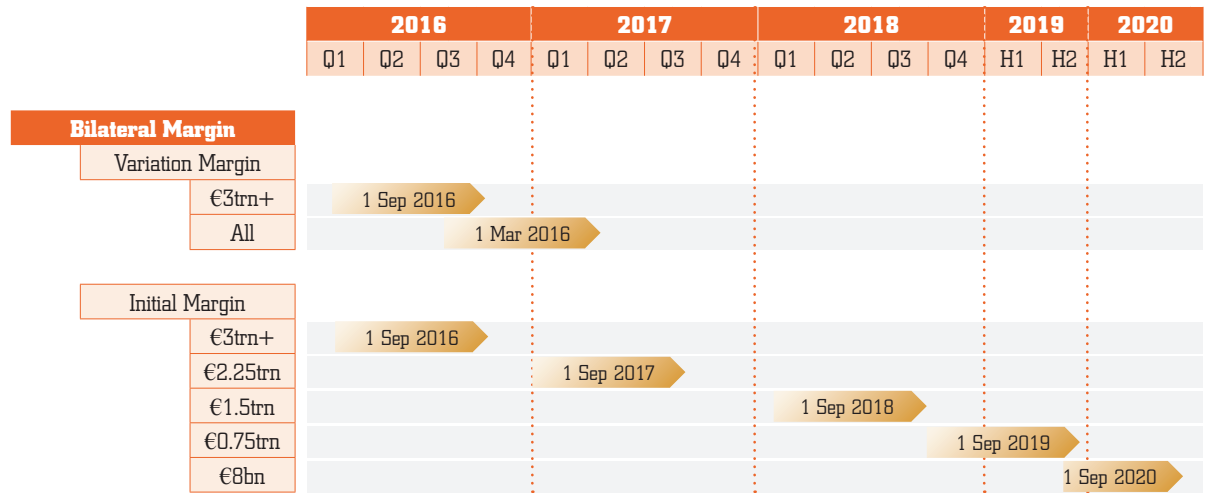


Table 1: Legal check list

Check list	Options
New credit support documentation for all affected counterparties, covering IM & VM (if applicable) from September, and VM from March 2017 for all firms	<ul style="list-style-type: none"> • Draft and negotiate new documentation for every counterparty (credit support annex, credit support deed, collateral transfer agreement) • Put in place multiple custody agreements or triparty service agreements to cover the holding of IM • Review the need for any new or updated netting opinions for the above agreements <p>Or</p> <ul style="list-style-type: none"> • Execute a single collateral management agreement with Clearstream. • Use the standardised Clearstream Pledge Conditions (CPC), and Collateral Transfer Agreement (produced in conjunction with ISDA) which covers all the above requirements
Analyse the impact of regulations on all bilateral counterparties, with respect to the jurisdiction of each party	<ul style="list-style-type: none"> • Gather and understand the implementation of the new rules per jurisdiction • Communicate with each counterparty and establish an implementation approach • Consider the status of affiliates in each corporate group, and the differing approach in the US and EU over how these are or aren't included under the new rules • Request the gross notional measurement results during 2016 from each counterparty to deduce the timing of their implementation

Implementation

Key departments impacted by these rules include Legal, Operations, Technology, Risk Management, Compliance and Trading. Figure 1 is a guide to be ready for September 2016 and March 2017.

Legal

The new rules apply only to trades executed from September 1st 2016, in which case the ISDA documentation framework needs amending to cater for the pre-September portfolio and post-September portfolios separately.

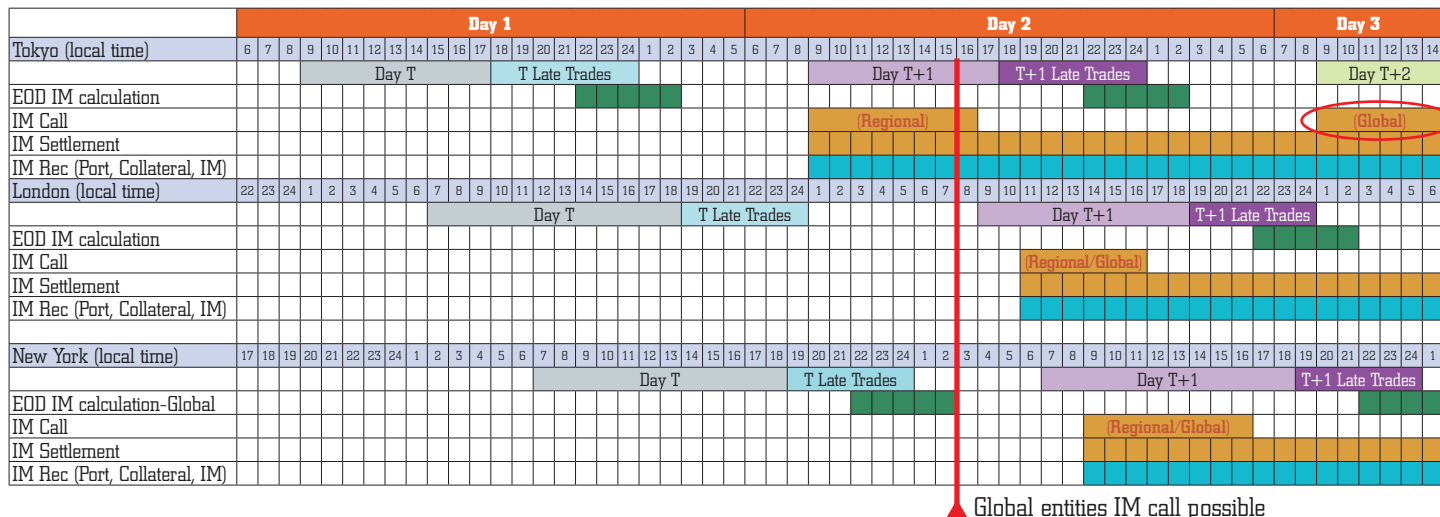
Operational

Even though the legal setup is complex, the operational requirements are also challenging. One outstanding issue with the US regulations already adopted - and possibly also the forthcoming EU regulations - is the need to deliver assets to cover IM on Trade Date + 1 business day.

ISDA have published a paper which discusses the challenges in detail on this page (<https://www2.isda.org/functional-areas/wgmr-implementation/>) with this PDF: [https://www2.isda.org/attachment/ODA-wOQ==/ISDA%20-%20WGMR%20Timing%20Letter%20\(3\).pdf](https://www2.isda.org/attachment/ODA-wOQ==/ISDA%20-%20WGMR%20Timing%20Letter%20(3).pdf)

Figure 2: Daily Settlement Cycle Across Global Timezones

The following illustrates a potential daily IM calculation and exchange proposal. Diagram reproduced by kind permission of ISDA.



Process

1. Calculate IM daily*
 - Late trades to be included in next day margin call
2. Call agreed amount T+1 regionally and T+2 globally (settlement occurs per industry standards)
 - If calculation amounts differ, settle lower of the two amounts
3. Perform portfolio and IM rec
4. Dispute Resolution for non-agreed margin amounts
5. Resolve dispute and settle remainder of call

*Assumes use of Regional Market Data

Table 2: Operations check list

Check list	Options
Setup new margin agreements in internal systems, both for September 2016 and March 2017	<ul style="list-style-type: none"> • Solely down to each firm to implement all the new agreements referenced above
Allocate a third party (ie triparty agent or a custodian) to hold received IM assets and sign necessary service agreements	<ul style="list-style-type: none"> • Firms have a free choice of triparty agent or custodian, and the counterparty need not choose the same one, but, • Jointly choosing Clearstream will make asset transfers the fastest possible, and customers will benefit from the tri-party approach, matching instructions for each asset movement
Setup communication and procedures with affected counterparties to make double the number of margin calls, both on the new and old documentation	<ul style="list-style-type: none"> • Design an approach to communicating margin calls which differentiates between the two margin agreements • Create accounts, reports and record keeping for the two agreements • Consider joining market infrastructure services which will provide multi-lateral margin call, reconciliation and dispute resolution services
Test the new approach prior to September 1st	<ul style="list-style-type: none"> • This will need either a complex bilateral set of test dates, or a multi-laterally agreed approach across the industry
Implement new data feeds and reporting into collateral management systems	<ul style="list-style-type: none"> • Depending on your choice of triparty agent or custodian, and any market infrastructure services, each new feed needs implementation and testing • Clearstream can provide fully detailed reporting for all asset movements on your margin accounts, including concentration risk and asset valuations
Select a provider for your IM segregation	<ul style="list-style-type: none"> • Participate and monitor the selection of triparty agent or custodian agent to hold the segregated IM.
On-boarding of new counterparties subject to VM	<ul style="list-style-type: none"> • KYC/ALM check of new counterparties which will be exchanging VM as of Septembers 2016 or March 2017

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Figure 2 illustrates a typical global trading day with the resulting portfolio margin calculations and settlement cycle. It is clear that between the US and Asia, meeting the regulations for settlement could potentially dictate which assets are pledged (JGBs for example follow a 3 day settlement cycle per market convention). Where both parties use a common tri-party agent, this could speed up the book entry transfer of assets (Clearstream operating and enabling the settlement of collateral for 23 hours out of 24).

Risk Management

The regulations have a high level of detail regarding:

- The approach to calculating IM and your choice of model
- How your chosen model should be calibrated and back-tested
- How your choice of model must be independently governed and approved
- The configuration of scenarios into the model
- The split of asset classes and related scenarios

See Table 3.

Technology

The drivers for change will come from departments such as Operations and Collateral Management. These teams may be considering third party services in addition to internal change to meet the regulations. See Table 4 for some of these changes.

Trading and Resource Management

Once these regulations become effective, there is a direct economic effect of delivering and receiving assets under the new margin agreements. Although for large banks the economic effects of margin are well embedded in their pricing, this may be new for many firms when VM takes effect in March 2017. See Table 5.

Clearstream accelerators

Clearstream’s triparty platform, the Global Liquidity Hub, provides ways to make the implementation of the regulations easier and quicker, here are the highlights. See Table 6 and Figure 3.

For a Party to integrate the Clearstream Triparty service legally, they would firstly establish their bilateral relationship with their counterparty, then secondly enter into an agreement with Clearstream to provide services. Each party only has to execute an agreement once with Clearstream to then move collateral with any number of other parties. For each bilateral relationship Clearstream would need an eligibility criteria agreement which for the bilateral margin regulations may well be similar, but allows customisation to suit each party.

Table 3: Risk Management check list

Check list	Options
Select an approach to IM calculation	<ul style="list-style-type: none"> • Either VaR based or using the table / schedule provided in the regulations
Select a provider for your IM calculator	<ul style="list-style-type: none"> • Could be an in-house build, or provided by a third party • Disputes are more likely if all firms choose to implement their own models, or those of a wide range of vendors • The ISDA Standard Initial Margin Model (SIMM) is intended to provide a common approach to this
Implement an approach to calibration and back-testing for the chosen model	<ul style="list-style-type: none"> • For the chosen model, have in place the procedures and review cycle to maintain the model • Periodic calibration, at least annually • Regular back-testing • Notification to regulators of any material changes to the model for new products or a new approach
Integration into internal systems	<ul style="list-style-type: none"> • The data required to perform the IM calculation will require a feed of trades from nearly all internal systems holding the official record of trades. • This may include all affiliates so as to demonstrate that the risks of affiliates are being measured and managed adequately

Table 4: Technology check list

Check list	Options
New systems	<ul style="list-style-type: none"> • If a firm doesn’t have any systems at all for managing margin agreements, Excel isn’t good enough. • Users could consider 1) an in-house installed software package 2) a cloud based service or 3) the new market infrastructure
Systems capacity	<ul style="list-style-type: none"> • Firms will need to load, implement, test and operate a large increase in the number of margin agreements • Your platform must be able to a) calculate the new exposure numbers b) segregate by asset class c) issue lots more margin calls d) handle lots more (potential) disputes
Timing	<ul style="list-style-type: none"> • Regulations require the issue and settlement of margin calls on Trade Date +1, the system needs to support this locally and globally • Your system must be able to “follow the sun” and support a globally distributed team
Functional support	<ul style="list-style-type: none"> • Your system must support the key regulatory requirements of a) product coverage b) asset eligibility c) asset haircuts d) IM calculation e) VM calculation f) dispute resolution g) reconciliations

Table 5: Front office check list

Check list	Options
Full scope pricing	<ul style="list-style-type: none"> Your system needs to produce an all-in price quote for OTC products including the costs of margin and capital Your systems need to take into account all xVA factors driving the P&L of the business
Funding	<ul style="list-style-type: none"> Your Treasury desk and systems need to interact electronically to take collateral placement instructions and enable funding to take place as soon as possible You need to put in place the appropriate procedures and communications between Collateral Management and the Treasury / Front Office?

Table 6: Clearstream accelerators

Check list	Options
Legal infrastructure	<ul style="list-style-type: none"> Use the Collateral Management Service Agreement (CMSA) which as a multi-lateral document avoids signing a new triparty doc with every counterparty Use the jurisdiction opinions which underpin the CMSA for these regulations in each jurisdiction that Clearstream operates. No need to acquire your own Customise operational criteria through elections in the agreement on concentration limits and eligible collateral See Figure 3
Prevent rehypothecation	<ul style="list-style-type: none"> Built into the account setup for these regulations
Asset selection	<ul style="list-style-type: none"> Built-in to the Global Liquidity Hub to meet the rules for each national regulator Automatically selects eligible assets from your long box for you to deliver Clearstream has enhanced rule-based eligibility, concentration and haircut management tools enabling customers to configure and meet the detailed requirements of regulation
Triparty trigger for delivery	<ul style="list-style-type: none"> Clearstream will wait for matched instructions from the giver and taker before triggering a transfer
Reporting	<ul style="list-style-type: none"> The Global Liquidity Hub provides all the reports you need on your asset holdings, valuations and limits, electronically
Holding assets by a third party with segregation	<ul style="list-style-type: none"> Clearstream is ideally placed to be that third party and has the segregation options to meet the regulations
Delivery on T+1	<ul style="list-style-type: none"> Using Clearstream by both parties makes the delivery of assets a book entry process, the quickest possible way to complete the process. Clearstream's Global Liquidity Hub operates 23 hours out of 24, enabling settlement almost instantaneously anywhere around the globe
Support for global assets	<ul style="list-style-type: none"> The Global Liquidity Hub integrates access to selected custodians around the world, giving you maximum access to your assets
Holding on a segregated basis	<ul style="list-style-type: none"> The regulations do not allow firms to agree to one IM calculation, each firm must calculate and post IM to each other separately. Clearstream is ideal as a neutral party as it segregates assets used for margining from the assets of Clearstream and other counterparties.

Conclusion

The preparations for September 2016 and March 2017 cannot be left much longer. If your firm is new to operating margin agreements, now is the time to allocate resources to understand the impacts and

plan your implementation. With the Global Liquidity Hub, Clearstream provides an efficient platform to meet the new regulations, and integrates with the various market infrastructure projects which are underway. See Figure 4.

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Figure 3: Clearstream multi-lateral Documentation Structure

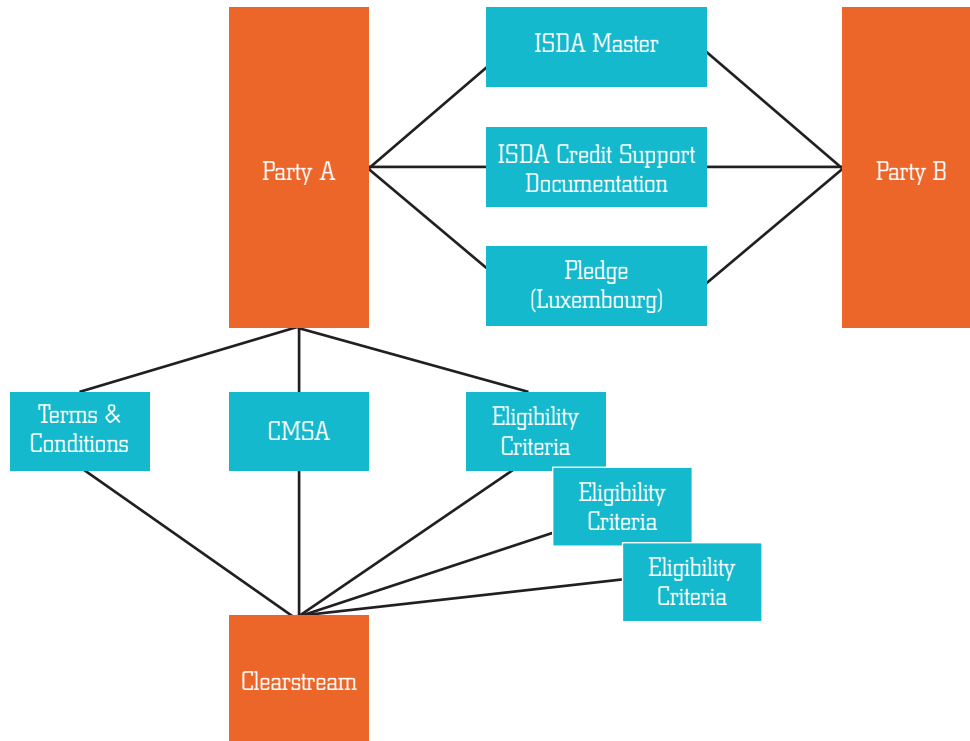


Figure 4: Clearstream Implementation Options

	Sept 2016 - DIY	Sept 2016 - With Clearstream	Cleared
Regulation	Implemented by national regulators		DFA / EMIR
Legal Basis	Bilateral Credit Support Docs	Clearstream Multilateral	CCP Rule book
Portfolio Reconciliations	Internal / Bilateral		Not required
Variation Margin			CCP
Initial Margin			
Margin Calculation			
Margin Call	Clearstream Triparty Collateral Management Service (TCMS)		
No rehypothecation			
Selection of Assets			
Delivery of Assets			
Record Keeping of Assets			
Reporting & Communication			

Appendix 1: Summary Comparison of the US and EU regulations as they stand

For full details of the regulations please refer to the actual regulatory texts which contain more detail than described here.

Area	CFTC – Dec 2015	ESAs – March 2016
Day of Execution (DOE)	Trade Date in the latest time zone, prior to 4pm and rolled to the next good business day	Silent
IM model	An approved model for calculating a risk-based amount of IM – Risk based – Table based Needs re-approval with 60 days notice if extended to cover new products or for any material change	Standardised method or approved model. Approach to be agreed for each bilateral pair of parties Calculated on the next business day after DOE
IM threshold excluding trades exempted by 23.150(b)	\$50m for the entity and its affiliates	Threshold for IM not to exceed €50m or €10m for intragroup
Affiliate	An entity which appears on a consolidated financial statement	Covered within EMIR
Material Swaps Exposure	Entity and affiliates have an aggregate notional exceeding \$8bn for June, July and August of the previous year Phased in – see below	€8billion gross notional for March, April and May of the preceding year. Phased in – see below
Minimum transfer	\$500,000 of combined VM & IM	€500,000 of combined VM & IM
Concentration limits	Silent	Must exist for the receiver in any given security and avoid wrong-way risk
Collection of IM & VM	Must take place on or before the next business day after Day Of Execution (DOE) and until termination of any relevant swaps	IM collected on next business day post Day Of Execution (DOE) VM must either be collected on DOE+1 or within DOE+2 provided the IM MPOR is scaled to cover the collection period
Disputes	Not if your counterparty refuses to participate in the exchange of IM or VM (to or from) provided your entity makes every effort to do so	Post the minimum undisputed amount
Potential Future Exposure	99% one tailed Historic Simulation VaR with a ten day holding period. The history shall contain equally weighted scenarios of between 1 and 5 years, and should include a period of significant financial stress for each asset class. Risk factors should include FX, Rates, Credit, Equity and Commodities, plus spread and basis risk. It shall also include different segments of the yield curve to capture imperfect correlation. The model need not capture the underlying exchange of principal for a Currency Swap. The model should segregate assets classes of commodity, credit, equity, and foreign exchange or interest rate	99% one tailed Historic Simulation VaR with at least a ten day holding period. Historic period of between 3 and 5 years. 25% of the scenarios must represent a period of significant financial stress. The model must include scenarios of the most recent period since the IM model calibration date. The periods of financial stress must be applied per asset class. Scenarios should be weighted equally. The model should be recalibrated every 12 months. Asset classes should include: (a) interest rates, currency and inflation; (b) equity; (c) credit; (d) commodities and gold; (e) other.
Oversight	The Risk Management team must be independent from the Trading teams	Internal governance process with validation at least once per year
Table based approach	See Appendix 2	See Appendix 3

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Appendix 1: Summary Comparison of the US and EU regulations as they stand (cont.)

Area	CFTC – Dec 2015	ESAs – March 2016
Eligible assets for IM	<ul style="list-style-type: none"> • Cash <ul style="list-style-type: none"> – USD cash – Major currency – The swap currency • US Treasury securities • US Government securities • ECB securities • US GSE securities • Securities from the BIS, IMF or multi-lateral bank • Other securities approved by a prudential regulator • Equities in the S&P 1500 Composite Index • Pooled investment funds <p>Do not post</p> <ul style="list-style-type: none"> • Self-issued securities • Securities from a bank holding company, savings and loan company, a foreign bank, a depository, a broker or a non-bank financial institution 	<ul style="list-style-type: none"> • Cash • Gold • EU government and public sector securities • Securities from multi-lateral development banks • Non-EU government securities • Corporate bonds • Tranches of securitisations • Convertible bonds • Equities • Shares in UCITS funds
Haircuts	See Appendix 4	See Appendix 5
Custody	IM must be held by an independent entity, not part of the counterparty group or the entity itself	Held by a custodian protected from default by both parties and the custodian. Segregated from the assets of the custodian and optionally from those of other parties too.
Rehypothecation	Assets cannot be re-used in any form and must be bankruptcy remote. Substitution is allowable	Not for initial margin assets, but a custodian can re-invest cash
Agreements	Both parties must put in place an agreement which specifies how VM & IM are calculated and how disputes are resolved.	Similar
Affiliates	<p>IM is not required with an affiliate provided there is a risk management program in place to monitor the risks in the affiliate, and that VM is exchanged with the affiliate.</p> <p>Affiliates who enter into swaps with third parties outside the jurisdiction of the US must also comply with these rules unless the affiliate is not subject to rules under substituted compliance.</p>	Exclusions defined within EMIR – inclusion similar to the US rules
Dates	<p>1st Sept 2016 for VM & IM where their aggregate notional (in non-exempt swaps) is > \$3trn in March, April and May 2016</p> <p>1st March 2017: VM for all entities</p> <p>1st Sept 2017: \$2.25trn IM</p> <p>1st Sept 2018: \$1.5trn IM</p> <p>1st Sept 2019: \$0.75trn IM</p> <p>1st Sept 2020: IM for all</p>	<p>1st September for VM & IM where their aggregate notional is > €3trn in March, April and May</p> <p>1st March 2017: VM for all entities</p> <p>1st Sept 2017: €0.25trn</p> <p>1st Sept 2018: €1.5trn</p> <p>1st Sept 2019: €0.75trn</p> <p>1st Sept 2020: €0bn</p>
CCPs entering into un-cleared Swaps for hedging or default management purposes	Silent	Exempt
Scope	Unclear	Applies to parties outside the EU, having an exposure with a party inside the EU

Appendix 2: Table based IM for the CFTC

Asset class	Gross Initial margin (% of notional exposure)
Credit: 0-2 year duration	2
Credit: 2-5 year duration	5
Credit: 5+ year duration	10
Commodity	15
Equity	15
Foreign Exchange/Currency	6
Cross Currency Swaps: 0-2 year duration	1
Cross Currency Swaps: 2-5 year duration	2
Cross Currency Swaps: 5+ year duration	4
Interest Rate: 0-2 year duration	1
Interest Rate: 2-5 year duration	2
Interest Rate: 5+ year duration	4
Other	15

Appendix 3: EU Standardised Approach for IM

Category	Add-on factor
Credit: 0-2 year residual maturity	2%
Credit: 2-5 year residual maturity	5%
Credit: 5+ year residual maturity	10%
Commodity	15%
Equity	15%
Foreign Exchange	6%
Interest rate: 0-2 year residual maturity	1%
Interest rate: 0-2 year residual maturity	2%
Interest rate: 0-2 year residual maturity	4%
Other	15%

Appendix 4: Haircuts for the CFTC

Cash in same currency as swap obligation	0.0
Eligible government and related debt (e.g., central bank, multilateral development bank, GSE securities identified in paragraph (a)(1)(iv) of this section): residual maturity less than one year	0.5
Eligible government and related debt (e.g., central bank, multilateral development bank, GSE securities identified in paragraph (a)(1)(iv) of this section): residual maturity between one and five years	2.0
Eligible government and related debt (e.g., central bank, multilateral development bank, GSE securities identified in paragraph (a)(1)(iv) of this section): residual maturity greater than five years	4.0
Eligible corporate debt (including eligible GSE debt securities not identified in paragraph (a)(1)(iv) of this section): residual maturity less than one year	1.0
Eligible corporate debt (including eligible GSE debt securities not identified in paragraph (a)(1)(iv) of this section): residual maturity between one and five years	4.0
Eligible corporate debt (including eligible GSE debt securities not identified in paragraph (a)(1)(iv) of this section): residual maturity greater than five years	8.0
Equities included in S&P 500 or related index	15.0
Equities included in S&P 1500 Composite or related index but not S&P 500 or related index	25.0
Gold	15.0
Additional (additive) haircut on asset in which the currency of the swap obligation differs from that of the collateral asset	8.0

Appendix 5: EU Haircuts - Haircuts for long term credit quality assessments

Credit quality step with which the credit assessment of the debt security is associated	Residual maturity	Haircuts for debt securities issued by entities described in Article 22 (2) (c) to (e) and (h) to (k), in (%)	Haircuts for debt securities issued by entities described in Article 22 (2) (f), (g), (l) to (n), in (%)	Haircuts for debt securities issued by entities described in Article 22 (2) (a), in (%)
1	≤1 year	0.5	1	2
	>1 ≤5	2	4	8
	>5	4	8	16
2-3	≤1 year	1	2	4
	>1 ≤5	3	6	12
	>5	6	12	24
4 or below	≤1 year	15	N/A	N/A
	>1 ≤5	15	N/A	N/A
	>5	15	N/A	N/A