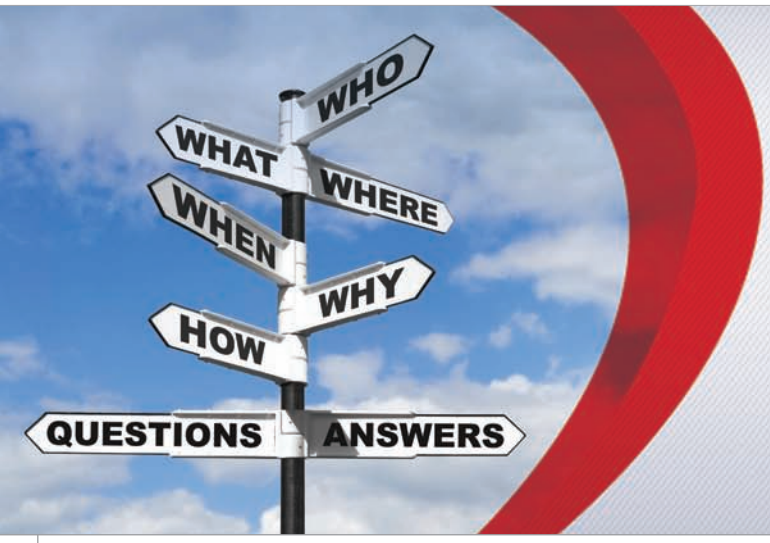
InteDelta
Risk Management Consultants

Market Intelligence Study



Collateral Management prepares for Dodd Frank

InteDelta explores the impact on collateral operations of impending Dodd Frank rules and the approach taken by broker-dealers to update their collateral management processes to support central clearing services.

Introduction

This report summarises the key findings of a Market Intelligence exercise carried out by InteDelta in April-June 2011.

InteDelta interviewed collateral management supervisors in fifteen banks, including seven of the G-14 group of major broker dealers. The survey focused on the organisation, business processes and technology infrastructure of the collateral management function for OTC derivatives, repo and securities borrowing and lending (SBL) products, and on the state of institutions' preparations for central clearing of derivatives.

Organisational design of collateral operations

Historically, collateral operations for the key OTC derivatives, repo and securities borrowing and lending products have been organised in silos, reflecting the different process and market practices associated with each product type, the relative significance and maturity of each product within an institution and the system infrastructure options available to support collateral operations for each product.

However, there is increasing evidence of banks seeking to align, and ultimately to integrate, collateral operations across different product types. In this context, alignment means bringing collateral operations under a single team structure, but not necessarily consolidating the business processes and systems infrastructure. Integration describes a more complete convergence, with a unified collateral operations team supporting multiple product types from a single strategic collateral management system.

The key business drivers for integration are: (i) improve cross-product risk management, (ii) consolidate systems and achieve efficiency gains, (iii) aggregate collateral assets to maximise funding capacity and (iv) put in place the foundation for value-add services such as cross-product margining and collateral transformation.

Figure 1: *Current and planned collateral operations alignment*

	A*	B	C	D	E*	F	G	H	I*	J	K	L*	M*	N*	O*
Current alignment	○	◑	◑	●	◑	◑	●	○	◑	◑	○	◑	◑	◑	◑

● Full integration ◑ Organisational alignment ○ No alignment

* G-14 broker-dealer

	A*	B	C	D	E*	F	G	H	I*	J	K	L*	M*	N*	O*
Plans to further align	◑	◑	●		◑	◑		◑	●	○	◑	◑	◑	◑	

● Project in progress ◑ Under consideration ○ No plans

A variety of in-house systems and vendor solutions support collateral management for OTC derivatives, repo and SBL products across the surveyed banks. Convergence of collateral management onto a single platform remains challenging as there are no vendor products that fully support all product types without substantial customisation.

While greater alignment and integration of collateral management processes for the various product types is a widely-held objective, system requirements are expected to continue to evolve until the strategic target operating model has stabilised. Several banks therefore cited the need to be able to respond flexibly to support evolving market structure and business strategy decisions.

Although lack of budget was cited by some banks as a constraint in large-scale changes to existing collateral management systems, central clearing requirements have substantially increased the priority of collateral management systems investment.

Active collateral inventory management

The survey revealed a wide range of approaches to inventory management, from passive, manual processes for selecting cash or securities to deliver, through to the implementation of sophisticated, automated functionality to systematically optimise collateral inventory. All of the participating banks cited an increased need for better collateral inventory management and optimisation solutions. This reflects the need to maximise the efficiency with which collateral inventory is managed in light of the constraints imposed by central clearing regulations, including requirements for two-way initial margin, segregation of client collateral and the conservative collateral eligibility requirements of the central clearinghouses.

Figure 2: *Active inventory management capability*

	A*	B	C	D	E*	F	G	H	I*	J	K	L*	M*	N*	O*
Active inventory capability	◔	◑	◔	◑	◑	◔	◔	○	◔	○	○	●	◑	◕	●

● Full capability ◕ Partial capability ◑ Project underway
◔ Basic manual process ○ Entirely passive process

The objective of optimization is to maximise the funding capacity of a bank's inventory of assets. In general, the lowest-quality collateral ('cheapest to deliver') will be ranked highest and so will be delivered first provided that it meets counterparty eligibility criteria. The output of the optimisation process is therefore a list of assets available for use as collateral, ranked by their collateral value. This list is fed to collateral management systems so that the appropriate assets can be delivered to meet margin calls.

Three of the large G-14 broker dealers have sophisticated collateral optimisation functionality in place today; in each case the functionality is owned by the Treasury funding team. Key input parameters including collateral eligibility and required call values are fed from collateral management systems. In each case, optimisation has been implemented as an in-house development project. There are no comprehensive vendor collateral optimisation solutions available on the market, although some vendors are beginning to develop functionality in this space.

An alternative approach to collateral optimisation is to use one of the tri-party services as these offer optimisation functionality of varying degrees of sophistication.

One participant cautioned that the frequency of collateral substitution requests generated by the optimisation process has potential to cause client relationship issues due to the operational overhead associated with additional collateral movement instructions and settlements.

Central clearing strategy

The requirement to support central clearing of derivatives, mandated by the Dodd Frank Act in the USA and the equivalent European Market Infrastructure Regulation (EMIR) legislation in Europe, is a major catalyst for banks to re-evaluate their collateral management capabilities and strategy.

Of the banks surveyed, all are or expect to become clearing members of one or more CCPs. In the case of the larger G-14 broker dealers, the default assumption is that the bank will become a clearing member on all of the evolving CCPs in order to be able to support the broadest possible client clearing service. In most cases, the scope of client clearing services is yet to be finalised, and will evolve to reflect the developing market structure as new CCPs and cleared products emerge.

Only two of the non G-14 participants surveyed have firm plans to offer client clearing services at this stage. One expects to provide client clearing services for products in which it specializes, but that it may itself use clearing brokers for other products rather than investing in direct clearing membership of all CCPs.

One bank has no plans to seek direct clearing membership until the market structure is stable, and will rely on clearing brokers to access the centrally cleared market in the short term.

Figure 3: *Centrally-cleared derivatives strategy*

	A*	B	C	D	E*	F	G	H	I*	J	K	L*	M*	N*	O*
Direct Clearing Membership	●	●	●	●	●	◑	◑	●	●	●	◑	●	●	●	●
Client clearing service	○	◑	○	○	◑	◑	○	○	○	◑	○	◑	●	●	●
Use clearing brokers	○	◑	○	○	○	○	○	○	○	○	●	○	○	○	○

● In place ◑ Planning ○ No plans or decision yet

Figure 4: *Central counterparty participation*

	A*	B	C	D	E*	F	G	H	I*	J	K	L*	M*	N*	O*
LCH SwapClear (IRS)	●	●	●	○	●	○	○	●	●	●	○	●	●	●	●
ICE Clear Europe (IRS)	○	◑	○	○	●	○	○	○	●	○	○	●	●	●	●
ICE Clear Europe (CDS)	●	○	○	○	●	○	○	○	●	○	○	●	●	●	●
CME (IRS)	○	◑	○	●	●	○	○	○	●	○	○	●	●	●	●
CME (CDS)	○	○	○	○	●	○	○	○	○	○	○	●	○	●	●

● Clearing member ◑ Affiliate of clearing member ○ No plans or decision yet

Only three of the survey participants commented in detail on their expectations for the scope of client clearing services, but noted that the final model remains under active discussion. All identified collateral transformation (i.e. the financing of CCP-eligible collateral with a client's non-CCP-eligible collateral) as a key service. One of the three plans to offer collateral transformation to its Prime Services clients only in the first instance. A second expects to provide some form of service, but may rely on tri-party services to address the transformation requirement.

Central clearing operations

The survey participants were asked to discuss various aspects of operational readiness for central clearing. In particular, they were asked whether they plan to validate CCP valuations and margin calls, and how collateral management operations would be organised.

Approximately half of the surveyed institutions plan to validate CCP valuations. Many smaller institutions remain unconvinced of the value in a validation capability or have yet to commit to validation. Although the CCPs' margining methodologies are generally transparent, replicating them is not straightforward; both methodology and input parameters have to be accurately replicated.

One of the G-14 broker dealers noted that a benefit of the ability to accurately replicate the CCPs' margining methodologies as described above will be the capability to advise clients more accurately on the expected initial margin requirement for a proposed trade.

Figure 5: *Validation of CCP margin calls*

	A*	B	C	D	E*	F	G	H	I*	J	K	L*	M*	N*	O*
Validation of CCP calls	○	●	○	○	○	○	●	◑	●	◑	○	◑	●	●	●

● Will validate ◑ May validate ○ No decision yet

The survey revealed that the degree to which each institution has determined its business model for central clearing of derivatives varies. As a result, there is uncertainty over how collateral operations for centrally cleared business will be organised in several of the institutions surveyed.

Figure 6: *Responsibility for CCD collateral operations*

	A*	B	C	D	E*	F	G	H	I*	J	K	L*	M*	N*	O*
OTC collateral operations			◑	◑			◑	◑	●	●	◑	●	●	●	●
ETD collateral operations						◑							●		
Other collateral team	◑	◑			◑		◑								◑

● Target model ◑ Tactical approach

In the majority of cases, the current OTC derivatives collateral operations team has assumed or is expected to assume responsibility for all aspects of centrally-cleared derivatives (CCD) margining, reflecting the business areas impacted by central clearing (initially Credit and Rates) and the need for continuity in terms of internal and client engagement.

One of the larger institutions that will support centrally cleared business from its current OTC derivatives collateral operations team noted that this was a tactical measure; the long-term expectation is that the ETD model would be adapted once the evolving central clearing market structure has stabilized. One institution plans to support all collateral management for CCDs by adapting its current process for ETD, and another has adopted a hybrid model, supporting centrally cleared business from its current OTC derivatives collateral management team in Europe, but leveraging its Futures Clearing Merchant (FCM) infrastructure for cleared products in the US.

Other institutions have split collateral management for CCD business into its constituent parts; for example, margining for central counterparties may be managed by a dedicated Treasury or Operations team while the associated client margining is managed by the OTC derivatives collateral management team.

Central clearing challenges

Survey participants cited the scale, complexity and cost of organizational, process and technology change demanded by the central clearing framework. Other issues and open questions included:

- Need to build confidence in evolving CCP model as default of a systemically significant CCP would be catastrophic.
- Concern over substantial capital penalties under Basel III for non-cleared OTC (i.e. bilateral) business, with no clarity when instruments other than IRS, CDS and some FX swaps will migrate to a cleared model.
- Uncertainty over the number and scope of CCPs; will CCPs compete to attract clearing members and clear equivalent products? If so, will the risk mutualisation qualities of CCPs be compromised?
- Concern over the volume of additional CCP-eligible collateral that will be required, exacerbated by loss of bilateral netting benefits, restricted opportunity for re-use of collateral and conservative CCP collateral eligibility criteria.
- Need for CCPs to be transparent in valuation and margining methodology; the majority view is that transparency will be demanded by market participants.
- Need for flexibility in the face of evolving regulatory, internal and client demands. The general expectation is that long-term operating models will look quite different to banks' initial tactical solutions.

About InteDelta

InteDelta supports financial institutions all over the world to implement risk and collateral management best practices within their organisations. Combining subject matter expertise with a structured consulting approach tailored to risk and collateral management initiatives, we help clients to define and implement market leading business processes across the enterprise collateral management landscape incorporating the latest industry developments such as Central Counterparties, collateral optimisation and cross-product integration.

Our clients are based in all geographies and range from some of the world's largest banks and asset managers through to regional banks in developing markets, hedge funds and collateral management software vendors.

Further Information

If you would like additional information on this survey and would like to discuss any of the issues raised, or are interested in having your institution's practices benchmarked, please contact:

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