White paper

Impact of Dodd-Frank on OTC derivatives: supporting central trading and clearing

AUTHORS:

Ebbe D. Kjaersbo & Justin McBride, Chief Business Consultants, SimCorp

THIS PAPER DISCUSSES:

1 Dodd-Frank's provisions relating to OTC derivatives
2 The business systems required to support OTC derivatives as they migrate from bilateral to central trading and clearing arrangements
3 The role of SimCorp's investment management solution in helping asset managers work towards Dodd-Frank compliance

SimCorp

www.simcorp.com

MITIGATE RISK | REDUCE COST | ENABLE GROWTH

Abstract

The Dodd-Frank Act signifies the biggest US regulatory change in several decades. According to experts, Dodd-Frank will have a substantial influence over an estimated 8,500 investment managers, all the 10–12 US exchanges and alternative execution networks.

While Dodd-Frank encompasses a wide range of financial provisions, this white paper is confined to the new regulations that specifically relate to the central clearing of OTC derivatives, and the repercussions for confirmation/settlement flows, reporting and risk management. The main purpose of this paper is to address these issues by listing the principal functionalities an investment manager must consider when choosing and using a business system to meet these requirements.

We propose that SimCorp clients and all industry participants read this white paper as a catalogue of the challenges and issues they may face when addressing the business process changes required to accommodate the Dodd-Frank legislation. In other words, the points made in this paper can be used as a checklist for a self-assessment of system capabilities and readiness.

Dodd-Frank's provisions for OTC derivatives

In this section, we examine the scope and scale of Dodd-Frank, identifying the Act's main provisions related to OTC derivatives. We seek to define the main issues as firms are asked to migrate from bilateral trading and clearing arrangements to a central exchange.

The road leading to reform

The main thrust of the legal provisions embodied in Dodd-Frank seeks to correct structural weaknesses in the US financial industry. More specifically, the reform looks to mitigate the risk posed by activity that falls outside direct regulatory supervision, specifically the bilateral trading and clearing of over-the-counter (OTC) derivatives. The issue of a bilateral trading system is two-fold. First, counterparties could fail. Second and very importantly, buy-side firms may not know their exact exposure at any given time. It is believed that the massive losses in the derivative markets were a significant contributor to the 2008-2010 global economic crises. The intent of Dodd-Frank is to instill confidence in the financial markets by boosting transparency and liquidity, reducing the opacity of sell-side trading operations and mitigating counterparty concentration. While the effects on the sell-side are drastic, the buy-side will also be impacted as Swap Execution Facilities (SEFs) and Central Counter Parties (CCPs) come on line. US investment managers with global operations will also be impacted by regulation originating internationally, such as the European Market Infrastructure Regulation (EMIR), which sets out to increase stability in the OTC derivatives market.

Requirements of the new reform

The greatest change to trading in OTC derivatives will be the move from collateral bilateral trading into a margin-based arrangement. The new model will use SEFs for execution and price discovery, and an exchange-style CCP to centralize the exchange of collateral. Regulators must also determine the specific types of swaps and derivatives, in terms of characteristics, that must be cleared through a CCP, and therefore traded through an SEF, in order to meet transparency requirements dictated by Dodd-Frank. Changes in the area of OTC derivatives are to be phased in over a period of time. The first of two phases related to central clearing for OTC derivatives are potentially initially limited to Credit Default Swaps (CDS) and Interest Rate Swaps (IRS). In the first phase, it is foreseen that registered OTC-derivatives dealers and parties to the trade must:

- meet minimum capital requirements and minimum initial and variation margin requirements;
- submit and make available for inspection reports regarding their transactions, positions (margin calls) and financial status;
- maintain daily trading records of their OTC derivatives and all related records and recorded communications;
- keep daily trading records for each customer or counterparty in a form that is identifiable with each OTC derivatives transaction;
- preserve a complete audit trail for conducting comprehensive and accurate trade reconstructions.

Also underway is the Commodity Futures Trading Commission's (CFTC) proposal to employ a system to uniquely identify swaps and therefore track parties through transactions, asset classes and legal entities. As proposed, the Commission would employ a two part alpha-numeric system that identifies a registered entity and a swap transaction. Through the use of "Unique Swap Identifiers", the CFTC seeks to facilitate tracking of positions and/or activity of traders across interconnected business units.

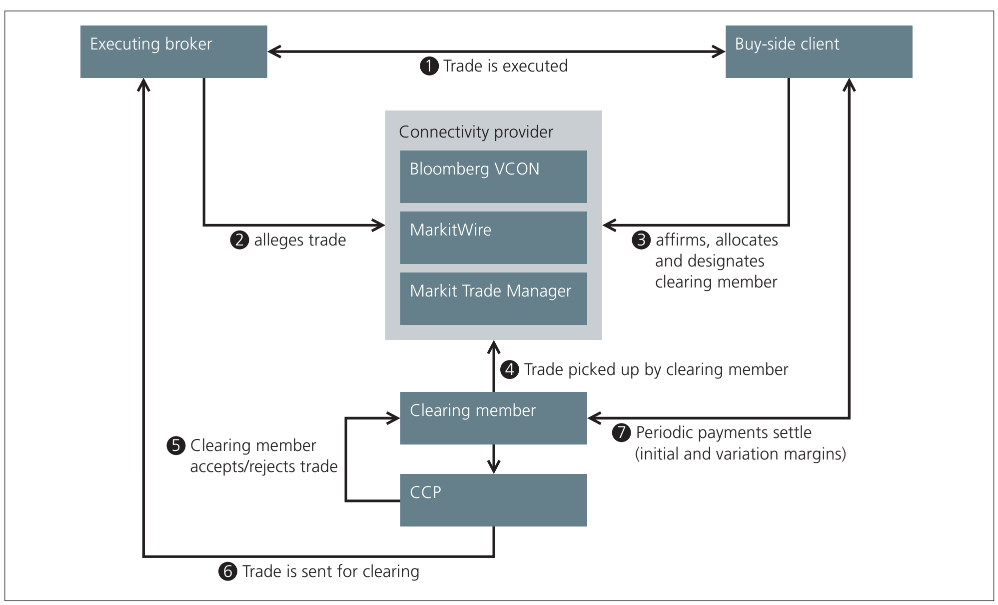
New challenges unfold with OTC derivatives

The intent of the new reform is clear in its attempt to reduce system risk inherent in transactions that fall outside regulatory supervision, as well as to protect asset managers from counterparty exposure. However, what remains undefined is how these instruments will specifically trade, clear/settle under the new reform. Dodd-Frank does not specify the execution method or price discovery mechanics of the SEF, nor if this is simply a new name for existing providers. As rules governing the SEF are clarified, these details will become clearer. In turn, the rules will have a direct impact on how securities firms connect to SEFs and what functionality is required from investment management systems.

The regulation will also drive more buy-side clearing as opposed to bilateral dealer-to-dealer arrangements that exist today. When Dodd-Frank takes effect, several clearing options will need to co-exist in the marketplace, namely 'mandatory cleared', 'clearing eligible' and 'not eligible for clearing'. Investment managers will need to deal with the complexity of operating in this 'new world'.

Any OTC transaction involves counterparty risk, with payment of profits/loss being impacted by ability to pay. Before the crisis, counterparty exposure involved aggregating exposures due to trading activity, performing stress tests on likely profits expected, and assessing if any party was overexposed. In the new world, financial accounting standards are demanding more transparency by incorporating a Credit Value Adjustment (CVA) directly into the reported fair value of derivatives. This means all fair market or exit values must expressly capture the monetized value of the counterparty credit risk. With this move, counterparty risk is no longer a purely administrative task; pre-deal calculation of CVA affects valuation of current holdings, modifies collateral requirements and dictates preference in trading partners.

Figure 1. Example of a workflow for central clearing of OTC derivatives



Required business system support for Dodd-Frank compliance

In this section we turn to the main business system requirements for supporting OTC central clearing. Additionally, we discuss how SimCorp's investment management platform, SimCorp Dimension, can support asset managers on the road to Dodd-Frank compliance.

Data management: consolidation of data sources for 360˚ view of risk and performance

The foundation of a system that adequately supports Dodd-Frank's requirements is data quality and the ability to accurately capture the data points that represent the underlying contract. The ability to capture all the data points reflecting how the instrument is traded (for example the day-count-convention for an Interest Rate Swap) has a profound impact on the accuracy of calculation of risk exposure, profit/loss and reporting.

SimCorp Dimension's enterprise wide data management capabilities comprehensively capture data from all entities involved in OTC derivative trading and clearing process – including the counterparty, clearing house and the issuer.

With SimCorp Dimension, the entire investment management firm can use exactly the same data with all positions and transactions for all instrument types in a single consolidated database. The ability to easily access and use consistent data minimizes 'multiple versions of the truth', which is typical in an environment of silo systems. Discrepancies between data held in different systems will result in poor data quality and therefore impaired or delayed decisions and inaccurate client or regulator reporting.

Additionally, in response to the CFTC's proposal for unique product identifiers, SimCorp Dimension's enterprise data management capabilities provide risk surveillance by aggregating transaction and position data, across asset classes, within parent and affiliate entities. SimCorp will be able to meet the CFTC's requirements for asset managers to use Unique Counterparty Identifiers (UCI) in all swap data reporting, as well as for Unique Product Identifiers (UPI), based upon type of product underlying the swap (e.g. LIBOR).

Automatic generation of variation margin and theoretical pricing

With central clearing for OTC derivatives introduced in phase 1 of Dodd-Frank, the capability to independently value these positions is fundamental to being able to calculate daily profit and loss on these swap positions. This calculation of profit and loss is, in turn, required in order to automatically generate any related variation margin amounts on a daily basis. Investment managers that have to comply with Dodd-Frank's central clearing of OTC derivatives must have a platform that can integrate with and consolidate data from third party data sources, such as LIBOR rates employed as inputs to theoretical pricing models.

This functionality will enable the investment management firm to independently verify the CCP's valuation. Bringing together disparate underlying data sources and pricing all OTC instruments in the system is the fundamental basis of margining via the Central Clearing House.

SimCorp Dimension offers comprehensive middleware capabilities for importing the underlying data to support the multiple pricing and valuation models. SimCorp Dimension employs theoretical pricing across all OTC instruments (in addition to quoted prices for exchange traded instruments). The ability to incorporate FINCAD's valuation model for OTC derivatives within SimCorp Dimension allows the system to

Figure 2. Business system capabilities checklist for OTC derivatives central trading and clearing

Business system capabilities checklist for OTC derivatives central trading and clearing

1 Support enterprise data management for a 360° view of risk and performance

2 Automate position valuation and generation of variation margin

3 Automatically reconcile discrepancies between your firm and the transacting counterparty

4 Support full straight-through-processing (STP) workflow for OTC swaps

5 Provide transparency in trade transaction flow for full disclosure

6 Communicate details of the trade and any collateral, on a real-time basis, to all relevant parties

7 Provide broad instrument coverage that includes centrally and bilaterally cleared trades as well as instruments that fall outside the scope of Dodd-Frank

8 Support real-time reporting to reflect the most up-to-date view of positions and trades

automate the generation of variation margin on a daily basis, as well as the ability to reconcile periodically to the clearing member. It is recognized that the CCP will provide the 'quoted' prices which will be the indisputable basis for the margins. However, theoretical pricing capability is important as it enables the buy-side to independently verify and manage the margining process.

Central clearing will enforce standardization for a larger proportion of OTC swap contracts than we currently see. Inevitably specific requirements will mean that it will not be possible to centrally clear unconventional contracts, and as a result, bilateral arrangements will continue to exist in the 'new world'. Given this reality, SimCorp Dimension is capable of bridging the requirements of the 'new Dodd-Frank world' with 'the old-world' of bilateral arrangements.

Integrated reconciliation engine

Under the provisions of central clearing, a robust reconciliation engine is key to reconciling discrepancies between the investment manager and the transacting counterparty.

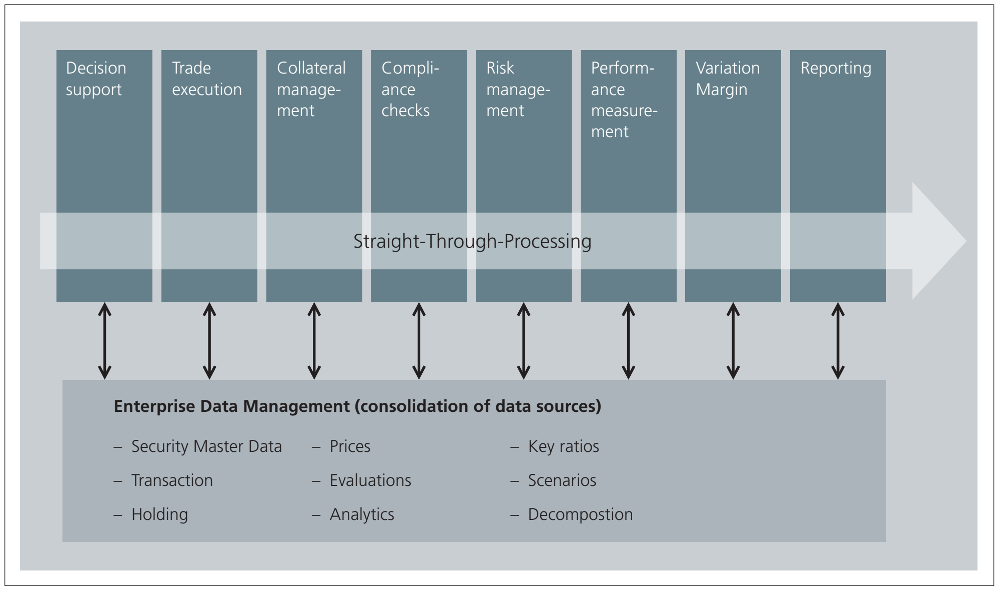
SimCorp Dimension offers a fully automated integrated reconciliation engine within its core accounting engine allowing for reconciliation of trades, holdings market values and profit/loss for all OTC swap positions. Pairing and matching criteria are fully configurable with specific requirements and the functionality allows for an exception management view to be taken over the process. This integrated reconciliation engine can be used in conjunction with the automated margining capabilities within the system, such that any reconciliation breaks between the investment manager and the transacting counterparty can be identified and fully investigated.

Straight-through-processing

An optimal business system to meet Dodd-Frank requirements will offer a high degree of automation to support a full straight-through-processing (STP) workflow, in order to minimize manual processing errors that lead to poor data quality and subsequent bad investment decisions. The system should be sufficiently automated to deal with real-time communication of trade confirms with the counterparty. This includes the automated handling of cancel/corrects as part of externally interfacing trade details, as well as automatically communicating payments and/or collateral instructions to the transacting broker.

SimCorp Dimension provides an automated and fully integrated system that can tie all investment management operations into one flexible, transparent and efficient workflow that reduces dependence on manual processing. It supports

Figure 3. The illustration demonstrates an STP workflow



the full STP workflow for OTC swaps both in terms of confirmation and affecting settlement.

Transparency in transaction flow

One of the principal tenets of Dodd-Frank is the ability to maintain transparency in the transaction flow in order to support full disclosure. This includes, for example, transparency between the valuation engine and the investment ledger or transparency within the reconciliation process between the counterparty and the investment ledger. Even in the most efficient process, errors can occur. When errors do occur, it is important to have validation procedures in place and the necessary transparency to identify and correct the error. This includes full transparency of the input data used as well as the calculation models. The more advanced analysis the investment company requires, the higher the demands on transparency. It is critical for the organization to choose and implement a system that ensures transparency in how the information has been derived.

SimCorp Dimension is completely modular in business function and instrument type, with all components using the same core database and transaction processes. This facilitates overall transparency and meets disclosure requirements in terms of how the information has been derived. Another important point in terms of fulfilling the transparency requirements of Dodd-Frank is that positions (or margin calls) can be collateralized in SimCorp Dimension. The system keeps track of how much is collateralized and how much is required to channel it back. When it comes to a receivable and underlying collateral is forthcoming, maintaining a clear market perspective is crucial as well. It is not just exposure to what is held on the transaction side; it is also exposure to what is collateralized or what is pledged for that matter. There are four aspects of transparency here that SimCorp Dimension covers:

- the value of the position held by the investment manager;
- the value of the counterparty's offsetting position;
- the collateral at both the counterparty;
- and within SimCorp Dimension.

SimCorp Dimension covers the four corners, encompassing all OTC derivatives as true instruments based on one trade. This eliminates the need for workarounds that would otherwise be necessary with multiple trades in OTC derivative instruments.

Trade processing

It is important that the system representing the trade and positions is also communicating details of the trade and any collateral, on a real-time basis, to all relevant parties. Specifically, the system should capture the trade status representing the current stage within the confirmation/settlement process. These trade stages should also have the ability to trigger real-time processes to communicate trade details – for example delivery of an XML message format and the ability to receive messages back which update the status of the trade. The system must also be able to accommodate settlement processes impacted by different regulatory reforms. This includes regulations such as EMIR and AIFMD which affect US firms operating in Europe. SimCorp Dimension fulfills all the above requirements.

Broad instrument coverage

As the requirements of Dodd-Frank in the area of central clearing of OTC derivatives become clearer, and as the legislation is expanded to include more OTC derivatives, a system is required that has the scalability to adapt and support these new instruments. One system is required for centrally cleared instruments as well as unconventional swaps that will continue to be traded on a bilateral basis. For example, FX forward contracts are exempt from mandatory central clearing provisions by the US Treasury, but remain subject to all other requirements of the reform, including detailed reporting and record keeping. Additionally, the system has to provide for instruments that fall entirely outside the scope of Dodd-Frank.

SimCorp Dimension has the necessary scalability and adaptability to embrace these changing requirements per instrument type. The system includes a toolbox which can be used to model new instruments as soon as they are proposed or approved for trading. The new instruments can be incorporated in the current software version without requiring an upgrade to the system. An XML-based financial modeling language, it can be used to build in-house security master data to trade and have trading positions updated in real-time throughout the system. It includes risk and performance calculations, as well as any valuation models required to support margin calculations. It is thus a very flexible tool to handle new types of instruments as they emerge.

Reporting

Reporting is a cornerstone of the Dodd-Frank reform because it is fundamental to securing the transparency the Act is looking to achieve. The system must provide the ability to report on all data points captured at a contract, trade and positional level. An open relational database schema is required to allow for flexible reporting requirements that will potentially change over time. It should be possible to run all reports in real time to reflect the most up to date view of positions and trades within the system.

SimCorp Dimension offers an integrated reporting solution capable of delivering trade and positional data to swap data repositories [SDRs]. All positions and transactions are logged in a single database, which is extremely important for making available inspection reports regarding transactions, positions and financial status. Full transaction history is maintained as well as full audit trails. SimCorp Dimension represents positions in a true and accurate way on both sides of the trade, that of the counterparty and that of the system, ensuring that both internal and external reporting requirements are met. As a result, it is able to report daily positions, valuations and exposure to whatever central swap data repository emerges.

Conclusion

As many argue the merits of Dodd-Frank and the potential negative impact on the profitability and global competitiveness of US asset managers, SimCorp assumes the position that regulatory reform does not have to come at the expense of growth and value creation. The business system readiness checklist provided in this paper can be applied beyond the transparency mandated by Dodd-Frank but it can also be used as a self-assessment for firms to evaluate risk-reward investment strategies to fuel growth and expansion.

Finally, while the scope of this paper is limited to the provisions of Dodd-Frank relating to OTC derivatives, it is important to note that SimCorp continues to actively monitor other aspects of the reform as they evolve, including (but not limited to) Dodd-Frank liquidity, credit concentration and overall risk exposures.

Join our LinkedIn® group
http://linkd.in/fKYXMZ

Follow us on Twitter
twitter.com/simcorp

SimCorp

Since 1971, SimCorp has been providing investment and portfolio management software and services to the world's leading investment managers, asset managers, fund managers, fund administrators, pension funds, insurance funds, and wealth managers. SimCorp's world-class software provides global financial organisations with the tools they need to mitigate risk, reduce cost, and enable growth. SimCorp is a global company, regionally covering all of Europe, North America, and Asia Pacific. Listed on the NASDAQ OMX Copenhagen, SimCorp is dedicated to supporting the global investment management industry, its clients and its investors. For more information about SimCorp's products, please visit www.simcorp.com/product.

SimCorp