Over-the-Counter (OTC) Derivatives in Asia: The Impact of Regulations

As regulatory requirements evolve in the Asian markets for OTC derivatives, there will be a growing convergence between the front-to-back-office processes of exchange-traded products and OTC derivatives.

Executive Summary

The Asian OTC derivatives market, at 8% of the global turnover, is relatively small. However, dealing with the impact of OTC derivatives regulation can become quite complex for Asian banks, due to two reasons. First, Asian markets are quite fragmented, with multiple jurisdictions that have their own rules and regulations at various levels of completion and with varying emphasis. Second, Asian banks dealing with U.S. and EU counterparties will have to comply with Dodd-Frank and EMIR requirements, in addition to the regulatory requirements in their home jurisdictions.

This paper reviews the OTC derivatives regulation coming out of major Asian countries and assesses the impact of regulatory reform on banks in Asia and the Australia region.

Asian OTC derivatives regulation has emphasized the reporting of transactions, followed by centralized clearing and higher collateral requirements. Electronic trading is slated to come later, once the reporting and clearing infrastructure is in place.

The risk and compliance function will witness the biggest and most immediate impact, along with middle- and back-office IT and operations.

The front-office function will have to gear up for eventual electronic trading and Treasury collateral requirements, though these concerns are not immediate in Asia.

Over the medium to long term, we see a convergence between the banks’ fixed income and OTC derivatives departments in terms of operations and IT infrastructure, data management and interactions with outside participants. Rather than responding tactically to the myriad requirements as and when they come up, we believe that a front-to-back-office strategic realignment can create the maximum synergy.

Overview of the Asian Market and Regulatory Regimes

OTC Derivatives Markets in Asia

Asia accounts for just 8% of OTC derivatives outstanding globally. However, at $56 trillion, it is still a substantial amount, with most of it concentrated in just seven territories: Australia, Hong Kong SAR, Japan, Singapore, India, Korea and China. Figure 1 (next page) shows the breakdown of the global turnover of interest rate swaps and FX derivatives – the two most important OTC derivative products.
As Figure 1 indicates:

- In terms of turnover, the OTC derivatives market is dominated by the U.S. and UK, which together account for between half to two-thirds of the market.
- Among Asian countries, Japan, Australia, Hong Kong and Singapore have a material share of the worldwide OTC derivatives market. However, their share is much smaller than that of the U.S. and Europe.

We will limit our analysis to the four Asian economies with a significant share of derivatives: Japan, Australia, Hong Kong and Singapore.

**Regulatory Framework and Legislation in Asia**

These four Asian economies have authorized government bodies to ensure that G20 commitments are met. Each country has its own pace and priorities in terms of the crafting of OTC derivatives rules. However, some patterns can be discerned. Most regulators have started with the creation of trade repositories (TRs) with the idea that an aggregated view of the OTC trade universe will help in drafting standards for centralized clearing. The focus is on increasing the use of standardized products that can achieve economies of scale in central clearing and trading.

Regulations related to mandatory trading on exchange/electronic platforms are ineffective, due to uncertainty about the liquidity of the products in scope. Margin requirements for non-centrally-cleared derivatives are also not in force as international marging standards have yet to be finalized. The approach is to target mandatory reporting and central counterparty (CCP) clearing for the high volume products and the larger market players in the first phase as they pose a higher systemic risk. The smaller market entities have been allowed exemptions, considering that the cost may be prohibitive. The regulatory timeline in Figure 2 (next page) summarizes the rulemaking in various Asian countries. Figure 3 (also next page) depicts the infrastructure readiness of CCPs and TRs in Asia.

An important point to note here is that the Asian regulatory landscape, unlike in Europe, is fragmented. While a pan-European bank, with a presence in, say, all West European countries, would have to deal with just two sets of regulations (EU and Swiss), a pan-Asian bank with a presence in 10 Asian countries has to comply with 10 national regulations on OTC derivatives, potentially increasing the cost of compliance. The absence of a single cross-border regulator is the key difference between Asia and Europe.

**Key Areas Of Impact**

Figure 4 (on page 4) summarizes our view of the major areas that OTC regulations will impact in various geographies.

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**IRS and FX Turnover by Country/Region**

Source: BIS Triennial Central Bank Survey, 2010. Daily averages in April 2010, in billions of USD, are expressed as percentages. The values are adjusted for local inter-dealer double-counting but not for cross-border inter-dealer double-counting.

Eurozone consists of Austria, Belgium, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxemburg, Netherlands, Portugal, Spain and Slovenia. Other Asian consists of China, India, Korea, Indonesia, Thailand, Malaysia and Philippines.
Regulatory Reporting

All the countries that our study focused on have begun creating a regulatory framework for reporting OTC derivative transactions to an authorized body. Regulatory reporting will have a greater impact in Singapore and Australia early this year as the reporting requirements in these jurisdictions began in October 2013. In Japan, the reporting channel has stabilized to some extent as the requirements have been in effect since November 2012, while in Hong Kong the reporting mandates are still in the consultation phase. An interim reporting is in place in Hong Kong for some of the largest financial institutions.

CCPs & Trade Repositories (TRs) in Asia: Operational or Expected in Future

Source: Cognizant Internal Research. Data as on Sept. 1, 2013

Figure 2

Figure 3
In some countries, trades that have sufficient links to the economy fall under the country’s jurisdiction even though they may have been booked elsewhere. For example, an OTC trade booked in Hong Kong having the underlying asset denominated in Hong Kong dollars or Chinese renminbi or the underlying asset listed in Hong Kong is required to be reported to HKMA irrespective of whether the trade was booked in Hong Kong. In Australia, a transaction qualifies for reporting even if one counterparty is the foreign subsidiary of an Australian entity, provided the subsidiary has booked the trade to the P&L of the Australian entity.

**Centralized Clearing**

Asian countries have followed the principle of implementing regulations related to reporting of OTC transactions before regulations related to CCP clearing are put in place. This helps to delay the impact of infrastructure cost and margining costs due to centralized clearing for the market participants. Japan was the early mover by making clearing mandatory for high-volume products such as interest rate swaps (IRS) and credit default swaps (CDS) in November 2012. Though the necessary legislation is in place in Hong Kong, Singapore, and Australia, clearing mandates will not come into force till this year in Hong Kong and Singapore. However, Asian banks dealing with U.S.-based or European counterparties will be subject to clearing requirements of Dodd-Frank and EMIR. All of these four Asian regulators have imposed mechanisms to recognize overseas CCPs and allow domestic counterparties to clear their trades.
trades at overseas locations. Therefore, centralized clearing of OTC derivatives is set to become a reality for Asian banks.

High-volume products like plain vanilla and cross-currency IRS will fall under the clearing mandate of all Asian markets, whenever the mandate is in force. In addition, Japan includes CDS products (index of iTraxx Japan) while Singapore and Hong Kong have brought in nondeliverable forwards (NDFs) under the scope for clearing. In Australia, regulators have recommended that mandatory clearing be applied for OTC interest rate transactions denominated in GBP, Euros, Japanese Yen and USD mandatory.

Seven local and four international CCPs (LCH, CME, Eurex and Ice) could be operational in Asia soon. Based on business benefits, a competing CCP is likely to clear a single asset class or a group of asset classes. Hence, two counterparties can clear their trade in different CCPs. Moreover, a single CCP can clear trades from multiple asset classes. This fragmentation will result in multiple silos of risks across CCPs that cannot be netted against each other. A BIS working paper on collateral requirements estimates that consolidating the number of CCPs can significantly reduce the variation margin requirements. As CCP consolidation is unlikely in such a fragmented market, one potential solution to enable netting of margins could be the emergence of one of the models of CCP interoperability in Asia shown in Figure 6.

A standard infrastructure across the Asian CCPs and a standard risk assessment framework for each OTC product is lacking. This makes CCP interoperability unlikely in the near future.

Centralized clearing will also bring about changes to risk management and treasury processes due to the emergence of a central counterparty and higher margin requirements, as discussed above.

**Extraterritoriality**

The diversity of country-specific obligations aside, compliance will become more complicated for both local and multinational banks due to “extraterritoriality” – subjection to the rules of a foreign jurisdiction as a result of dealing with counterparties from that jurisdiction or dealing with instruments denominated in the currency of that jurisdiction. The U.S. regulator Commodity Futures Trading Commission (CFTC) proposes that a non-U.S. entity dealing in OTC derivatives with a U.S. person will also come under the regulatory purview of the Dodd-Frank Act. Asian banks dealing with U.S. counterparties will therefore have to bear the compliance cost of both the U.S. and local Asian jurisdiction in some cases. The European Securities and Markets Authority (ESMA) in the EU will be the next important regulator that Asian banks will have to consider.

However, on July 12, 2013, CFTC approved a final guidance on its cross-border regulations. Simultaneously, it also provided an exemptive order to provide conditional relief from these regulations till December 2013. This has offered a breather to U.S. investment banks such as Citigroup, JPMorgan Chase and Bank of America, which have a big presence in the EU derivatives market. Their trades in foreign locations will not count...
CFTC has also decided to consider substituted compliance for six jurisdictions, namely Australia, Canada, the EU, Hong Kong, Japan and Switzerland. This recognizes the regulation in these six jurisdictions as being equivalent to U.S. regulation.

The presence of Asian jurisdictions on this list is encouraging. Singapore is a notable exclusion due to its data privacy laws and the fact that its regulatory reporting structure is still being finalized. In the OTC Derivatives Regulators Group meeting in August 2013, these six jurisdictions and the U.S. discussed common cross-border conflicts and duplicate requirements in jurisdictions around the world. Figure 7 summarizes the salient feature of cross-border regulation in the major economies.

**Data Privacy**

Reporting of counterparty data to trade repositories is causing concern to banks, since it may violate laws in various jurisdictions relating to privacy of counterparty data. This is especially true of cross-border reporting of transactions, where some jurisdictions have rules that prohibit movement of counterparty data across borders. There are two kinds of issues here — reporting of counterparty information to TRs, both local and foreign, and sharing of information between TRs across borders.

Client confidentiality clauses will generally be an obstacle in reporting counterparty data to trade repositories. Some jurisdictions may allow the confidentiality rules to be overridden for the purposes of trade reporting. ESMA has done this for EU reporting. The preferred option for banks is to obtain a blanket counterparty consent to report their information to authorities.

However, many jurisdictions have rules prohibiting the transfer of client data beyond their borders. For example, in South Korea a trade level consent is mandatory, while in China counterparty information may be considered a state secret and divulging it a criminal offense.

Singapore has stringent data privacy norms, and Singapore laws prevent sharing of local client information outside its jurisdiction even with client consent. A large volume of OTC trades in Asia is based out of Singapore. Hence, banks in Japan, Australia and Hong Kong might consider accessing a data center in Singapore and report trades to the designated trade repository SGX. This might at the very least reduce the cost of holding multiple data centers in Asian jurisdictions. DTCC has already opened its Asia Pacific Global Data Center in Singapore. This is one of the DTCC’s three global data centers, the other two being in the U.S. and the Netherlands.

<table>
<thead>
<tr>
<th>Country</th>
<th>Cross-Border Regulation in Place</th>
<th>Conflicts to Implement Cross-Border Regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>• Measures to facilitate trade reporting in cross-border transactions.</td>
<td>• Low: OTC regulations override the barriers caused by local privacy laws.</td>
</tr>
<tr>
<td>Japan</td>
<td>• Definite rules in place for both domestic and foreign participants.</td>
<td>• Low: Local regulations have very few conflicts with U.S. regulations in the first place.</td>
</tr>
<tr>
<td>Singapore</td>
<td>• Reporting regulations still in consultation phase. Lack of plans for cross-border trade repository as yet is a cause of concern.</td>
<td>• High: There are strict domestic privacy laws that restrict data reporting outside local jurisdictions – leading to less cross-border flexibility.</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>• Foreign repositories or CCPs are allowed but will require authorization.</td>
<td>• Medium: Foreign CCP assessment is unclear, but is likely to be based on international standards.</td>
</tr>
</tbody>
</table>
Margining and Collateral Requirements
While most Asian regulators have not yet finalized margining requirements for transactions that are not centrally cleared, both Dodd-Frank and EMIR impose margining requirements on uncleared transactions. This will impact Asian banks in transactions with U.S./EU-based counterparties or their own branches in the U.S./EU. These Dodd-Frank/EMIR margining requirements apply to all kinds of counterparties, financial or non-financial, sovereign or otherwise. Though the margin rules are not finalized, they are expected to be in line with international regulators such as BCBS and IOSCO. In the case of non-CCP-cleared derivatives, the margin charges are likely to be much higher than those for CCP-cleared trades and in line with the requirements published by BIS/IOSCO in September 2013. As such, there is a risk that the margining rules might adversely impact liquidity in the uncleared swaps market.

Change to Product Mix: “Futurization of Swaps”
The compliance with new regulations and the additional collateral requirements impose costs that may make the OTC derivatives business model less attractive. Foreign banks have a substantial share in the Asian OTC derivatives markets and are already pressured by challenges at home such as rising compliance costs, shrinking balance sheets and higher capital requirements. This may lead banks to reassess their product mixes and may prompt a move away from OTC derivatives toward exchange-traded derivatives. This trend has been termed the “futurization of swaps.” U.S. exchanges such as CME have anticipated this and are offering products such as “interest rate swap futures,” which, according to the exchange, have the same risk characteristics as the OTC IR swaps, but will trade on futures exchanges, and as a result will attract lower amounts of collateral. Such products may get introduced in Asian markets as well.

However, futurization will present its own challenges, mainly related to the imperfect hedging of risks. The listed products will not always match the risk profile of their OTC equivalents. While this will be acceptable on many contracts, some risks will still have to be hedged via the OTC route. However, if “futurization” reduces the size of the OTC market and raises costs significantly, some nonfinancial end-users may choose not to enter into a derivative contract, thus leaving the exposures unhedged.

Trading on Electronic Trading Platforms (ETPs)
Currently, Japan is the only country that has made progress on the use of ETPs. In the initial phase, high-volume transactions like yen-denominated IRS would be traded on ETPs. Other OTC derivative products (like CDS transactions referring to the iTraxx index) with sufficient market liquidity may also be included in this requirement. The Japanese authorities are open to overseas ETPs, operating under an overseas regulator, being used for trading between Japanese entities.

Impact on Functions
Figures 8 and 9 summarize the relative impact of various areas on the individual functions and major departments within a bank.

Front-Office IT
While not yet widespread in Asia (excluding Japan), exchange trading will eventually have the biggest impact on the front-office trading

<table>
<thead>
<tr>
<th>Area of Impact</th>
<th>Front-Office IT</th>
<th>Middle-/Back-Office IT</th>
<th>Shared Services</th>
<th>Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulatory Reporting</td>
<td>Medium</td>
<td>Low</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Extraterritoriality Concerns</td>
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<td>Low</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Centralized Clearing</td>
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<td>High</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td>Data Privacy</td>
<td>Low</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Margin &amp; Collateral Requirement</td>
<td>Low</td>
<td>Medium</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Change to Product Mix</td>
<td>High</td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td>Trading on Electronic Platforms</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>Low</td>
</tr>
</tbody>
</table>

Figure 8
systems used for trading OTC derivatives. These systems will have to be upgraded to support the exchange trading of these erstwhile OTC derivatives products and linkages to the different trading venues as and when they come on board.

The trading systems used for futures and options trading might possibly be integrated with those used for swap trading. The “futurization” of swaps will result in new products being launched to cater to the same requirements, but in a different way – e.g., IRS “futures.” Front-office IT will have to enhance the trading systems to incorporate these new products.

**Operations**

The introduction of centralized clearing for many classes of OTC derivatives across Asia has had the biggest impact on the operations function of Asian banks. The ops functions will have to develop new relationships with clearing members (CMs). If they are themselves CMs, then they will have to develop relationships with the CCPs to process clear trades. A new set of processes will be required including identification of clearing eligibility of trades, transmission of clearing eligible trades to CMs/CCPs, posting of initial margin, processing of trade novation, margin calculation and management over the trade lifecycle. Exchange trading will cause trade valuation processes to shift from a model-based to a market-based approach.

**Risk and Compliance**

The clearing and margining requirements completely alter the risk profile of OTC derivative instruments. While CCP clearing reduces the counterparty credit risk, the risk departments have to provide for the far-more-difficult-to-model risk of a systemic crisis unleashed by a major CM going bankrupt. What makes it more complex for Asian banks is the lack of a pan-Asian CCP, which limits the opportunity for netting of exposures. The possible emergence of multiple CCPs dealing with different asset classes can present challenges for cross-product netting.

Exchange trading will introduce a new element of market risk. Arguably, this will bring about greater transparency and clarity in measuring a firm’s exposure, compared to purely model-based valuations. Compliance functions will have to deal with complex and sometimes vague data privacy rules in various jurisdictions to ensure that counterparty anonymity is maintained. This will be especially important while reporting to common repositories straddling international borders, as data privacy rules of both jurisdictions might apply.

**Middle- and Back-Office IT**

Trading of erstwhile OTC products on swap execution facilities (SEFs) will require major changes to middle- and back-office operations processes, which in turn will impact the IT systems. One-to-one client confirmation will give way to standard confirmation affirmation processes that the trading venue will prepare. This will require that infrastructure for connecting to clearing members and CCPs will be set up.

**Shared Services**

Traditionally, data on OTC derivatives trading was not reported outside the firms, except to the counterparties. Also, most of the reporting was end-of-day or end-of-month. As a result of the new reporting requirements, all the OTC derivatives trade data has to be collected, aggregated...
and reported to the data repositories almost in real time. The shared services infrastructure will have to gear up to handle far greater data volumes and data complexity.

**Treasury**

While most Asian regulators have not yet finalized margining requirements on transactions that are not centrally cleared, both Dodd-Frank and EMIR impose such requirements on uncleared transactions, which will impact the Asian banks when they deal with U.S./EU-based counterparties or their own branches in the U.S./EU. These Dodd-Frank/EMIR margining requirements apply to all kinds of counterparties, financial or nonfinancial, sovereign or otherwise.

Treasury departments will have to manage higher demands for collateral, in terms of both quality and quantity, without putting undue stress on the banks' balance sheets and without impacting the cost of capital. An efficient collateral management system and cheapest to deliver (CTD) collateral mechanism will be in demand. In this respect, Asian banks are better placed because the 2008 crisis affected Asian balance sheets less than it did the banks in the U.S. and Europe.

**Reporting**

The most immediate impact of both Asian and global regulation has been on the reporting function. Entire classes of OTC derivatives trades have become reportable. Determination of what is to be reported has become vital. Most liquid and heavily traded asset classes in each jurisdiction have come under the purview of domestic reporting, while cross-border trades, due to extraterritoriality, have become reportable to international regulators. Data privacy issues add more complexity to the report generation process, since each report that is generated has to pass through the necessary filters to exclude client information.

**Legal**

Extraterritoriality and data privacy can potentially create legal issues while the final rules around these are still being drawn up. It will take a few years for these rules to become interpreted and precisely defined. Till then, the legal departments will have to make every effort to minimize potential litigation without hampering the bank’s business prospects.

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**How Should Asian Banks Respond?**

In an environment of evolving regulation and infrastructure and changing risk profiles, the business model for OTC derivatives is undergoing a change. The new business model is characterized by:

- Changed product mix, dominated by futures-like standardized, exchange-traded, centrally-cleared products, alongside a small set of specialized, uncleared exotic derivatives.
- High margin and collateral requirements, mitigated by multilateral netting and netting across CCPs.
- Cross-border reporting, based on the product being traded and the counterparty location, to mutually certified regulatory agencies, with complex data confidentiality rules.
- Cross-border clearing at a CCP whose margin and collateral requirements most benefit the bank.
- Increasingly comingled operations and IT systems across asset classes – i.e., cash and traditionally exchange-traded derivatives, and the newly-exchange-traded derivatives.

As the erstwhile OTC derivatives become exchange-traded and CCP-cleared, and the product mix shifts toward standardized products, they will resemble futures and options, which have always been exchange-traded standard products. Hence, we foresee a growing convergence between the front-to-back-office processes of exchange-traded products and OTC derivatives.

We believe that Asian banks should use this as an opportunity to evolve a common strategic front-to-back office operations and IT infrastructure across asset classes. Banks should explore possibilities such as:

- Combining cash equities, FI, futures and options trading infrastructure with the OTC derivatives infrastructure, since both are traded on similar exchanges and follow similar processes.
- Developing a strategic data aggregation and management policy across all asset classes, even though all of them are under regulatory reporting purview.

In our opinion, an unintended consequence of the OTC derivatives revolution will be to make it easier and more desirable to move toward a “model office” that has best-in-class systems and standardized processes across asset classes.
Footnotes
2 Conclusion section in BIS working papers: Collateral requirements for mandatory central clearing of over-the-counter derivatives, www.bis.org/publ/work373.pdf.

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