Post-trade Integration in the ASEAN – Challenges and Opportunities

Passion to Perform

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A group of seven ASEAN exchanges recently took a significant step towards capital market integration with the ASEAN Trading Link, opening the door for a new era of collaboration between ASEAN economies. As the integration of trade order routing gains traction and is followed up by plans for post-trade linking of clearing and settlement, it will give rise to a number of challenges and opportunities.

The ultimate vision of the ASEAN countries is to forge closer collaboration among the seven member exchanges, which together boast a combined market capitalisation of USD 2.1 trillion, making it the 4th largest market in the Asia Pacific region. This collaboration in turn is aimed at achieving the wider goal of encouraging capital market growth, driving the development of new ASEAN products, attracting more investment and promoting cross-border trades.

In this white paper set within the context of on-exchange traded equities, we will outline the challenges and opportunities which may arise from any future post-trade integration. We will take as an example the European environment, where some Central Counterparties (CCP) have already started to interoperate and some Central Securities Depositories (CSD) operate cross-CSD links. We will then draw from related developments in the European market infrastructure environment to highlight some considerations for any future linked post-trade environment in the ASEAN region. Finally, while not all ASEAN markets have a separate CCP entity for on-exchange equity clearing, for the purpose of this article, we will refer to the clearing party as “CCP”.

ASEAN securities trading and post-trade infrastructure developments have traditionally followed geographical boundaries and the region’s different regulatory structures, economic maturity and currencies add a certain level of complexity. Compared to markets such as Europe or the USA, where single currencies, as well as pan-regional laws and regulations have helped to facilitate market cohesion, the diverse nature of the countries comprising the ASEAN inherently raises the bar for any post-trade infrastructure linkage, and underscores the importance of collaboration between public and private sectors. Certainly, the scale and implications of any post-trade linking should not be underestimated. However, by identifying and gaining deeper insights into these considerations, the ASEAN community should be able to find the best approaches to achieve a linked post-trade environment and create new opportunities.

3 www.world-exchanges.org/statistics/monthly-report
4 www.asianceforum.com/LinkClick.aspx?fileticket=VhGMPc6_v40%3D&tabid=210&mid=652
Central Counterparties and Central Securities Depositories in the ASEAN

Within the current national boundaries, after a trade has been executed on the exchange, the local CCP manages the clearing activities, during which cash and securities obligations or entitlements are calculated and the different securities transactions in the same security are netted. As a result, the CCP becomes the buyer to every seller and the seller to every buyer through a process known as “novation”. This process helps mitigate the counterparty default risk. The identified risks between CCP participants and the CCP are then covered by collateral arrangements, which usually comprise initial and variation margins. Currently, most of the clearing entities in the participating ASEAN countries novate. This includes Indonesia, Malaysia, the Philippines, Singapore and Thailand.

ASEAN Exchange’s clearing entities and novation

<table>
<thead>
<tr>
<th>Country</th>
<th>Who clears the trade?</th>
<th>Are trades novated?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>Performed by a separate clearing entity – Kliring Penjaminan Efek Indonesia</td>
<td>Yes</td>
</tr>
<tr>
<td>Malaysia</td>
<td>Performed by a separate clearing entity – Bursa Malaysia Securities Clearing</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Performed by a separate clearing entity – Securities Clearing Corporation of the Philippines</td>
<td>Yes</td>
</tr>
<tr>
<td>Thailand</td>
<td>Performed by Thailand Securities Depository</td>
<td>Yes</td>
</tr>
<tr>
<td>Singapore</td>
<td>Performed by Central Depository</td>
<td>Yes</td>
</tr>
<tr>
<td>Vietnam (HNX)</td>
<td>Performed by Vietnam Securities Depository</td>
<td>No</td>
</tr>
<tr>
<td>Vietnam (HOSE)</td>
<td>Performed by Vietnam Securities Depository</td>
<td>No</td>
</tr>
</tbody>
</table>

Source: Deutsche Bank Direct Securities Services, ASEAN Countries
Once a trade is novated and cleared, the CCP typically enters the transactions in an already pre-matched status into the Central Securities Depository (CSD). Trades that are not routed through a CCP – such as trades done Over-the-Counter (OTC), will run through a matching process that is usually performed at the CSD level to ensure that the details of the trade match before the transactions are advanced for settlement. On the settlement day, the CSD effects the transfer of ownership as a result of the successful exchange of securities and cash between the different parties. Therefore, a CSD addresses settlement risks by providing the standardised infrastructure for settlement processing.

While cross-border trades – defined as a transaction with one of the counterparties not being established in the traded securities’ place of issuance, may seem to be more complex, in ASEAN, the clearing and settlement process is still executed in the security’s place of issuance. As a result, cross-border trading in ASEAN is not impacted by the diverse clearing and settlement practices in this region.

For example, the Table below represents a brief overview of the pre-matching, matching and settlement times in ASEAN countries. This successfully co-exists with cross-border trading as securities are settled in their country of issuance. There are also nuances in the matching and settlement practices of each country, which are not shown in this table.

### The Different Settlement Timing

<table>
<thead>
<tr>
<th>Country</th>
<th>Settlement Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>TOS Method: Sell trade From T+1, 12.00 to T+2, 16.00 T+2, 16.00</td>
</tr>
<tr>
<td>Malaysia</td>
<td>TOS Method: Buy trade From T+1, 12.00 to T+2, 16.00 ISS Method: Buy/Sell trade T+2, 17.30</td>
</tr>
<tr>
<td>Philippines</td>
<td>From point of trade to T+3, 12.00 T+3, 12.00</td>
</tr>
<tr>
<td>Singapore</td>
<td>From T+2, 10.00 to T+3, 11.59 T+3, 12.00</td>
</tr>
<tr>
<td>Thailand</td>
<td>From point of trade to T+3, 11.30 T+3, 11.30</td>
</tr>
<tr>
<td>Vietnam</td>
<td>From T Date, 16.00 to T+2, 09.30 T+3, 09.45</td>
</tr>
</tbody>
</table>

Source: Deutsche Bank Direct Securities Services, ASEAN Countries
There are currently no infrastructure links existing between any of the ASEAN CSDs or CCPs — nor are they planned in the current phase of the ASEAN Exchanges project. However, the subject has been raised as a future development following the exchange trading link. Inevitably, the similarities with the European Union (EU)’s initiatives in this regard immediately come to mind.

With a similar goal to achieve more integrated capital markets, the EU’s efforts are driven by its objective to create a Single Financial Services Market. Within this framework, EU has encouraged competition, cost efficiency and intra-EU trading. In particular, regulations have allowed non-domestic clearing of a security and lowered the entry barriers for non-national CCPs to establish their services. Today, reaching a new balance, a number of CCPs in the EU compete for trade feeds from trading platforms resulting in different dynamics.

For the ASEAN community, the developments of the EU’s interconnected post-trade environment provide insights into the inner workings and effects of such initiatives. In addition, ambitious EU projects, such as the single trading, clearing and settlement layers initiated by NYSE Euronext, LCH Clearnet and Euroclear for Euronext Securities (ESES) across Belgium, France and the Netherlands, “CCP.CEE” — the regional single central counterparty entity across some of the Central Eastern European countries, and TARGET2-Securities (T2S) provide a realistic measure of the time and effort involved in achieving greater integration and its impact on the wider industry. The increased focus on systemic risk and investor protection will also need to be taken into consideration.

5 http://ec.europa.eu/internal_market/finances/actionplan/index_en.htm
Evaluating a possible model for an ASEAN post-trade link

ASEAN trade-to-post trade flows operate in an equally complex environment, but in a presently straightforward vertical manner within each national boundary as shown on Table below.

This table also illustrates another aspect of this characteristic: in addition to clearing which is not necessarily performed by a separate entity in each location, cash settlement is a mixture of commercial and central bank money. Any post-trade link will need to take into consideration these differences.

With the practices of domestic clearing and settlement, and also a key difference from the EU model, the linking of ASEAN CCPs and CSDs will instead need to incorporate the regional characteristics of having different currencies, laws and market practices. In the following sections, we will briefly review possible CCP and CSD models for ASEAN exchanges.

In regards to the CCP function, there could be three methods of integration. It could be done by merging CCPs across markets to effectively create a pan-regional entity, allowing CCP interoperability or by expanding the eligibility criteria of participants and allowing CCPs to participate as clearing members for each other. Each model would also have different degrees of benefits and complexities.

### ASEAN Vertical Clearing and Settlement Structure for Equity Securities

<table>
<thead>
<tr>
<th></th>
<th>Indonesia</th>
<th>Malaysia</th>
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<th>Singapore</th>
<th>Thailand</th>
<th>Vietnam (HNX)</th>
<th>Vietnam (HOSE)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Matching</strong></td>
<td>Kustodian Sentral Efek Indonesia (KSEI)</td>
<td>Bursa Malaysia Securities Clearing (BMSC)</td>
<td>Philippine Depository &amp; Trust Corporation (PDTC)</td>
<td>Central Depository (CDP)</td>
<td>Central Depository (CDP)</td>
<td>Vietnam Securities Depository (VSD)</td>
<td>Vietnam Securities Depository (VSD)</td>
</tr>
<tr>
<td><strong>Securities Settlement</strong></td>
<td>Kustodian Sentral Efek Indonesia (KSEI)</td>
<td>Bursa Malaysia Depository (BMD)</td>
<td>Philippine Depository &amp; Trust Corporation (PDTC)</td>
<td>Central Depository (CDP)</td>
<td>Central Depository (CDP)</td>
<td>Vietnam Securities Depository (VSD)</td>
<td>Vietnam Securities Depository (VSD)</td>
</tr>
<tr>
<td><strong>Cash Settlement</strong></td>
<td>Approved Commercial Banks</td>
<td>Bank Negara Malaysia (BNM)</td>
<td>Approved Commercial Banks</td>
<td>Approved Commercial Banks</td>
<td>Approved Commercial Banks</td>
<td>Bank for Investment &amp; Development of Vietnam (BIDV)</td>
<td>Bank for Investment &amp; Development of Vietnam (BIDV)</td>
</tr>
</tbody>
</table>

Source: Deutsche Bank Direct Securities Services, ASEAN Countries
A single entity across the different markets can have clear benefits for the investment community. If a broker-dealer or its clearing agent is able to post one line of collateral for the trades into the different underlying markets, it can have meaningful cost benefits. In addition, the CCP would act as a single entity to clear trades between the different exchanges and clearing participants. Thereafter, the respective central securities depositories would be used for settlement, thereby potentially creating operational efficiencies. At a systemic level, there would be an overall regional view of daily flows and events, which would help improve regional risk management.

But there are also practical considerations to take into account. This option would require substantial legal, regulatory and technological reforms, rules on fair level playing field as well as harmonisation and standardisation across the ASEAN countries. Likewise, a model that allows different CCPs to clear for different stock exchanges – CCP interoperability, could also have cost benefits, but might create a “spaghetti effect” regionally. It would also require similar levels of effort and time to put in place.

Therefore, having cross-CCP memberships could be seen as a more feasible way to link CCPs. In a cross-clearing membership model – remote or otherwise – each CCP would act as a clearing member for each other.

The complexities which will be present in any CCP-linked model will include the different currency and liquidity in ASEAN markets, different permissibility around netting and segregation of positions, as well as the related scope and availability of eligible collaterals. To mitigate additional credit exposure, ASEAN CCPs may need to raise capital and post collaterals to each other. The linked CCPs would also need to consider how to minimise the effects of their own collateral demands if they are to avoid accentuating market spikes during stressed market conditions when asking for more collateral. In addition to the operational requirements for managing inter-CCP processes, any CCP link would require consideration on how to interact with CSDs. The direct impacts and benefits to the broker and post-trade communities could be significant and would also need to be analysed.
Regardless of which CCP-linked model is finally adapted for the ASEAN environment, a key success factor will be ensuring that a broker can manage a single line of margin and collateral for all participating markets from a single clearing membership.

Like CCPs, CSDs have a variety of inter-operability methods for intra-region settlement. Similarly, they could merge into a single entity across the ASEAN region. Alternatively, they could develop a correspondent account relationship with an integrated centralised messaging hub, or through the outsourcing of settlement functions to a single entity.

CSDs merging into a single entity across the different markets could bring similar benefits as the idea of a single CCP entity. However, this single entity would also face practical challenges, resembling those of the single-entity CCP. Moreover, such single entity could end the current national monopolies, which could make the single entity option a challenging one to implement. The method of outsourcing the settlement function by the different CSDs to a single regional entity could follow the route of Europe’s T2S project, although the drivers for T2S are different. The significant legal, regulatory and market practice changes in ASEAN which would be required for such an option, as well as significant investments to build a platform make this longer term option.

In contrast, the second option – which is to establish a correspondent account relationship and messaging hub, has a lower entry barrier to market. In this scenario, CSDs would open securities settlement accounts with each other. In a move that replicates a portion of what the current custodian/intermediary model performs, a home country CSD would keep records of securities held abroad by each of its participants. A central technology message hub could act as a “message translator”, thereby addressing the “spaghetti effect” potentially created by different message formats and instructions that will need to flow through the different CSDs. Such technology hub may also act as storage and transmitter of corporate action events across the region.

While the main driver of this model is technology, each of the CSDs may effectively become an “agent” for the other who records, tracks and ensures safekeeping of investors’ foreign assets. As it pertains to settlement finality and records of ownership, over time, it could attract practical considerations, including the higher levels of responsibilities and liabilities that are being placed on depositories and depository agents for investors’ protection. With this model, securities settlement would remain in the market of issuance, however, the linked CSDs may undertake other asset servicing activities or the participating ASEAN locations may move to a central bank money clearing practice. How any of these scenarios would affect ASEAN CSDs, securities and cash settlement, as well as the levels of risk and transparency, would be an important consideration for all stakeholders.

In all forms of inter-operability, it is important to recognise that any level of increased integration entails the possibility that problems might easily spread to other CSDs. As a result, clear market infrastructure responsibilities and the respective legal framework need to be in place in order to alleviate any potential settlement confusion. For example, the legal status of instructions in the event of a system fault in the messaging hub would need to be clearly defined.

CSD and CCP links would also need to be assessed by their regulators and the investment community for their resilience. For example, the CPSS-IOSCO Principles for Financial Market Infrastructure could be used as a benchmark. Appropriate technology back-up plans would also need to be put in place.

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A truly pan-ASEAN approach?

Once on the path to greater integration, ASEAN Exchanges will not only need to consider which model to use for increased CCP and CSD inter-operability, but they will also need to identify and encourage the use of solutions that are already in the region to facilitate the ASEAN Exchange post-trade plans.

Indeed, there is a direct link between increased trading volume and clearing needs. For example, Direct Market Access (DMA) enables non-members of a trading exchange to utilise the technological infrastructure of trading members to send and manage their trade orders. The wider use of DMA will also make it easier for investors to access ASEAN markets. However, the higher trade volumes can increase operational pressures and collateral costs for the clearing brokers, especially if multiple collateral requirements for the different markets are required. It can also lead to increased and concentrated counterparty risks in a linked CCP environment.

The DMA project has been launched in Singapore, and it is under consideration in the Philippines. More broadly, it is likely to gain greater acceptance across the region. The October announcement of the Singapore Exchange and the London Stock Exchange’s initiative to launch cross-exchange trading of selected securities should add to this momentum.

Within the ASEAN regional clearing and settlement environment, financially strong and experienced banks can provide third-party clearing, account operator or “give-up/take-up” services to higher volume brokers. By leveraging such platforms, brokers themselves could help mitigate their risks, stemming from the greater volumes of trading and partially contribute to mitigating the systemic risk coming from a linked CCPs model. The reach of these banks’ credit lines into the market would also help facilitate liquidity and provide a risk buffer.

However, not all ASEAN countries today allow post-trade clearing services like third-party clearing. Therefore, as part of the wider post-trade linking planning process, the countries’ efforts to enable the availability of these strategic tools in each ASEAN market could be as important as those considering using DMA as an access tool.

In addition, market stakeholders cannot ignore the impact of using different currencies on integration. For this reason, in relation to any post-trade model, efforts would need to be made to ensure foreign currency exchange (FX) flows can be as seamless and cost effective as possible. An integrated ASEAN Exchange post-trade model should provide possibilities where FX transaction flows can be aggregated and a panel of experienced ASEAN-based banks, with both on-the-ground and global FX capabilities, could provide services to help address availability and provide competitive rates.

From the central securities depository angle, a CSD correspondent account structure with a messaging/corporate action hub could be a useful utility service which could improve inter-CSD efficiency while setting the course to greater inter-operability. It is also a tool that could encourage local custodians to deliver higher level of value-added services and client service levels.
Considerations here should also include analysis on how local CSD participants could access the different markets via a single point of entry from each local market’s CSD, since this type of streamlined account structure could potentially enable cost savings for the investment community.

Finally, because of the efforts required and the extensive nature of the impacts that these changes would bring, links at the CCP and CSD levels would need take into consideration not only client demands, but also related technical and economic viability without introducing significantly new risks into a previously relatively low risk ASEAN post-trade environment.

Conclusions

No progress comes without risk. In the diverse and attractive ASEAN region, progress towards closer post-trade integration of CCPs and CSDs will be a journey. It will involve a fair amount of effort and time. However, the potential benefits gained in environments where CCPs and CSDs cooperate with each other, can be significant.

Due to the wide-ranging implications of such plans, the objectives of this journey will need to be firmly established to maintain a consistent momentum. Hence, any changes to the trading and post-trade environment in the ASEAN would be most successful if public and private sector stakeholders can work closely together to establish what could become a unique approach to regional integration, using the experience of other regions as a guide.
Deutsche Bank’s expertise

Deutsche Bank’s Direct Securities Services division has approximately EUR 1.5 trillion assets under custody globally, with an operational presence in 33 global markets, 14 of which are Asian countries. In the ASEAN region, the Bank is represented in the efforts of the ASEAN+3 Bond Market Forum and other key industry initiatives.

Deutsche Bank has proven expertise in post-trade engagements and projects such as TARGET-2 Securities, CCP.CEE, as well the NYSE-Euronext and ESES initiative.

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