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Introduction

The capital markets and investment banking industry is seeing a rapid shift in their business model. An avalanche of new regulations and the continuing economic uncertainty means the industry is operating at Return on Equity levels that are less than 10%, much lower than the historical levels seen before the 2008 financial crisis. The Dodd Frank Act and European Market Infrastructure Regulation (EMIR) are pushing the Over-The-Counter (OTC) industry towards standardization. In Europe, TARGET-2-Securities (T2S) is being pushed for implementation at select Central Securities Depository (CSDs) in phases starting 2015. Driven by the change, investment banks and broker-dealers are gravitating towards becoming either large flow players in the trading business or niche players for select products and markets. At a time when the top 10 global investment banks are spending close to $100-$250 million per annum in maintaining and enhancing their back office securities processing systems, margins in both - the flow and OTC businesses are rapidly shrinking with uncertain trade volumes and creeping commoditization.

In addition, the changing market dynamics are forcing broker-dealers to invest heavily in front office systems to differentiate themselves by providing better access to liquidity, best execution and lower fees. The industry’s continued shift towards electronification of asset classes and drive to reduce costs in traditional flow business means that significant investments are required in IT platforms to maintain scale, reduce cost-per-trade and remain relevant in the market. This article explores one of the industry trends, which is to create or join a utility platform for securities back office processing and the associated functions.

The word “Utility” is generic and often used in multiple contexts. For the purpose of this article we define it as shared platform across banks or within a bank to deploy technology services, operations services or both.
Multi-Tenant Utilities are Coming of Age

The ever adapting capital markets and investment banking industry is exploring new ventures and partnerships to create platform services in securities processing.

Today, most large players in the US and European markets are in advanced stages of setting up back office Securities Processing Utilities or joining one that already exists. The primary functions of this utility are related to clearing & settlement, reconciliation, reference data and corporate actions. The players in the fray include outsourcing providers, securities service firms, product vendors, exchanges, market data providers, depositories and Central Counter Parties (CCPs).

As a business model, the industry is not new to utilities and platform services. A few of the established players and platforms are shared in the figure below:

<table>
<thead>
<tr>
<th>Participants</th>
<th>Utility Offering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broadridge</td>
<td>Provides Mid-Office &amp; Back-Office IT utility and BPO services for mostly tier-2 banks in US.</td>
</tr>
<tr>
<td>Pershing</td>
<td>Provides clearing solution for sell-side brokers.</td>
</tr>
<tr>
<td>State Street Global Services</td>
<td>Provides custody Mid-Office &amp; Back-Office IT and ops utility for buy-side players.</td>
</tr>
<tr>
<td>Euro Clear &amp; Clear Stream</td>
<td>Clearing and settlement services pan-Europe.</td>
</tr>
</tbody>
</table>

Figure 1: Established Players and Platforms

In addition to the list above, many platform solutions exist in Germany, Japan and New Zealand for domestic processing. In the year 2012 alone, many banks (SocGen, UBS and Citibank) and market infrastructure providers (Euroclear and SmartStream) made new announcements about offering platform services for securities processing, custody and reference data. Accenture also announced a joint partnership with Broadridge and SmartStream to offer a Post-Trade Processing Solution for banks operating in Europe and Asia.

While securities processing utility models are fast emerging, the key to success is choosing the right partnership construct and the utility operating model.
Choosing the Right Service Model and Partnership Construct

Multi-tenant securities processing utilities could take different forms based upon the unique requirements of the investment banks. Some of the prevalent utility models are depicted in the figure below:

- **Bank’s Internal Shared Platforms**
  - Internal Shared Service Centres of a Bank
  - Internal shared platforms across different lines of business
  - Internal utilities are already set-up by many banks

- **Software as a Service (ASP)**
  - Shared IT + In-House Operations
  - Hosted platform shared by the banks for securities processing
  - Operations processes are managed by their in-house teams

- **Platform as a Service (PaaS)**
  - Shared IT + Outsourced Distinct Operations
  - IT Platform characteristics similar to an ASP model
  - Operations processes are also outsourced to the provider with distinct teams for each client

- **Business Process as a Service (BPaaS)**
  - Shared IT + Outsourced Shared Operations
  - In addition to PaaS model, the utility provider will pool in shared processes for commonly used non-proprietary functions.
  - Example: Instrument data, corporate action, event processing

There is no single model that will be a silver bullet in the bank’s quest to find an optimal platform or service model. Banks must look at the extent of customization required in the platform for the internal trade workflows, data confidentiality issues, and the forecasted trading volumes before choosing the model that delivers the target savings.

From a practical view point, banks must start with an internal utility, which is a shared platform for different lines of business within the bank (e.g. Equities and Fixed Income) before approaching external tenants. The lessons of setting up such a utility across lines of business will be invaluable for scaling up the model to onboard external tenants.
Key Considerations for Setting up a Utility

While it’s easy to think of back-office securities processing as one single function that could be moved to a utility platform, the reality is considerably different. The variations across banks, products and markets have a significant impact on the implementation and success of the utility model.

While designing the scope of the back office securities processing utility, a combination of factors need to be considered to achieve realistic savings targets with minimal disruption to operations.

<table>
<thead>
<tr>
<th>Utility Possibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly standardized product, largely exchange traded</td>
</tr>
<tr>
<td>OTC derivatives</td>
</tr>
<tr>
<td>Largely homogenous market infrastructure</td>
</tr>
<tr>
<td>APAC countries</td>
</tr>
<tr>
<td>Trade processing functions commoditized and standardized</td>
</tr>
<tr>
<td>Client side processes like confirmations &amp; custody</td>
</tr>
</tbody>
</table>

Figure 3: Considerations for Setting up a Utility

It is easier to build a utility model starting with most liquid markets e.g. US and most standardized products such as cash equities. However, the challenge in offering the utility model is the presence of large banks with the scale to build similar and competing platforms and their already low cost-per-trade structure, which limits the scope for substantial savings. Some of the smaller banks in some parts of EMEA and APAC suffer from low trade volumes and lack of standardization but have a high cost-per-trade structure, which offers an opportunity for significant savings. The actual roadmap for implementation should be designed by keeping the requirements of the seed banks and the other partners in mind.

While the roadmap of the platform needs to be carefully decided, the design principles to build the platform are even more important to ensure it maintains high scalability, parameterization and global implementation potential.
Design Principles for Building a Utility

While, banks with existing platforms are looking to monetize them through sale or partnerships, a consortium of banks that would like to build a platform have a difficult decision to make - whether to build it from scratch or partner with a product vendor? Both choices need to be carefully put through the following evaluation framework before a decision is made.

### TYPICAL DECISION CRITERIA FOR PLATFORM BUILD

- Time-to-market for platform roll-out
- Extensibility to other tenants and other lines of business within the bank
- Handling of minimum forecasted trade volumes
- Significant reduction in costs
- Minimal operational risk during implementation

### BEST PRACTICES IN PLATFORM DESIGN

- Service oriented design with global roll-out capability
- Shared processing functions and rules engines with data masking
- Single code base for the platform with separate processing queues for individual tenants
- Linearly scalable architecture
- Flexible Interfaces

SPVs – The Recommended Legal Structure

The ideal legal structure for the utility is to create a Special Purpose Vehicle (SPV) that will own the platform and offer it as a service to the processing entities. While the stake in the SPV is determined by the capital and Intellectual Property brought in by the parties, the voting control may reside with one party during the development of the platform. As new tenants join, the SPV charter will decide the future changes to the ownership structure. Some of the SPV agreements have exit clauses and transfer of ownership and/or assets at appropriate times during the contract duration.

SPV is the most appropriate way to ring fence the platform assets, regulatory and operational risk and the cash flows during the utility roll out. Critical to the success of the SPV is the transfer of staff from the parent companies and the domicile of the SPV for legal and tax purposes.
Business Case for the Utility

The typical savings potential that banks target are in the range of 30-50%. However, the actual savings will considerably vary as it will depend on the new trade volume from the tenants on-boarded, additional market share that the broker-dealer garners at the lower cost-per-trade and the extent of shared infrastructure with other tenants.

<table>
<thead>
<tr>
<th>Key business case elements</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT and Operations Staff</td>
<td>The IT staff cost should see a significant optimization. 40-50% of savings could be achieved through lower spend for development, testing and maintenance of the platform. However, achieving optimization in the operations staff cost is not so straightforward. The key is the Straight Through Processing (STP) rate that the bank will achieve post transition to the utility. A standard platform could initially have a negative impact on STP rates. However, a flexible platform design that accommodates bank specific variations could mitigate the risk. In addition, the utility is also expected to improve data quality across tenants and hence, better the STP rate.</td>
</tr>
<tr>
<td>Savings in Platform Build or Maintenance Costs</td>
<td>Banks could expect considerable reduction in build and maintenance expenditure for the platform as long as the tenant-specific extensions are kept to the minimum. Anywhere between a 25-40% reduction is feasible.</td>
</tr>
<tr>
<td>Hardware, Infrastructure and Hosting</td>
<td>10-15% savings could be expected by sharing data center, development and test environments.</td>
</tr>
<tr>
<td>Additional Integration and Data Transformation</td>
<td>The cost of integration and data transformation between tenant systems and the utility platform must be estimated and included in the business case. The potential impact could lead to an additional cost of 5-10%.</td>
</tr>
</tbody>
</table>
A common practice used to measure the back office efficiency levels of banks and also the utility platform is by using a cost-per-trade metric. Intuitively, multi-tenancy will drive higher trade volumes on the platform, which will push banks down the cost-per-trade curve. However, to make this a reliable contractual benchmark in a utility setting, it is important to define the scope and definition of cost-per-trade. Commonly agreed direct and indirect costs as well as the boundaries of processes need to be defined to make sure the cost-per-trade comparison is meaningful.

In general, pre-netted trade executions are a good benchmark to determine what constitutes a “Trade”.

Multi-Tenant Utilities are the Way Forward

With all the constraints and operational difficulties of setting-up a multi-tenant utility, it is an idea whose time has come. The commoditization of the back office functions, coupled with the high level of investments required for regulatory and market changes are forcing banks to consider shared platform models. Multi-tenant utilities will bring the scale, best practices and cost variabilization that will drive the industry towards consolidation around a small set of high volume flow providers.

Figure 4: Lower cost-per-trade through Utility Models

The definition of trade for this discussion is pre-netted trade execution.
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