luxoft
A DXC Technology Company

What's the business case for central clearing projects?

by Yogesh Kshirsagar
Principal Consultant, Banking and Capital Markets

You've heard of central clearing projects, no doubt.

But what risks and other business problems do they address? What solutions do they provide? And what about the scope and continuous improvement aspects of central clearing projects?

Often viewed as profitability projects, they also help banks protect themselves from exposure in massive deals under interest-rate, derivative or credit-default swap contracts. In short there are two business problems that central clearing projects address:

• Revenue protection (mitigating a defaulting risk)
• Revenue generation (improving future profitability)

Analysis of the revenue protection and future profitability from the trading desk (front office) drives your business case. If these factors are unavailable, projects can't go ahead. For example, if you're going to spend $1.8 million on a project over a 12-month period, can you demonstrate that you can meet the desired

ROI within a reasonable timescale? The team dynamics needed to implement such a project can be found in the second half of this white paper. For simplicity, I've used "CCH" to indicate central clearing houses like LCH, CME Group, ICE Clear and Eurex Clearing.

Once you're convinced the numbers add up, you need to take a high-level look at the clearing models and do a comparative study. Typically, there are two distinct avenues:

• Clearing at a central clearing house (like LCH) with an intermediary clearing bank

• As above without an intermediary clearing bank

Revenue protection and revenue generation

Revenue protection (mitigating a defaulting risk)

A CCH takes a side in trades between two counterparties. When there is a default risk, it helps settle the trade with no loss to you. So, by using the CCH, you're hedging against the counterparty risk that normally exists in any bilateral trade. Many interest-rate derivatives trades are settled bilaterally (e.g., between two banks, say ABC bank and XYZ bank. If XYZ goes bankrupt, ABC loses money).

However, when CCH takes the opposite side of a trade, you get your money back because the trade is no longer bilateral and will be cleared by CCH (one of many clearing houses which perform this function).

Revenue generation (future profitability improvement)

As CCH protects you from default risks, you can increase the volume of your trades with counterparties. The greater the volume, the bigger the profit potential should trades turn out favorably. Therefore, if you're expecting a rise in trade volume, you should make a point of it in your business case.

Clearing with or without
an intermediary clearing bank

Clearing trades via an intermediary clearing bank is a strategic decision and could, in some cases, be your only viable option.
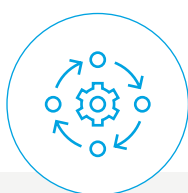
Key benefits of using an intermediary clearing bank:

Saves the cost of a CCH subscription (see membership section of the CCH portal)

If you forecast that your IRS/CDS business will increase, experience says an intermediary clearing bank will help

Legal framework limitations (e.g., if you can't subscribe but still want to clear at CCH). Let an intermediary clearing bank manage your regulatory requirements (Dodd Frank or MiFID, for example). There could be other regional requirements

Access an intermediary clearing bank's report of the trades cleared by CCH that can be used for reconciliation purposes by your back office

This information will help get management buy-in and build a strong business case for project initiation.

Central-clearing solutioning

Always implement clearing projects that mirror existing models used elsewhere in your bank. With the help of BA and Ops users, pinpoint your existing clearing models. Draft "as is" and "to be" illustrations in PowerPoint to show current processes and future states.

Only replicate existing Ops procedures. Try not to improve them unless there's a critical business need for a new solution:

- Don't reinvent the wheel

- If you improve existing processes, it could delay your current project or implementation. Take a pragmatic view and don't plan any process improvements during the project

Make sure automation is excluded if it's likely to improve the existing process:

- If you try to drastically change your existing architecture, it might cause problems to your existing businesses and could be a very expensive mistake

- Be economical and pragmatic when automating existing applications

Fulfil regulatory requirements. All requirements should be in scope:

- Reconciliations are vital. As control mechanisms, they must be deployed while implementing a clearing solution. There should be separate discussions with recon teams to identify all current reconciliations

- New reconciliations can be within your scope, or delivered via another project

Leverage existing books and entities (reference/static data):

- The books required for accounting and customer data should be reused/leveraged where possible. Ask the Ops or IT teams to extract data from one application and then copy it to another application, seeking help from your vendor/IT/Ops

- Be creative. There will be several possible solutions

Use existing application connectivity wherever possible:

- The connectivity between trade-booking and middle-office applications can be used in most cases (consult interfacing teams)

Anything other than these actions calls for deep analysis before being added into scope

End-to-end ("to be") solution

Having considered the present bank models and principles laid down for the solution design, here's a solution:
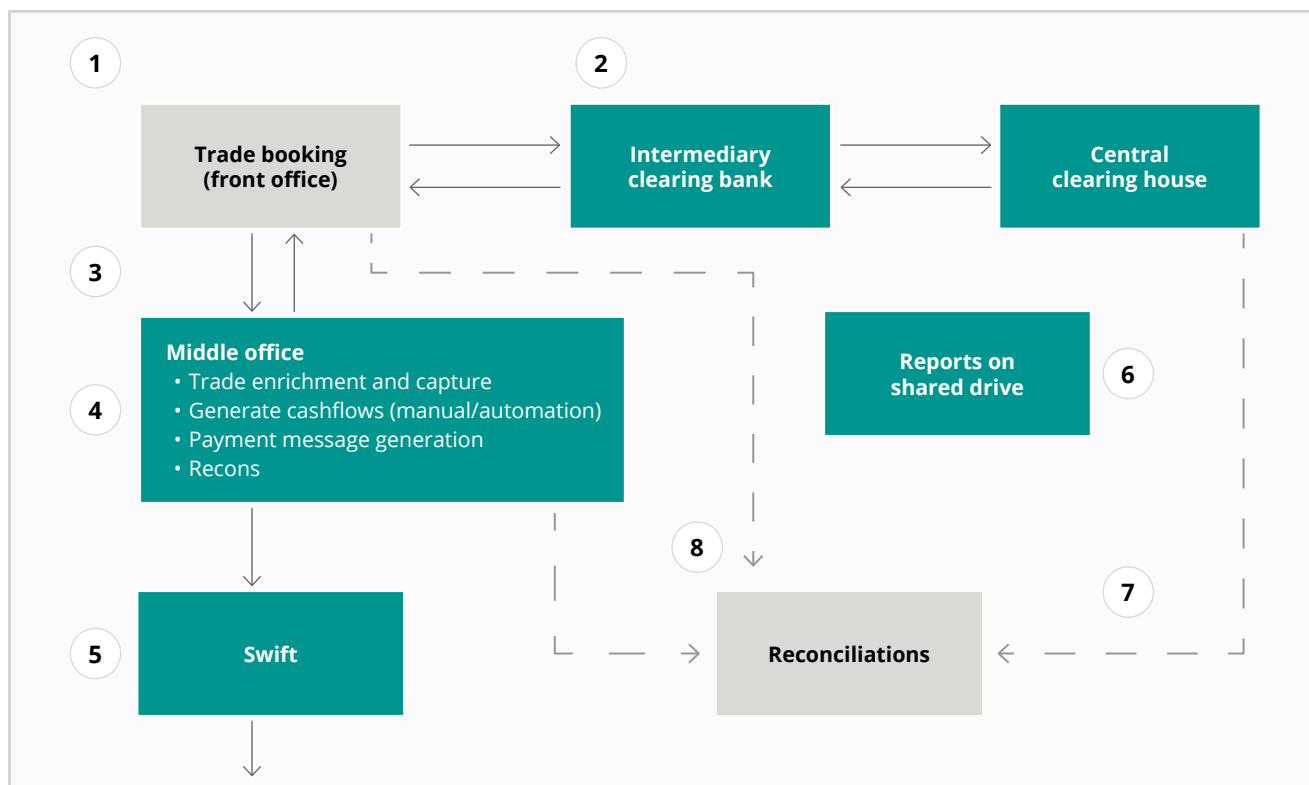
1. Front-office user of client books a trade in a trade-booking application

2. A trade flows out to CCH via a clearing bank (Novated) and flows back to the front office where it gets canceled. This is an alpha trade

3. As soon as an alpha trade is canceled, a beta trade is booked which flows to the middle office. There is two-way communication between the middle and front offices

4. The middle office performs trade enrichment, trade capture, confirmation and the sending of Swifts

5. Swift messages are sent out from the Swift alliance

6. The collateral management team receives a daily report from the intermediary clearing bank and uses it to generate cash flows into the middle office

7. CCH sends cleared-trade reports to the bank

8. Reconciliation process:

    a. Front office versus middle office
    b. Middle office versus CCH
    c. Other reconciliations

Note: All trades will be reported to the regulators at relevant stages of the trade lifecycle. The existing procedure will be followed and additional procedures implemented as required by the jurisdiction of the entity in question.

Solution details

There are two options for implementing central counterparty clearing projects:

1. If you have a CCH subscription, you can clear trades without using an intermediary clearing bank

2. If you use an intermediary clearing bank, it sends your trade to CCH which novates the trade (takes the other side) and sends it back to an intermediary clearing bank

In due course, these trades arrive in your middle- and back-office systems for post-trade processes.

Front office:

- The front office books trades and generates revenue. It's known for its ability to get more customers to book more trades and generate more revenue

- The infrastructure helps send trades to CCH (directly or via an intermediary clearing bank). The front office confirms trades between counterparties and then sends trades to your bank's middle-office system

- The application you use to book trades should give you a pipeline or an API to feed trades to your middle office

- Having integrated your front-office applications to book interest-rate swaps and feed them to a post-trade processing application, the first part of the solution is complete. Now you can assess the technological feasibility, cost and schedule

- If you have no integration budget, you can book trades directly through your back-office system (e.g., Murex) and get them to send the trades to CCH as a bespoke solution

Middle and back offices:

- The back-office processes trades as fast as possible

- Post-trade organizations process trades seamlessly. Often, trades are booked but not processed for some considerable time, so make automated improvements to your back-office processes

- The middle-office application has its own trade flow. This robust back-/middle-office system sends customer confirmations, does trade enrichment and sends messages to your Swift alliance

- Once you get Swift messages back from customers or clearing banks, the middle-office application automatically changes the status of your trades to "settled." Then it sends notifications to various front-office applications, detailing that trades are settled, partially settled, or not settled

- So, you can use the middle-office application for all confirmations, allocations and so on when it comes to products like equities, and interest-rate and credit-default swaps

Reconciliations

Reconciliation is a control mechanism that prevents fraud and calculation errors, or makes sure systems are in sync. It's a matching process and always a middle-/back-office function.

- **FOBO reconciliation:**

  - Whatever you've booked in your front office also needs to be in your back-office system

  - If a $100 million trade booked for Bank A has been sent to CCH, the same trade should have arrived in a middle-office application and the two entries should match

  - This is a very simple FOBO reconciliation, but financial institutions often struggle with this kind of process

- **Middle office versus central-clearing party reconciliation:**

  - Think about reconciliations between back-office CCH/central-clearing-house trades. An intermediary clearing bank should help you send a list of trades settled at CCH. So, you'll have a list from the intermediary clearing bank and another from the middle-office application

  - This is very similar to a nostro or a position reconciliation

- **Other reconciliations:**

  - Speak to your Ops and technology teams if there are any other reconciliation processes to be added to the scope

Bespoke peripheral systems

Apart from these systems, you might need to implement other client requirements. For example, automate a process called "margining" if it's not already automated. This converts cleared trades into simple cashflows which are used for settlements.

Regulatory requirements

You need to align Dodd-Frank and MiFID regulatory requirements with an intermediary clearing bank or your front office to decide how reporting happens. This is one of the crucial elements of the project. Although you can implement the solution faster by ignoring regulatory requirements, ultimately, you might not be able to use the solution. So, focus on regulatory activities right from the outset.

Downstream impact and work required

It's a myth that central-clearing projects only impact the front office. In fact, you can't have a front-office project without making back-office changes, because front-office changes impact trade flow, static data and settlement processes.

Once you've booked a trade, it should flow through to the middle office, so you'll need connectivity between your front and the middle offices. Also, you must make sure the middle office can process trades. Otherwise, if there are no workflows assigned, the trades will join a technical exception queue and will need to be reprocessed. You must understand how your middle office processes trades, so involve your middle office, middleware and front-office teams plus any integration partners.

Of course, you could copy workflows used for other bank entities, but this would mean a separate discovery phase and agreeing requirements with the middle-office development team.

The following confirmations are necessary:

- The middle office must be able to accept trades

- The middle office must be able to send confirmations to your customers

- The back office must be able to send Swift messages to your Swift alliance so you can get Swift messages from your custodians to settle trades within your internal systems. Once the trades are settled, notify the front-office systems they are settled, partially settled or outstanding

Note: You might need middle-office application BAs or developers to address changes for clearing projects. You can also use your BAU developers if the technical work is not too difficult or there's no budget allocated.

Project scope

The project scope is just a list of items you want to build. The top five things required for any central clearing project include the ability to:

1. Book trades in the front office

2. Send trades to an intermediary clearing bank or another clearing agent

3. Send trades down to your middle-office application

4. Process trades in the middle office and send confirmations and Swift messages to your Swift alliance

5. Ensure you can reconcile all project transactions and are following all regulatory requirements from the outset. Day-one requirements encompass building a minimum viable product (MVP). Once completed, you can begin to think about less critical, day-two requirements, etc.

Day-two data requirements break down into the following areas:

a. Improvements

b. Automation of existing processes

c. Other business actions like building a new system within the project

Once you have the high-level scope, convert it into the plan as follows:

• List all activities to be done

• Check estimates/funding are accurate — this is seldom done by project managers. It's the perfect opportunity for you to revise the project and budget, and negotiate the scope. If not done here, it will certainly impact your project by raising change requests later

• Check high-level timelines for all teams

• Plan and discuss in your workgroup
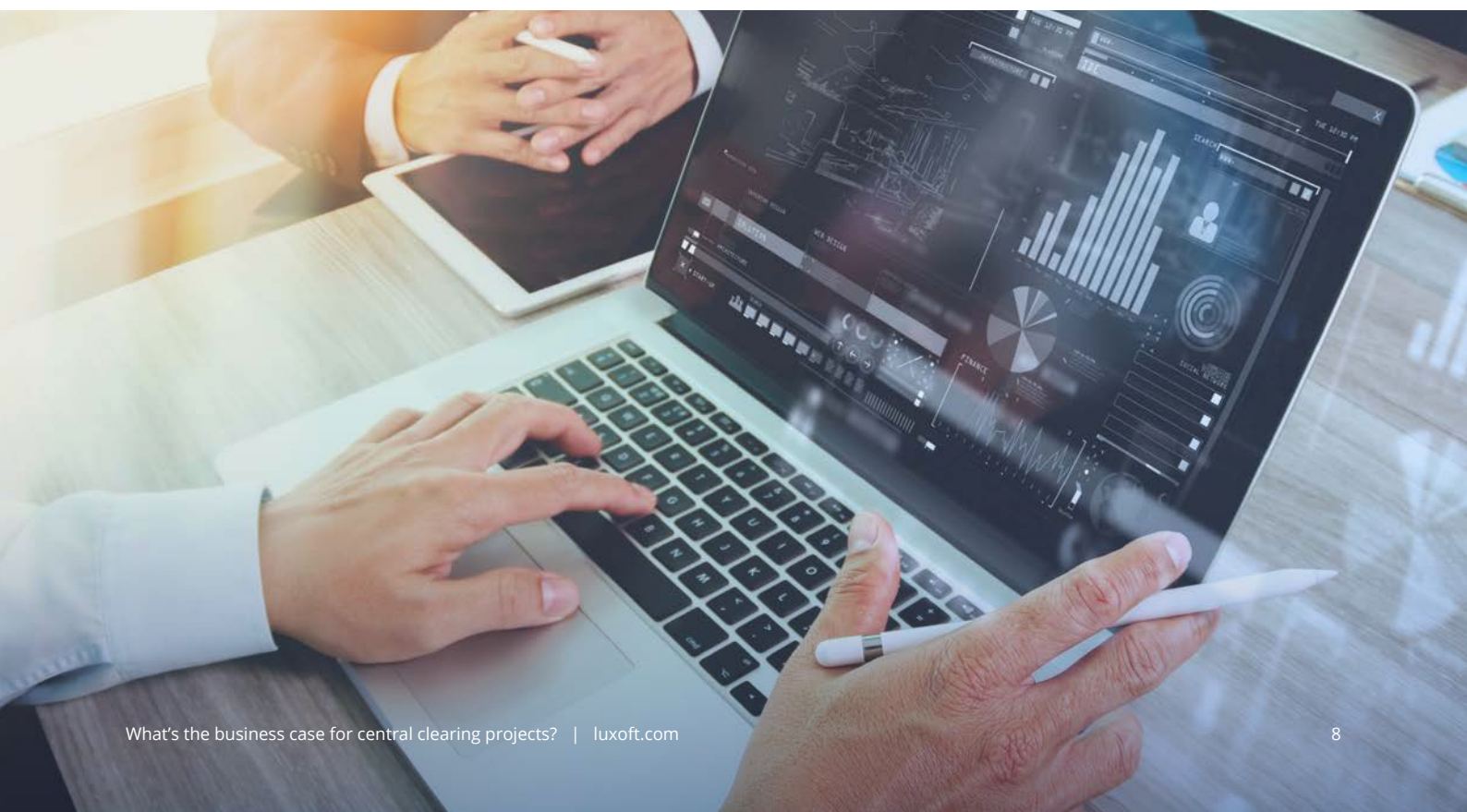
The key project management task is trying to separate technical and strategic parts without mixing them up. For example, maybe you need to buy a connector to pass trades from your front office to the middle office. The technical questions are about integration, which team will help, etc., and are simple to solve. On the other hand, what if you need to secure funding for a connector, but no sponsors are interested? This requires a strategic discussion to solve the problem.

Post-scope development activities

After developing your scope, the next steps are to make and execute the project plan, manage risks and then think about making improvements, if possible.

To summarize, the business case says you can reduce the risk level for your organization by having a CCH act as a third party. So, if a counterparty defaults, your trade is still honored.

The solution looks very simple. It's a matter of integrating your front office with your middle office and an intermediary clearing bank, then ensuring that your margining process is implemented or customized and a couple of reconciliations are built for the solutioning part of the project.

Team structure

The project could take up to 9-12 months, so you'll need a project manager who's familiar with clearing houses, back-office applications and Swift messaging. In addition, you'll need:

- A BA who can write end-to-end requirements

- Middle- and back-office specialists (preferably two, one with workflow development knowledge and the other with an overall understanding of the middle and back offices) who can get into workflow details, understand requirements and write accordingly

- Someone who can write industry-standard reconciliation-related requirements

In fact, this reconciliation piece could prove critical and might require a team lead and a program/project manager as well. Then you'll need two or three QAs and some technical experts who can integrate systems. So, we're looking at building a 10-member team to help implement this project successfully within 9-12 months.

Questions?

If you'd like to delve a little deeper into the business case for central clearing projects, visit **luxoft.com/industries/capital-markets** or contact **financialservices@luxoft.com**.

About **the author**

Yogesh Kshirsagar
Principal Consultant, Banking and Capital Markets

Yogesh has 19 years of IT experience in banking and finance. Before joining Luxoft, he held leadership positions across the UK, United States, Singapore, Malaysia and India, working with clients like Standard Chartered, Credit Suisse, American Express, CLSA, Natixis, Bank of Ireland and MUFG Securities. He specializes in regulatory reporting, anti-money laundering, client lifecycle management and investment banking. Yogesh also writes and speaks about these topics. Any spare time is spent with his daughter, jogging, reading or experimenting with new ideas.

Want a career in software testing or to upgrade your software-testing skills? Check out our **trainings**.