

# Synapse The Power of Connectivity

Since its launch, Stock Connect, the landmark mutual market access programme linking the Hong Kong and Mainland China equity markets, has fundamentally changed capital markets in the region, pioneering greater accessibility and offering more investor choice, resulting in record trading volumes.

As international investors' access and participation in China's onshore market grows, so too do the post-trade complexities, due to different settlement requirements across markets. Market participants, including Asset Managers, Global Custodians, Local Custodians, Exchange Participants, and Clearing Participants, have been deploying tailored solutions to improve post-trade efficiencies. The lack of interoperability amongst these solutions, however, has in turn created additional operating, processing and counterparty risks.

In collaboration with the matching platform provider Depository Trust & Clearing Corporation (DTCC), Hong Kong Exchanges and Clearing Limited (HKEX) is launching HKEX Synapse, a new integrated settlement workflow tool, to complement the existing post-trade infrastructure for Northbound Stock Connect. The solution aims to standardise and streamline post-trade processes and workflows, maximising connectivity and efficiencies for market participants in a transparent, secure and reliable manner.

# Stock Connect Challenges

As participation in the Stock Connect programme has grown, common challenges have arisen amongst market participants.

Bespoke processes within tight settlement window	Stock Connect is a T+0 market, but is integrated into the established settlement flow designed for a T+2 market. Various bespoke solutions have been introduced to address market needs.	Asset Manager OMS
Operational Risk	Multiple bespoke solutions, many with manual processes, increase the processing burden and operational risks.	Send instruction after allocation is matched
Complexity due to low transparency	Participants have no real-time visibility into the settlement status, reducing the time they have to resolve exceptions.	Global Custodian TPS Matching SSI Enrichment Status & Exception instruction after allocation is matched
Scalability	Lack of standard processes and manual workflow mean scalability is an issue; further index inclusion increases risks and may limit access.	Pass on the instruction Status & Exception
Barrier to participation	Participants may be discouraged from participating in the Stock Connect market due to the additional risks and costs arising from bespoke solutions.	Local Custodian TPS Input instruction to CCASS CCASS CCASS CCASS CCASS CCASS CCASS TPS

OMS: Order Management System / TPS: Transaction Processing System

# The Solution: HKEX Synapse

The existing sequential workflow lacks transparency, delays downstream processing, and complicates exception resolutions. A standardised settlement instruction platform and workflow tool, therefore, is needed to facilitate Northbound Stock Connect post-trade processes and workflows with accurate and timely status updates.

HKEX Synapse provides a standardised and centralised platform and workflow tool that generates a single source of truth for settlement instruction workflow, enabling the enrichment of trades instructed by Asset Managers or their matching platform providers. It then simultaneously creates settlement instructions to all parties along the settlement chain, facilitating concurrent processing. It also provides near instantaneous status updates to HKEX Synapse participants, thereby greatly improving transparency for all market participants via multiple connectivity options.

The HKEX Synapse solution intends to standardise settlement workflows and in doing so will provide greater efficiency and transparency to Stock Connect's market participants, while connecting them to a more seamless post-trade workflow.

		Order for Execution
Leverages existing connectivity	Synapse leverages existing connectivity through interfacing to matching platform providers.	Asset Status/ DTCC as matching platform provider Status / Exceptions Participant
Standardises settlement initiation flow	Synapse introduces a standardised settlement initiation workflow, which reduces operational risk, while improving scalability.	OMS     Block & Allocation Matching in CTM     CTM® Block and Allocation Matching       DTCC ALERT® Database SSI Enrichment     Block & Matching in CTM       Settlement Instruction Manager Settlement Messaging and
Improves transparency	Synapse provides instantaneous status updates, allowing for faster processing and improved exception management.	Exception Reporting Buy-side Matched Agreed Allocation Global
Encourages Stock Connect adoption	Standardising workflows and reducing the risks and costs associated with bespoke solutions will alleviate compliance burdens and encourage new entrants to the Stock Connect market.	Custodian Approve Powered by DAML TPS Status / Exceptions Settlement Instruction Generation and Notification TPS Local Local Approve Approve TPS
Leverages new technology and latest SWIFT standards	Synapse is powered by DAML smart contract technology. GUI, API and ISO 20022 SWIFT interfaces are flexible connectivity options to Synapse, allowing for efficient integration, while also moving the market into the future.	TPS     Status / Exceptions       Generate Buy-side Si to CCASS     Si Status Generate Sell-side Si to CCASS       CCASS     CCASS

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