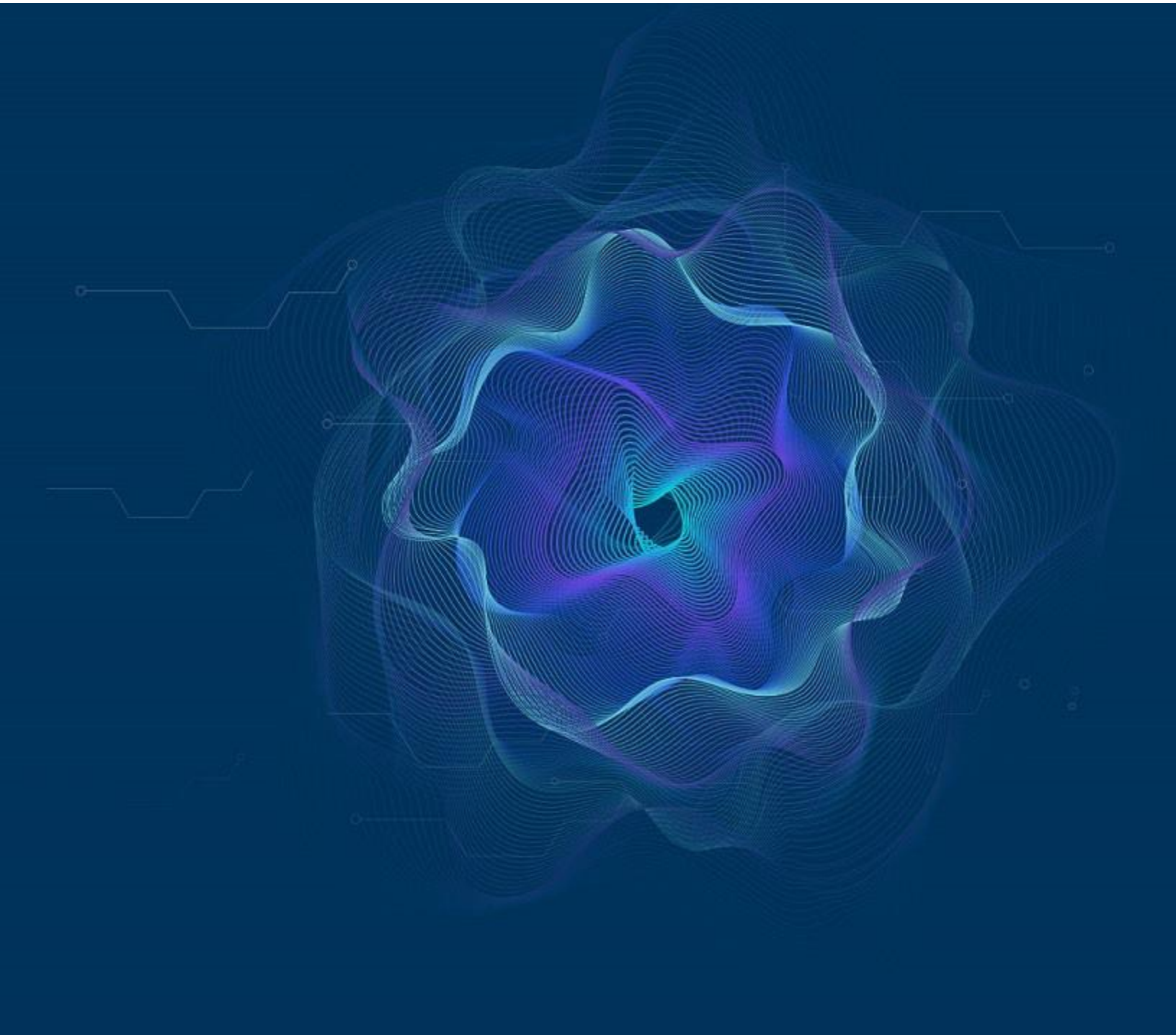
HKEX
香港交易所

24 February 2025

HKEX Synapse

User Guide



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Versions

Publication Date	Version
24 Feb 2025 **[Current]**	Version 1.5 published • Add section 10.1.3 Day-begin Master SPSA Sellable Balance Report (G29) to describe the display of the sellable balance report under Reports tab

16 Sep 2024	Version 1.4 published
	• Update section 4.3 Synapse Dashboard
	  ○ Remove the wording “No Further Processing” from the CCASS exceptions alert message
	• Update section 5.1 Fund Onboarding
	  ○ Update the length size GC’s Account at LC to 15
	• Update section 6.1 Account Onboarding
	  ○ Update the length size EP’s Account at CP to 15
	• Update section 7.2.1.2 and 7.2.1.3 for the addition of new UI field “EP’s account at CP” in the KEY SETTLEMENT DETAILS tab under PARTICIPANT DETAILS
	• Update section 7.3.1.4 and 7.3.1.5 SI/STI Approvals and Rejection for GC and LC
	  ○ Describe the extraction logic of how EP’s account at CP is retrieved from the settlement notification from DTCC via SWIFT MT541 and MT543
	  ○ Provide background and a description of the new health check workflow that is triggered when the approval process starts. Specify the alert message will be promoted when any non-fatal error(s) is/are found in SI Health Check tab
	  ○ Direct Synapse users to reference to section 7.6 for recommendations regarding the failure reasons
	• Update section 7.6 Health Check to add a new health check item: “EP’s account at CP”
	  ○ Describe the new business validation implemented to verify if EP’s account at CP is presented in the SN from DTCC and its resolution
	  ○ Add screenshots from “SI Health Check” that displays the failure reason

05 Feb 2024	Version 1.3 published • Remove scenarios of manual amendment notification under section 4.3 Synapse Dashboard • Remove the alternative approach to select individual AM when submit the SOH subscription request via system post system

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Publication Date	Version
	enhancement under section 10.2 Statement of Holding Report Subscriptions • Remove the note that reminder user not to approve cancelled SN for a SI/STI as cancelled SN will no longer available for approval under section 7.3 SI/STI Approvals and Rejections

02 Dec 2023	Version 1.2 published
	• Update the operation hours table under section 2 System Availability
	• Remove the description of exception scenarios post system enhancement on below user functions
	  ○ Account Onboarding
	  ○ Deactivate Account after account is activated
	  ○ DTCC send a cancelled SN for a SI/STI
	  ○ Audit Log retrieval
	  ○ Apply filter on reporting on Settlement Instruction List view

04 Oct 2023	Version 1.1 published • Enriched the content of application behaviour of logging in to Synapse and refreshed the screen capture of HKEX Access Management Portal under section 4.1 Login to Synapse • Added the functional ID and role type in HKEX Access Management Portal under section 4.2 Synapse User Types and Role Types to provide reference for access and role management
18 Sep 2023	First version published

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1. Introduction

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 (AMs), Global Custodians (GCs), Local Custodians (LCs), Exchange Participants (EPs), and Clearing Participants (CPs), 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.

Hong Kong Exchanges and Clearing Limited (HKEX) is launching HKEX Synapse, a new integrated post-trade platform and workflow tool, generating a single source of truth for settlement instructions for its landmark Stock Connect programme. Synapse simultaneously generates settlement instructions and provides near instantaneous status updates to all parties along the settlement chain, facilitating concurrent processing, providing greater efficiency and transparency to Northbound Stock Connect's market participants, while connecting them to a more seamless post-trade workflow. Synapse will alleviate existing market challenges and standardise the current information and instruction transmission process in relation to transactions under the Northbound Stock Connect Programme. AMs, GCs, LCs, EPs and CPs will all benefit from the improved connectivity.

This Synapse User Guide aims to provide detailed Synapse Operational Procedures and other operational and connectivity details to Synapse Users. In addition to this user guide, Synapse Users should also refer to Synapse FAQ and other materials posted on HKEX Synapse website before using Synapse. Parties who are interested to join Synapse should also refer to the Synapse New Application Guidelines available on HKEX website.

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2. System Availability

2.1 Operating Hours

Synapse will be operational from 7:00 AM to 12:00 Midnight (Hong Kong Time UTC+8), from Monday to Friday (which is also a business day when the Northbound Stock Connect is available for trading). Any further scheduled ad-hoc maintenance work will be communicated to all users in advance.

Synapse Users may contact HKEX Synapse Operations Team via phone at +852 2840-3048 from HKT 9:00 AM – 8:00 PM or email at synapse_support@hkex.com.hk for general enquiries.

In normal circumstance, Synapse will operate in different modes in specified time during the Northbound trading day:

Hong Kong Time (UTC +8)		
From	**To**	**Synapse Operating Mode**
7:00 AM	7:14 AM	• Synapse interface with CCASS (including settlement instruction transmitted from Synapse to CCASS and settlement instruction status update transmitted from CCASS to Synapse) will not be available. Fully approved settlement instructions will be queued in Synapse and sent to CCASS after Synapse interface with CCASS is resumed • All other functions within Synapse will remain normal and available
7:15 AM	8:05 PM	• All functions (including interface with CCASS) will be available
8:06 PM	12:00 Midnight	• Synapse interface with CCASS (including settlement instruction transmitted from Synapse to CCASS and settlement instruction status update transmitted from CCASS to Synapse) will not be available. Fully approved settlement instructions will be queued in Synapse and sent to CCASS after Synapse interface with CCASS is resumed • All other functions within Synapse will remain normal and available
12:01 AM	6:59 AM	• Synapse will be in maintenance mode and none of its functions will be available

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2.2 Severe Weather Arrangements

If a Typhoon Signal No 8 (or above) or Extreme Conditions or Black Rainstorm Warning are issued by the Hong Kong Observatory, the service arrangement of Synapse will be as below:

Scenarios	Synapse Operating Mode
Signal / Extreme Conditions / Warning issued before 9:00 AM and cancelled at or before 12:00 Noon	• Synapse interface with CCASS (including settlement instruction transmitted from Synapse to CCASS and settlement instruction status update transmitted from CCASS to Synapse) will not be available. Fully approved settlement instructions will be queued in Synapse and sent to CCASS after Synapse interface with CCASS is resumed • All other functions within Synapse will remain normal and available • Synapse will resume the interface with CCASS two hours following the discontinuation of the Signal / Extreme Conditions /Warning
Signal / Extreme Conditions / Warning issued before 9:00 AM and cancelled after 12:00 Noon	• Synapse interface with CCASS (including settlement instruction transmitted from Synapse to CCASS and settlement instruction status update transmitted from CCASS to Synapse) will not be available. Fully approved settlement instructions will be queued in Synapse and sent to CCASS after Synapse interface with CCASS is resumed • All other functions within Synapse will remain normal and available • No Synapse service for the day in CCASS and that day will not be treated as a Settlement Day
Signal / Extreme Conditions / Warning issued at or after 9:00 AM	• Normal Synapse service will be available

2.3 Data Retention Period in Synapse

Synapse online retention period is 31 calendar days for settlement instructions after such instructions have no further status update in Synapse, and for accounts / funds / statement of holding subscription requests that are pending approval by Synapse Users. Similarly, for inactivated funds / accounts, they will be retained in Synapse for 31 calendar days. Synapse Users are encouraged to keep record of all Synapse's data by their own for internal usage / reference if needed.

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3. Synapse Pre-requisite and Workflow

1. The AM and EP, are required to be connected to a matching platform provider eligible to send matched instructions to Synapse. Clients requiring further information on the eligible matching platform providers may contact HKEX Synapse Operations Team.

2. The buy-side (i.e. AM, GC and LC) and sell-side (i.e. EP and CP) need to onboard as the Synapse Users. For AM, EP and CP, they may appoint outsourcing operators to perform Synapse operations on their behalf (i.e. Asset Manager Middle Office Outsourcing Operator (AMOO) for AM, Exchange Participant Middle Office Outsourcing Operator (EPOO) for EP and Account Operator (AO) for CP, collectively known as Designated Service Providers).

3. After Synapse Users are onboard to Synapse,
    a. for buy-side chain users, they need to set-up their buy-side relationship by onboarding the fund and setting up data relevant to that fund. After the fund is onboarded in Synapse successfully, Synapse can start to consume the settlement instructions of the respective fund from the matching platform for further processing.
    b. for sell-side chain users, they need to set-up their sell-side relationship by onboarding the account and setting up data relevant to that account. After the account is onboarded in Synapse successfully, Synapse can start to consume the settlement instructions of the respective account from the matching platform for further processing.

4. AM and EP perform block and allocation matching on the eligible matching platform provider side, with Standing Settlement Instruction (SSI) enrichment.

5. Synapse consumes the “match agreed” allocations from matching platform with SSI enrichment and then starts orchestrating the settlement instructions within Synapse, based on the fund and account onboarded via step 3. Please note if the newly listed China Connect Securities do not possess ISIN initially, these securities will not be applicable to Synapse.

6. Upon consumption of the “match agreed” allocations with SSI enrichment from the eligible matching platform provider, and thus generating the single source of truth, Synapse creates settlement instructions to GC, LC and CP. A single common reference, Unique Transaction Identifier (UTI), will be utilised across all instructions generated for all parties, on matching platform provider side, in Synapse and a truncated version of it in CCASS.

7. GC, LC and CP perform their internal checks. They are required to provide either an “Acknowledged Accepted” or a “Rejected” status with reason to Synapse.

8. Synapse will make available all “Acknowledged Accepted” and/or “Rejected” status with reason to all Synapse Users.

9. Synapse generates a settlement instruction (SI) to the HKEX Central Clearing and Settlement system (CCASS)
    a. upon receiving “Acknowledged Accepted” from both GC and LC, Synapse

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generates an SI to CCASS on behalf of the LC.

b. upon receiving “Acknowledged Accepted” from CP, Synapse generates an SI to CCASS on behalf of the CP.

10. CCASS performs its matching and settlement processing following the existing Northbound Stock Connect matching and settlement batches.

11. Synapse consumes the settlement status from CCASS and disseminates it to AM, EP, GC, LC and CP via their selected communication channels.

Note: AM and EP may send matched and agreed cancellation on the trade allocation to Synapse through the matching platform. Once consumed such cancellation, Synapse will check the latest settlement status of the respective SI, and if such SI is not already cancelled or settled, Synapse will proceed with the cancellation accordingly without requiring the GC, LC or CP’s approval.

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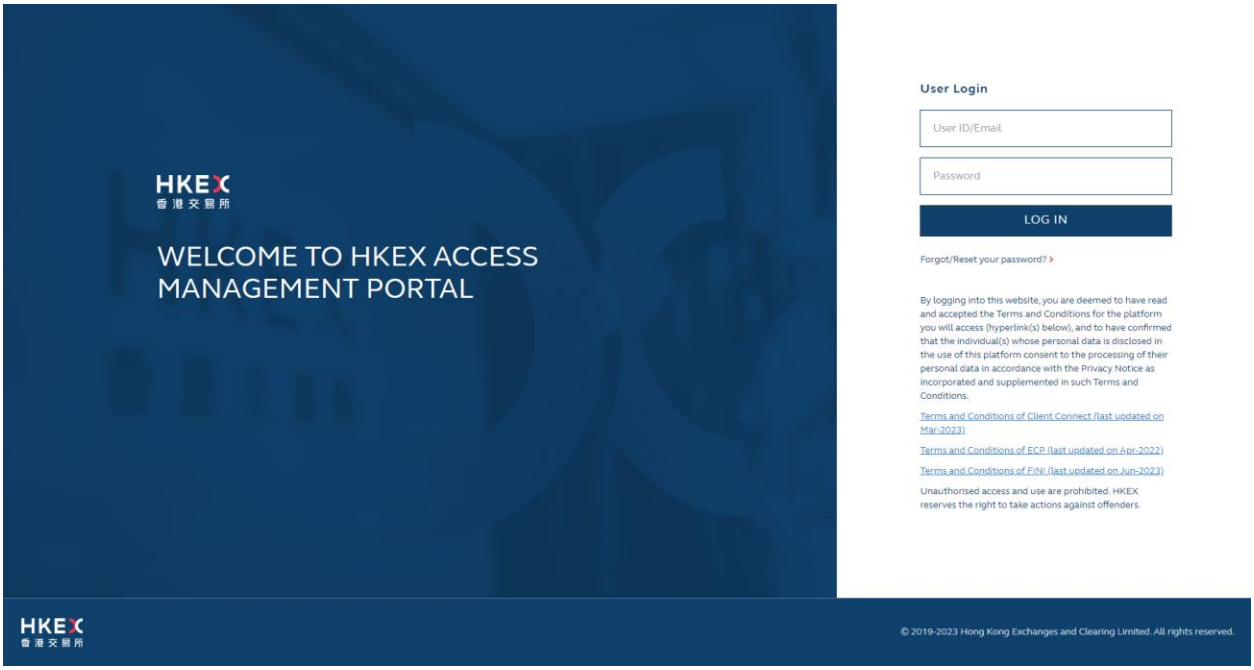
4. Getting Started

4.1 Login to Synapse



Synapse user could log into Synapse by entering this URL on the web browser: https://synapse.hkex.com.hk/.[1] This URL will direct user to HKEX Access Management Portal and the user will be required to enter log in detail (i.e. User ID/Email and Password). After successfully login, the user will be directed to Synapse Dashboard screen.

The upper right-hand side of the Dashboard screen has several functions:

Functions	Description
Calendar View	Shows current date
Username	User can view its own Username
Synapse Menu Panel	Dashboard, Settlement Instructions, Funds (for buy side) / Accounts (for sell side), Relationships, Market Data, Reports

[1] User could also login via https://connect.hkex.com.hk. However, user will be required to click the Synapse link on the navigation bar to enter Synapse Dashboard screen.

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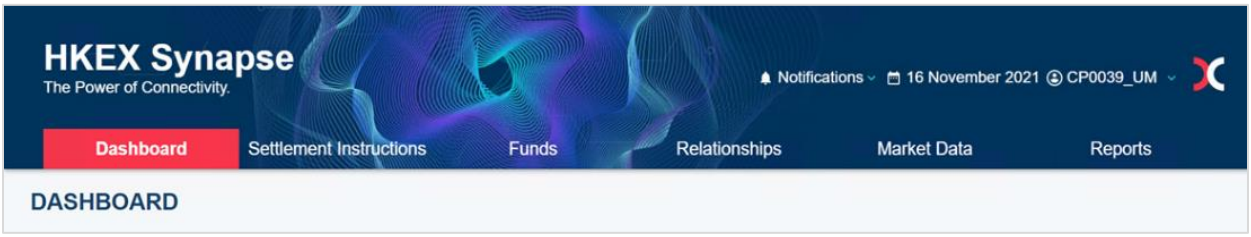
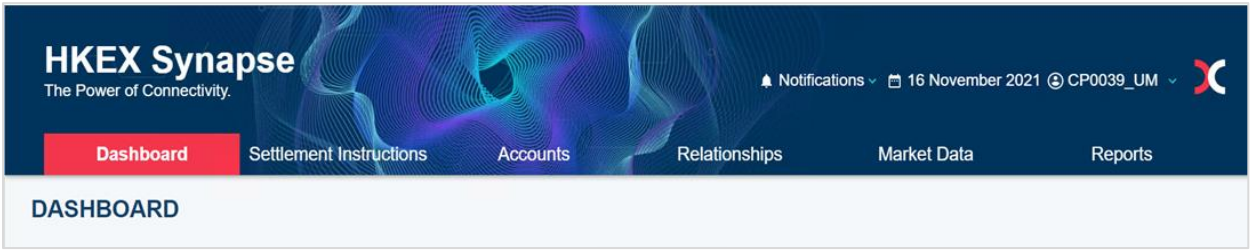
Buy-side Dashboard:

There are 6 main tabs on the Buy Side's Dashboard screen navigation bar: Dashboard, Settlement Instructions, Funds, Relationships, Market Data, and Reports. Further details for each tab and its functionality will be provided throughout the user guide.



Sell-side Dashboard:

There are 6 main tabs on the Sell Side's Dashboard screen navigation bar: Dashboard, Settlement Instructions, Accounts, Relationships, Market Data, and Reports. Further details for each tab and its functionality will be provided throughout the user guide.



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4.2 Synapse User Types and Role Types

There are eight different types of Synapse Users or Designated Service Providers (DSPs):

1. Asset Managers (AM)
2. Global Custodians (GC)
3. Local Custodians (LC)
4. Exchange Participants (EP)
5. Clearing Participants (CP)
6. Asset Manager's Middle Office Outsourcing Operators (AMOO)
7. Exchange Participant's Middle Office Outsourcing Operators (EPOO)
8. Clearing Participant's Account Operators (AO)

Synapse role types are assigned by the Delegated Administrators (DA) of the Synapse Users and are passed to the Synapse application when the user logs into the Synapse UI through HKEX Access Management Portal. Refer to Synapse New Application Guidelines for the steps and reference of user management (i.e. user creation and assign function).

Function ID & Role Type in HKEX Access Management Portal	Role Type	Description	Available Functions
EU_DataManager (maker role)	Data Manager Input Only User ('Maker')	• User can input data and play the role of "maker" • User cannot authorize any data input • Users cannot input data outside of their Data Manager input only user role	5 Funds 6 Accounts 8 Relationships 9 Market Data 10 Reports
EU_DataManager (checker role)	Data Manager Input Authorise User ('Maker' or 'Checker')	• User can authorize data input by Data Manager input only user (maker) • User plays the role of "checker" on those functions which require the Data Manager maker-checker functionality • User can also input data as a "maker." [Note: a different Data Manager input authorize user (i.e., checker) would have to authorize their input] • User cannot input or authorize data outside of their Data Manager input authorize user role	5 Funds 6 Accounts 8 Relationships 9 Market Data 10 Reports

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EU_Transaction Balances (maker role)	Transaction Balance Input Only User ('Maker')	• User can input data and play the role of "maker" • User cannot authorize any data input • User cannot input data outside of their Transaction Balances User input only user role	7 Instruction Processing 8 Relationships 9 Market Data 10 Reports
EU_Transaction Balances (checker role)	Transaction Balance Input Authorise User ('Maker' or 'Checker')	• User can authorize data input by Transaction Balance input only user (maker) • User plays the role of "checker" on those functions which require the Transaction Balance maker-checker functionality • User can also input data as a "maker." [Note: a different Transaction Balance input authorize user (i.e., "checker") would have to authorize their input] • User cannot input or authorize data outside of their Transaction Balance input authorize user role	7 Instruction Processing 8 Relationships 9 Market Data 10 Reports
EU_SYNUser (enquiry role)	Read Only User	• User can only view / access data and information to which their firm is allowed access • User does not have ability to input or authorize changes • Note: user can also be a company that has presented an ISO message or API call that has been restricted due to read only policy	5 Funds 6 Accounts 7 Instruction Processing 8 Relationships 9 Market Data 10 Reports

For AM, EP and CP (i.e. known as core users) who have appointed DSPs will become read-only users and will not able to perform any fund onboarding maintenance (applicable to AM) / account onboarding maintenance (applicable to EP and CP) / SI approval or rejection activities (applicable to CP). The DSP appointed will perform these activities on behalf of the core users.

1. Buy Side

Buy Side users include AMs, GCs, LCs and AMOOs. On the Dashboard screen, buy side users can view Settlement Instructions, Fund Profiles, and Notifications.

Sample dashboard screens of each type of buy side users can be seen below:

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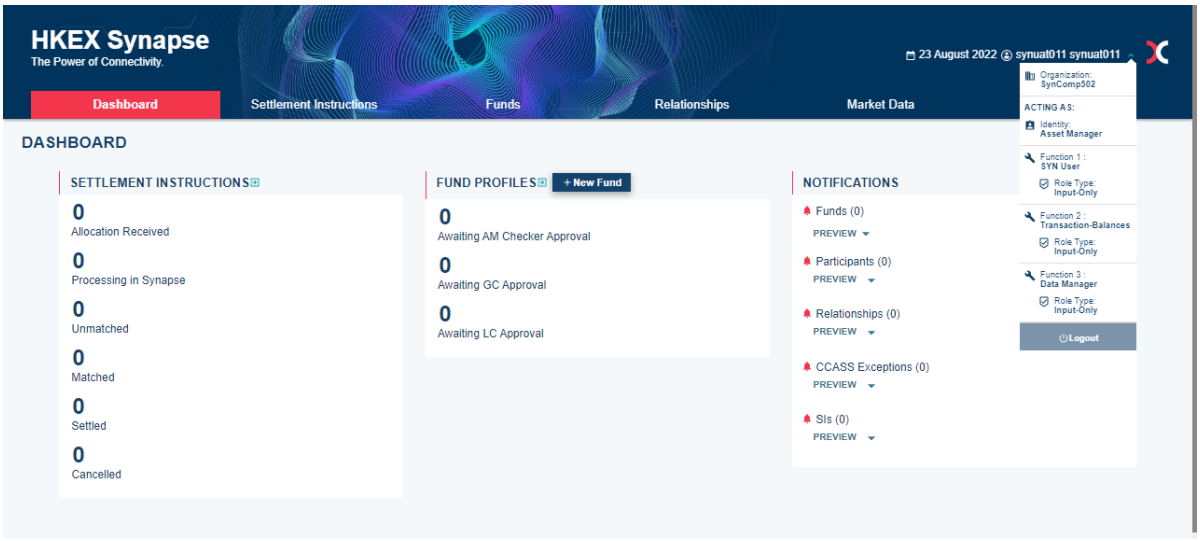
AM:



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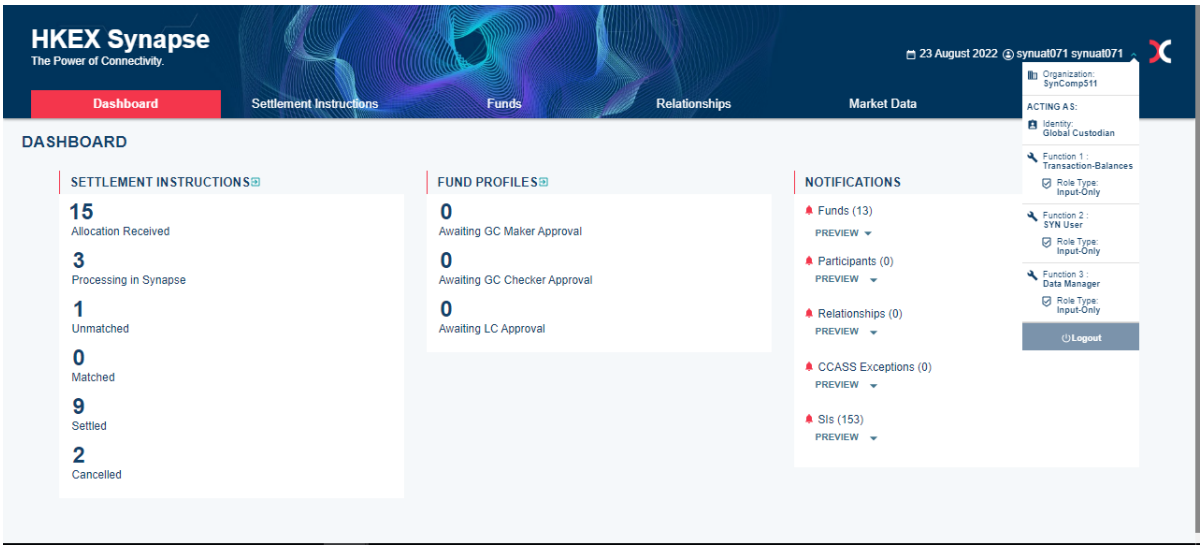
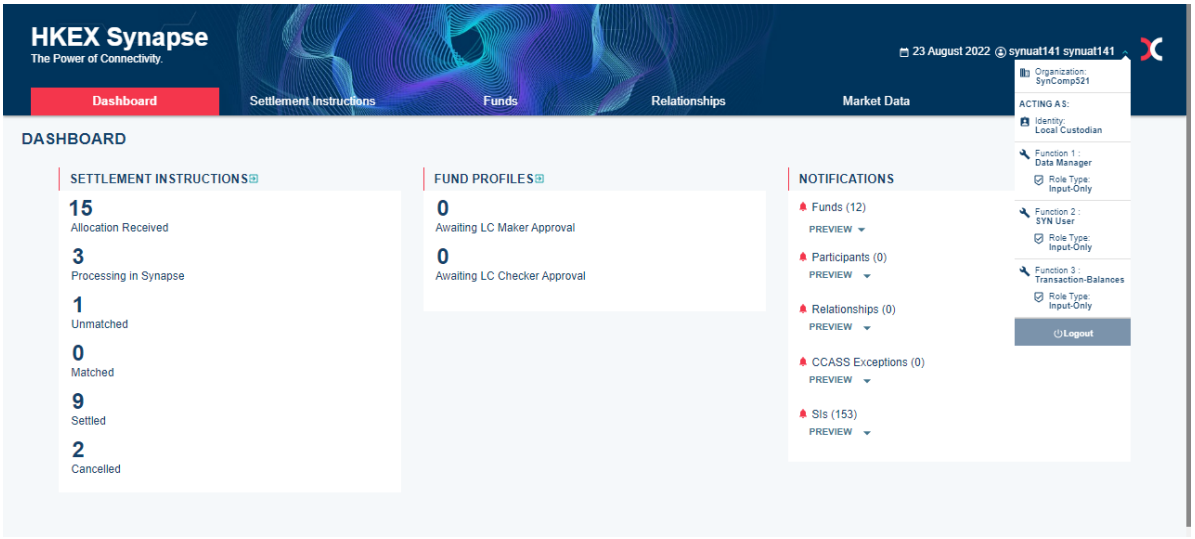
GC:



LC:



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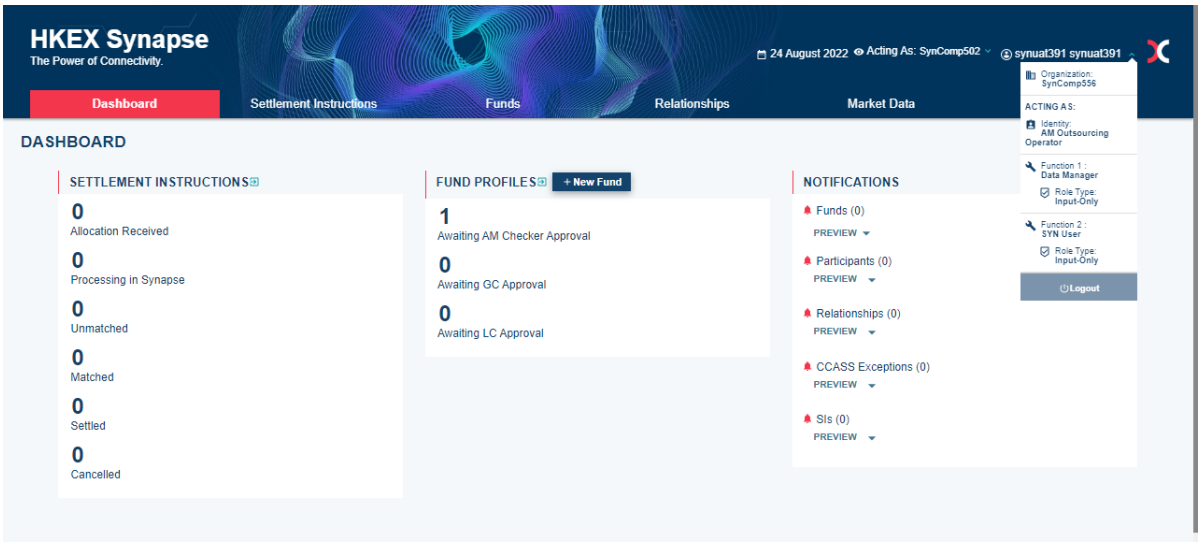
AMOO:

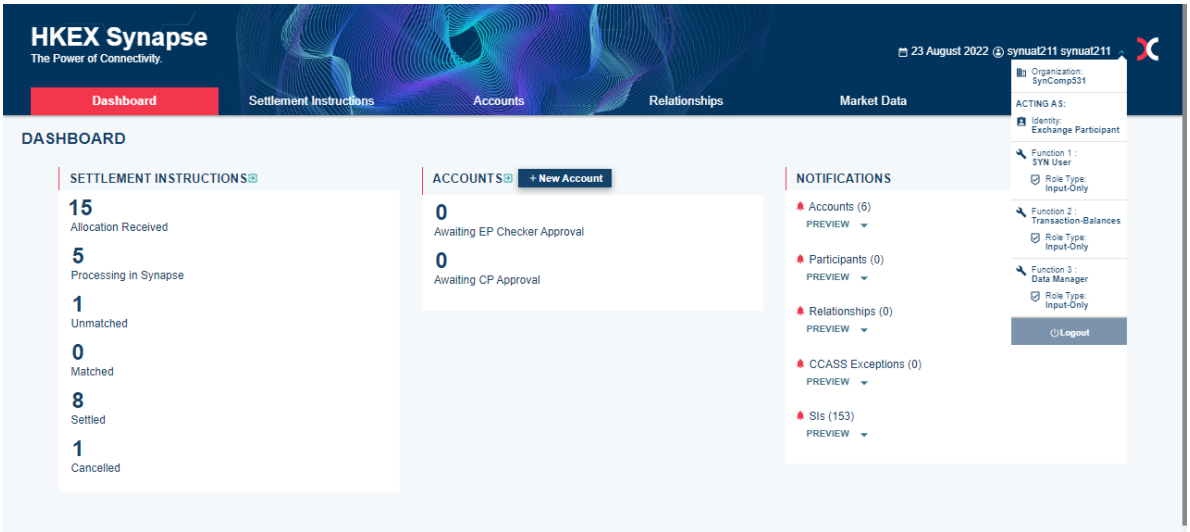


2. Sell Side

Sell Side users include EPs, CPs, EPOOs and AOs. On the Dashboard screen, sell side users can view Settlement Instructions, Accounts, and Notifications.

Sample dashboard screens of each type of sell side users can be seen below:

EP:



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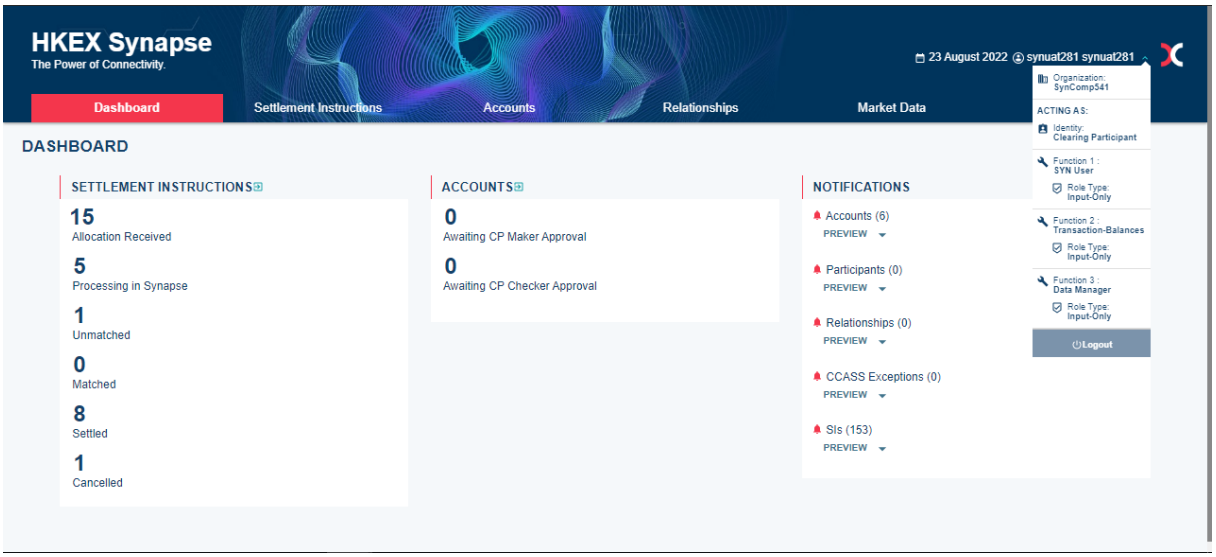
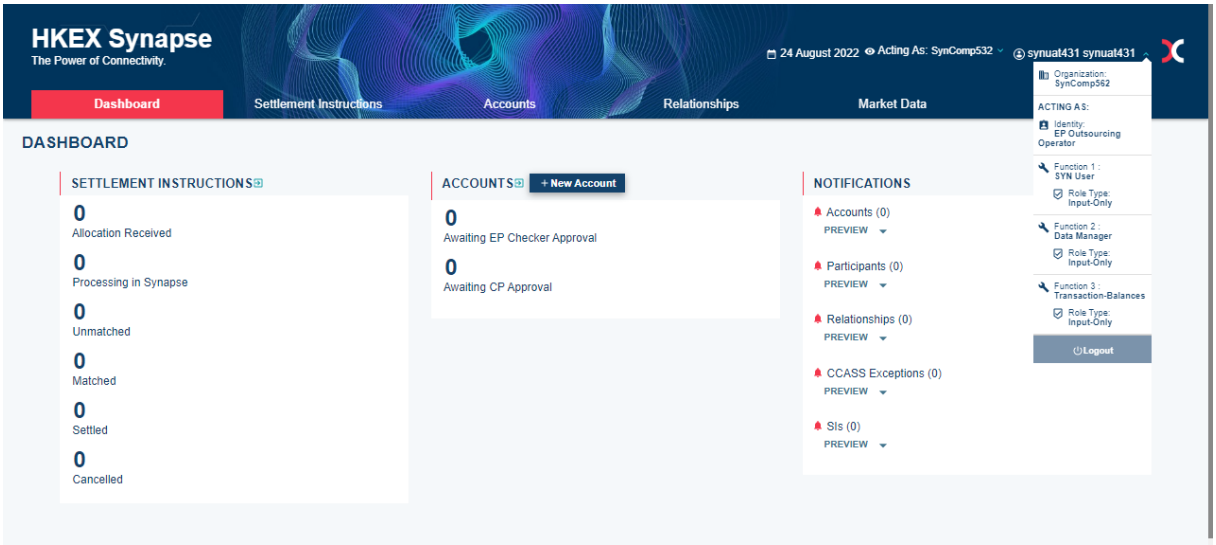
CP:



EPOO:



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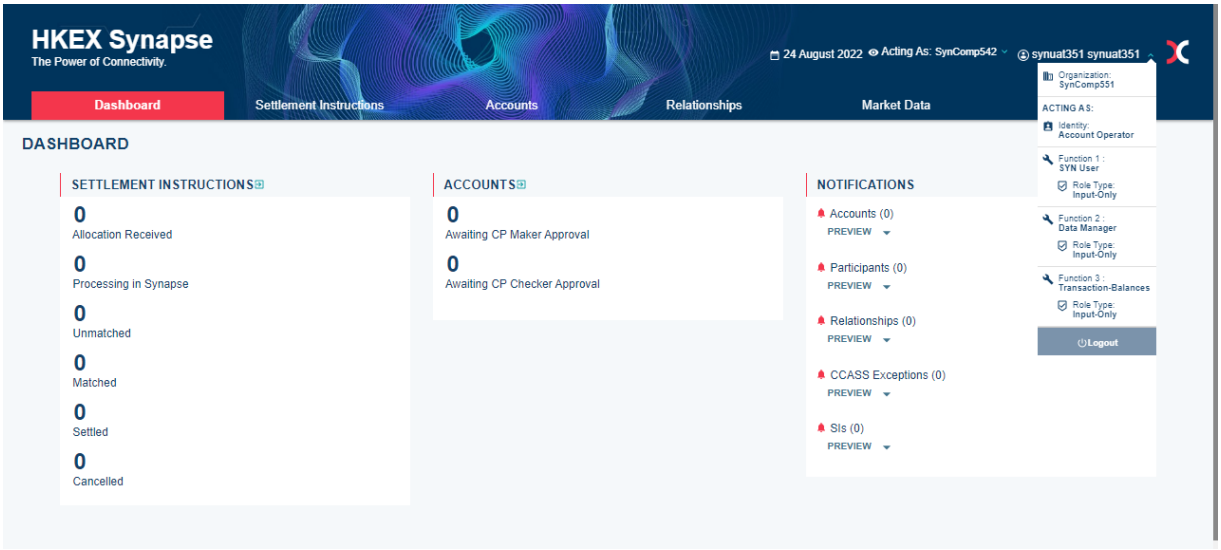
AO:



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4.3 Synapse Dashboard

Synapse Users can view the following sections on the dashboard 1) Settlement Instructions, 2) Fund Profiles (buy side users only), 3) Accounts (for sell side users only) and 4) Notifications.

4.3.1 Settlement Instructions

The Settlement Instructions section shows a summary of allocations received and Settlement Instructions statuses. By clicking on a Settlement Instruction status related fields (Allocations Received is not included), the application automatically jumps to the Settlement Instruction List View and highlights the quick filter result displayed on the Dashboard.

Section Sub-header	Description
Allocation Received	Shows the number of all matched allocations or matched cancelled allocations from CTM that passed business validation on current HKT business day which is the same as the creation date.
Processing	Shows the total number of all Settlement Instructions pending approval or being rejected (please see below for list of Synapse rejection reasons) such that Settlement Instructions have not yet been submitted to CCASS, i.e., no CCASS Input Number has been received yet, on current HKT business day and within the past 31 calendar days. Transactions with the following Synapse status are included into that counter: • RJGC – rejected by Global Custodian – transaction is rejected by Global Custodian • RJLC – rejected by Local Custodian – transaction is rejected by Local Custodian • RJCP – rejected by Clearing Participant – transaction is rejected by Clearing Participant • RJCE – rejected by CCASS – transaction is rejected by CCASS as it carries information not recognized by CCASS, or due to system error. Note: If the SCV is with Synapse status = CTHP (Cancelled By Third Party) but with no CCASS status (i.e., the SN is cancelled before being approved by GC/LC/CP (before directed to CCASS)), it will show as "Processing" in the list view instead of “Cancelled”. If such SCV is subsequently being approved by GC/ LC / CP then Synapse will send to CCASS and the unmatched / matched / settled counter will also be updated subsequently. Please refer to Section 7.5 for different CCASS

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	status.
Unmatched	Shows the total number of Settlement Instructions (SI) with CCASS status “Unmatched” on current HKT business day and within the past 31 calendar days. Transactions with the following CCASS status are included into that counter: • NCRR – settlement currency unmatched • DSEC – stock code/ISIN unmatched • DQUA – quantity unmatched • CMIS – no possible matching SI found • OTHR – other • FRAP – payment instruction unmatched • PODU – possible matching SI but not earmarked as pairs • SAFE – client A/C no. unmatched • DMON – money value unmatched • DDAT – settlement date unmatched • DELN – transaction direction unmatched
Matched	Shows the total number of Settlement Instructions (SI and STI) with CCASS Status “Matched” on current HKT business day and within the past 31 calendar days. The CCASS statuses supported by Synapse are: • MTCH – matched • CYCL – matched – payment validated • CVAL – matched – RDP shares on hold • PREA – matched – matched on hold or counterparty instruction on hold • CAIS – pending for transfer (STI only)
Settled	Shows the total number of Settlement Instructions (SI and STI) with CCASS Status “Settled” for SI or “Transferred” for STI on current HKT business day. If the settlement instruction settled on current HKT business day is not created today (e.g. created previously on T-1), the “Settled” counter will not be reflected. The CCASS statuses supported by Synapse are: • SETD – settled
Cancelled	Shows the total number of all cancelled transaction of SI and STI (all end of lifecycle statuses) on current HKT business day which is the same as the creation date. Cancelled SI / STI before approval will not be

Classification – Internal

	reflected. The CCASS statuses supported by Synapse are: • CSUB – cancelled – revoked SI by counterparty • CANS – cancelled – SI/STI purged • CANI – cancelled or revoked SI OR unmatched SI deleted OR cancelled for STI

Classification – Internal

4.3.2 Fund Profiles (available to buy side users only)

The Fund Profiles section shows a summary of Fund onboarding's statuses.

Section Sub-header	Description
New Fund Quick Button	Navigate to New Fund creation page
Fund Profile Status	AM View • Awaiting AM Data Manager Input Authorise User Approval – the count represents the number of funds that are pending AM Data Manager Input Authorise User approval • Awaiting GC Approval – the count represents the number of funds that are pending GC approval • Awaiting LC Approval – the count represents the number of funds that are pending LC approval GC View • Awaiting GC Data Manager Input Only User Approval – the count represents the number of funds that are pending GC Data Manager Input Only User approval • Awaiting GC Data Manager Input Authorise User Approval – the count represents the number of funds that are pending GC Data Manager Input Authorise User approval • Awaiting LC Approval – the count represents the number of funds that are pending LC approval LC View • Awaiting LC Data Manager Input Only User Approval – the count represents the number of funds that are pending LC Data Manager Input Only User approval • Awaiting LC Data Manager Input Authorise User Approval – the count represents the number of funds that are pending LC Data Manager Input Authorise User approval

Classification – Internal

4.3.3 Accounts (available to sell side users only)

The Accounts Profiles section shows a summary of Accounts' statuses.

Section Sub-header	Description
New Account Quick Button	Navigate to New Account creation page
Account Status	EP View • Awaiting EP Data Manager Input Authorise User Approval – the count represents the number of accounts that are pending EP Data Manager Input Authorise User approval • Awaiting CP Approval – the count represents the number of accounts that are pending CP approval CP View • Awaiting CP Data Manager Input Only User Approval – the count represents the number of accounts that are pending CP Data Manager Input Only User approval • Awaiting CP Data Manager Input Authorise User Approval – the count represents the number of accounts that are pending CP Data Manager Input Authorise User Approval

4.3.4 Notifications

The Notifications section shows a summary of notifications. Notifications are shown according to the pop-up sequence and the red dot on the left-hand side indicated new notifications not yet read by users. Notifications will be removed 14 calendar days following the effective date of the events.

Section Sub-header	Description
Funds	(available to buy side users only) Fund notifications include: • Updated fund status and effective date ➢ Fund profile inactivation and effective date ➢ LC re-appointment of a Fund and effective date
Accounts	(available to sell side users only) Account notifications include: • EP updated account mapping status with CP and effective date • Account mapping inactivation and effective date
Relationships	Reserved for future's use
Settlement Instructions	Settlement Instructions notifications include: • Settlement Instruction detail is updated due to Corporate Action (CA) conversion in CCASS

Classification – Internal

	• Settlement Instruction is pending cancellation • Settlement Instruction is settled in CCASS, and no cancellation can be taken
CCASS Exceptions (LC, CP, AO only)	CCASS Exception notifications include: • SI system error • STI system error • Manual SI field amendment by LC / CP in CCASS. ➢ Manual ISIN amendment ➢ Manual quantity amendment ➢ Manual settlement currency amendment ➢ Manual securities movement type amendment ➢ Manual UTI amendment ➢ Manual counterparty amendment ➢ Manual client account no. amendment ➢ Manual payment type amendment Please note Synapse will continue to update and reflect the status of the amended SI (but will not show the updated value of the fields). Manual amendment notifications will also be created under the following scenarios that are not related to the amendment of SI fields in CCASS: 1) Field "97A SAFE" in the BUYR/SELL Block of the Sell-side SN prepared by EP exceed 15 characters (Limitation of CCASS for Client Account Number) 2) CA conversion causing possible ISIN / quantity change of the SI

List of Notifications:

Type	No	Display Tag	When Display	Applicable User Type
Funds	1	[AM] updated fund status of [FUND NAME]. Effective on [EFFECTIVE DATE].	After AM/ AMO Checker approves the fund status amendment.	AM, AMOO, GC, LC
	2	Fund profile inactivation will be effective on [EFFECTIVE DATE].	One business day before the effective date of a fund profile inactivation.	AM, AMOO, GC, LC
	3	LC re-appointment of [FUND NAME] is completed. Effective	After LC Checker approves the amended fund profile.	GC, LC

Classification – Internal

Type	No	Display Tag	When Display	Applicable User Type
		on [EFFECTIVE DATE].		
Accounts	1	[EP] updated account mapping status with [CP]. Effective on [EFFECTIVE DATE].	After EP/EPOO Checker approves the account mapping status.	EP, EPOO, CP, AO
	2	Account mapping inactivation will be effective on [EFFECTIVE DATE].	One business day before the effective date of the account mapping inactivation with [CP].	EP, EPOO, CP, AO
SIs	1	SI detail (Trade ID: XXXXXXXXXXXXXX) is updated due to CA conversion in CCASS	After SI detail is updated due to CA conversion in CCASS at EOD.	AM, AMOO, GC, LC, EP, EPOO, CP, AO
	2	Settlement Instruction (Trade ID: XXXXXXXXXXXXXXXXXXX) is pending cancellation	After Synapse consumed the cancellation SN from CTM.	AM, AMOO, GC, LC, EP, EPOO, CP, AO
	3	Settlement Instruction (Trade ID: XXXXXXXXXXXXXXXXXXX) is settled in CCASS and no cancellation can be taken.	After Synapse checked the settlement status of this Settlement Instruction in CCASS and confirmed that the instruction is settled and no cancellation can be taken.	AM, AMOO, GC, LC, EP, EPOO, CP, AO
CCASS Exceptions	1	Manual ISIN Amendment: [SI Number]	After the LC / CP amended the stock code of the unmatched / matched SI in CCASS.	LC, CP, AO
	2	Manual Quantity Amendment: [SI Number]	After the LC / CP amended the quantity of the unmatched / matched SI in CCASS.	LC, CP, AO
	3	Manual Settlement Currency	After the LC / CP amended the settlement currency of the	LC, CP, AO

Classification – Internal

Type	No	Display Tag	When Display	Applicable User Type
		Amendment: [SI Number]	unmatched / matched SI in CCASS.	
	4	Manual Securities Movement Type Amendment: [SI Number]	After the LC / CP amended the instruction type of the unmatched / matched SI in CCASS.	LC, CP, AO
	5	Manual UTI Amendment: [SI Number]	After the LC / CP amended the processing reference of the unmatched / matched SI in CCASS.	LC, CP, AO
	6	Manual Counterparty Amendment: [SI Number]	After the LC / CP amended the counterparty of the unmatched / matched SI in CCASS.	LC, CP, AO
	7	Manual Client Account No. Amendment: [SI Number]	After the LC / CP amended the client account number of the unmatched / matched SI in CCASS.	LC, CP, AO
	8	Manual Payment Type Amendment: [SI Number]	After the LC / CP amended the payment instruction of the unmatched / matched SI in CCASS.	LC, CP, AO
	9	SI System Error "Code" + "MESSAGE" : [SI Number]	When the following CCASS API error code is encountered: 2037: Counterparty invalid (cannot be the same participant as the created one) 2042: Settlement date must be before the delisted date of the stock 2044: Stock already delisted 2072: Settlement date must by on / after clearing admission date of stock	LC, CP, AO

Classification – Internal

Type	No	Display Tag	When Display	Applicable User Type
			2090: Stock is not eligible to CCASS (Stock not yet admit) 3017: Counterparty not found 3041: Stock code not found 3063: Stock account not found Above just list out the most common CCASS API error code, please contact HKEX separately if you encounter any codes not within the above list	
	10	STI System Error "Code" + "MESSAGE" : [STI Number]	When the following CCASS API error code is encountered: 3041: Stock code not found 3072: Transfer from A/C not found 3073: Transfer to A/C not found Above just list out the most common CCASS API error code, please contact HKEX separately if you encounter any codes not within the above list	LC, CP, AO

Classification – Internal

5. Funds

5.1 Fund Onboarding

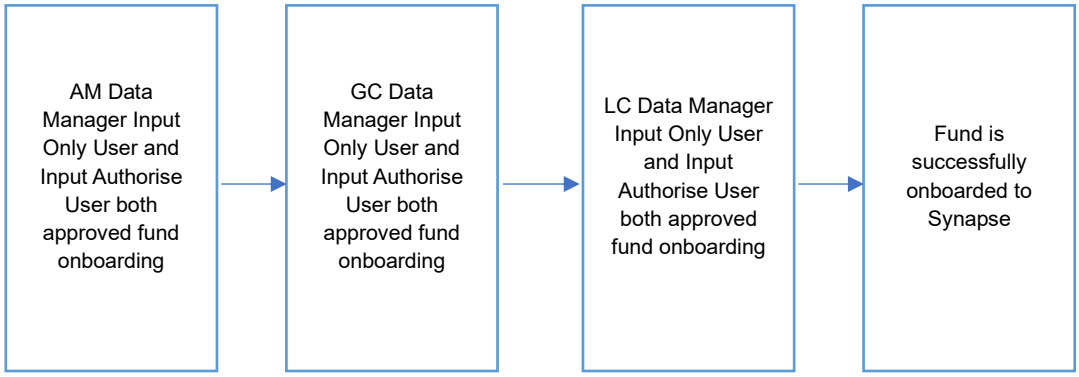
Fund Profile is required to be setup before Synapse creates the Settlement Instructions (“SIs”) or Stock Segregated Account Transfer Instruction (“STIs”) in CCASS of HKSCC. When a Fund is successfully onboarded, it will have one fund profile associated with it, and buy side users can create multiple Fund Profiles for a specific Fund onboarded in Synapse subject to its business needs.

To create a new Fund, AMs can start the self-service Fund onboarding process to onboard a single or multiple fund(s) by creating Fund Details and Fund Profile so Synapse can use it for creating the SIs or STIs in CCASS.

A Fund will be successfully onboarded when the AM, GC and LC have approved the fund submission. Each successfully onboarded fund automatically includes one fund profile. AMs can add additional fund profiles to each fund as needed.

5.1.1 Asset Managers (AM)

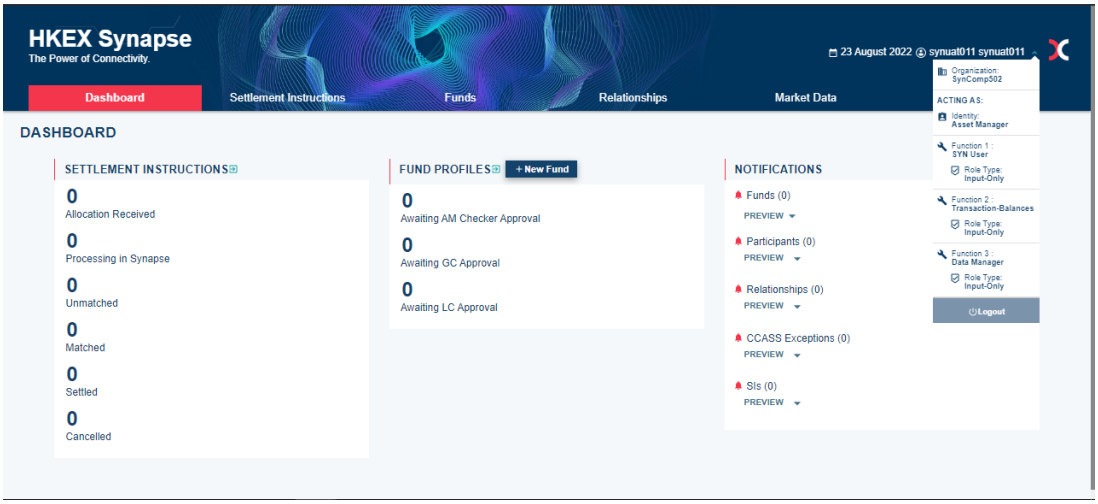
Approval by AM Data Manager Input Only User;
Approval by AM Data Manager Input Authorise User:



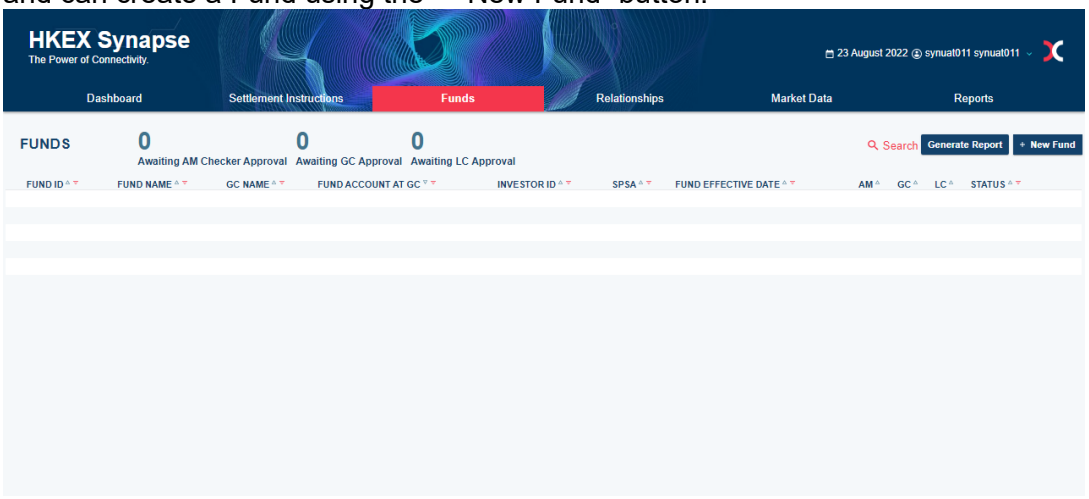
Approval by AM Data Manager Input Only User:

1. The AM Data Manager Input Only User logs in to Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

Classification – Internal

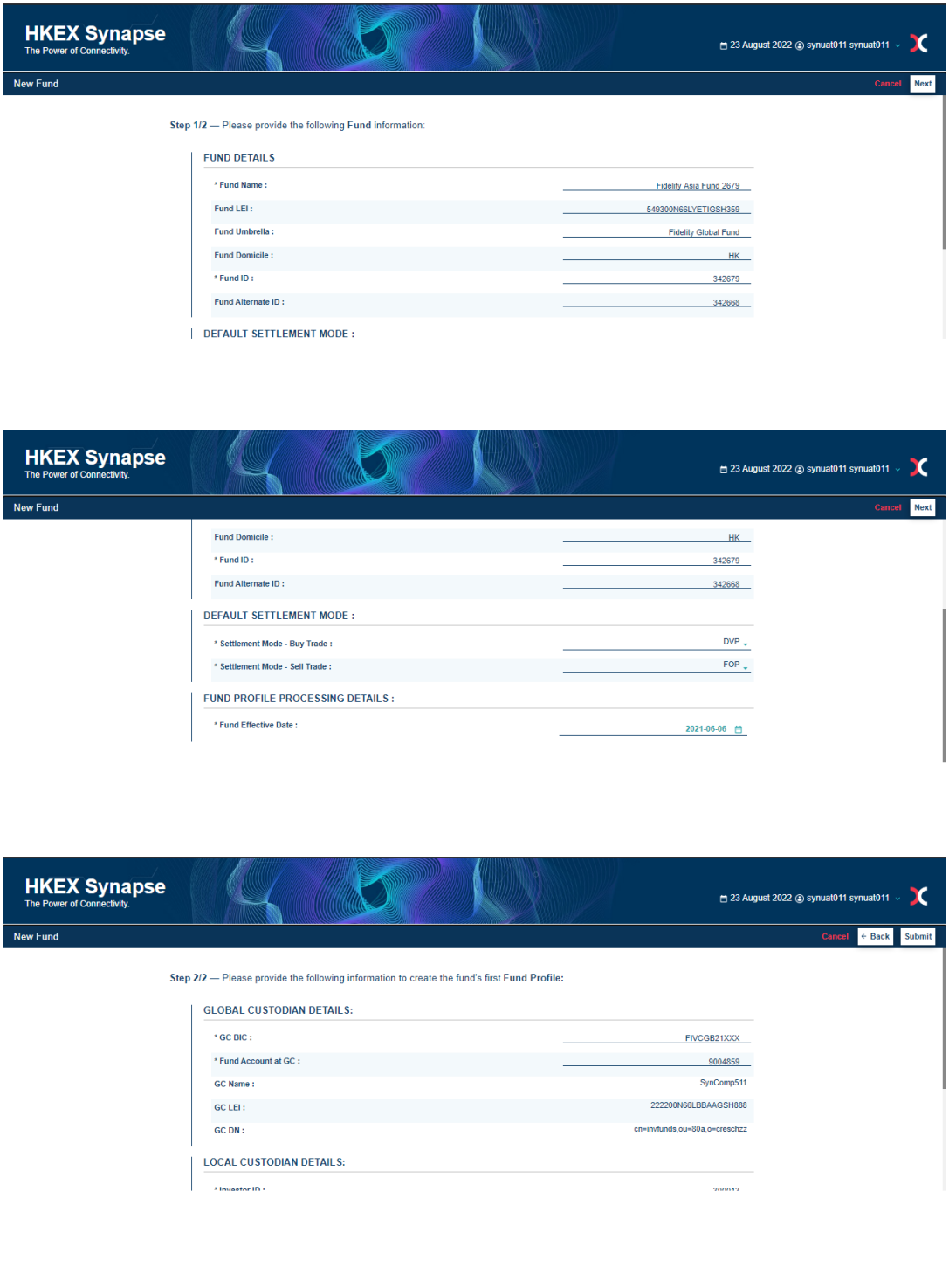


2. On the Funds tab, the AM Data Manager Input Only User can see the Funds list view and can create a Fund using the “+ New Fund” button.

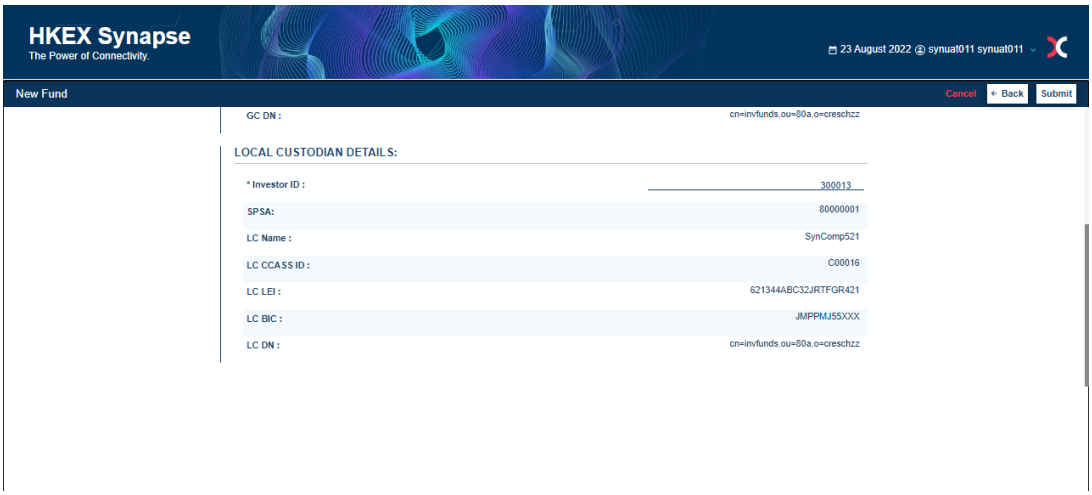


3. The AM Data Manager Input Only User will be asked to provide the Initial Fund Onboarding details. There will be 2 screens of information to submit. Then the AM Data Manager Input Only User will click “Submit”.

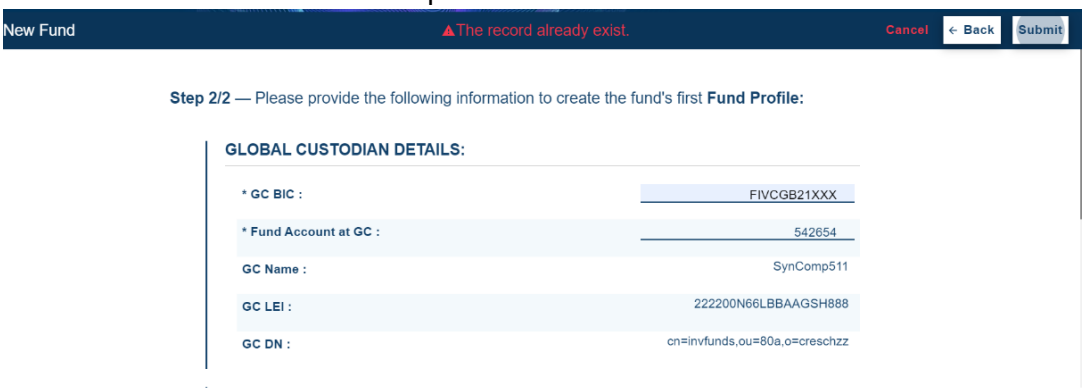
Classification – Internal



Classification – Internal



Note: The fund to be onboarded must not exist in Synapse in which semantic validation will be performed in specific fields that are marked as “Y” in the Contract Key column of the below table, otherwise the following error message will be shown when clicking “Submit”. This is to ensure no duplicate fund can be created.



Field Name	Description	Type	Size	Mandatory or Optional (M/O)	Syntax Validation	Contract Key* (Y/N)
Fund Name	The Legal Entity name of the Fund	String	70	M	N/A	Y – For Fund Data
Fund LEI	Legal Entity Identifier for the Fund	String	20	O	N/A	N
Fund Umbrella	Name of the fund umbrella. An AM can label a Fund for a Fund Umbrella Structure	String	50	O	Max 50 characters	N
Fund Domicile	Domicile of the fund defined by two-letter country in ISO 3166-1-alpha-2 code	String	2	O	2 characters	N

Classification – Internal

Field Name	Description	Type	Size	Mandatory or Optional (M/O)	Syntax Validation	Contract Key* (Y/N)
Fund ID	Field can be used by AM to link fund to a different ID, e.g., for integration into other systems	String	20	M	N/A	Y – For Fund Data
Fund Alternative ID	Field can be used by AM to link fund to a different ID, e.g., for integration into other systems	String	20	O	N/A	N
Fund Account at GC	Account No. for Fund at GC	String	20	M	N/A	Y – For Fund Profile
Global Custodian BIC	BIC Code of GC. AM can only select a GC that has been onboarded	String	11	M	Min 8 characters; max 11 characters	N
Settlement Mode – Buy Trade	Default Settlement Mode for buy trade (DVP, RDP or FOP)	String	3	M	3 characters	N
Settlement Mode – Sell Trade	Default Settlement Mode for sell trade (DVP, RDP or FOP)	String	3	M	3 characters	N
Fund Effective Date	The date from which the fund is active on the system. The date input must be a future date Note: Actual Fund effective date depends on when the LC completes the fund's approval	Date	10	M	YYYY-MM-DD	N
Investor ID	Investor ID for the Fund. The field Is a unique number assigned to each SPSA account by HKEX Note: Synapse will populate the following fields based on the Investor ID: • SPSA Account #	String	6	M	N/A	N

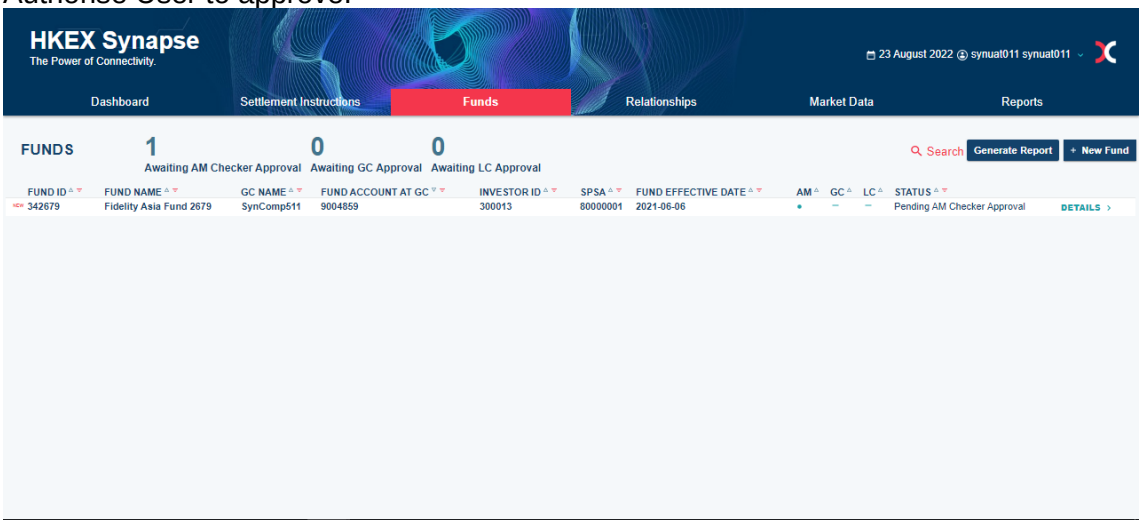
Classification – Internal

Field Name	Description	Type	Size	Mandatory or Optional (M/O)	Syntax Validation	Contract Key* (Y/N)
	• LC Name • LC CCASS Participant ID • LC LEI • LC BIC • LC DN Note: Investor ID is also known as "SPSA ID" in CCASS Rules					

*Note: Fields that are "Y" for the Contract Key column would be required for semantic validation. Synapse validates if the Contract Key value entered is not existing in Synapse onboarded fund, and the Contract Key fields would not be editable after submission (please refer to section 2.6 Edit Fund Details of an Active Fund for the fund edit descriptions). If there is more than one contract key field, the validation would be performed as a combination, i.e.:

a. For Fund Data, the combination of Contract Keys (i.e. Fund Name + Fund ID) must not exist in the onboarded fund; and
b. For Fund Profile (Refer to Section 5.2), the Contract Key (i.e. Account No. for Fund at Global Custodian) must not exist in the onboarded fund profile.

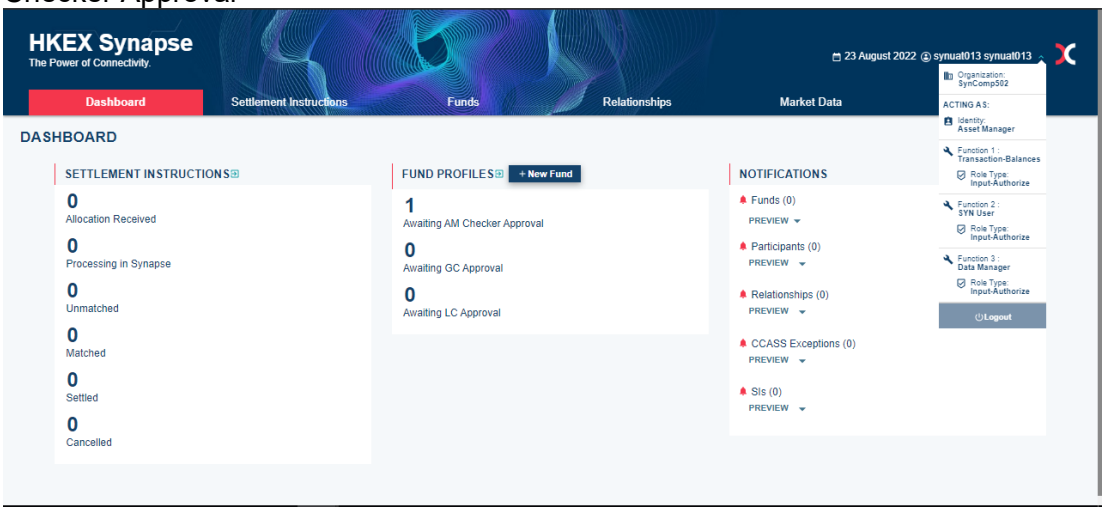
4. Once the AM Data Manager Input Only User submits the Initial Fund Onboarding details, then the AM Data Manager Input Only User will be brought back to the Funds List view. Under the AM column, the 'O' represents that the AM Data Manager Input Only User has submitted the input and that it is pending the AM Data Manager Input Authorise User to approve.



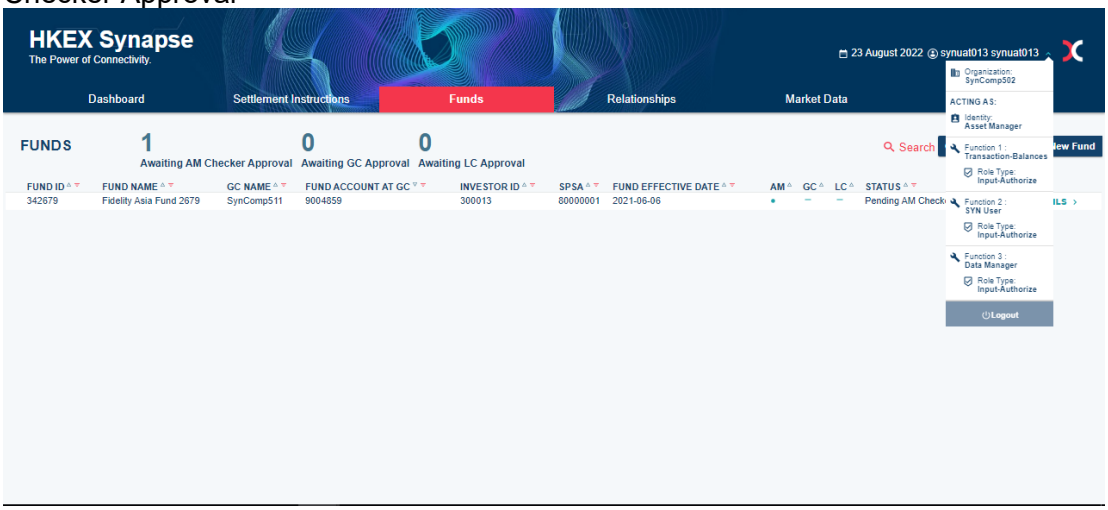
5. The AM Data Manager Input Authorise User will be informed in two ways:

Classification – Internal

a. Dashboard view: increased counter in the Fund Profiles section under “Awaiting AM Checker Approval”



b. Funds List view: increased counter under “Awaiting AM Checker Approval”, changed icon from ‘—’ to ‘O’ in the AM column, and changed status to “Pending AM Checker Approval”



Approval by AM Data Manager Input Authorise User:

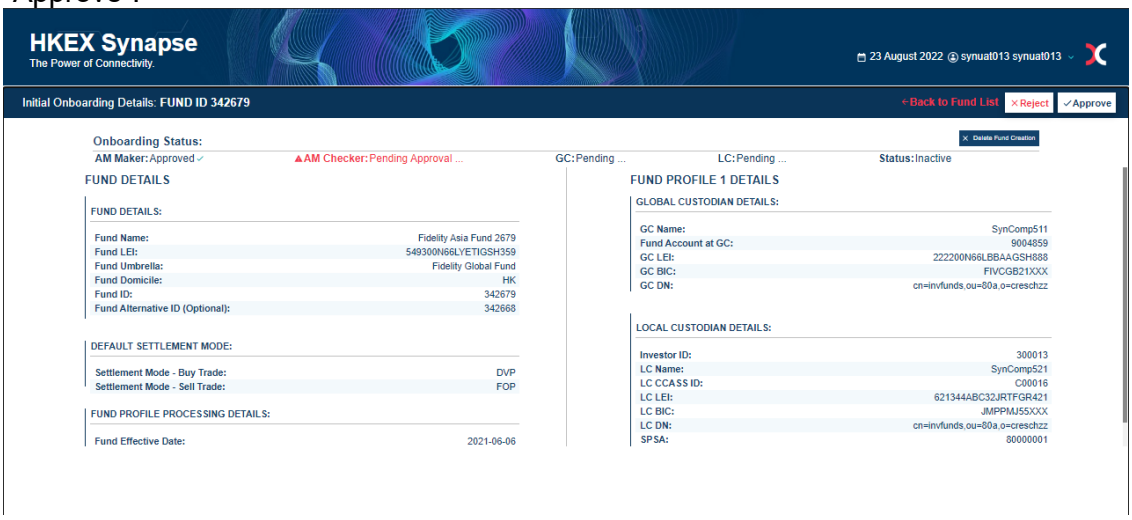
1. The AM Data Manager Input Authorise User logs in to Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

2. Once the AM Data Manager Input Only User has submitted the Initial Fund Onboarding details, the AM Data Manager Input Authorise User will be informed in two ways:
   a. Dashboard view: increased counter in the Fund Profiles section under “Awaiting AM Checker Approval”
   b. Funds List view: increased counter under “Awaiting AM Checker Approval”, changed icon from ‘—’ to ‘O’ in the AM column, and changed status to “Pending AM Checker Approval”

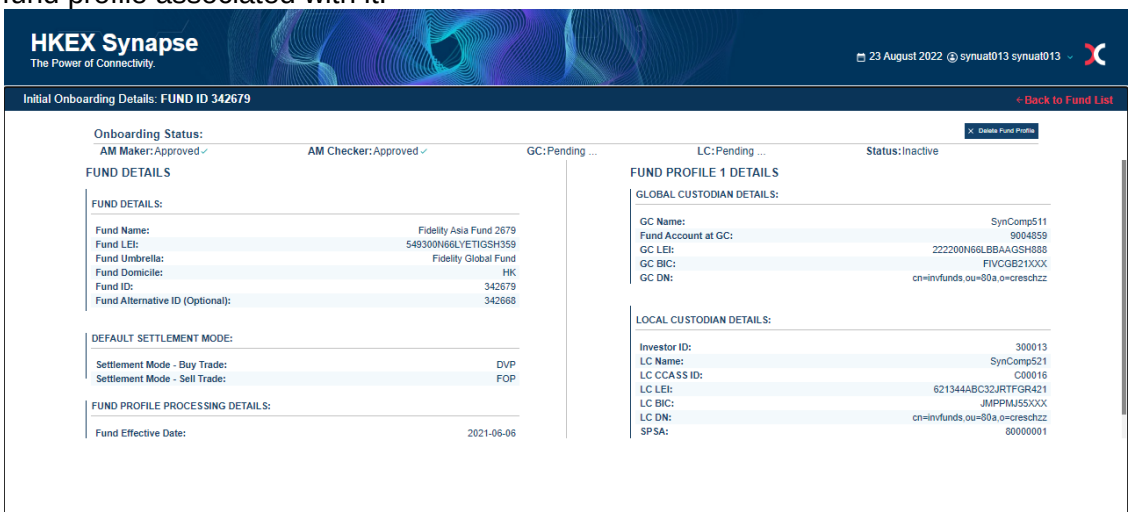
3. The AM Data Manager Input Authorise User can navigate to the Fund Details view by clicking “Details” on the Funds List view.

Classification – Internal

4. The AM Data Manager Input Authorise User can review the fund details and click “Approve”.



5. The fund is now created for GC processing, and the status of AM Data Manager Input Authorise User will be shown as “Approved.” The fund will automatically have one initial fund profile associated with it.



6. The GC Data Manager Input Only User will be informed that a fund onboarding is ready for their review in two ways:
   a. Dashboard view: increased counter in the Fund Profiles section under “Awaiting GC Maker Approval”
   b. Funds List view: increased counter under “Awaiting GC Maker Approval”, Funds List view changed icon from ‘○’ to ‘✓’ in the AM column, and changed status to “AM Approved”

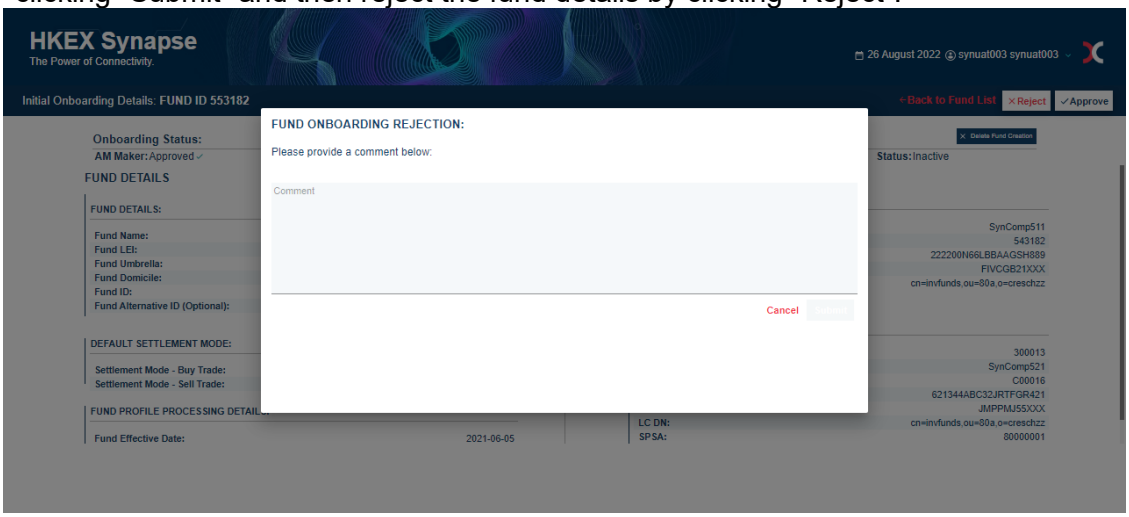
Rejection by AM Data Manager Input Authorise User:

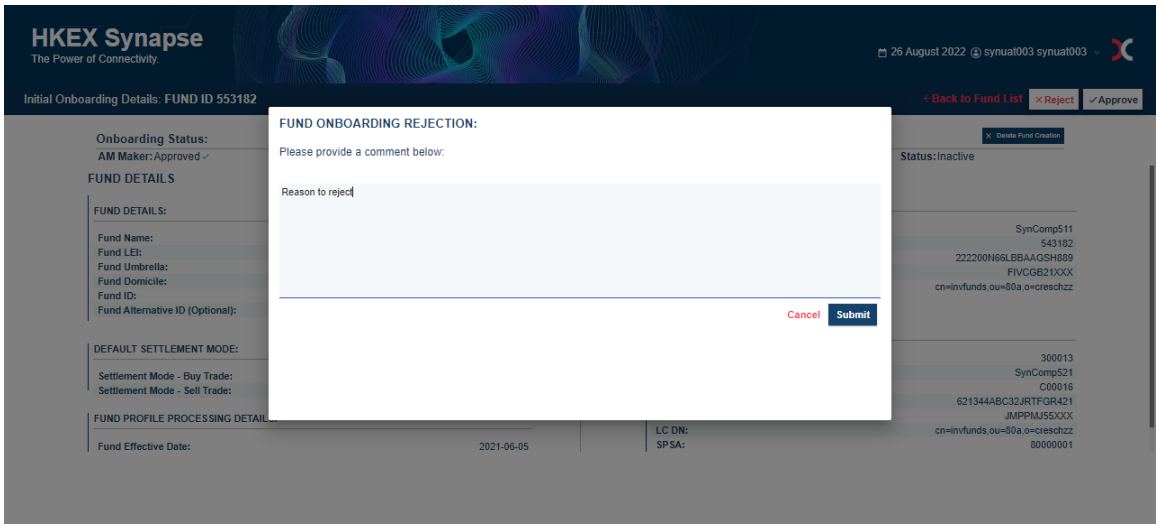
1. When the AM Data Manager Input Authorise User wants to reject the fund details, they

Classification – Internal

must click “Reject”. A text box appears for the AM Data Manager Input Authorise User to provide reason(s) for rejection in the form of freeform text.

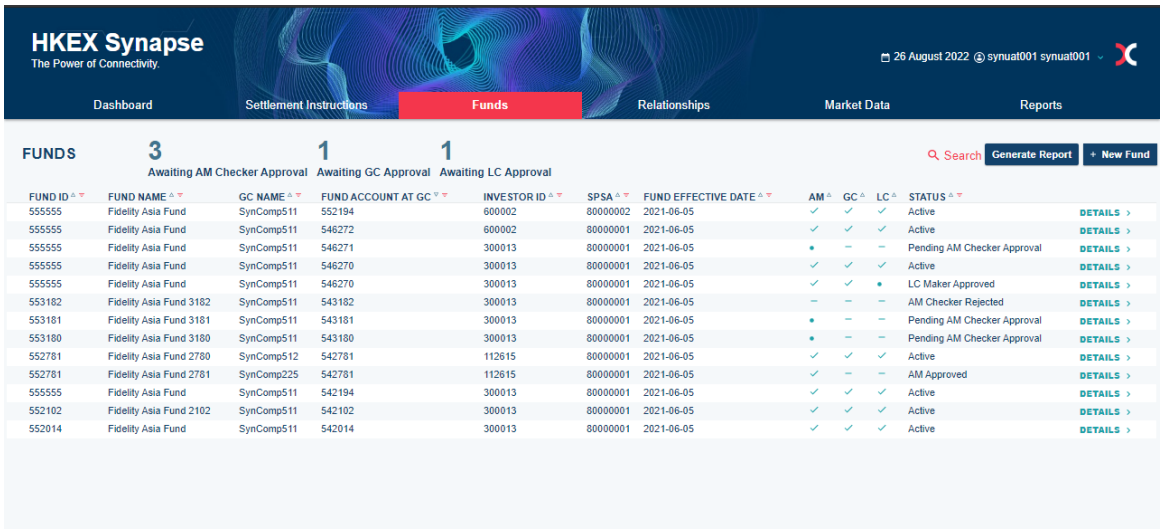
2. Then the AM Data Manager Input Authorise User must provide the rejection reasons by clicking “Submit” and then reject the fund details by clicking “Reject”.





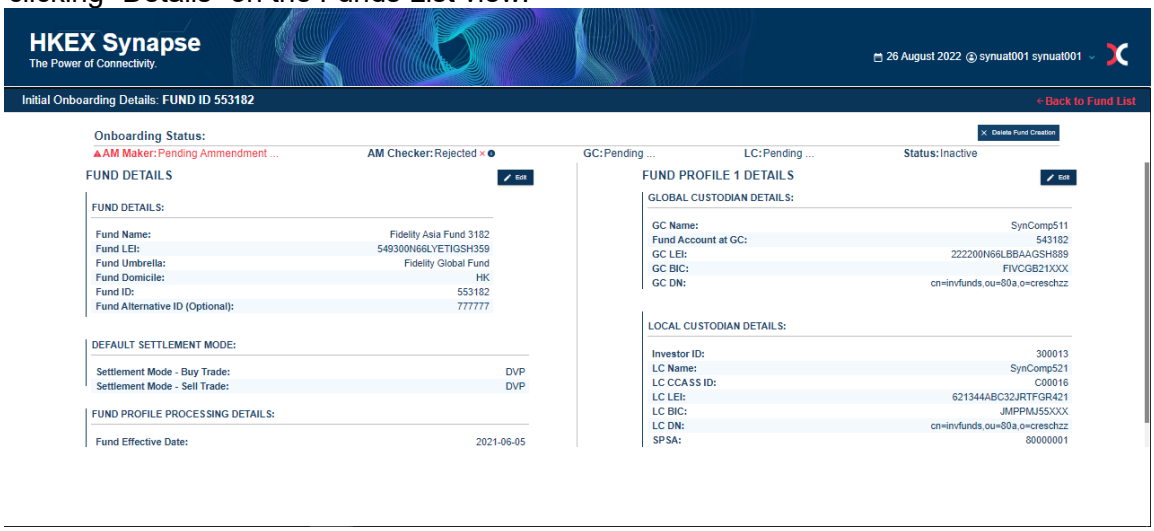
Classification – Internal

3. The AM Data Manager Input Only User will be informed that the AM Data Manager Input Authorise User has rejected the fund details in one way:
   a. Funds List view: changed icon from 'O' to '—' in the AM column on the Funds List view and changed status to "AM Checker Rejected"



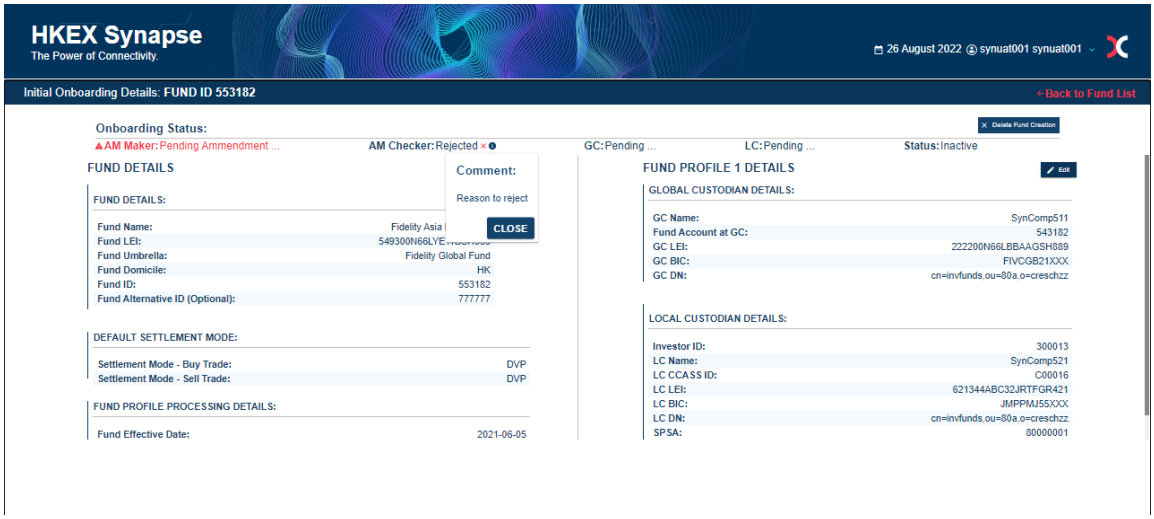
FUND ID	FUND NAME	GC NAME	FUND ACCOUNT AT GC	INVESTOR ID	SPSA	FUND EFFECTIVE DATE	AM	GC	LC	STATUS	
555555	Fidelity Asia Fund	SynComp511	552194	600002	80000002	2021-06-05	✓	✓	✓	Active	DETAILS
555555	Fidelity Asia Fund	SynComp511	546272	600002	80000001	2021-06-05	✓	✓	✓	Active	DETAILS
555555	Fidelity Asia Fund	SynComp511	546271	300013	80000001	2021-06-05	•	–	–	Pending AM Checker Approval	DETAILS
555555	Fidelity Asia Fund	SynComp511	546270	300013	80000001	2021-06-05	✓	✓	✓	Active	DETAILS
555555	Fidelity Asia Fund	SynComp511	546270	300013	80000001	2021-06-05	✓	✓	•	LC Maker Approved	DETAILS
553182	Fidelity Asia Fund 3182	SynComp511	543182	300013	80000001	2021-06-05	–	–	–	AM Checker Rejected	DETAILS
553181	Fidelity Asia Fund 3181	SynComp511	543181	300013	80000001	2021-06-05	•	–	–	Pending AM Checker Approval	DETAILS
553180	Fidelity Asia Fund 3180	SynComp511	543180	300013	80000001	2021-06-05	•	–	–	Pending AM Checker Approval	DETAILS
552781	Fidelity Asia Fund 2780	SynComp512	542781	112615	80000001	2021-06-05	✓	✓	✓	Active	DETAILS
552781	Fidelity Asia Fund 2781	SynComp225	542781	112615	80000001	2021-06-05	✓	–	–	AM Approved	DETAILS
555555	Fidelity Asia Fund	SynComp511	542194	300013	80000001	2021-06-05	✓	✓	✓	Active	DETAILS
552102	Fidelity Asia Fund 2102	SynComp511	542102	300013	80000001	2021-06-05	✓	✓	✓	Active	DETAILS
552014	Fidelity Asia Fund	SynComp511	542014	300013	80000001	2021-06-05	✓	✓	✓	Active	DETAILS

4. The AM Data Manager Input Only User can navigate to the Fund Details view by clicking "Details" on the Funds List view.

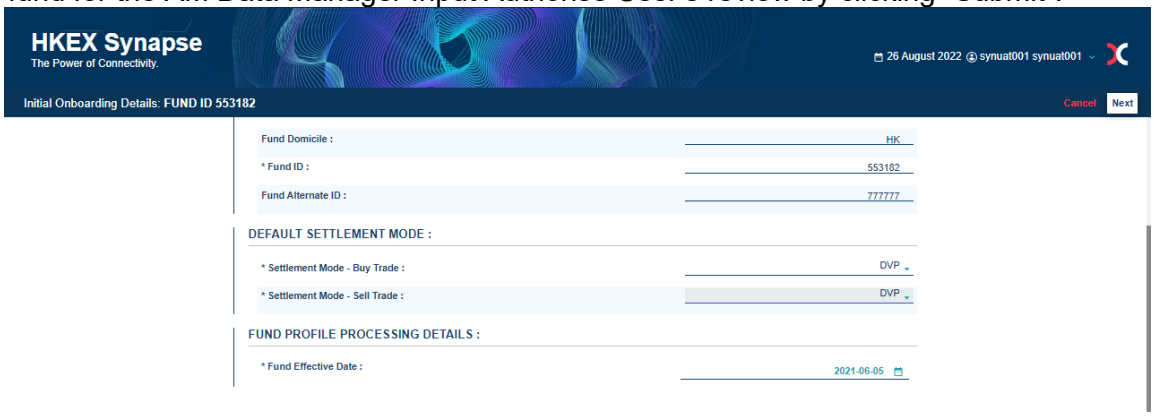


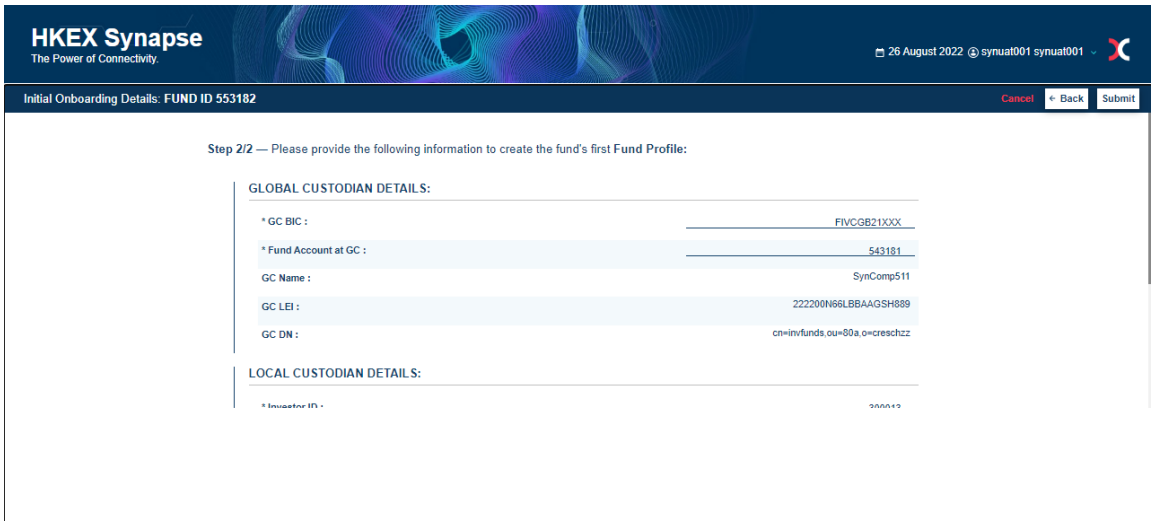
5. The fund has been rejected by the AM Data Manager Input Authorise User, and the AM Data Manager Input Only User can click "Edit" to edit specific fields based on the AM Data Manager Input Authorise User's comments for re-submission.

Classification – Internal

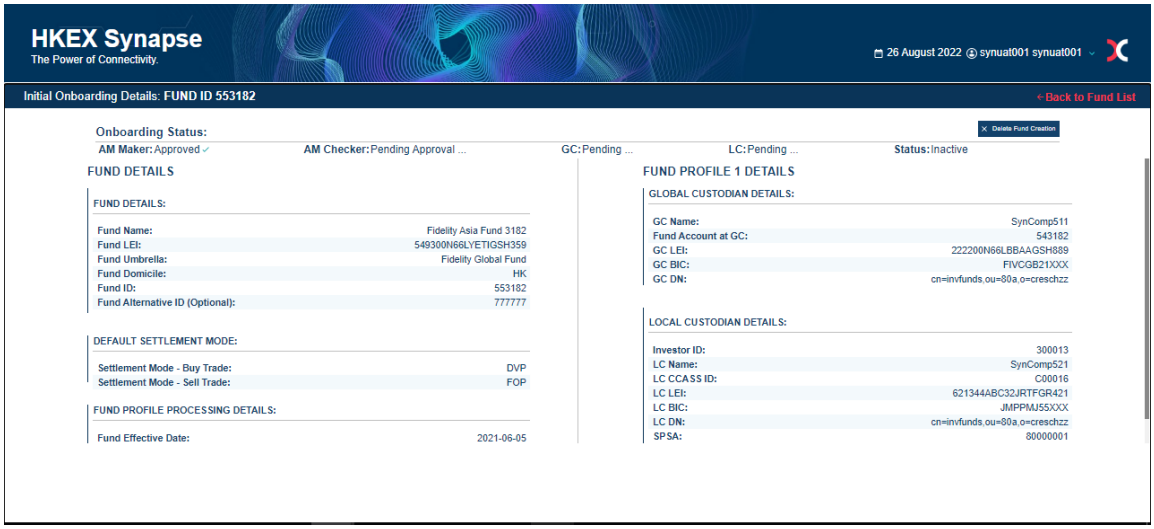


6. After editing specific fields, the AM Data Manager Input Only User can re-submit the fund for the AM Data Manager Input Authorise User's review by clicking "Submit".





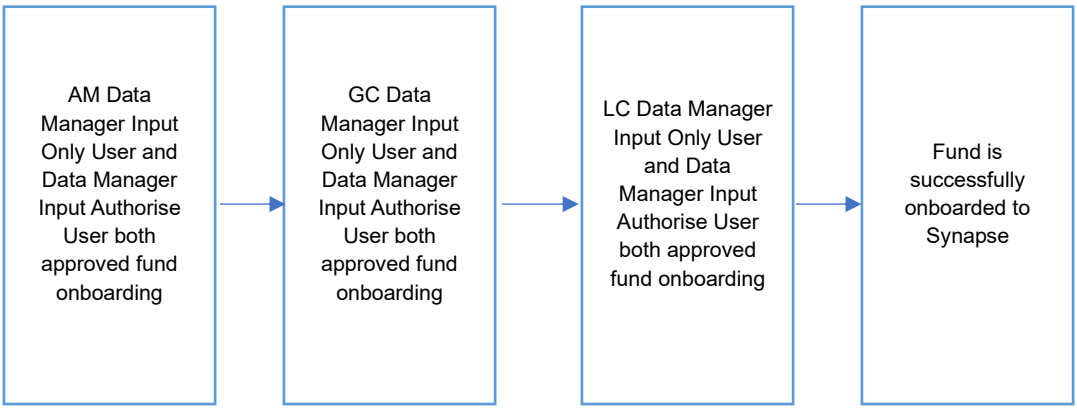
Classification – Internal



7. The AM Data Manager Input Authorise User can confirm that the updated fields re-submitted by AM Data Manager Input Only User by looking at the Fund Details view and “Approve”.

5.1.2 Global Custodians (GC)

Approval by GC Data Manager Input Only User;
Approval by GC Data Manager Input Authorise User:



Approval by GC Data Manager Input Only User:

1. The GC Data Manager Input Only User logs into Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

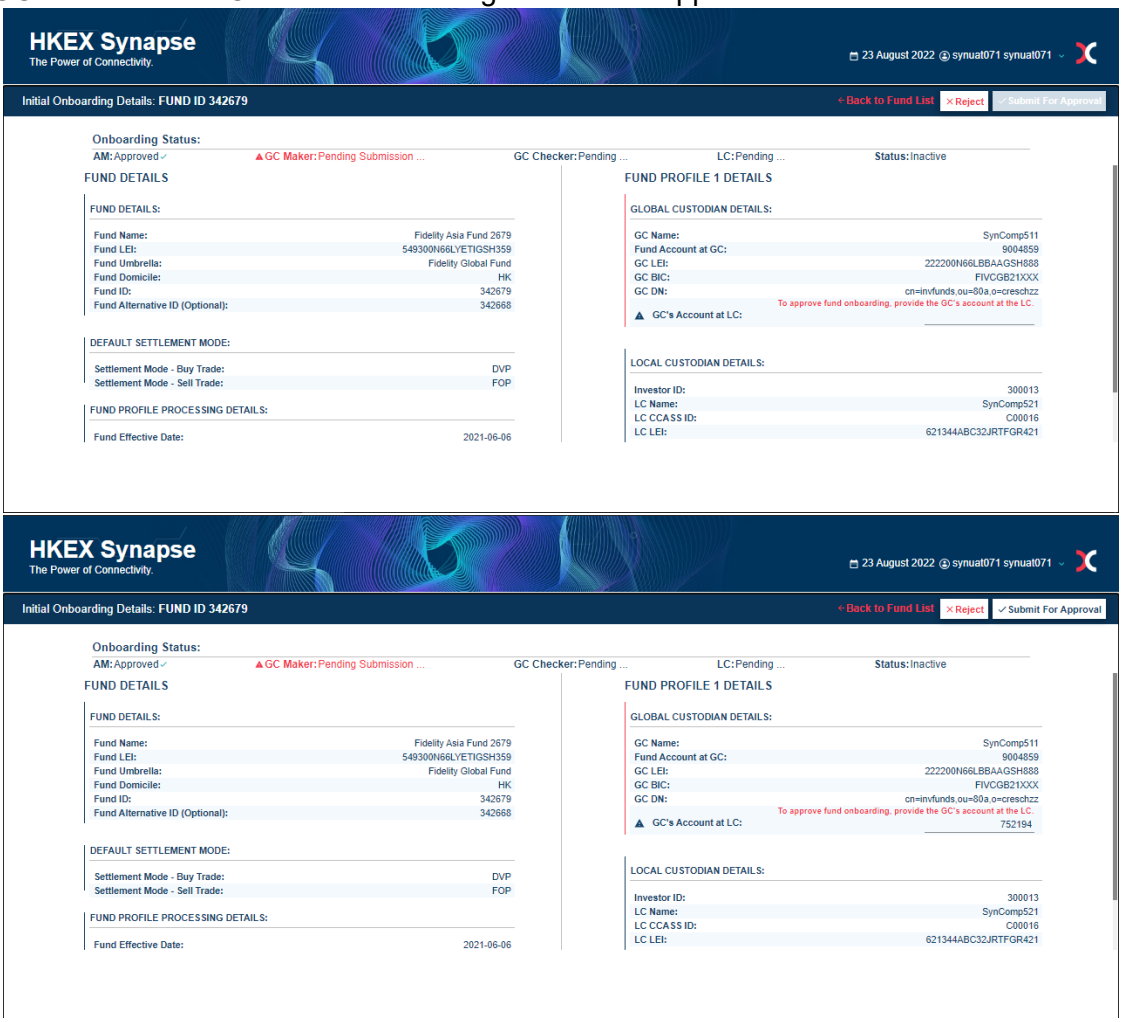
2. The GC Data Manager Input Only User will be informed that the AM has successfully submitted a fund in two ways:
   a. Dashboard view: increased counter in Fund Profiles section under “Awaiting GC Maker Approval”

Classification – Internal

b. Funds List view: increased counter under “Awaiting GC Maker Approval”, changed icon from ‘—’ to ‘✓’ in the AM column, a ‘—’ icon in the GC column, and a changed status to “AM Approved”

3. The GC Data Manager Input Only User can navigate to the Fund Details view by clicking “Details” on the Funds List view.

4. On the GC Data Manager Input Only User’s Fund Details page view, they must enter the ”GC’s Account at LC” field before hitting “Submit for Approval”.



Classification – Internal

Classification – Internal

Fields inputted by AM for GC's reference:

Field Name	Description	Type	Size	Mandatory or Optional (M/O)	Syntax Validation
Fund Profile Onboarding Status	Indicates the current status of the Fund Profile Onboarding Workflow	String	20	N/A	N/A
Fund Name	The Legal Entity name of the Fund	String	70	N/A	N/A
Fund LEI	Legal Entity Identifier for the Fund	String	20	N/A	N/A
Fund Umbrella	Name of the fund umbrella. An AM can label a Fund for a Fund Umbrella Structure	String	50	N/A	Max 50 characters
Fund Domicile	Domicile of the fund defined by two-letter country in ISO 3166-1-alpha-2 code	String	2	N/A	2 characters
Fund ID	Field can be used by AM to link fund to a different ID, e.g., for integration into other systems	String	20	N/A	N/A
Fund Alternative ID	Field can be used by AM to link fund to a different ID, e.g., for integration into other systems	String	20	N/A	N/A
Settlement Mode – Buy Trade	Default Settlement Mode for buy trade (DVP, RDP or FOP)	String	3	N/A	3 characters
Settlement Mode – Sell Trade	Default Settlement Mode for sell trade (DVP, RDP or FOP)	String	3	N/A	3 characters
Fund Effective Date	The date from which the fund is active on the system. Note: An indicative date will be input by the AM, and the actual Fund effective date depends on when the LC completes the fund's approval	Date	20	N/A	YYYY-MM-DD
Global Custodian Name	The Legal Entity name of the GC	String	70	N/A	N/A
Fund Account at Global Custodian	Account No. for Fund at GC	String	20	N/A	N/A
Global Custodian LEI	Legal Entity Identifier for GC	String	20	N/A	N/A
Global Custodian BIC	BIC Code for GC	String	11	N/A	N/A
Global Custodian DN	DN Code for GC	String	52	N/A	Min 8 characters

Classification – Internal

Field Name	Description	Type	Size	Mandatory or Optional (M/O)	Syntax Validation
Local Custodian Name	The Legal Entity name of LC	String	70	N/A	N/A
Local Custodian CCASS Participant ID	CCASS Participant ID of LC	String	6	N/A	6 characters
Local Custodian LEI	Legal Entity Identifier for LC	String	20	N/A	N/A
Local Custodian BIC	BIC Code for LC	String	11	N/A	N/A
Local Custodian DN	DN Code of LC	String	52	N/A	N/A
SPSA	SPSA Account No. for Investor ID	Integer	8	N/A	8 characters

Field input by GC Data Manager Input Only User

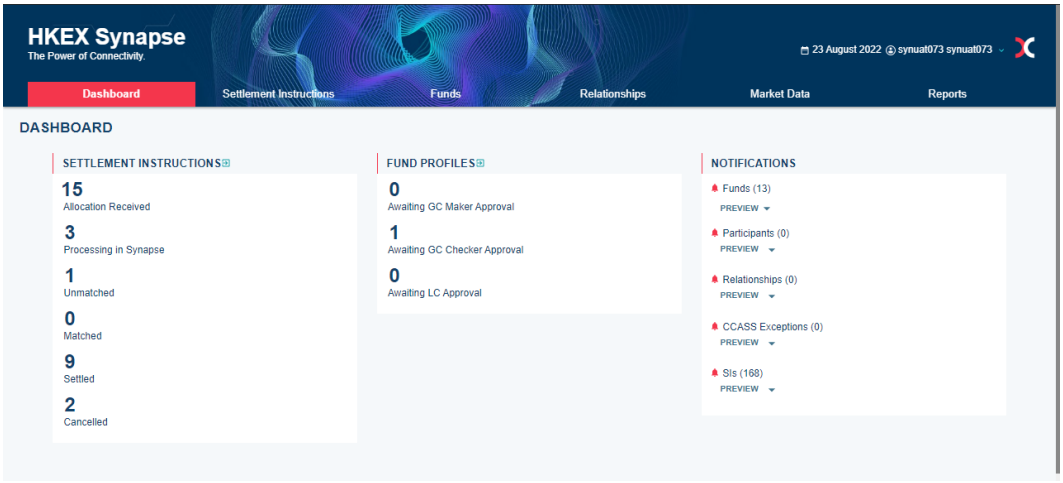
Field Name	Description	Type	Size	Mandatory or Optional (M/O)	Syntax Validation
GC's Account at LC	GC Account No. at LC for the Fund of the trade	String	15	M	N/A

Approval by GC Data Manager Input Authorise User:

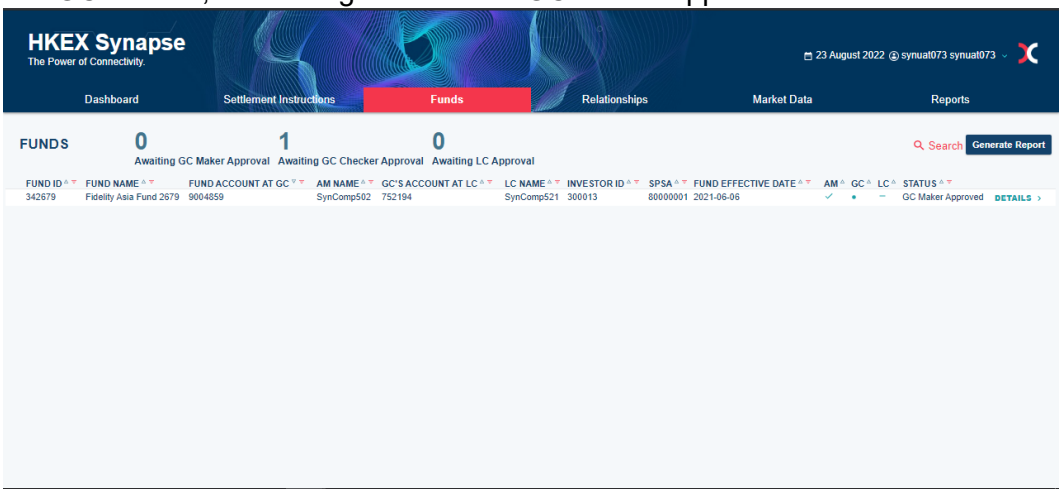
1. The GC Data Manager Input Authorise User logs in to Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

2. The GC Data Manager Input Authorise User will be informed that the GC Data Manager Input Only User has successfully added the "GC's Account at LC" field in two ways:
   a. Dashboard view: increased counter in Fund Profiles section under "Awaiting GC Checker Approval"

Classification – Internal



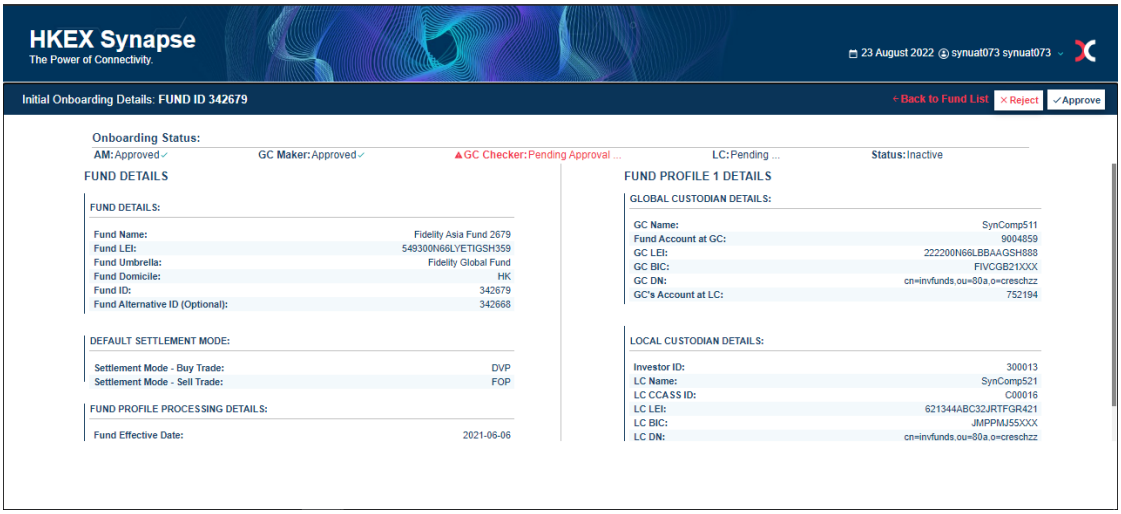
b. Funds List view: increased counter under “Awaiting GC Checker Approval”, changed icon from ‘—’ to ‘✓’ in the AM column, changed icon from ‘—’ to ‘○’ in the GC column, and changed status to “GC Maker Approved”



3. The GC Data Manager Input Authorise User can navigate to the Fund Details view by clicking “Details” on the Funds List view.

4. On the GC Data Manager Input Authorise User’s Fund Details page view, they can review the details and approve the fund by clicking the “Approve” button.

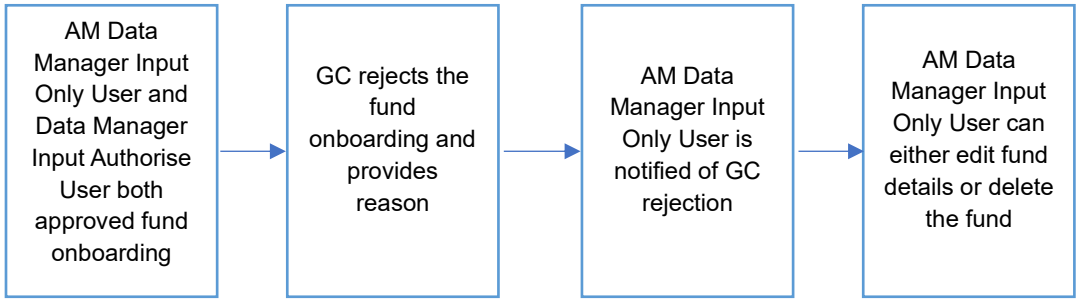
Classification – Internal



5. After GC Data Manager Input Authorise User clicks “Approve” button:

Rejection by GC Data Manager Input Only User;
Rejection by GC Data Manager Input Authorise User Back to AM:

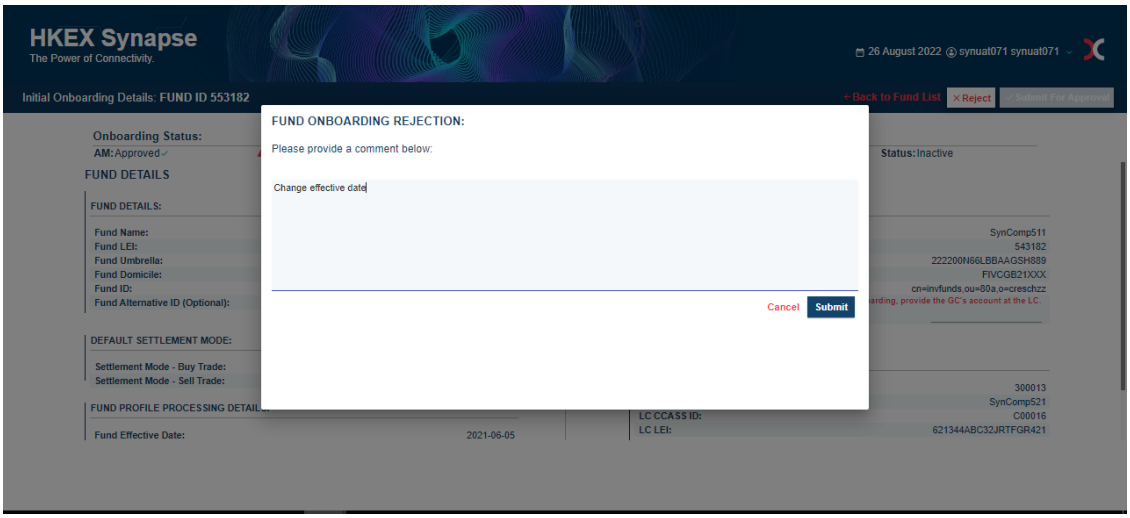
For a fund to be onboarded successfully, both the GC and LC need to approve the fund onboarding. If the GC Data Manager Input Only User rejects the fund and the GC Data Manager Input Authorise User agrees with the GC Data Manager Input Only User’s rejection, the GC Data Manager Input Authorise User can reject back to the AM.



Classification – Internal

Rejection by GC Data Manager Input Only User:

1. When the GC Data Manager Input Only User wants to reject the fund, they must click “Reject”. A text box appears for the GC Data Manager Input Only User to provide reason(s) for rejection in the form of freeform text.

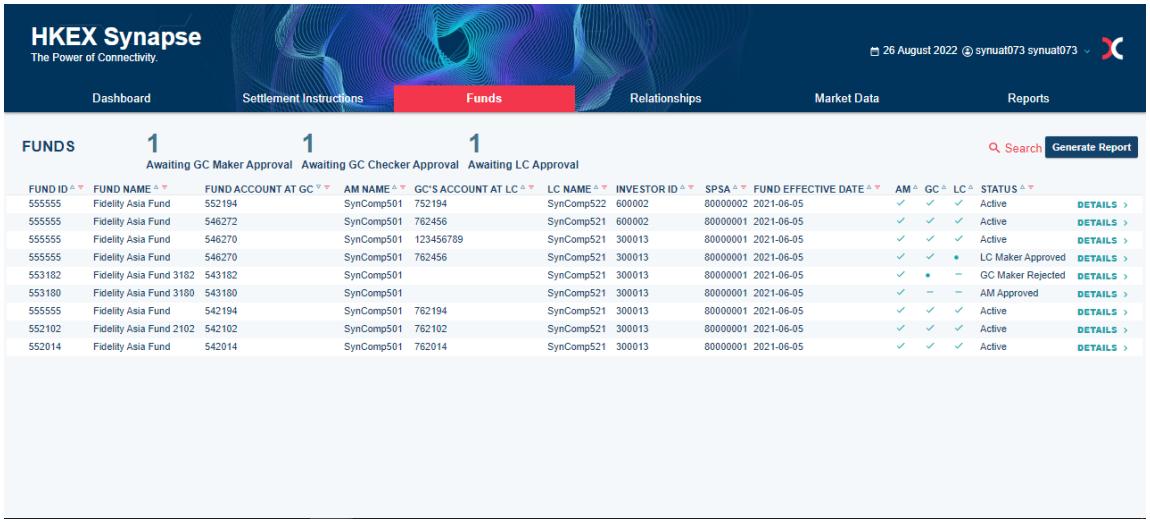


2. Then the GC Data Manager Input Only User must provide the rejection reasons by clicking “Submit” and then reject the fund details by clicking “Reject”.

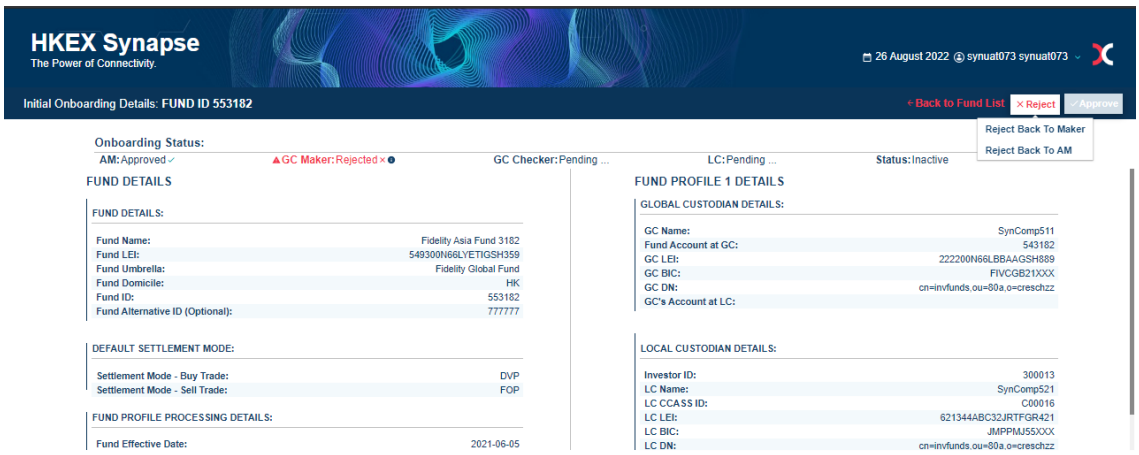
Rejection by GC Data Manager Input Authorise User:

1. The GC Data Manager Input Authorise User receives a notification that the GC Data Manager Input Only User has rejected the fund via the Dashboard view or the Funds List view.

Classification – Internal

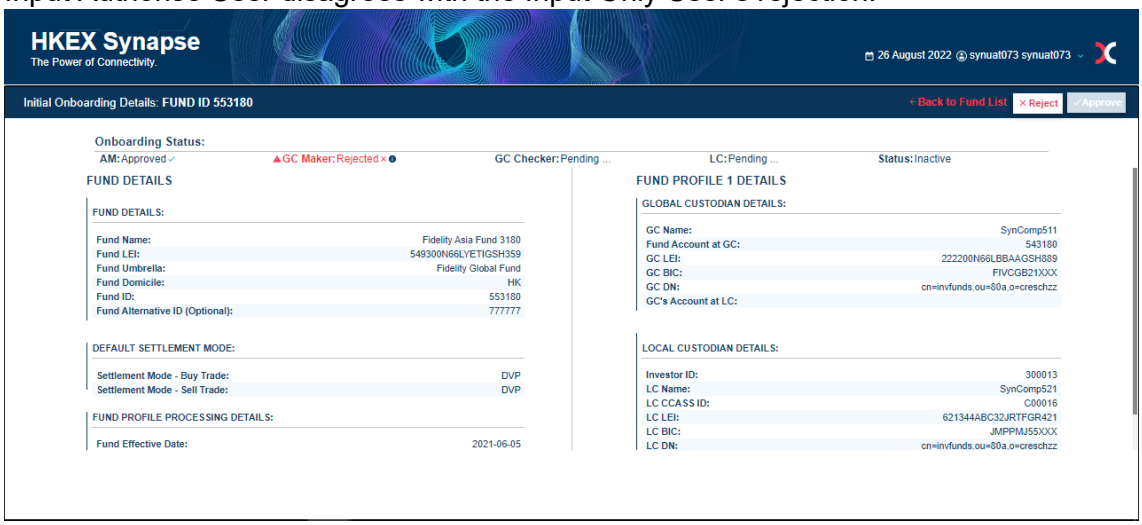


2. On the Fund Details view, the GC Data Manager Input Authorise User clicks “Reject” and sees the “Reject back to Maker” and the “Reject back to AM” buttons. The “Approve” button is greyed out.

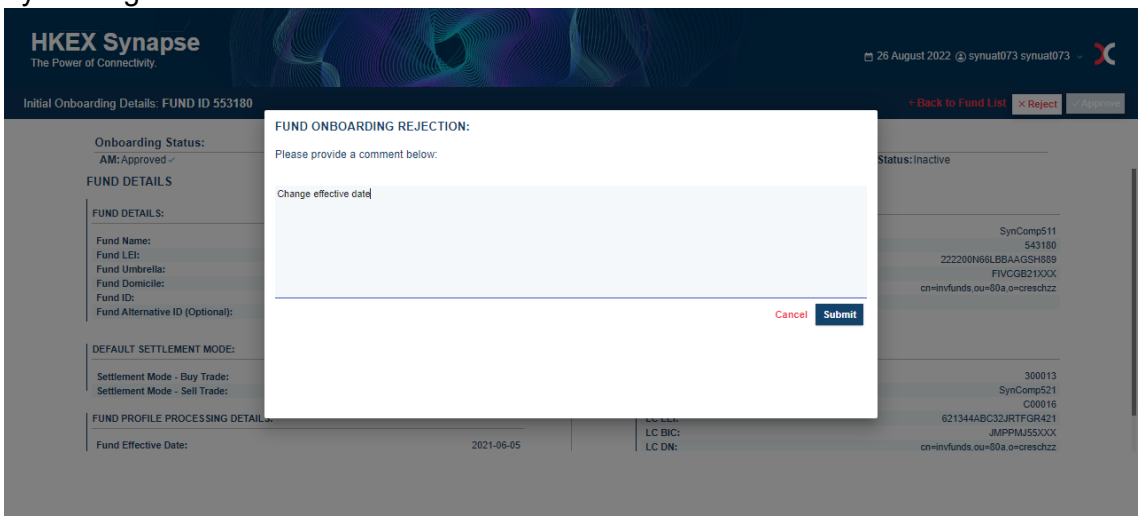


Classification – Internal

3. The GC Data Manager Input Authorise will select “Reject Back to Maker” when the Input Authorise User disagrees with the Input Only User’s rejection.



4. Then the GC Data Manager Input Authorise User must provide the rejection reason(s) by clicking “Submit”.



5. Funds List view: increased counter under “Awaiting GC Maker Approval”, changed icon from ‘O’ to ‘—‘ in the GC column, and changed status to “GC Checker Rejected”

Approval by GC Data Manager Input Only User; Rejection by GC Data Manager Input Authorise User back to GC Data Manager Input Only User:

If the GC Data Manager Input Only User approves the fund and the GC Data Manager Input Authorise User disagrees with the GC Data Manager Input Only User’s approval/input, the GC Data Manager Input Authorise User must reject back to the GC Data Manager Input Only User. After that, the GC Data Manager Input Only User will need to either amend the GC’s Account at LC for re-approval by the GC Data Manager Input Authorise User or rejects the fund.

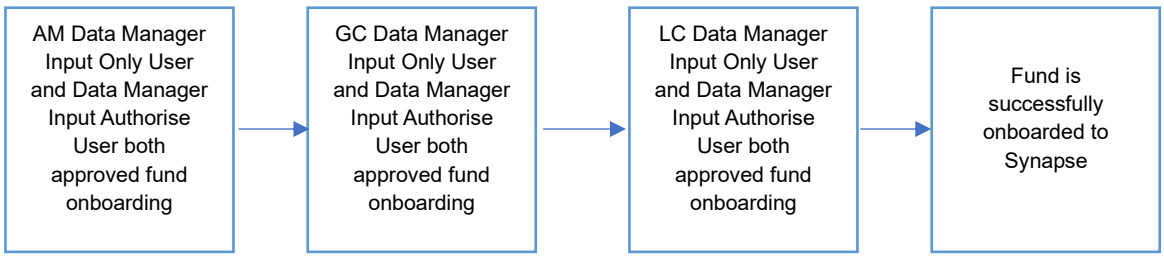
Classification – Internal

Rejection by GC Data Manager Input Only User;
Rejection by GC Data Manager Input Authorise User Back to GC Data Manager Input Only User:

If the GC Data Manager Input Only User rejects the fund and the GC Data Manager Input Authorise User disagrees with the GC Data Manager Input Only User's rejection, the GC Data Manager Input Authorise User must reject back to the GC Data Manager Input Only User. After that, the GC Data Manager Input Only User will need to restart the fund approval / rejection process again.

5.1.3 Local Custodians (LC)

Approval by LC Data Manager Input Only User;
Approval by LC Data Manager Input Authorise User:



Approval by LC Data Manager Input Only User:

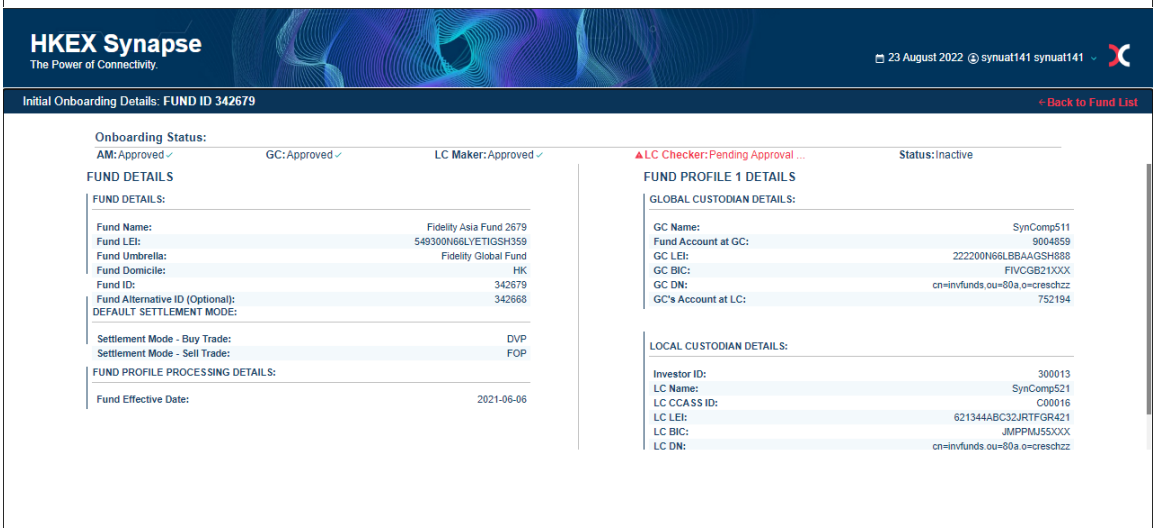
1. The LC Data Manager Input Only User logs in to Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

2. The LC Data Manager Input Only User will be informed in two ways:
   a. Dashboard view: increased counter in Fund Profiles section under "Awaiting LC Maker Approval"
   b. Funds List view: increased counter under "Awaiting LC Maker Approval", changed icon from '—' to '✓' in the AM column, changed icon from '—' to '✓' in the GC column, and changed status to "GC Approved"

3. The LC Data Manager Input Only User can navigate to the Fund Details view by clicking "Details" on the Funds List view and see that the AM has successfully onboarded a fund that has been approved by the GC and can click through to the Fund Details page.

4. On the LC Data Manager Input Only User's Fund Details page view, they have to confirm the "GC's Account at LC" field before hitting "Submit For Approval".

Classification – Internal



Field Name	Description	Type	Size	Mandatory or Optional (M/O)	Syntax Validation
Fund Profile Onboarding Status	Indicates the current status of the Fund Profile Onboarding Workflow	String	20	N/A	N/A
Fund Name	The Legal Entity name of the Fund	String	70	N/A	N/A
Fund LEI	Legal Entity Identifier for the Fund	String	20	N/A	N/A
Fund Umbrella	Name of the fund umbrella. An AM can label a Fund for a Fund Umbrella Structure	String	50	N/A	Max 50 characters
Fund Domicile	Domicile of the fund defined by two-letter country in ISO 3166-1-alpha-2 code	String	2	N/A	2 characters
Fund ID	Field can be used by AM to link fund to a different ID, e.g., for integration into other systems	String	20	N/A	N/A
Fund Alternative ID	Field can be used by AM to link fund to a different ID, e.g.,	String	20	N/A	N/A

Classification – Internal

Field Name	Description	Type	Size	Mandatory or Optional (M/O)	Syntax Validation
	for integration into other systems				
Settlement Mode – Buy Trade	Default Settlement Mode for Fund	String	3	N/A	3 characters
Settlement Mode – Sell Trade	Default Settlement Mode for Fund	String	3	N/A	3 characters
Fund Effective date	The date from which the fund is active on the system Note: An indicative date will be input by the AM, and the actual Fund effective date depends on when the LC completes the fund's approval	Date	20	N/A	YYYY-MM-DD
Global Custodian Name	The Legal Entity name of the Global Custodian	String	70	N/A	N/A
Fund Account at Global Custodian					N/A
Global Custodian LEI	Legal Entity Identifier for the Global Custodian	String	20	N/A	N/A
Global Custodian BIC	BIC Code for the Global Custodian	String	11	N/A	N/A
Global Custodian DN	DN Code representing the Global Custodian serving the fund	String	52	N/A	Min 8 characters
Global Custodian's Account at Local Custodian	Account No. for Global Custodian at Local Custodian	String	15	N/A	N/A
Local Custodian Name	The Legal Entity name of the participant	String	70	N/A	N/A
Local Custodian CCASS ID	CCASS Participant ID for the Local Custodian	String	6	N/A	6 characters
Local Custodian LEI	Legal Entity Identifier for the Local Custodian	String	20	N/A	N/A
Local Custodian BIC	BIC Code for the Global Custodian	String	11	N/A	N/A
Local Custodian DN	DN Code representing the Local Custodian serving the Global Custodian	String	52	N/A	N/A
SPSA	SPSA account No. for Investor ID	Integer	8	N/A	N/A

Approval by LC Data Manager Input Authorise User:

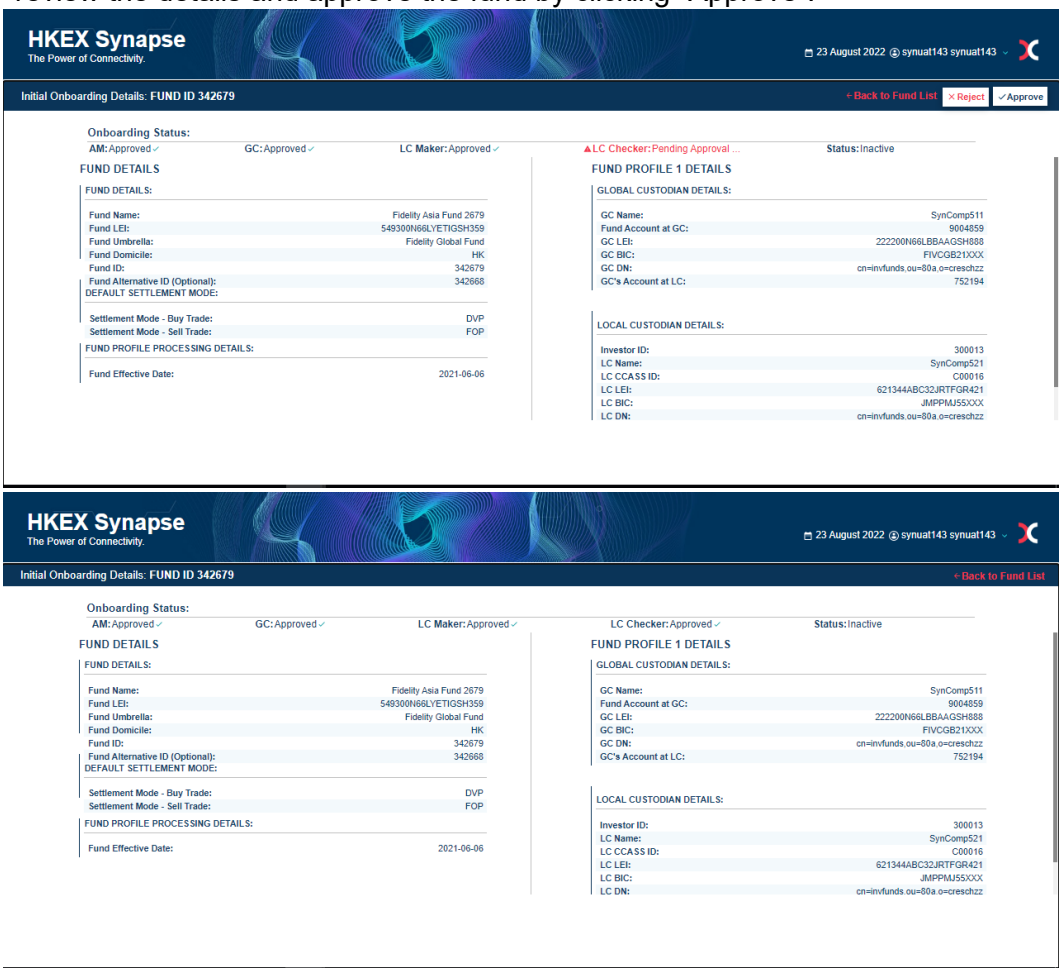
1. The LC Data Manager Input Authorise User logs in to Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

Classification – Internal

2. The LC Data Manager Input Authorise User will be informed that the LC Data Manager Input Only User confirmed the “GC’s Account at LC” field that the GC provided in two ways:
   a. Dashboard view: increased counter in the Fund Profiles section under “Awaiting LC Checker Approval”
   b. Funds List view: increased counter under “Awaiting LC Checker Approval”, changed icon from ‘—‘ to ‘O’ in the LC column, and changed status to “LC Maker Approved”

3. The LC Data Manager Input Authorise User can navigate to the Fund Details view by clicking “Details” on the Funds List view.

4. On the LC Data Manager Input Authorise User’s Fund Details page view, they can review the details and approve the fund by clicking “Approve”.

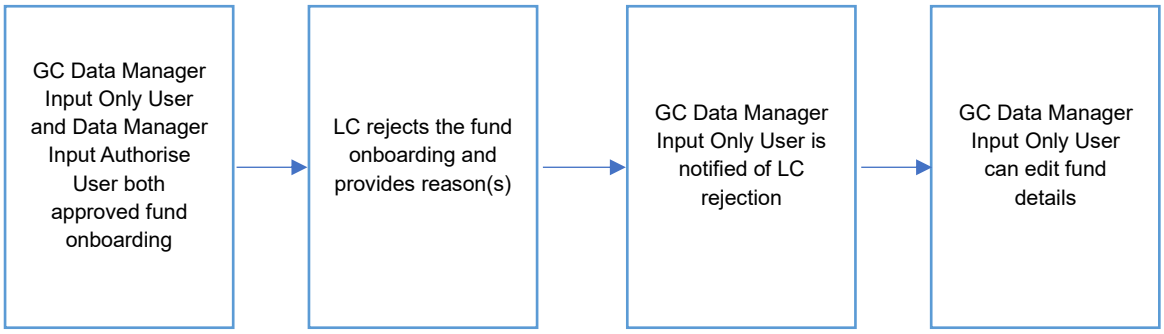


Rejection by LC Data Manager Input Only User; Rejection by LC Data Manager Input Authorise User Back to GC:

For a fund to be onboarded successfully, both the GC and LC need to approve the fund onboarding. If the LC Data Manager Input Only User rejects the fund and the LC Data

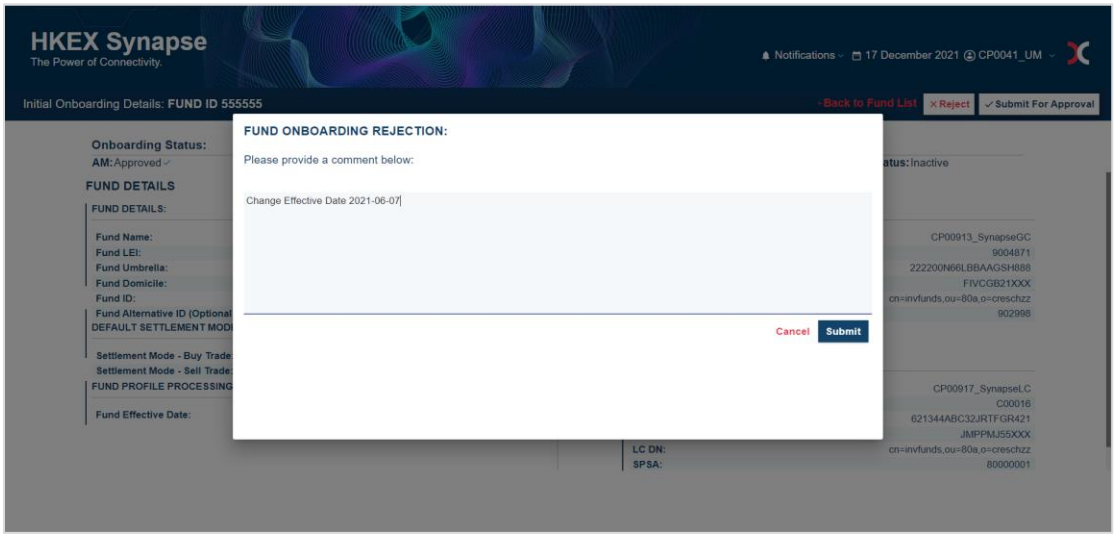
Classification – Internal

Manager Input Authorise User agrees with the LC Data Manager Input Only User's rejection, the LC Data Manager Input Authorise User must reject back to the GC.



Rejection by LC Data Manager Input Only User:

1. When the LC Data Manager Input Only User rejects the fund, a text box appears for the LC Data Manager Input Only User to provide reason(s) for rejection in the form of freeform text.



2. Then the LC Data Manager Input Only User must provide the rejection reasons by clicking "Submit" and then reject the fund details by clicking "Reject".

Rejection by LC Data Manager Input Authorise User:

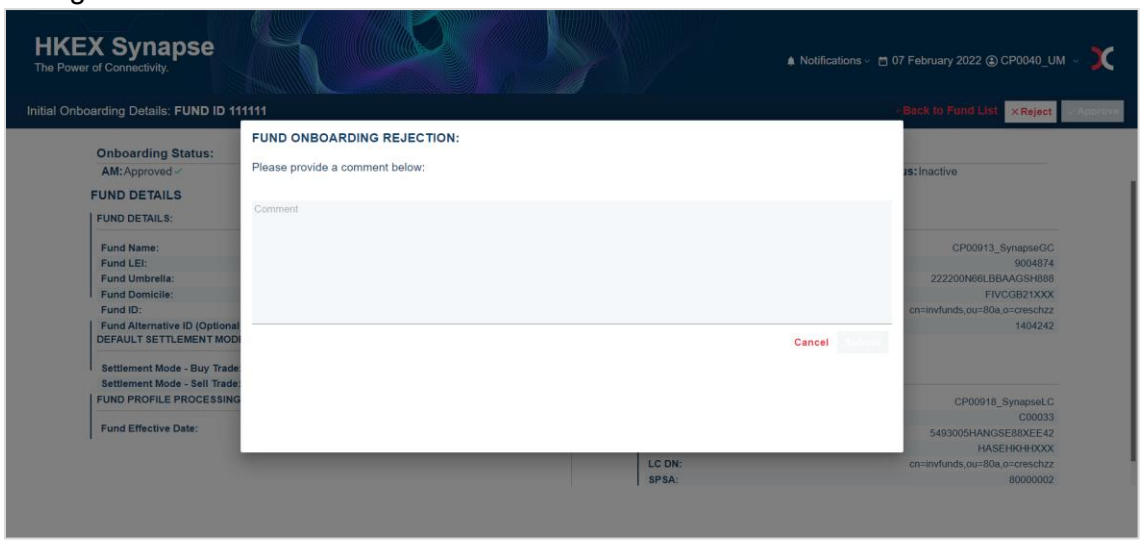
1. The LC Data Manager Input Authorise User receives a notification that the LC Data Manager Input Only User has rejected the fund via the Dashboard view or the Funds List view.

2. On the Fund Details view, the LC Data Manager Input Authorise User clicks "Reject" and sees the "Reject back to Maker" and the "Reject back to GC" buttons. The "Approve" button is greyed out.

Classification – Internal

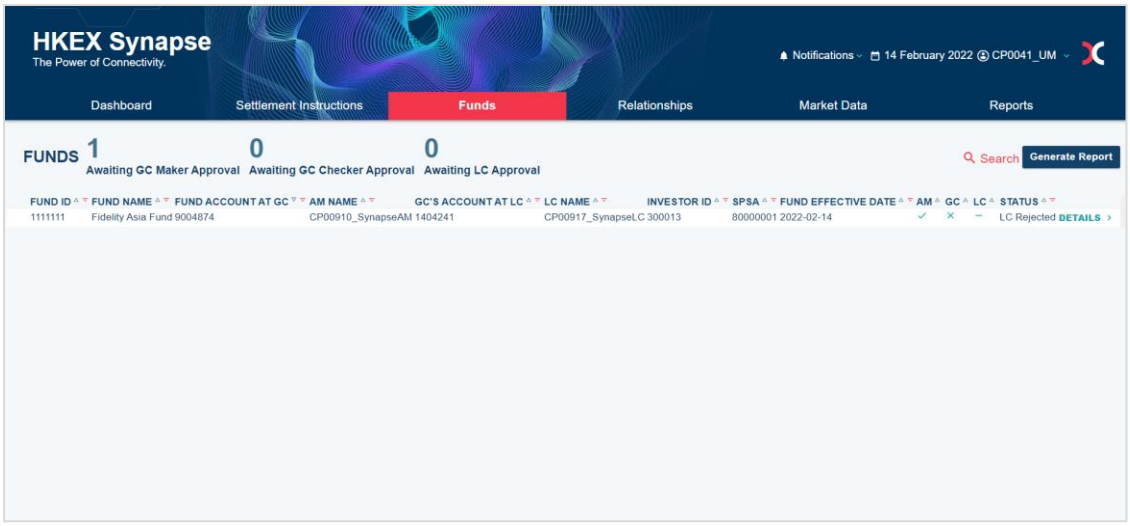
3. The LC Data Manager Input Authorise will select “Reject back to GC” when the LC Data Manager Input Authorise User agrees with the LC Data Manager Input Only User’s rejection.

4. Then the LC Data Manager Input Authorise User must provide the rejection reason(s) by clicking “Submit”.



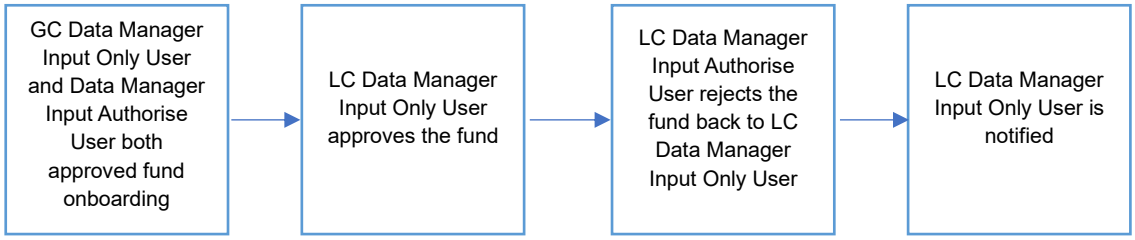
5. The GC Data Manager Input Only User will be informed in one way:
   a. Funds List view: increased counter under “Awaiting GC Maker Approval”, change in icon from ‘✓’ to ‘X ‘ in the GC column, and changed status to “LC Rejected”
   b. The LC Data Manager Input Only User and LC Data Manager Input Authorise User will see the row disappeared from the Funds List view.

Classification – Internal



Approval by LC Data Manager Input Only User; Rejection by LC Data Manager Input Authorise User Back to LC Data Manager Input Only User:

For a fund to be onboarded successfully, both the GC and LC need to approve the fund onboarding. If the LC Data Manager Input Only User approves the fund and the LC Data Manager Input Authorise User disagrees with the LC Data Manager Input Only User's approval/input, the LC Data Manager Input Authorise User must reject back to the LC Data Manager Input Only User.



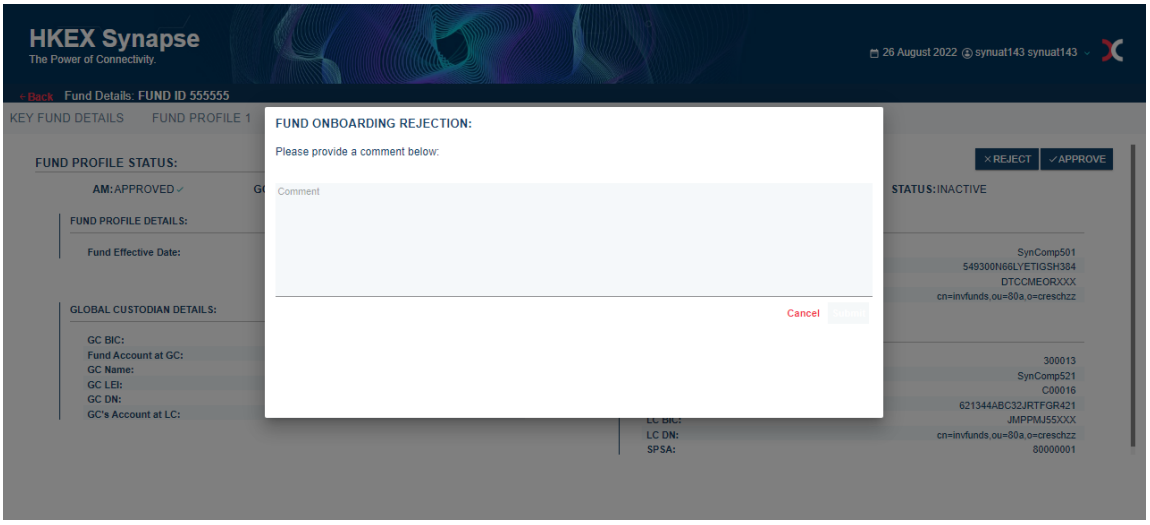
Rejection by LC Data Manager Input Authorise User:

1. If the LC Data Manager Input Authorise User disagrees with the LC Data Manager Input Only User's approval/input, the LC Data Manager Input Authorise User must reject back to the LC Data Manager Input Only User.

2. On the Fund Details view, the LC Data Manager Input Authorise User clicks "Reject" and sees the "Reject back to Maker" button. The "Reject back to GC" button is greyed out.

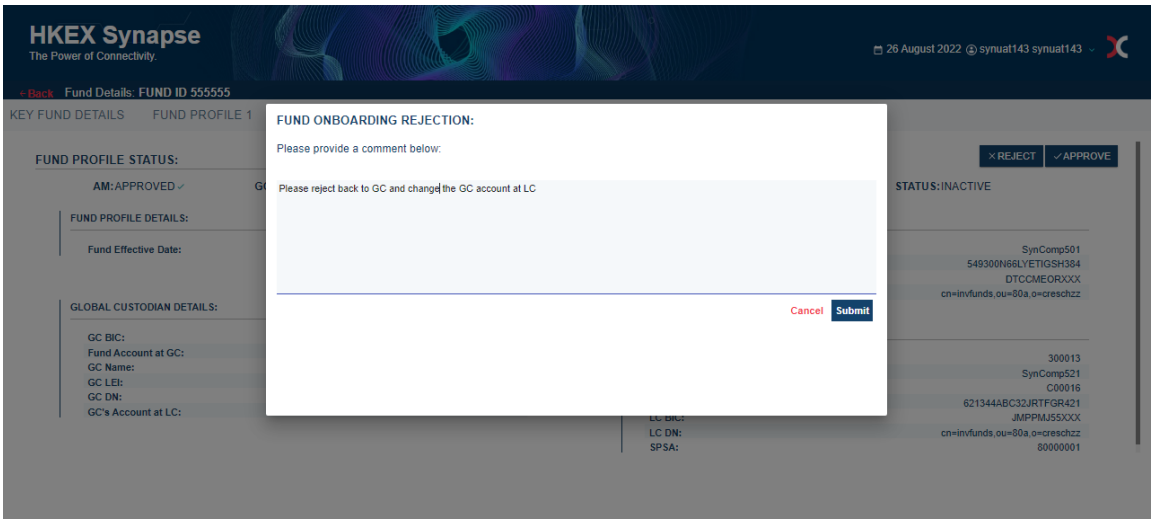
Classification – Internal

3. The LC Data Manager Input Authorise User must provide reason(s) for rejection in the form of freeform text.



4. Then the LC Data Manager Input Authorise User must provide the rejection reason(s) by clicking “Submit”.

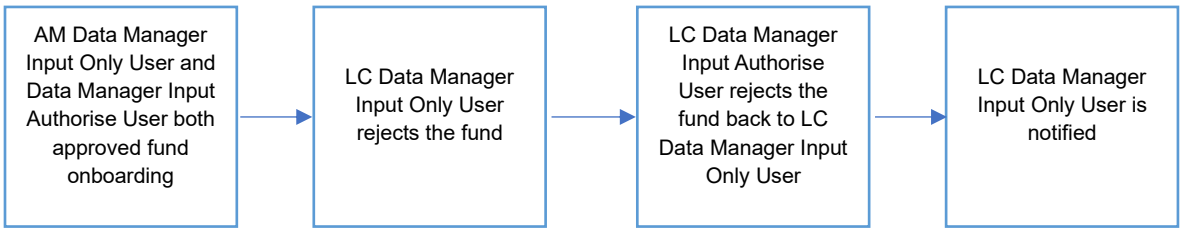
Classification – Internal



5. The LC Data Manager Input Only User is informed of this rejection in two ways:
   a. Dashboard view: increased counter in the Fund Profiles section under “Awaiting LC Maker Approval”
   b. Funds List view: increased counter under “Awaiting LC Maker Approval”, changed icon from ‘O’ to ‘—’ in the LC column, and changed status to “LC Checker Rejected”

Rejection by LC Data Manager Input Only User; Rejection by LC Data Manager Input Authorise User Back to LC Data Manager Input Only User:

For a fund to be onboarded successfully, both the GC and LC need to approve the fund onboarding. If the LC Data Manager Input Only User rejects the fund and the LC Data Manager Input Authorise User disagrees with the LC Data Manager Input Only User’s rejection, the LC Data Manager Input Authorise User must reject back to the LC Data Manager Input Only User.



Rejection by LC Data Manager Input Authorise User Back to LC Data Manager Input Only User:

1. The LC Data Manager Input Authorise User can navigate to the Fund Details view by clicking “Details” on the Funds List view.

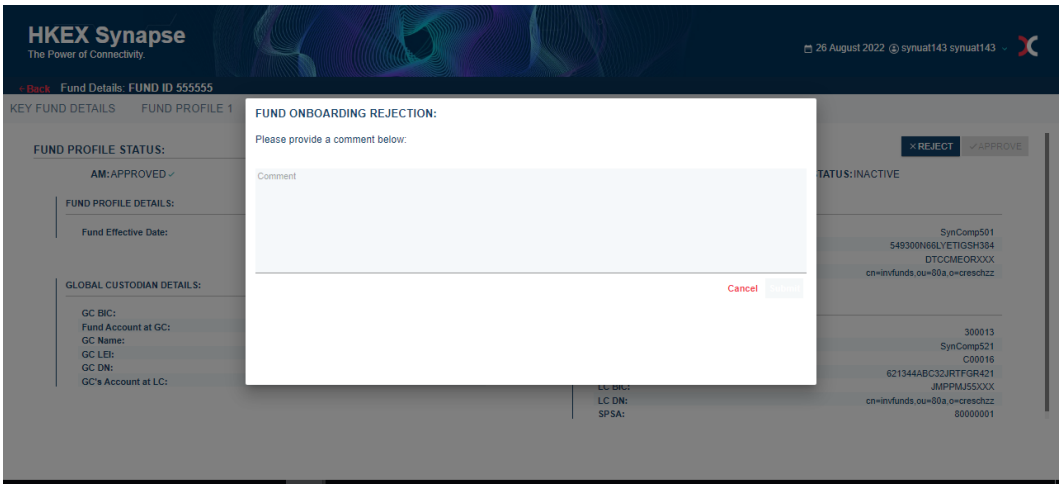
Classification – Internal

2. If the LC Data Manager Input Authorise User disagrees with the LC Data Manager Input Only User's rejection, the LC Data Manager Input Authorise User must reject back to the LC Data Manager Input Only User.

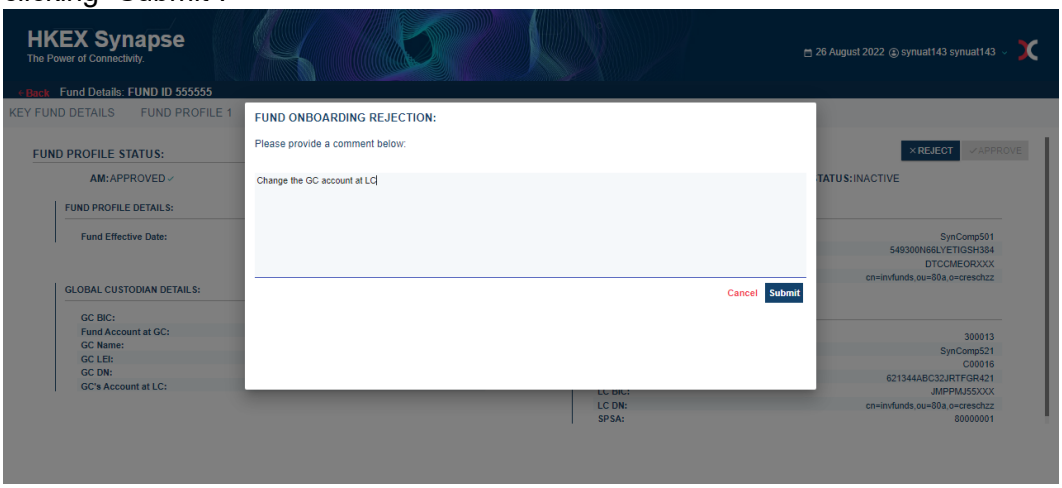
3. On the Fund Details view, the LC Data Manager Input Authorise User clicks "Reject" and sees the "Reject back to Maker" and "Reject back to GC" buttons. The "Approve" button is greyed out.

4. The LC Data Manager Input Authorise User must provide reason(s) for rejection in the form of freeform text.

Classification – Internal



5. Then the LC Data Manager Input Authorise User must submit the rejection reason(s) by clicking “Submit”.



6. The LC Data Manager Input Only User will be informed in two ways:
   a. Dashboard view: increased counter in the Fund Profiles section under “Awaiting LC Maker Approval”
   b. Funds List view: increased counter under “Awaiting LC Maker Approval”, changed icon from ‘O’ to ‘—’ in the LC column, and changed status to “LC Checker Rejected”

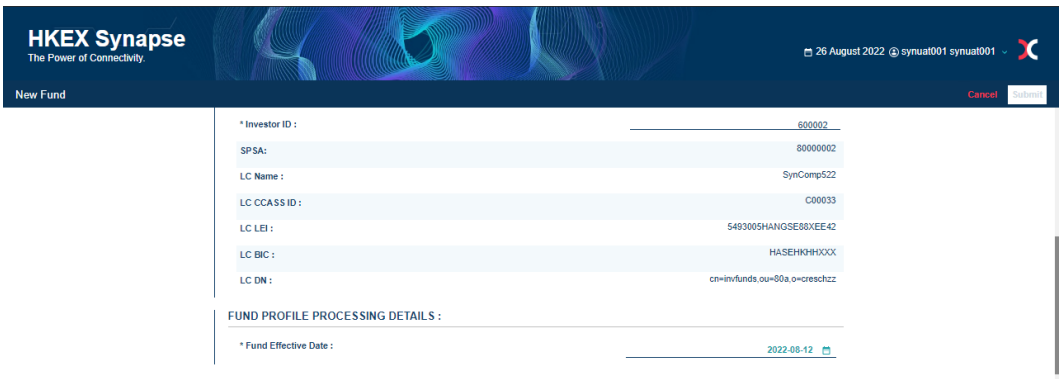
5.2 Fund Profile Creation

A pre-requisite for fund profile creation is that the fund has been successfully onboarded, i.e., approved by the AM, GC, and LC. Each fund must have at least one fund profile associated with it. The AM has the choice to whether onboarding further fund profile to the first fund onboarded or onboard another fund.

Fund Profile Creation follows the same flow for AMs / GCs / LCs as Fund Onboarding, where information can be found in Fund Onboarding section earlier.

Classification – Internal

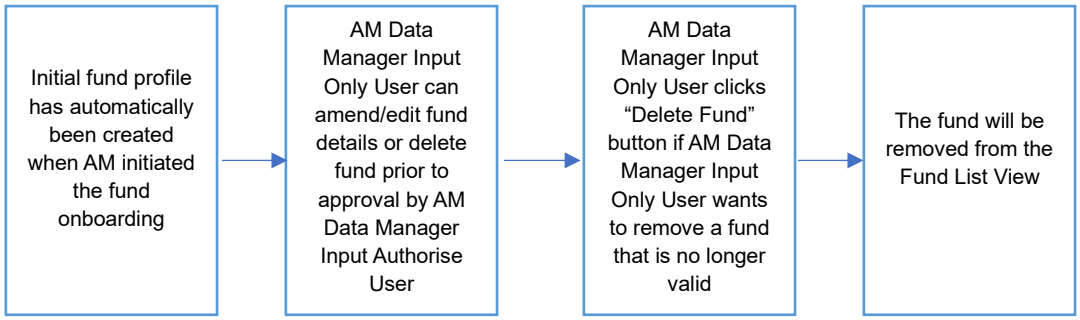
The AM Data Manager Input Only User can navigate to the Funds List view and click on the particular fund to which they want to add a fund profile by clicking the “+ Add Fund Profile” button. After AM Data Manager Input Only User clicks the “+ Add Fund Profile” button, the AM Data Manager Input Only User will be brought to a fund profile information page on which to provide details. Fund profile information is displayed on one screen. The fund effective date inputted by the AM Data Manager Input Only User must be >=T+1.



Classification – Internal

5.3 Delete Fund Creation

If the AM Data Manager Input Only User wants to remove a fund (including the fund details and the fund profile associated) that is no longer valid, they can delete the fund and its initial fund profile prior to the AM Data Manager Input Authorise User's approval.



5.3.1 Asset Managers (AM)

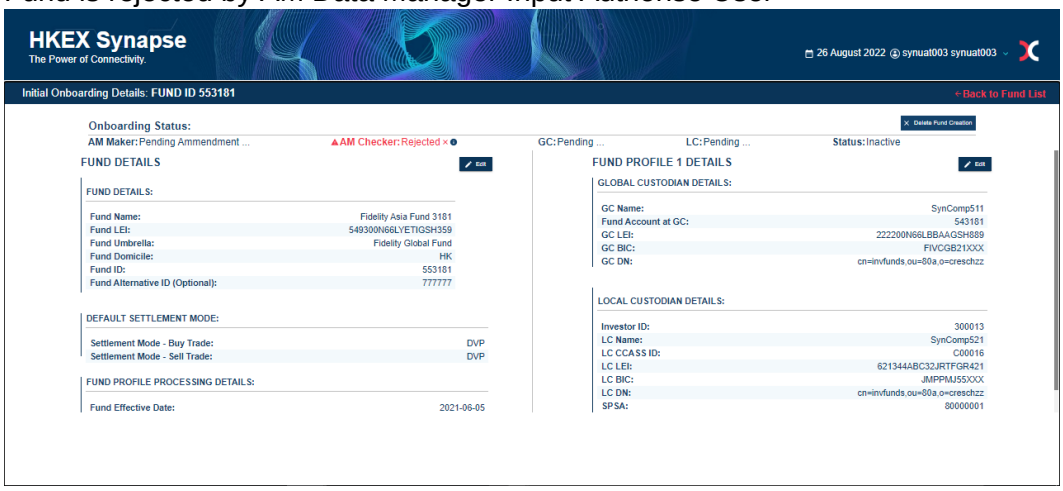
AM Data Manager Input Only User:

1. Once the fund has been created, one initial fund profile will automatically be created along with it.

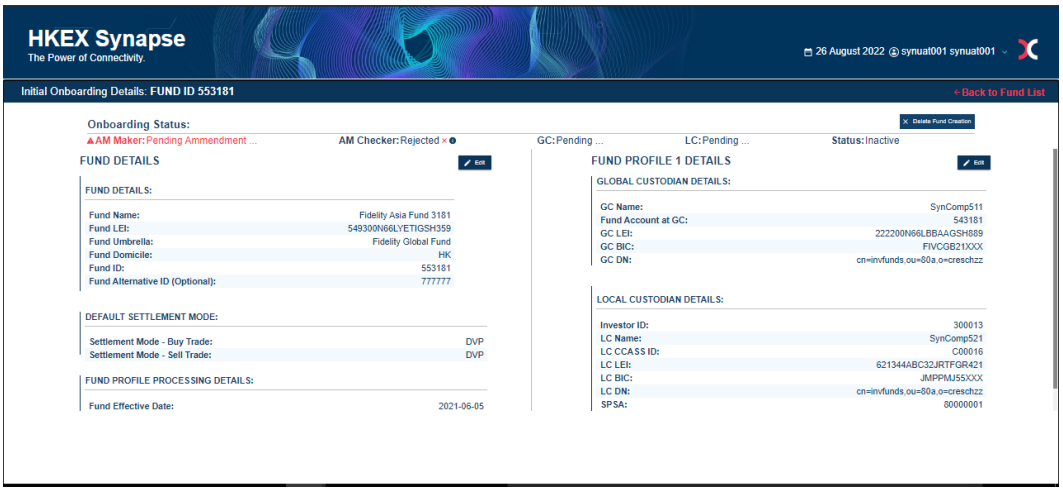
2. If the fund created by the AM Data Manager Input Only User is pending approval by AM Data Manager Input Authorise User or was rejected by the AM Data Manager Input Authorise User then the AM Data Manager Input Only User can either amend/edit the fund details (for rejection scenario) or delete the fund prior to creation.
    a. Fund is still pending approval by AM Data Manager Input Authorise User

Classification – Internal

b. Fund is rejected by AM Data Manager Input Authorise User

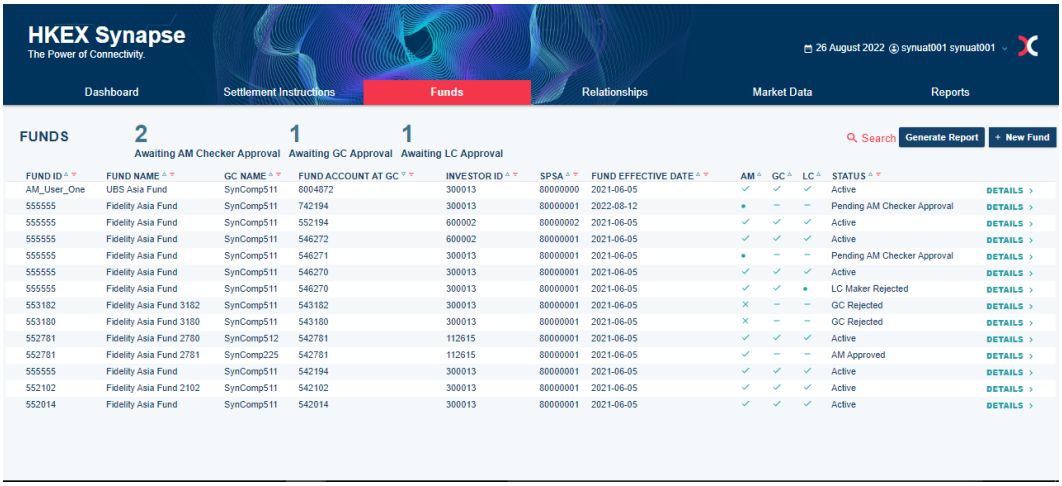


3. If the AM Data Manager Input Only User chooses to delete the fund creation, then they click “Delete Fund Creation” on the details view.



4. Once that button is clicked, then the fund and the initial fund profile will be deleted. When the AM Data Manager Input Only User goes back to the Funds List view, then the fund will no longer be listed.

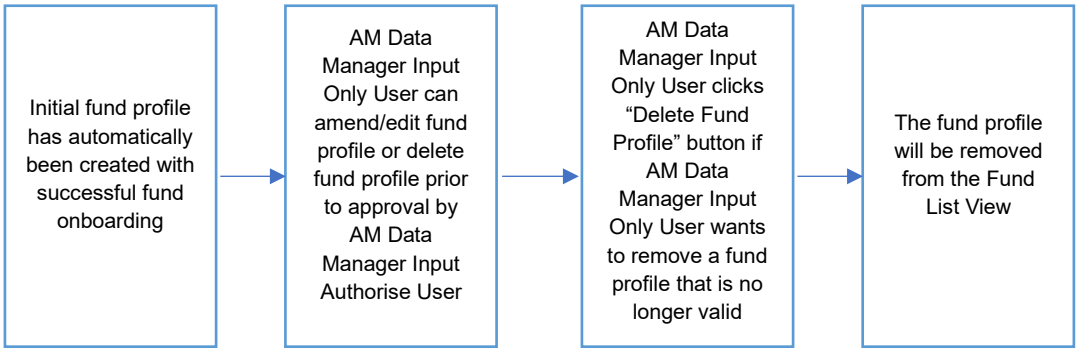
Classification – Internal



Classification – Internal

5.4 Delete Fund Profile Prior to AM Data Manager Input Authorise User's Approval

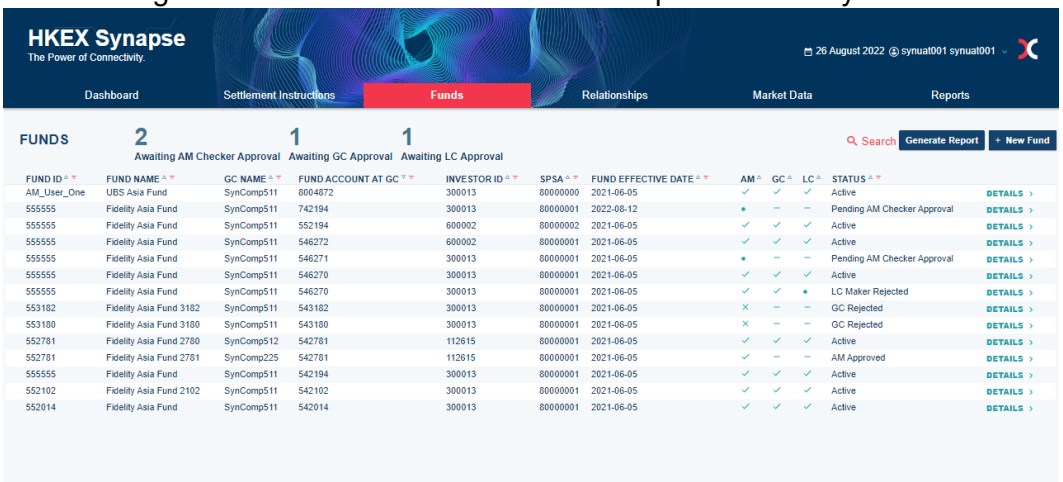
When a fund is successfully onboarded, i.e., approved by all buy side participants, then one initial fund profile is automatically created. If the AM Data Manager Input Only User creates a fund profile that is no longer valid, they can delete the fund profile prior to the AM Data Manager Input Authorise User's approval or after the fund profile was rejected by the AM Data Manager Input Authorise User. To delete one fund profile, the fund must be active and have two fund profiles. A fund is considered active when it has at least one fund profile associated with it.



5.4.1 Asset Managers (AM)

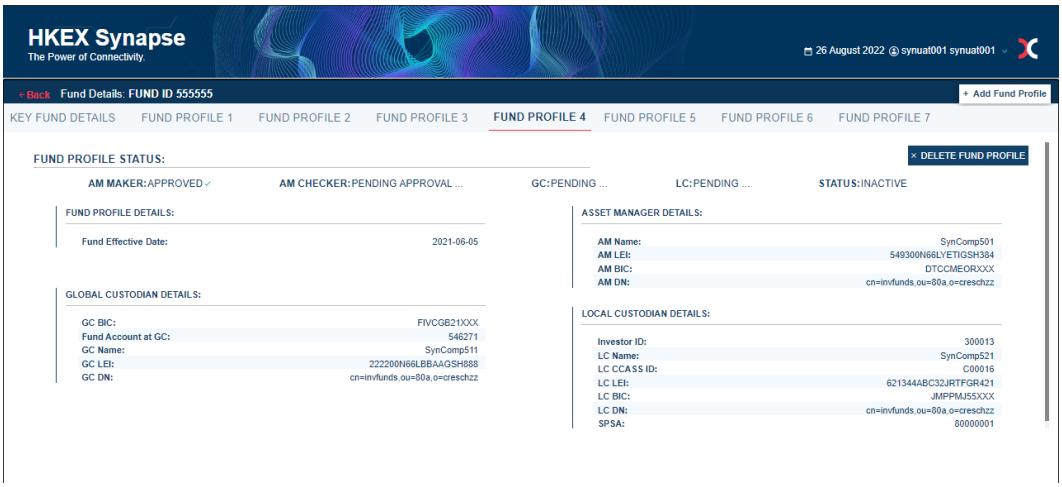
AM Data Manager Input Only User:

1. When the AM Data Manager Input Only User is on the Funds List view, they can click "Details" to go to the Fund Profile view of the fund profile that they would like to delete.



Classification – Internal

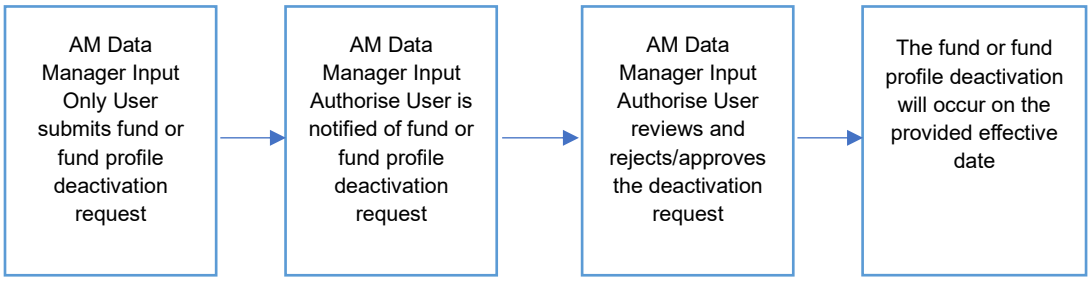
2. The AM Data Manager Input Only User can click “Delete Fund Profile” on the Fund Profile view.



3. The AM Data Manager Input Only User can delete a fund profile either prior to AM Data Manager Input Only Authorise User’s approval or after AM Data Manager Input Only Authorise User’s rejection.

5.5 Deactivation of an Active Fund or Fund Profile

A fund and its fund profile are considered active after the AM, GC, and LC have all approved the fund onboarding. The AM Data Manager Input Only User can choose to deactivate an active fund or fund profile. Please note the fund can only be deactivated after 31 days if it is created by LC re-appointment.



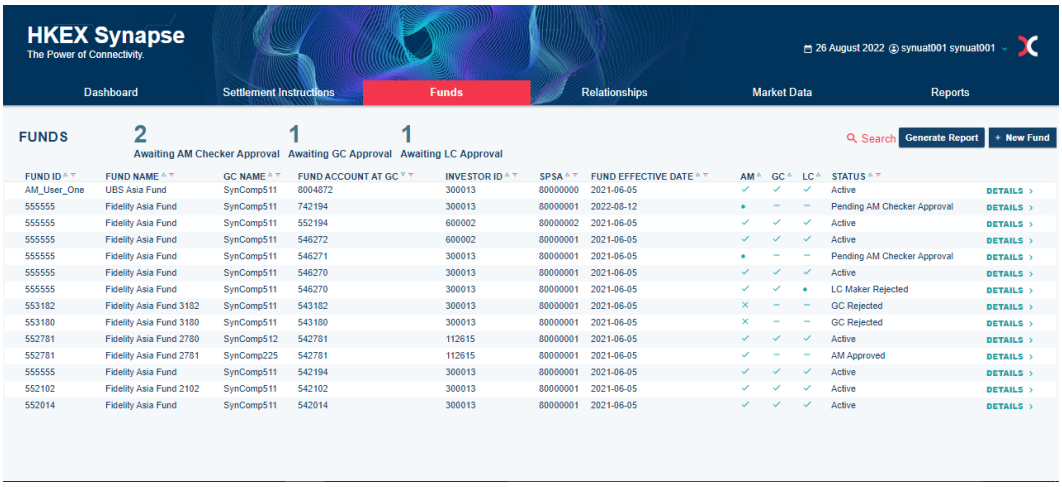
5.5.1 Asset Managers (AM)

AM Data Manager Input Only User:

1. The AM Data Manager Input Only User logs in to Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

Classification – Internal

2. The AM Data Manager Input Only User can navigate to the Funds List view by clicking the “Funds” tab.



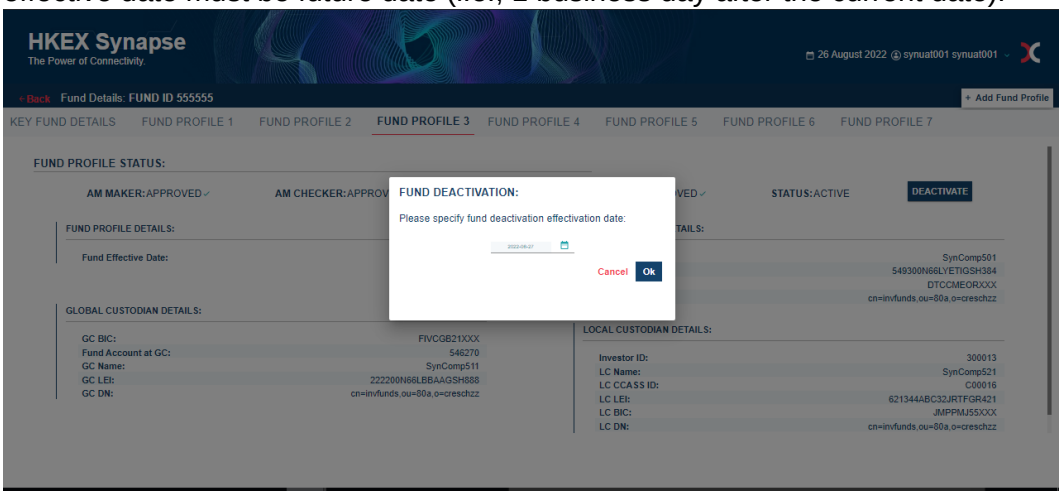
FUND ID	FUND NAME	GC NAME	FUND ACCOUNT AT GC	INVESTOR ID	SPSA	FUND EFFECTIVE DATE	AM	GC	LC	STATUS	
AM_User_One	UBS Asia Fund	SynComp511	8004872	300013	80000000	2021-06-05	✓	✓	✓	Active	DETAILS
555555	Fidelity Asia Fund	SynComp511	742194	300013	80000001	2022-08-12	•	–	–	Pending AM Checker Approval	DETAILS
555555	Fidelity Asia Fund	SynComp511	552194	600002	80000002	2021-06-05	✓	✓	✓	Active	DETAILS
555555	Fidelity Asia Fund	SynComp511	546272	600002	80000001	2021-06-05	✓	✓	✓	Active	DETAILS
555555	Fidelity Asia Fund	SynComp511	546271	300013	80000001	2021-06-05	•	–	–	Pending AM Checker Approval	DETAILS
555555	Fidelity Asia Fund	SynComp511	546270	300013	80000001	2021-06-05	✓	✓	✓	Active	DETAILS
555555	Fidelity Asia Fund	SynComp511	546270	300013	80000001	2021-06-05	✓	✓	•	LC Maker Rejected	DETAILS
553182	Fidelity Asia Fund 3182	SynComp511	543182	300013	80000001	2021-06-05	×	–	–	GC Rejected	DETAILS
553180	Fidelity Asia Fund 3180	SynComp511	543180	300013	80000001	2021-06-05	×	–	–	GC Rejected	DETAILS
552781	Fidelity Asia Fund 2780	SynComp512	542781	112615	80000001	2021-06-05	✓	✓	✓	Active	DETAILS
552781	Fidelity Asia Fund 2781	SynComp225	542781	112615	80000001	2021-06-05	✓	–	–	AM Approved	DETAILS
555555	Fidelity Asia Fund	SynComp511	542194	300013	80000001	2021-06-05	✓	✓	✓	Active	DETAILS
552102	Fidelity Asia Fund 2102	SynComp511	542102	300013	80000001	2021-06-05	✓	✓	✓	Active	DETAILS
552014	Fidelity Asia Fund	SynComp511	542014	300013	80000001	2021-06-05	✓	✓	✓	Active	DETAILS

3. The AM Data Manager Input Only User can select an active fund and navigate to the Fund Details view by clicking “Details” on the Funds List view.

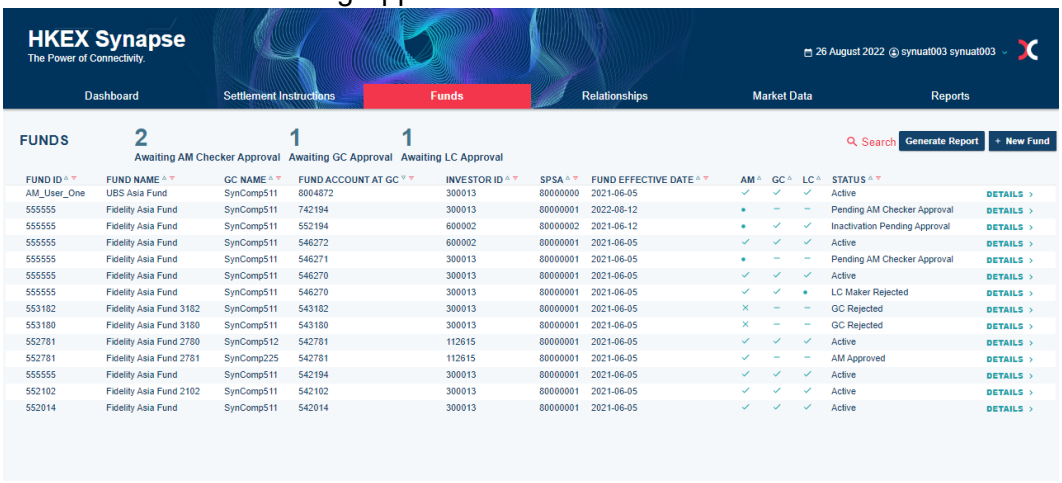
4. On the Fund Details view, the AM Data Manager Input Only User can click “Deactivate”.

Classification – Internal

5. A pop-up window requesting the fund deactivation effective date will appear. The effective date must be future date (i.e., 1 business day after the current date).



6. The AM Data Manager Input Only User adds the fund deactivation effective date submits the fund status deactivation request by clicking “Deactivate”. The AM Data Manager Input Authorise User will be informed in one way:
    a. Funds List view: the AM column will have a ‘O’ icon and the status column will show “Inactivation Pending Approval”



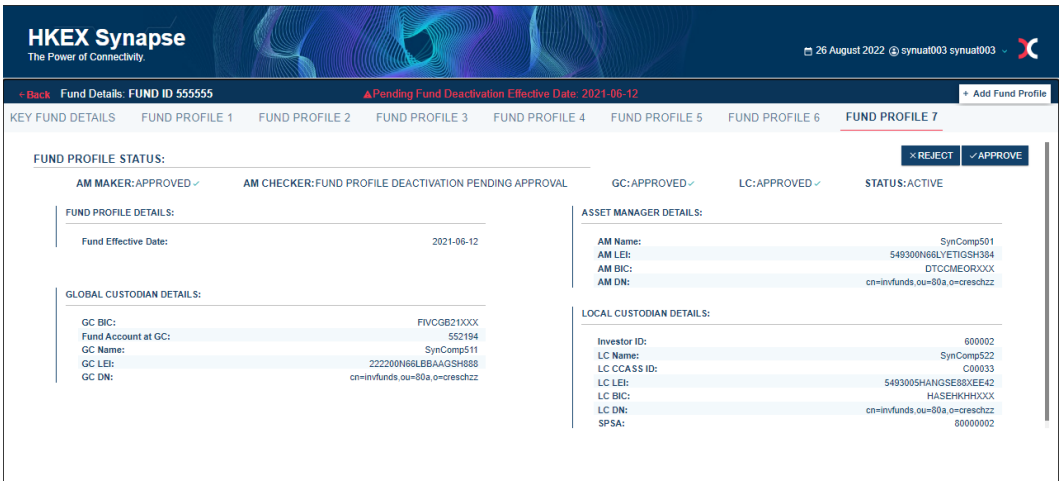
AM Data Manager Input Authorise User:

1. The AM Data Manager Input Authorise User will be informed the fund or fund profile deactivation in one way:
    a. Funds List view: the AM column will have a ‘O’ icon and the status column will show “Inactivation Pending Approval”

2. The AM Data Manager Input Authorise User can either reject or approve the deactivation request.
    a. If the AM Data Manager Input Authorise User rejects the deactivation request by clicking “Reject”, then the process ends there. The icon will change from a ‘O’ to

Classification – Internal

'✓'



b. If the AM Data Manager Input Authorise User approves the deactivation request by clicking "Approve", then the fund or fund profile will become deactivated on the effective date provided by the AM Data Manager Input Only User

3. The AM Data Manager Input Only User will be notified the fund or fund profile deactivation in one way:
    a. Funds List view: changed status to "Inactivation Approved"
        1. Note: on the effective date, the status will change to "Inactive" on the Funds List view

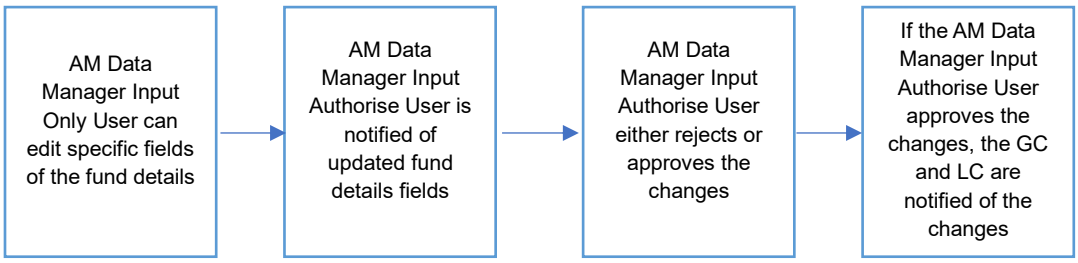
Notification for Global Custodian (GC) and Local Custodian (LC):

1. The GC Data Manager Input Only User, GC Data Manager Input Authorise User, and LC Data Manager Input Only User, LC Data Manager Input Authorise User will be informed of the fund profile deactivation and its effective date in two ways:
    a. Funds List view: changed status to "Inactivation Approved"
        Note: on the effective date, the status will change to "Inactive" on the Funds List view
    b. UI Notification on Dashboard page under Funds

Classification – Internal

5.6 Edit Fund Details of an Active Fund

A fund and its fund profile are considered active after the AM, GC, and LC have all approved the fund onboarding. The AM Data Manager Input Only User can edit specific fund details and submit the edited fund details to the AM Data Manager Input Authorise User for approval.



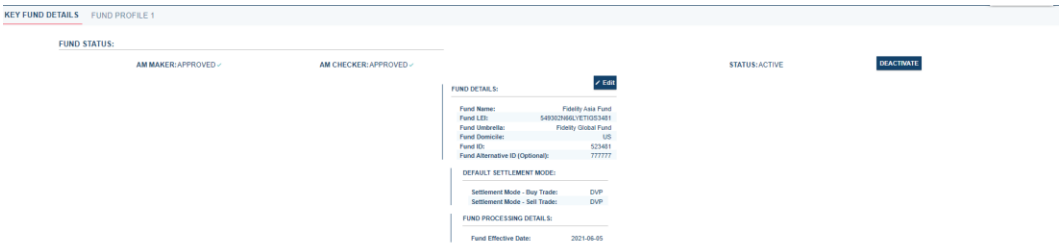
5.6.1 Asset Managers (AM)

AM Data Manager Input Only User:

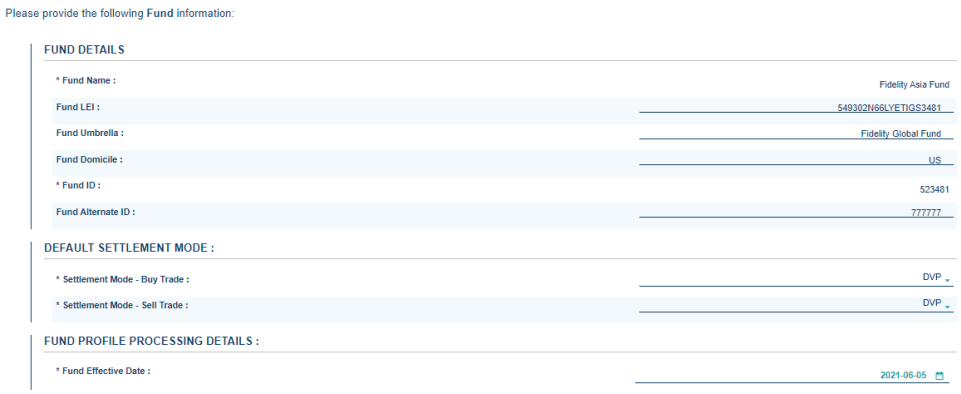
1. The AM Data Manager Input Only User logs in to Synapse via HKEX Access Management Portal and navigates to the Dashboard screen. The AM Data Manager Input Only User can navigate to the Funds List view by clicking the “Funds” tab.

2. The AM Data Manager Input Only User can select an active fund and navigate to the Fund Details view by clicking “Details” on the Funds List view.

Classification – Internal



3. The AM Data Manager Input Only User can click “Edit” to edit specific fields of the fund details and submit for approval to the AM Data Manager Input Authorise User.



Field Name	Description	Type	Size	Mandatory or Optional (M/O)	Syntax Validation
Fund LEI	Legal Entity Identifier for the Fund	String	20	O	N/A
Fund Umbrella	Name of the fund umbrella. An AM can label a Fund for a Fund Umbrella Structure	String	50	O	Max 50 characters
Fund Domicile	Domicile of the fund defined by two-letter country in ISO 3166-1-alpha-2 code	String	2	O	2 characters
Fund Alternative ID	Field can be used by AM to link fund to a different ID, e.g., for integration into other systems	String	20	O	N/A
Settlement Mode – Buy Trade	Default Settlement Mode for buy trade (DVP, RDP or FOP)	String	3	M	#N/A
Settlement Mode – Sell Trade	Default Settlement Mode for sell trade (DVP, RDP or FOP)	String	3	M	3 characters

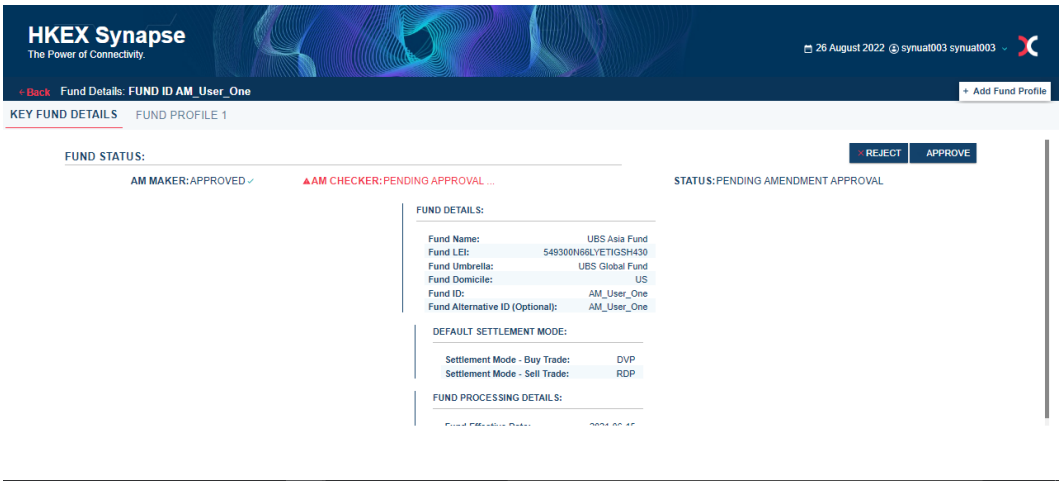
Classification – Internal

Field Name	Description	Type	Size	Mandatory or Optional (M/O)	Syntax Validation
Fund Effective Date	The date from which the fund is active on the system	Date	20	M	YYYY-MM-DD

4. The AM Data Manager Input Authorise User will then be notified for their approval in one way:
    a. Funds Details view: changed status to “Pending Amendment Approval”

AM Data Manager Input Authorise User:

AM Data Manager Input Authorise User can either approve or reject the edition submitted by AM Data Manager Input Only User. If AM Data Manager Input Authorise User rejects, then the process ends there. If AM Data Manager Input Authorise User approves, then the fund details or fund profile is updated.



5.7 Funds List View for Buy Side Participants

The Funds List view provides an overview of the buy side participants’ funds and specific details.

5.7.1 Asset Managers (AM)

Field Name	Description
Fund ID	Field can be used by AM to link fund to a different ID, e.g., for integration into other systems
Fund Name	The Legal Entity name of the Fund
GC Name	Name of Global Custodian
Fund Account at GC	Fund account at GC per successful fund onboarding
Investor ID	Investor ID for the Fund. Is a unique number assigned to each SPSA account by CCASS
SPSA	Special Segregated Account

Classification – Internal

Field Name	Description
Fund Effective Date	The date from which the fund is active on the system
AM Status	Status of AM approvals
GC Status	Status of GC approvals
LC Status	Status of LC approvals
Status	Overall status of fund

Classification – Internal

5.7.2 Asset Manager Outsourcing Operator (AMOO)

Field Name	Description
AM Name	Name of Asset Manager
Fund ID	Field can be used by AM to link fund to a different ID, e.g., for integration into other systems
Fund Name	The Legal Entity name of the Fund
GC Name	Name of Global Custodian
Fund Account at GC	Fund account at GC per successful fund onboarding
Investor ID	Investor ID for the Fund. Is a unique number assigned to each SPSA account by CCASS
SPSA	Special Segregated Account
Fund Effective Date	The date from which the fund is active on the system
AM Status	Status of AM approvals
GC Status	Status of GC approvals
LC Status	Status of LC approvals
Status	Overall status of fund

5.7.3 Global Custodians (GC)

Field Name	Description
Fund ID	Field can be used by AM to link fund to a different ID, e.g., for integration into other systems
Fund Name	The Legal Entity name of the Fund
Fund Account at GC	Fund account at GC per successful fund onboarding
AM Name	Name of Asset Manager
GC's Account at LC	Account No. for Global Custodian at Local Custodian
LC Name	Name of Local Custodian
Investor ID	Investor ID for the Fund. Is a unique number assigned to each SPSA account by CCASS
SPSA	Special Segregated Account
Fund Effective Date	The date from which the fund is active on the system
AM Status	Status of AM approvals
GC Status	Status of GC approvals
LC Status	Status of LC approvals
Status	Overall status of fund

5.7.4 Local Custodians (LC)

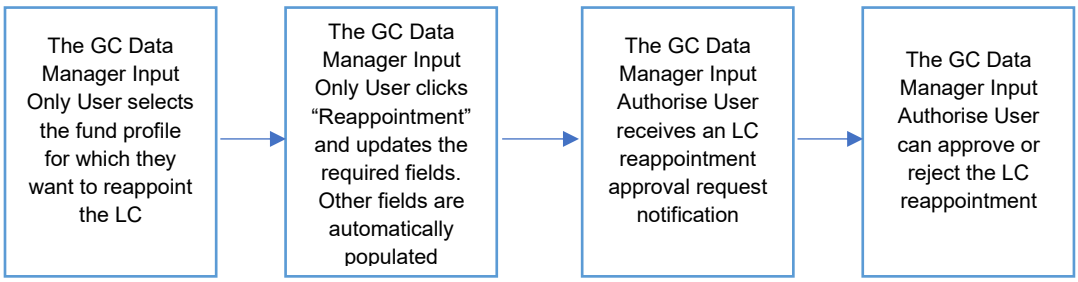
Field Name	Description
Fund ID	Field can be used by AM to link fund to a different ID, e.g., for integration into other systems
GC Name	Name of Global Custodian

Classification – Internal

Field Name	Description
GC's Account at LC	Account No. for Global Custodian at Local Custodian
Investor ID	Investor ID for the Fund. Is a unique number assigned to each SPSA account by CCASS
SPSA	Special Segregated Account
Fund Effective Date	The date from which the fund is active on the system
AM Status	Status of AM approvals
GC Status	Status of GC approvals
LC Status	Status of LC approvals
Status	Overall status of fund

5.8 LC Re-Appointment

The GC Data Manager Input Only User is the only participant who can initiate an LC re-appointment for a specific fund profile. Pre-requisites include that the fund has to be active and onboarded on Synapse, i.e., the fund has to be approved by the AM, GC, and LC. The purpose of LC re-appointment is for GC to appoint another LC. If the GC need to have a new fund profile with same LC but different Investor ID, the buy-side chain should use "Add New Fund Profile" function which should be initiated by AM.



5.8.1 Global Custodians (GC)

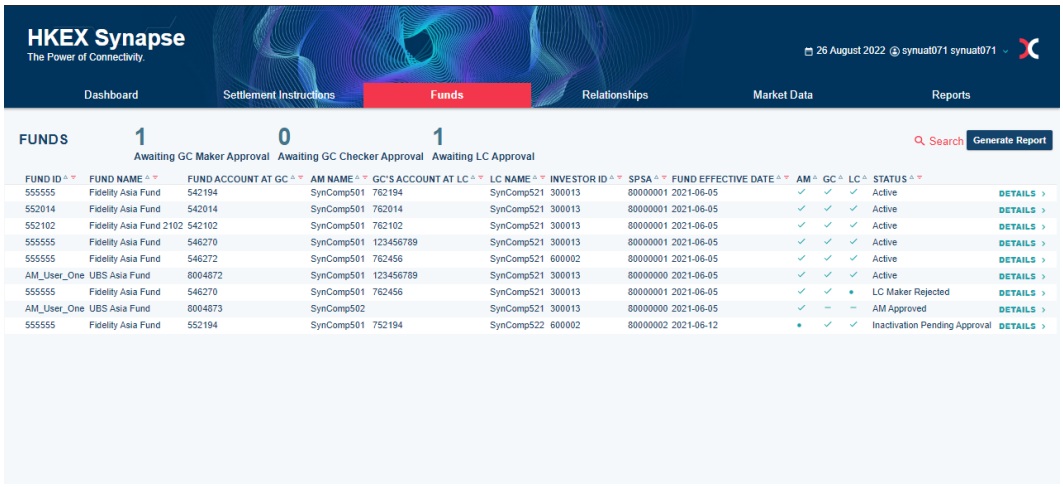
Approval by GC Data Manager Input Only User;
Approval by GC Data Manager Input Authorise User:

GC Data Manager Input Only User:

1. The GC Data Manager Input Only User logs in to Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

Classification – Internal

2. The GC Data Manager Input Only User can navigate to the Funds List view by clicking the “Funds” tab.



3. The GC Data Manager Input Only User can select an active fund for which they want to reappoint the LC and navigate to the Fund Details view by clicking “Details” on the Funds List view.
4. The GC Data Manager Input Only User will then click “Fund Profiles” to go to the Fund Profiles page. In the LC Details section, they will see a “Reappoint” button.

5. The GC Data Manager Input Only User is required to update 3 fields for the new LC that the GC Data Manager Input Only User would like to reappointment:
   a. “Investor ID”
   b. “GC’s Account at LC”
   c. “Reappointment Effective Date”
   d. Note:
      (1) Other fields like “LC Name”, “SPSA”, “LC CCASS ID”, “LC LEI”, “LC BIC”, and “LC DN” are automatically populated by Synapse.
      (2) GC can only reappoint to a new LC with different Investor ID with the reappointment function. If a new profile with the same LC but different investor ID is required, the

Classification – Internal

function “Add New Fund Profile” initiated by AM should be performed.

6. After updating the details, the GC Data Manager Input Only User can then click “Submit”.

GC Data Manager Input Authorise User:

1. The GC Data Manager Input Authorise User will be informed that they have to approve the LC reappointment in one way:
   a. Funds Details View

Classification – Internal

2. The GC Data Manager Input Authorise User navigates from the Dashboard to the Funds tab, i.e., the Funds List view, and then the Fund Details view to approve.

3. If the GC Data Manager Input Authorise User clicks “Accept LC Reappointment”, then the LC Data Manager Input Only User at the newly appointed LC is informed of the reappointment in two ways:
   a. Dashboard view: increased counter in Fund Profiles section under “Awaiting LC Maker Approval”
   b. Funds List view: increased counter under “Awaiting LC Maker Approval”, changed icon from ‘—’ to ‘✓’ in the AM column, changed icon from ‘—’ to ‘✓’ in the GC column, and changed status to “GC Approved”

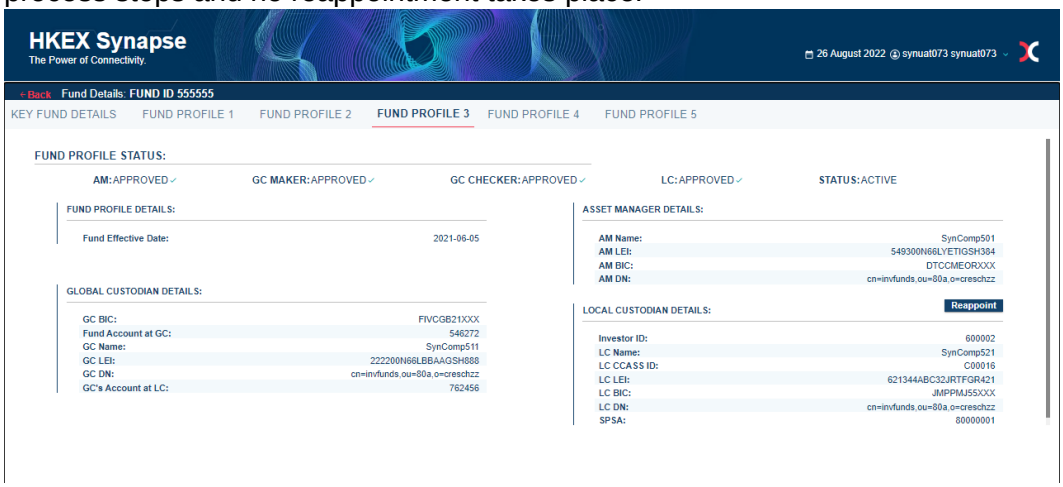
Approval by GC Data Manager Input Only User; Rejection by GC Data Manager Input Authorise User:

Rejection by GC Data Manager Input Authorise User:

1. The GC Data Manager Input Authorise User navigates from the Dashboard to the Funds tab, i.e., the Funds List view, and then the Fund Details view to reject by clicking “Reject LC Reappointment”.

Classification – Internal

2. If the GC Data Manager Input Authorise User rejects the proposed LC reappointment, the process stops and no reappointment takes place.



5.8.2 Local Custodians (LC)

LC Data Manager Input Only User and LC Data Manager Input Authorise User can refer to the fund onboarding sections to approve / reject the proposed LC Reappointment.

Classification – Internal

6. Accounts

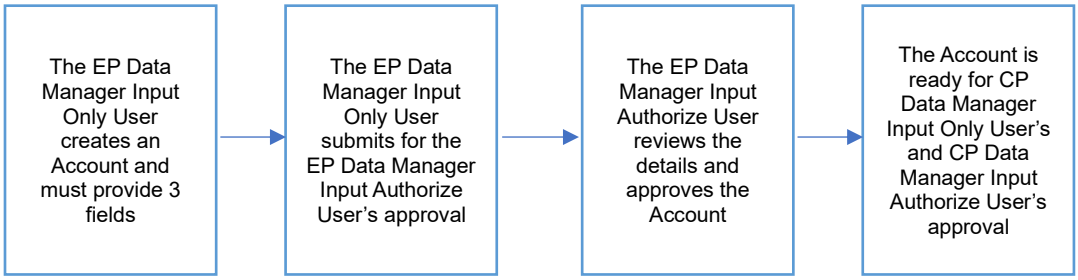
6.1 Account Onboarding

To create a new account, EPs can start the self-service account creation process to onboard an account by creating Account Details so Synapse can use it for creating the SIs or STIs in CCASS.

An Account will be successfully onboarded when the EP and CP have approved the account submission.

6.1.1 Exchange Participant (EP)

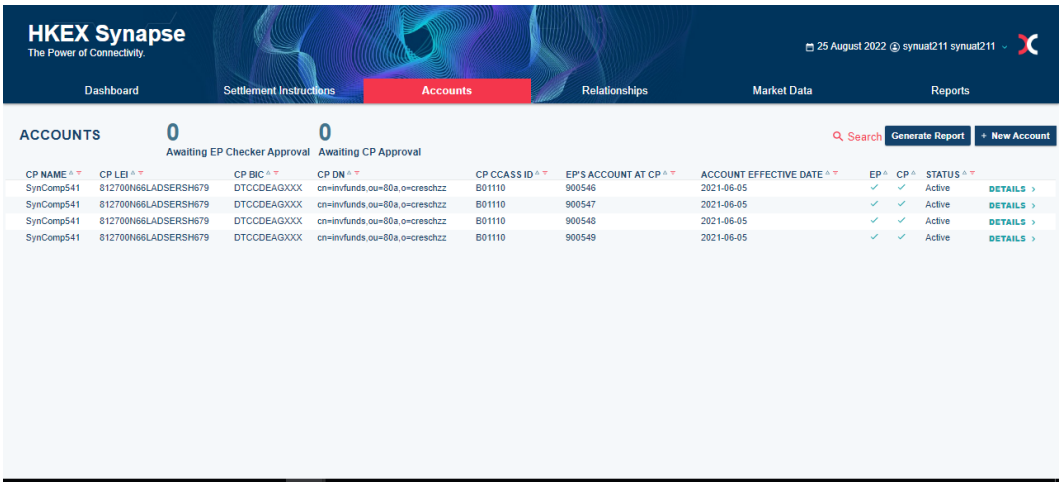
Approval by EP Data Manager Input Only User;
Approval by EP Data Manager Input Authorise User:



Approval by EP Data Manager Input Only User:

1. The EP Data Manager Input Only User logs into Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

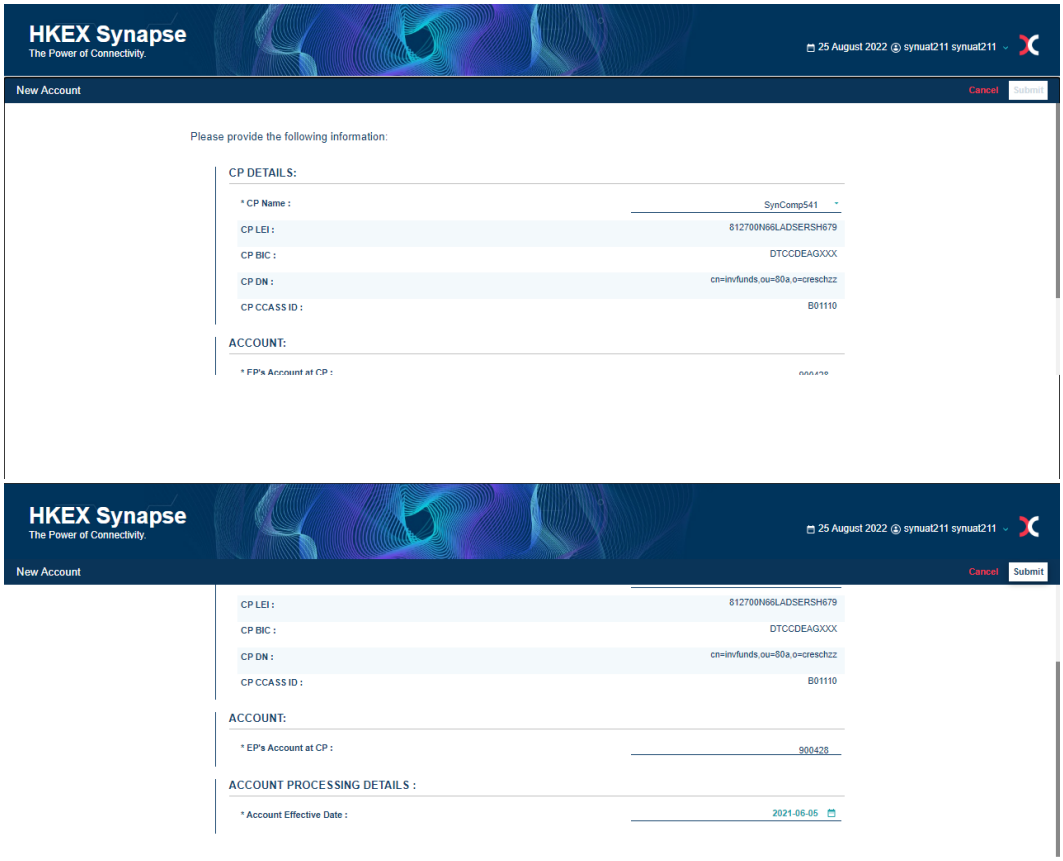
2. On the Accounts tab, the EP Data Manager Input Only User can see the Accounts List view and can create an Account via the "+ New Account" button.



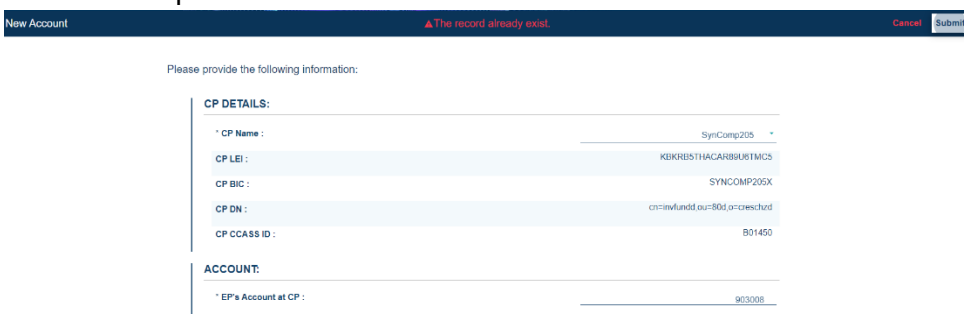
3. The EP Data Manager Input Only User will be asked to provide new account details.

Classification – Internal

a. The EP Data Manager Input Only User must provide 3 fields:
    i. CP Name
    ii. EP's Account at CP
    iii. Account Effective Date



Note: The Account to be created must not exist in Synapse onboarded Accounts in which semantic validation will be performed in specific fields that are marked as "Y" in the Contract Key column, otherwise the following error message will be shown when clicking "Submit". This is to ensure no duplicate Account can be created.



Classification – Internal

Field Name	Description	Type	Size	Mandatory or Optional (M/O)	Syntax Validation	Contract Key* (Y/N)
CP Name	The Legal Entity name of the CP	String	70	M	N/A	N
EP's Account at CP	Account No. for EP at CP	String	15	M	N/A	Y
Account Effective Date	The date from which the Sell side Account mapping is active on the system	Date	10	YYYY-MM-DD	N/A	N

*Note: Fields that are "Y" for the Contract Key column would be required for semantic validation. For Accounts, Synapse validates if the EP's Account at CP is not existing in Synapse created accounts, and the EP's Account at CP would not be editable after submission.

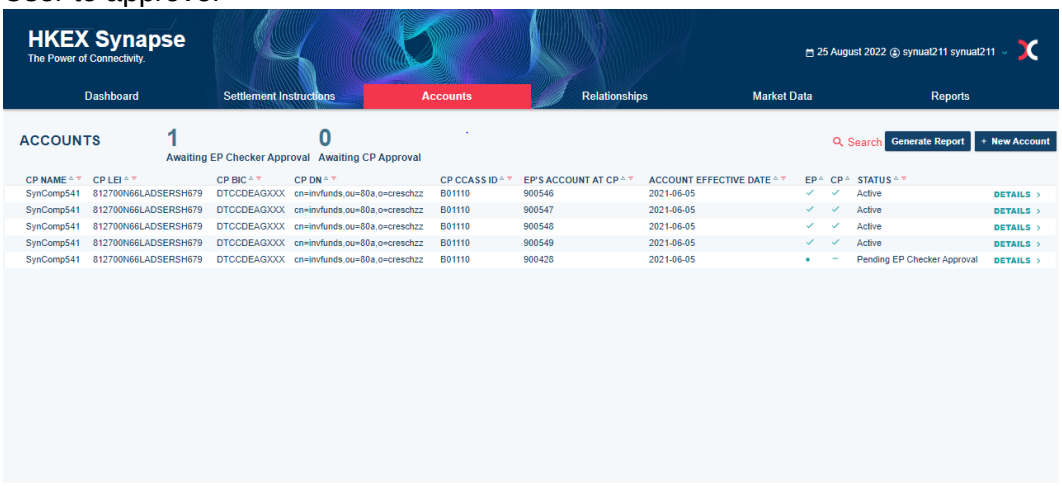
b. Once the EP Data Manager Input Only User has selected the Clearing Participant Name from a dropdown menu, 4 fields will be auto-populated by the Synapse application:
   i. CP LEI
   ii. CP BIC
   iii. CP DN
   iv. CP CCASS ID

Field Name	Description	Type	Size	Mandatory or Optional (M/O)	Syntax Validation
CP LEI	Legal Entity Identifier for the Clearing Participant	String	20	N/A	N/A
CP BIC	BIC Code of Clearing Participant	String	11	N/A	N/A
CP DN	DN Code of Clearing Participant	String	52	N/A	N/A
CP CCASS ID	CCASS Participant ID of Clearing Participant	String	6	N/A	N/A

4. The EP Data Manager Input Only User will click "Submit", then the EP Data Manager Input Only User clicks "Back to Accounts" and will be brought back to the Accounts List view. Under the EP column, the '〇' represents that the EP Data Manager Input Only User has submitted the input and that it is pending the EP Data Manager Input Authorise

Classification – Internal

User to approve.



5. The EP Data Manager Input Authorise User will be informed about the Account creation in two ways:
    a. Dashboard view: increased counter in the Accounts section under “Awaiting EP Checker Approval”
    b. Accounts List view: increased counter under “Awaiting EP Checker Approval”, changed icon from ‘—‘ to ‘O’ in the EP column, and changed status to “Pending EP Checker Approval”

Approval by EP Data Manager Input Authorise User:

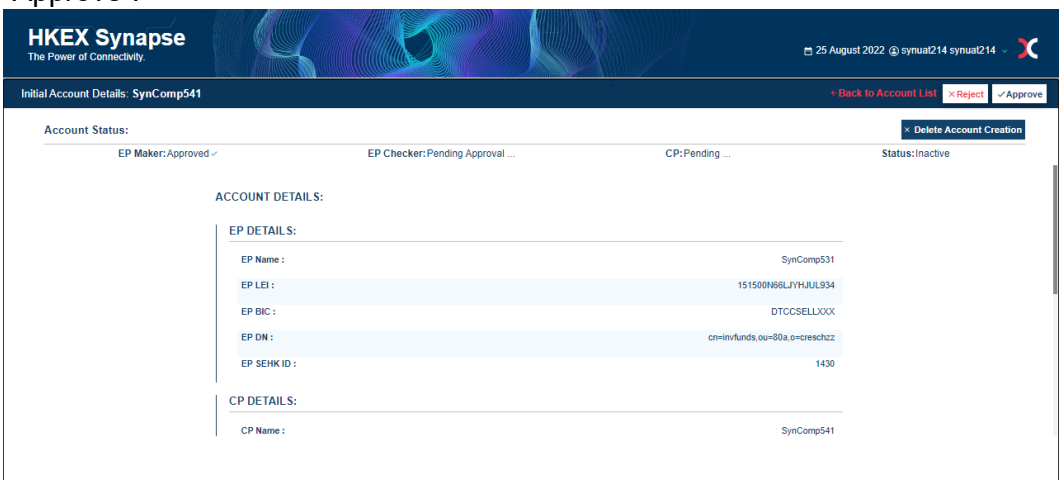
1. The EP Data Manager Input Authorise User logs into Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

2. Once the EP Data Manager Input Only User has submitted the Initial Account Creation details, the EP Data Manager Input Authorise User will be informed in two ways:
    a. Dashboard view: increased counter in the Accounts section under “Awaiting EP Checker Approval”
    b. Accounts List view: increased counter under “Awaiting EP Checker Approval”, a changed icon from ‘—‘ to ‘O’ in the EP column, and changed status to “Pending EP Checker Approval”

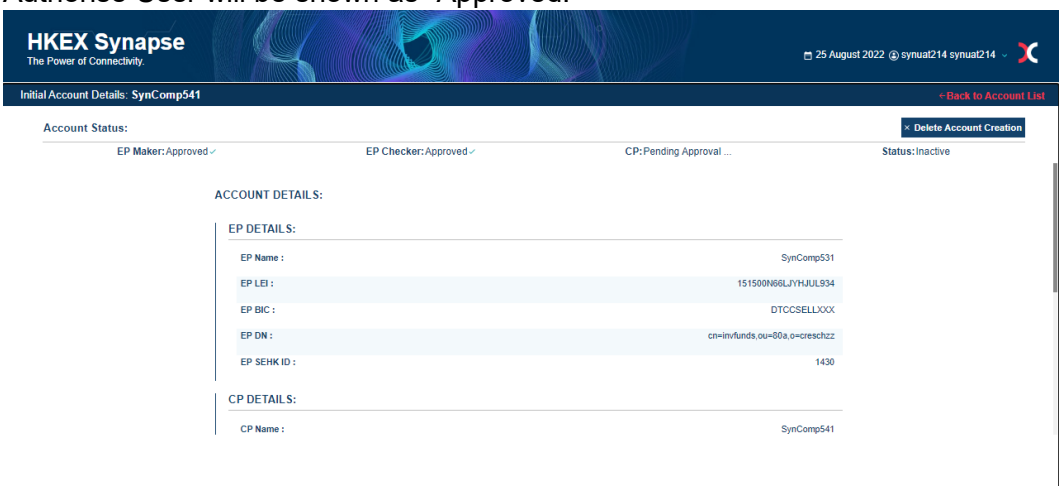
3. The EP Data Manager Input Authorise User can navigate to the Accounts Details view by clicking “Details” on the Accounts List view.

Classification – Internal

4. The EP Data Manager Input Authorise User can review the Account details and click “Approve”.



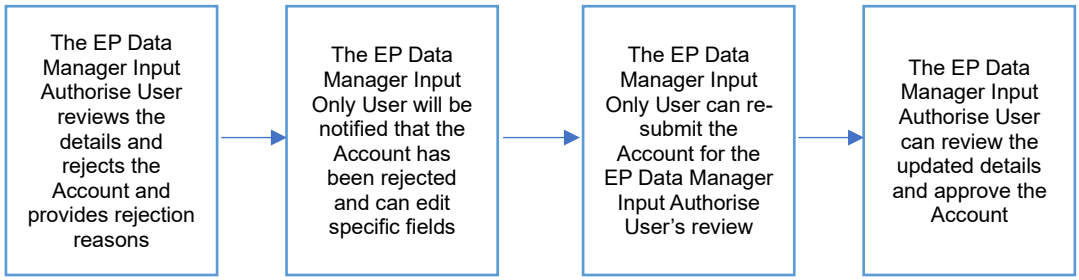
5. The Account is now created for CP processing, and the status of EP Data Manager Input Authorise User will be shown as “Approved.”



6. The CP Data Manager Input Only User will be informed that an account creation is ready for their review in two ways:
    a. Dashboard view: increased counter in the Accounts section under “Awaiting CP Maker Approval”
    b. Accounts List view: increased counter under “Awaiting CP Maker Approval”, Accounts List view changed icon from ‘O’ to ‘✓’ in the EP column, and changed status to “EP Approved”

Classification – Internal

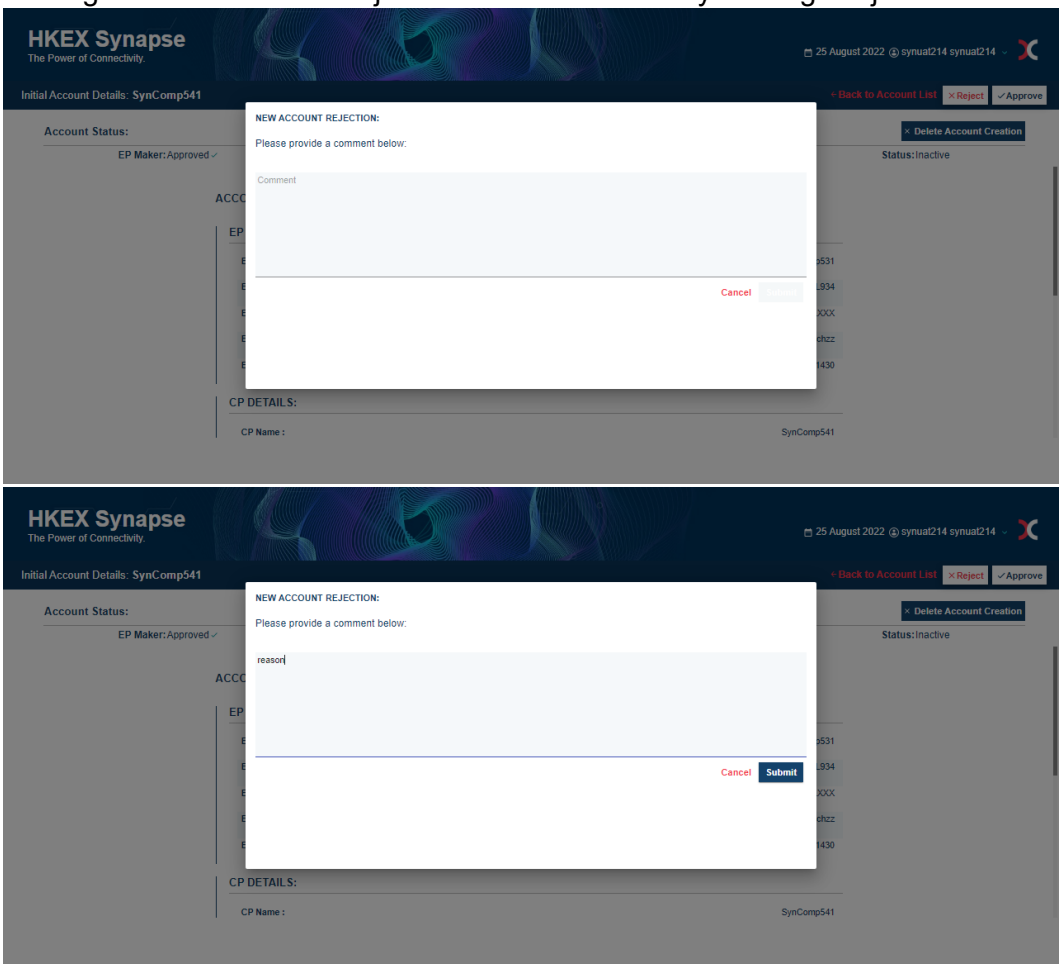
Approval by EP Data Manager Input Only User;
Rejection by EP Data Manager Input Authorise User Back to EP Data Manager Input Only User:



Rejection by EP Data Manager Input Authorise User Back to EP Data Manager Input Only User:

1. When the EP Data Manager Input Authorise User wants to reject the Account details, they must click "Reject". A text box appears for the EP Data Manager Input Authorise User to provide reason(s) for rejection in the form of freeform text.

2. Then the EP Data Manager Input Authorise User must provide the rejection reasons by clicking "Submit" and then reject the account details by clicking "Reject".

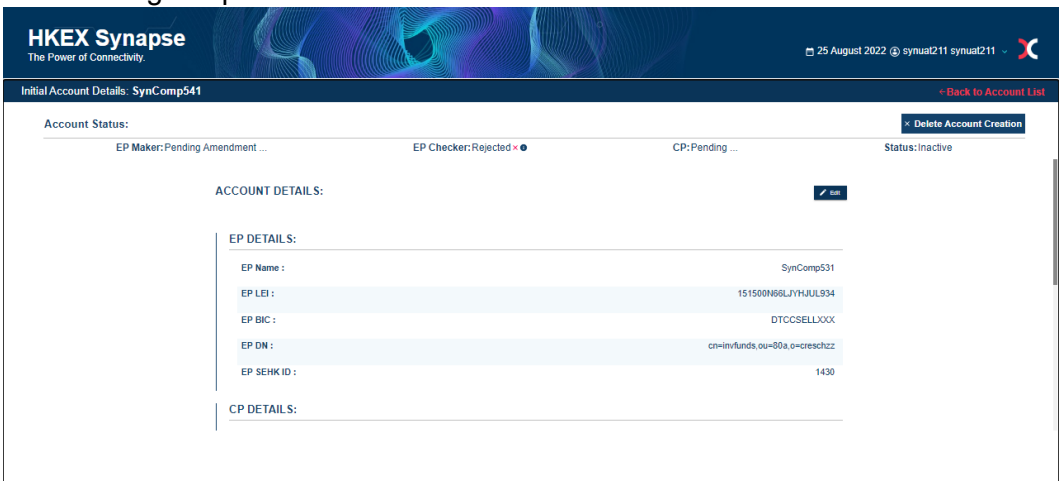


Classification – Internal

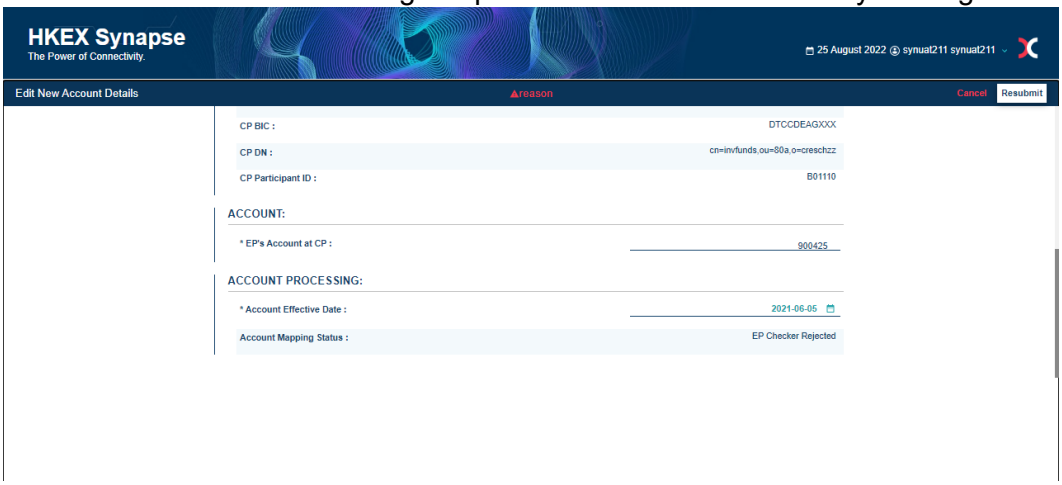
3. The EP Data Manager Input Only User will be informed that the Account has been rejected in one way:
    a. Accounts List view: changed icon from 'O' to '—' in the EP column and changed status to "EP Checker Rejected"

4. The EP Data Manager Input Only User can navigate to the Account Details view by clicking "Details" on the Accounts List view.

5. The account has been rejected by the EP Data Manager Input Authorise User, and the EP Data Manager Input Only User can click "Edit" to edit specific fields based on the EP Data Manager Input Authorise User's comments for resubmission.



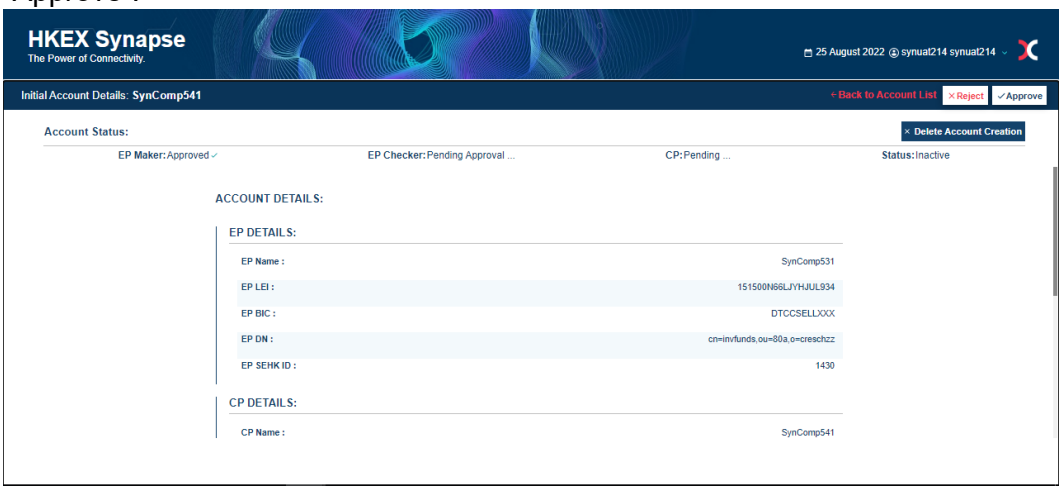
6. After editing specific fields, the EP Data Manager Input Only User can re-submit the Account for the EP Data Manager Input Authorise User's review by clicking "Resubmit".



7. The EP Data Manager Input Authorise User can confirm that the fields re-submitted by going to the Account Details of the re-submitted record on Accounts List View and

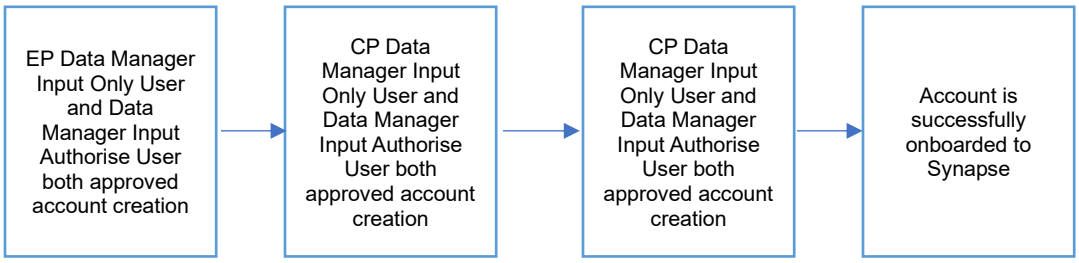
Classification – Internal

"Approve".



6.1.2 Clearing Participant (CP)

Approval by CP Data Manager Input Only User;
Approval by CP Data Manager Input Authorise User:



Approval by CP Data Manager Input Only User:

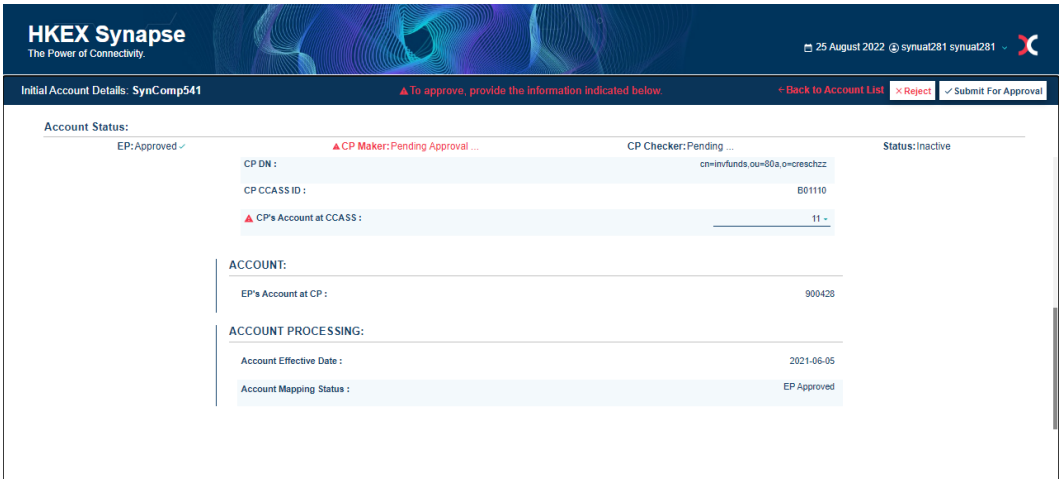
1. The CP Data Manager Input Only User logs in to Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

2. The CP Data Manager Input Only User will be informed that the EP has successfully submitted an Account in two ways:
   a. Dashboard view: increased counter in the Accounts section under "Awaiting CP Maker Approval"
   b. Accounts List view: increased counter under "Awaiting CP Maker Approval", changed icon from '—' to '✓' in the EP column, and changed status to "EP Approved"

3. The CP Data Manager Input Only User can navigate to the Account Details view by clicking "Details" on the Accounts List view.

Classification – Internal

4. On the CP Data Manager Input Only User's Accounts Details page view, they must select the "CP's Account at CCASS" from drop-down menu and click "Submit for Approval" button.



Classification – Internal

Field Name	Description	Type	Size	Mandatory or Optional (M/O)	Syntax Validation
CP's Account at CCASS	Settlement Account No. at CCASS used by the CP for each of the Account No. for EP at CP	String	20	M	N/A

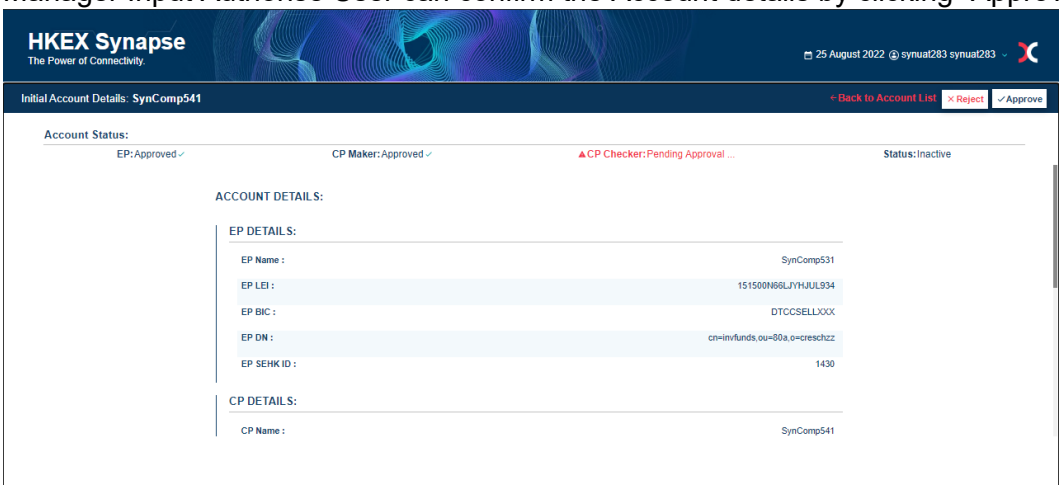
Approval by CP Data Manager Input Authorise User:

1. The CP Data Manager Input Authorise User logs into Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

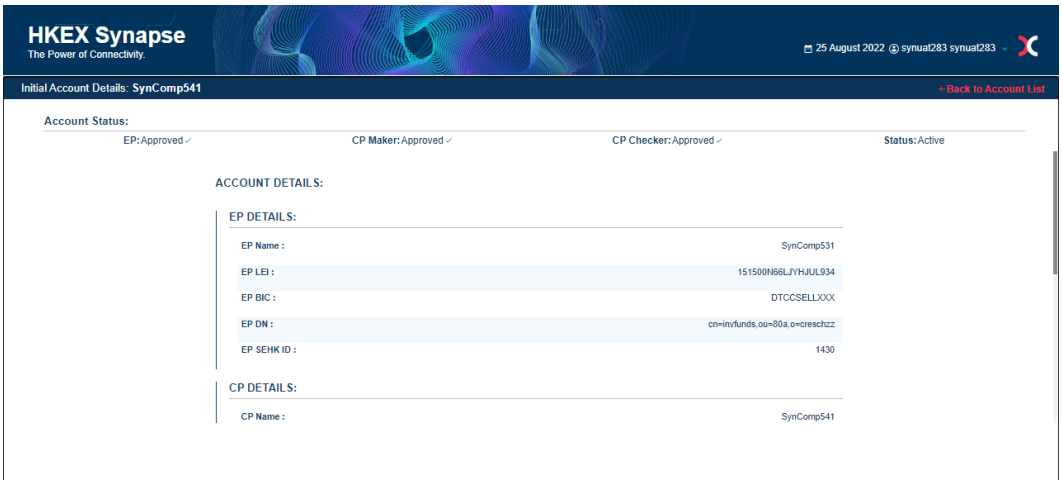
2. The CP Data Manager Input Authorise User will be informed that the CP Data Manager Input Only User has submitted the Account for CP Data Manager Input Authorise User's approval in two ways:
    a. Dashboard view: increased counter in the Accounts section under "Awaiting CP Checker Approval"
    b. Accounts List view: increased counter under "Awaiting CP Checker Approval", changed icon from '—' to 'O' in the CP column, and changed status to "CP Maker Approved"

3. The CP Data Manager Input Authorise User can navigate to the Account Details view by clicking "Details" on the Accounts List view.

4. On the CP Data Manager Input Authorise User's Account details view, CP Data Manager Input Authorise User can confirm the Account details by clicking "Approve".

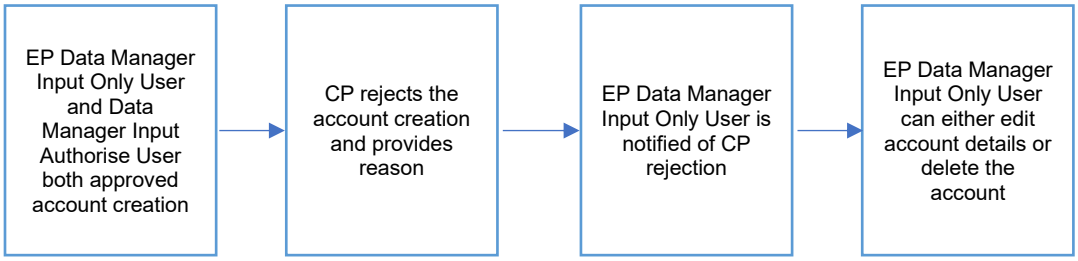


Classification – Internal



Rejection by CP Data Manager Input Only User; Rejection by CP Data Manager Input Authorise User Back to EP Data Manager Input Only User:

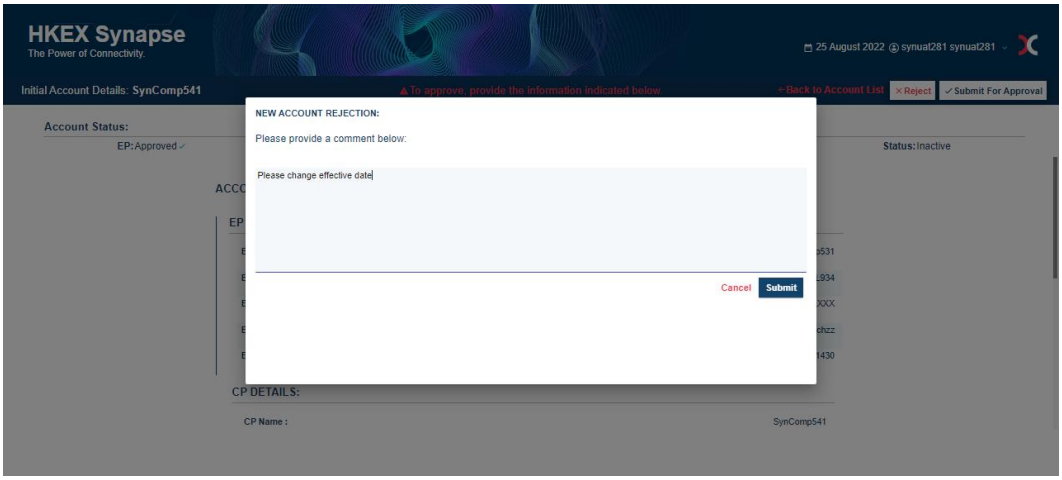
For an account to be onboarded successfully, CP needs to approve the account creation. If the CP Data Manager Input Only User rejects the account and the CP Data Manager Input Authorise User agrees with the CP Data Manager Input Only User's rejection, the CP Data Manager Input Authorise User can reject back to the EP.



Rejection by CP Data Manager Input Only User:

1. When the CP Data Manager Input Only User rejects the Account creation, freeform text rejection reason(s) must be provided.

Classification – Internal



2. Then the CP Data Manager Input Only User must submit the rejection reasons by clicking “Submit” and then reject the account details by clicking “Reject”.

3. The CP Data Manager Input Authorise User will be informed that the Account has been rejected in two ways:
    a. Dashboard view: increased counter in the Accounts section under “Awaiting CP Checker Approval”
    b. Account List view: increased counter under “Awaiting CP Checker Approval”, changed icon from ‘—’ to ‘○’ in the CP column, and changed status to “CP Maker Rejected”

Rejection by CP Data Manager Input Authorise User Back to EP Data Manager Input Only User:

1. The CP Data Manager Input Authorise User receives a notification that the CP Data Manager Input Only User has rejected the account via the Dashboard view or the Accounts List view.

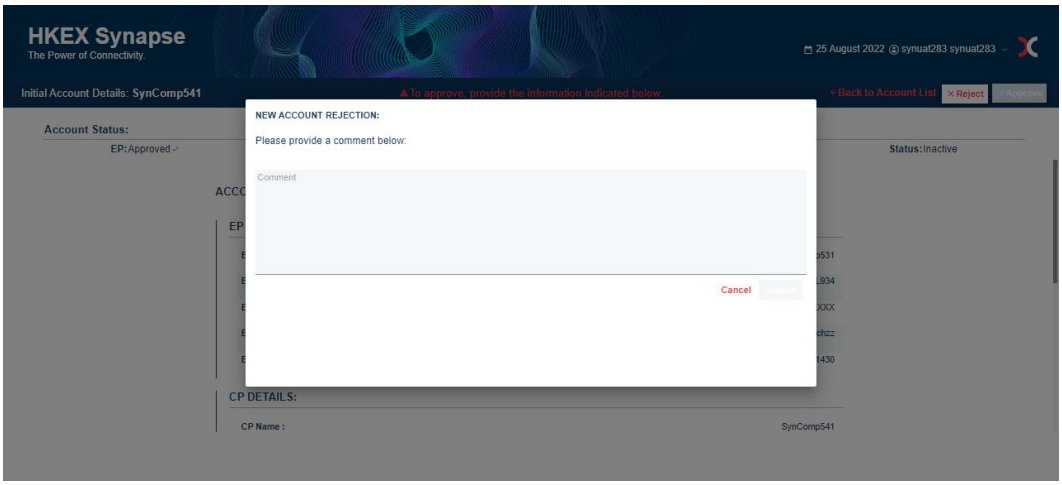
2. On the Account Details view, the CP Data Manager Input Authorise User clicks “Reject” and sees the “Reject back to Maker” and the “Reject back to EP” buttons. The “Approve” button is greyed out.

Classification – Internal

button and then select “Reject Back to EP”:

3. When the CP Data Manager Input Authorise User agrees with the CP Data Manager Input Only User’s rejection, they can reject back to EP Data Manager Input Only User by clicking “Reject”

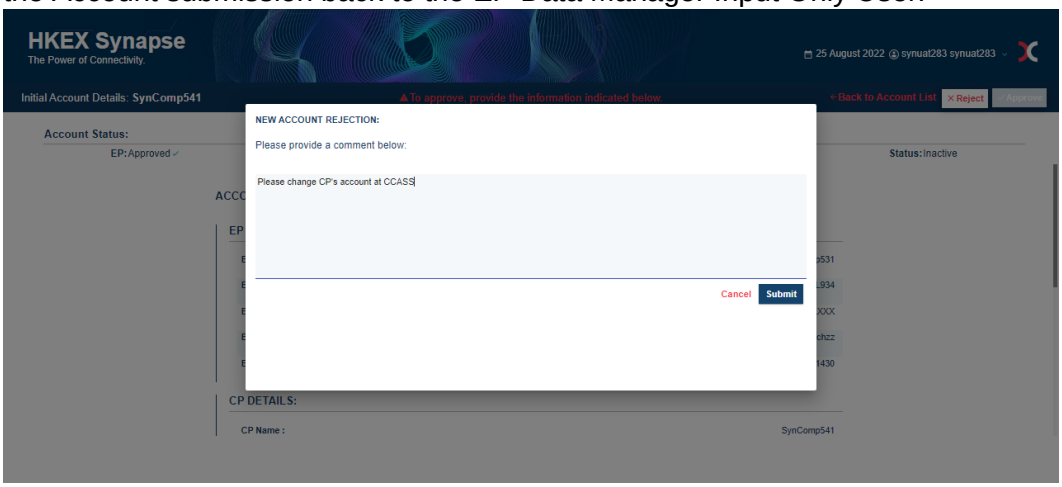
4. When the CP Data Manager Input Authorise User rejects the Account, a text box appears for the CP Data Manager Input Authorise User to provide reason(s) for rejection in the form of freeform text.



5. The CP Data Manager Input Authorise User agrees with the CP Data Manager Input Only User’s rejection and is required to provide freeform text rejection reason(s) to reject

Classification – Internal

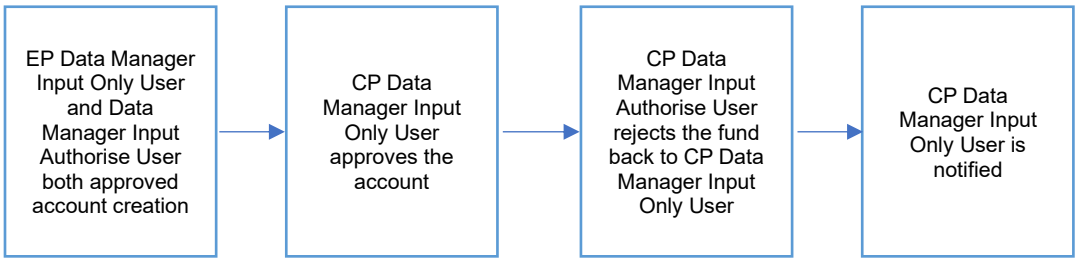
the Account submission back to the EP Data Manager Input Only User.



6. Then the EP Data Manager Input Only User is informed about the Account Creation rejection in one way:
    a. Accounts List view: changed icon from '✓' to 'X' in EP column, and changed status to "CP Checker Rejected"
    b. The CP Data Manager Input Only User and CP Data Manager Input Authorise User will see the row disappeared from the Accounts List view.

Approval by CP Data Manager Input Only User; Rejection by CP Data Manager Input Authorise User Back to CP Data Manager Input Only User:

For an account to be onboarded successfully, CP needs to approve the account creation. If the CP Data Manager Input Only User approves the account and the CP Data Manager Input Authorise User disagrees with the CP Data Manager Input Only User's approval/input, the CP Data Manager Input Authorise User will reject back to the CP Data Manager Input Only User.

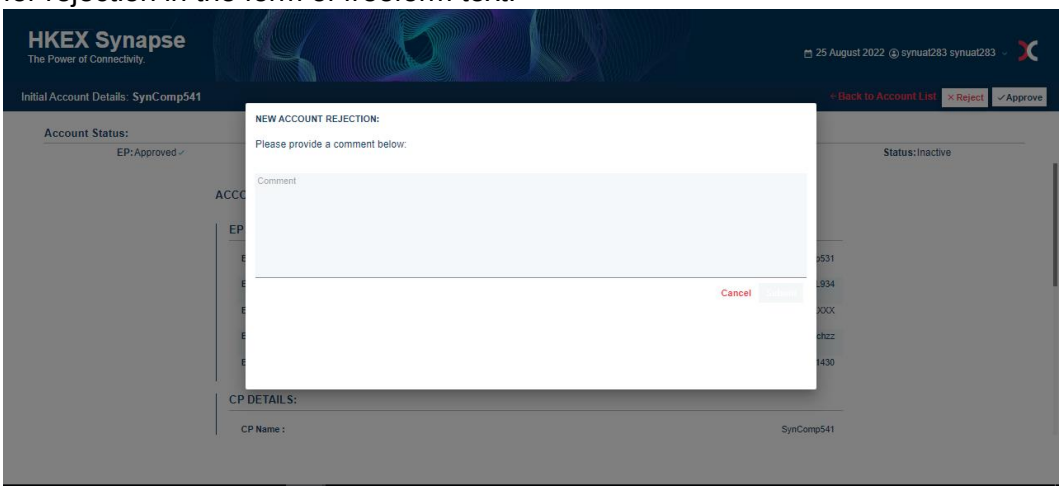


Classification – Internal

Rejection by CP Data Manager Input Authorise User Back to CP Data Manager Input Only User:

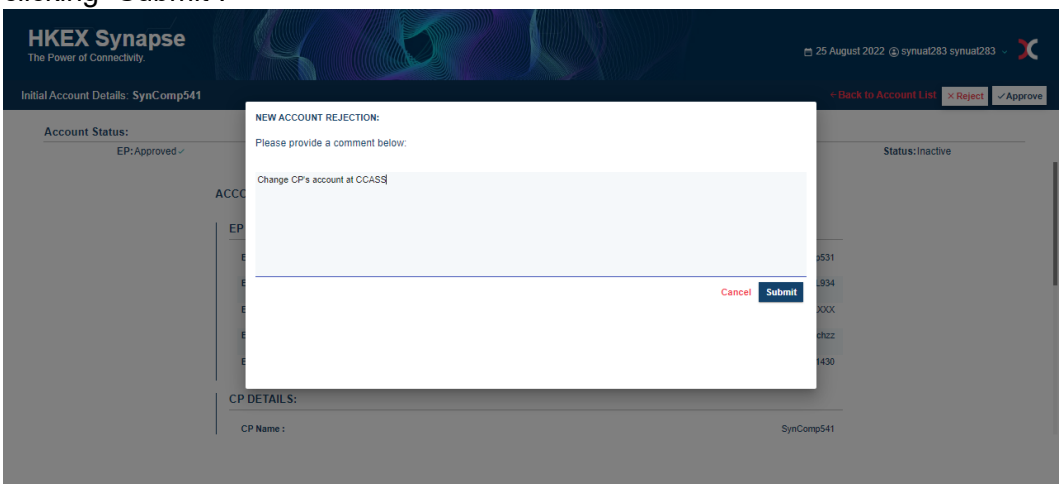
1. When the CP Data Manager Input Authorise User disagrees with the CP Data Manager Input Only User's approval, they can reject back to CP Data Manager Input Only User by clicking "Reject" button and select "Reject Back to Maker". The "Reject back to EP" button is greyed out.

2. A text box appears for the CP Data Manager Input Authorise User to provide reason(s) for rejection in the form of freeform text.

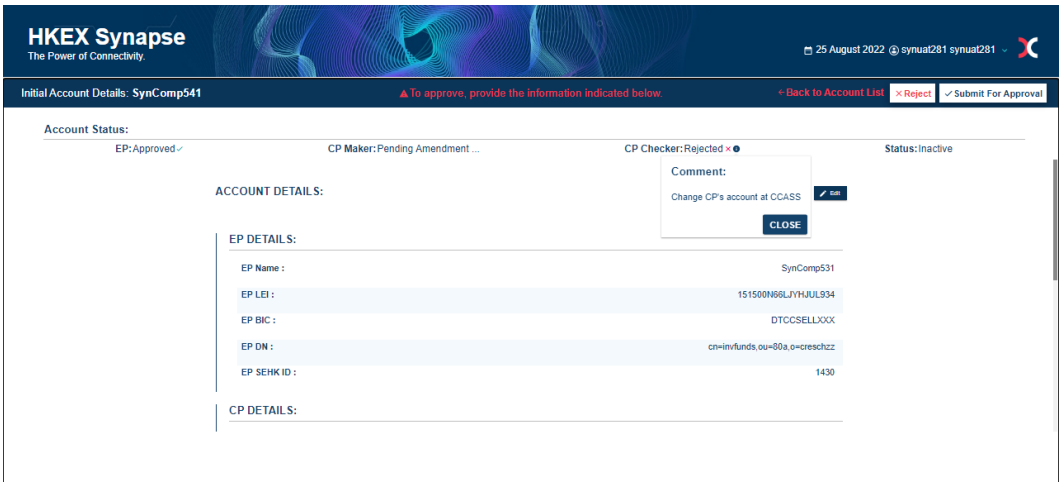


Classification – Internal

3. Then the CP Data Manager Input Authorise User must provide the rejection reason(s) by clicking “Submit”.



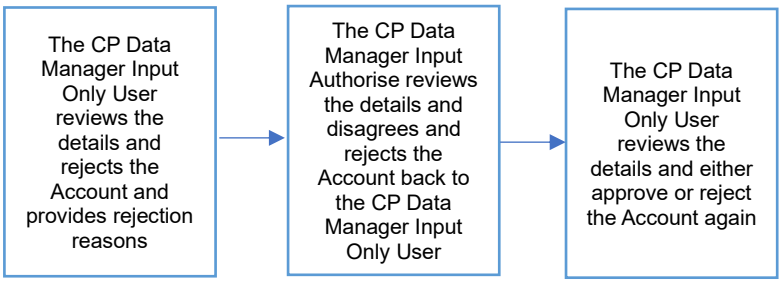
4. Then the CP Data Manager Input Only User is informed about the Account Creation rejection in one way:
    a. Accounts List view: increased counter under “Awaiting CP Maker Approval”, changed status to “CP Checker Rejected”, and changed icon from ‘O’ to ‘—’ in the CP column



Classification – Internal

Rejection by CP Data Manager Input Only User;
Rejection by CP Data Manager Input Authorise User Back to CP Data Manager Input Only User:

For an account to be onboarded successfully, CP needs to approve the account creation. If the CP Data Manager Input Only User rejects the account and the CP Data Manager Input Authorise User disagrees with the CP Data Manager Input Only User's rejection, the CP Data Manager Input Authorise User will reject back to the CP Data Manager Input Only User.



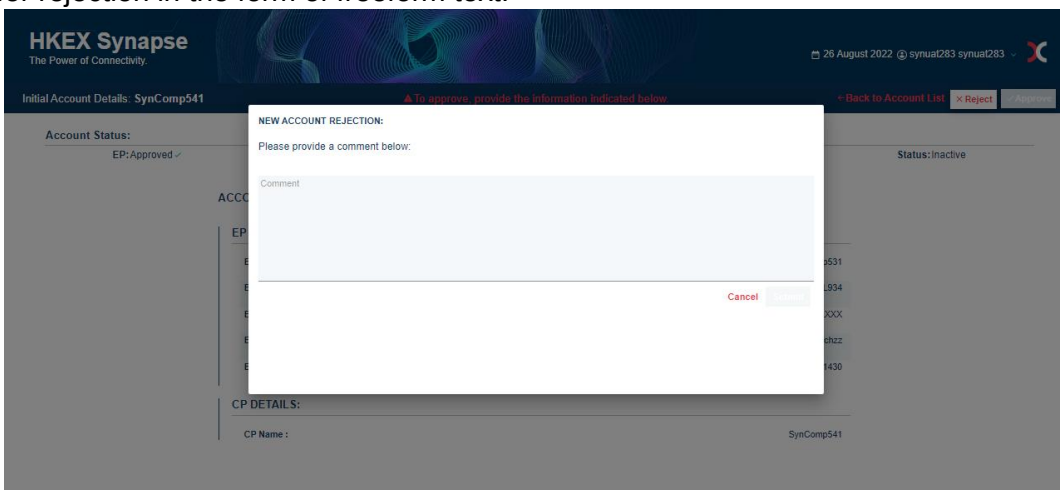
Rejection by CP Data Manager Input Authorise User Back to CP Data Manager Input Only User:

1. The CP Data Manager Input Authorise User receives a notification that the CP Data Manager Input Only User has rejected the account via the Accounts List view.

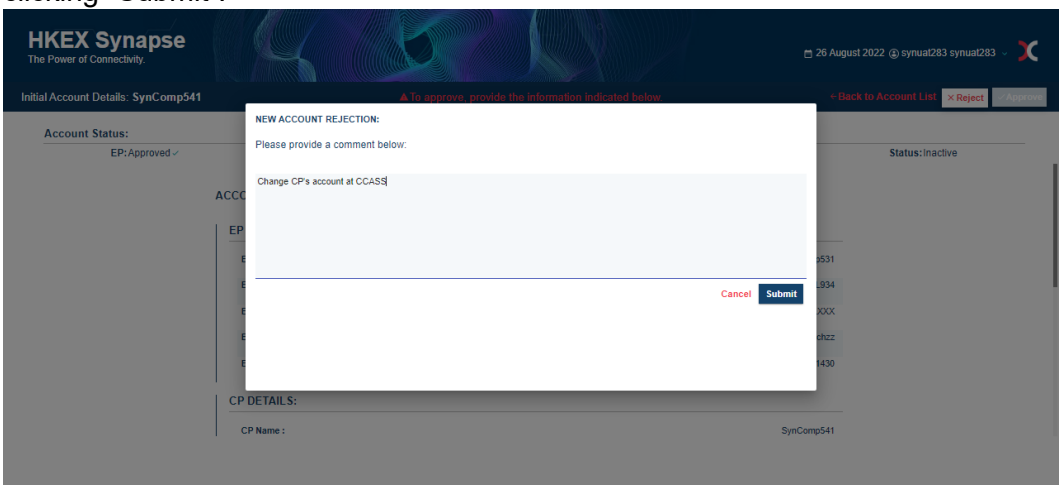
2. When the CP Data Manager Input Authorise User disagrees with the CP Data Manager Input Only User's rejection, they can reject back to CP Data Manager Input Only User by clicking "Reject" button and select "Reject Back to Maker". The "Approve" button is greyed out.

Classification – Internal

3. A text box appears for the CP Data Manager Input Authorise User to provide reason(s) for rejection in the form of freeform text.

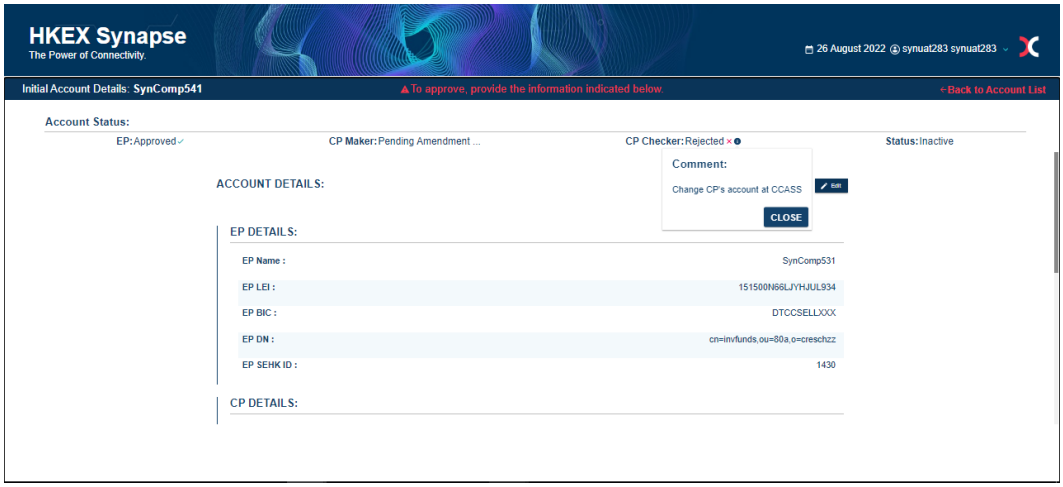


4. Then the CP Data Manager Input Authorise User must provide the rejection reason(s) by clicking “Submit”.



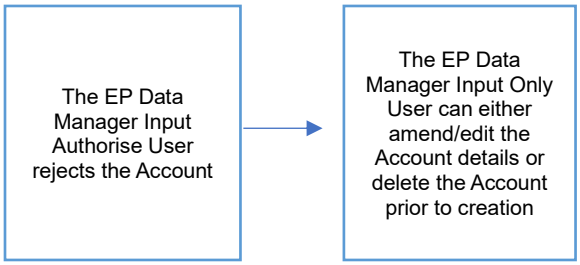
5. Then the CP Data Manager Input Only User is informed about the Account Creation rejection in one way:
    a. Accounts List view: increased counter under “Awaiting CP Maker Approval”, changed status to “CP Checker Rejected”, and changed icon from ‘O’ to ‘—’ in the CP column

Classification – Internal



6.2 Delete Account Creation Prior to EP's Approval

Accounts can be deleted only by EP Data Manager Input Only User prior to receiving EP Data Manager Input Authorise User's approval.

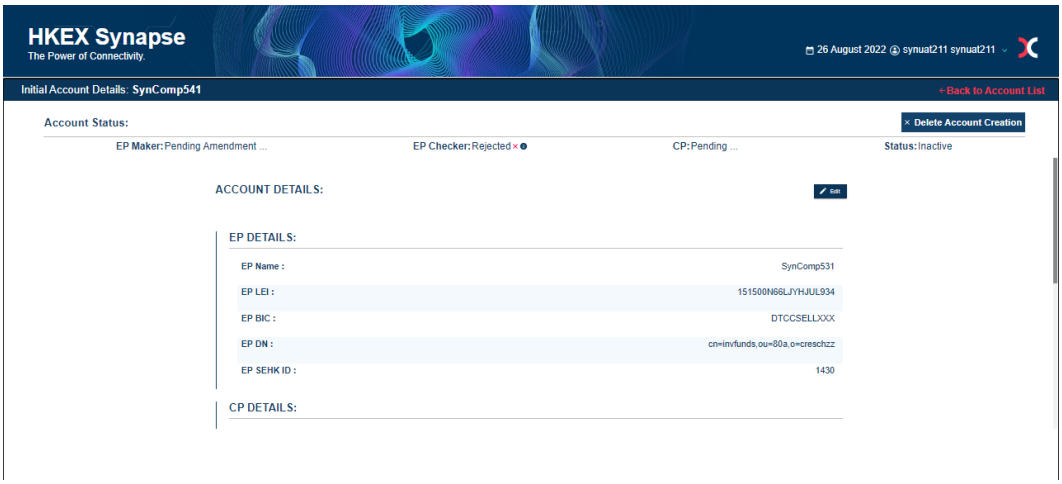


6.2.1 Exchange Participant (EP)

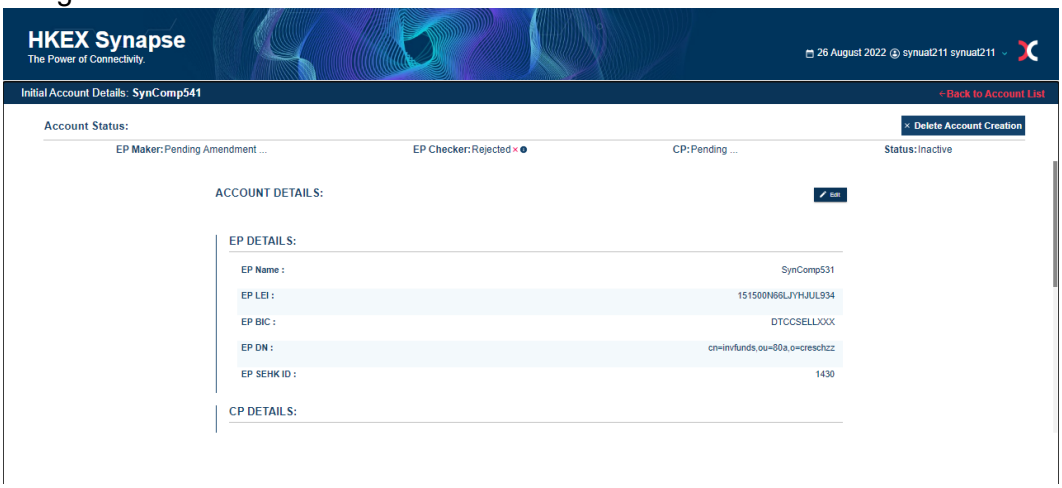
EP Data Manager Input Only User:

1. If the Account created by the EP Data Manager Input Only User was rejected by the EP Data Manager Input Authorise User, then the EP Data Manager Input Only User can either amend/edit the Account details or delete the Account prior to creation.

Classification – Internal

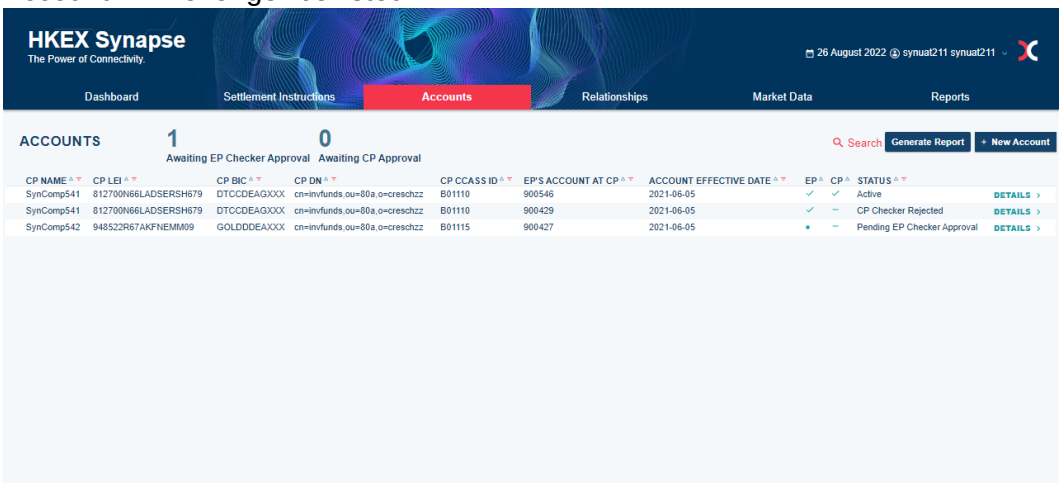


2. If the EP Data Manager Input Only User chooses to delete the Account, then they can navigate to the Account Details view and click “Delete Account”.



3. Once that button is clicked, the Account will be deleted.

4. When the EP Data Manager Input Only User goes back to the Accounts list view, the Account will no longer be listed.



Classification – Internal

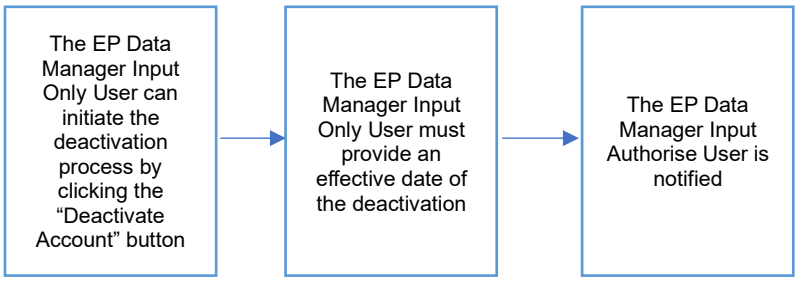
6.3 Deactivate Account After Account is Activated

Accounts can be deactivated only by EP Data Manager Input Only User. Account deactivation occurs when the EP Data Manager Input Only User initiates the deactivation and the EP Data Manager Input Authorise User approves the deactivation. Account will then be deactivated on the effective date input by EP.

6.3.1 Exchange Participant (EP)

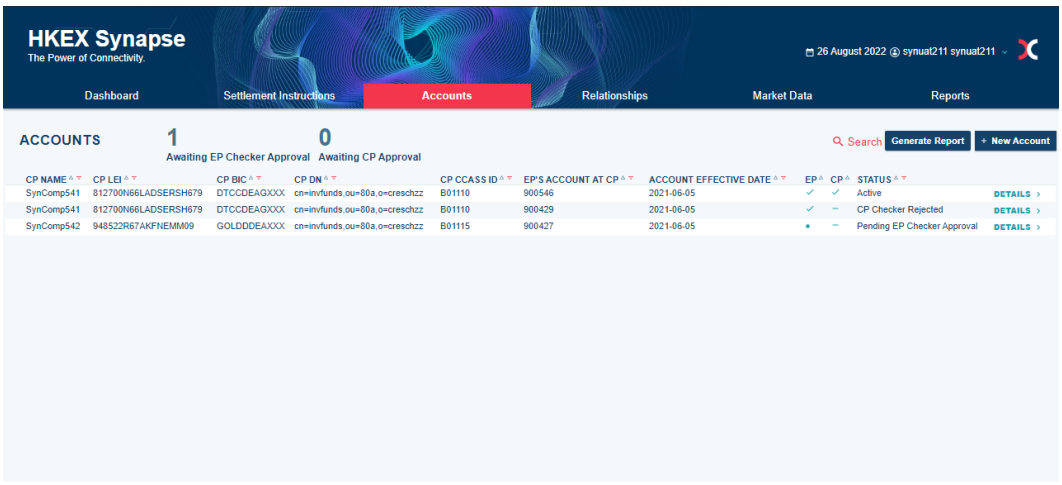
Approval by EP Data Manager Input Only User;
Approval by EP Data Manager Input Authorise User:

Approval by EP Data Manager Input Only User:



1. The EP Data Manager Input Only User logs into Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

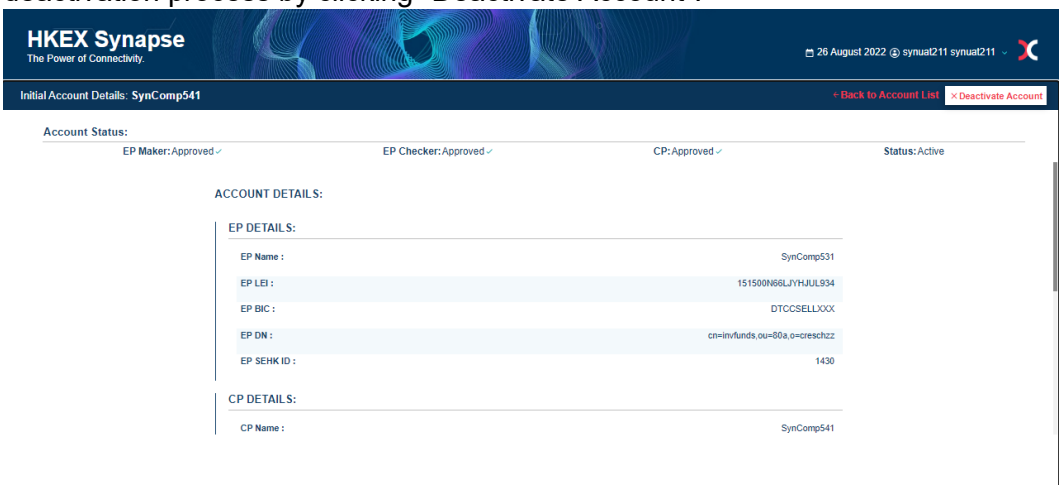
2. The EP Data Manager Input Only user can navigate to the Accounts List view by clicking the "Accounts" tab.



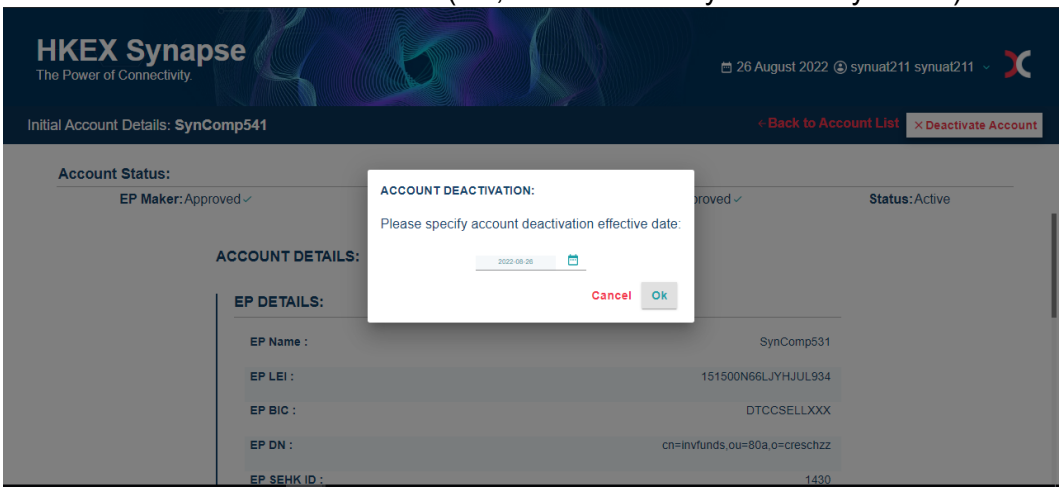
3. The EP Data Manager Input Only User can select an active account and navigate to the Account Details view by clicking "Details" on the Accounts List view.

Classification – Internal

4. On the Accounts Details view, the EP Data Manager Input Only User can initiate the deactivation process by clicking “Deactivate Account”.

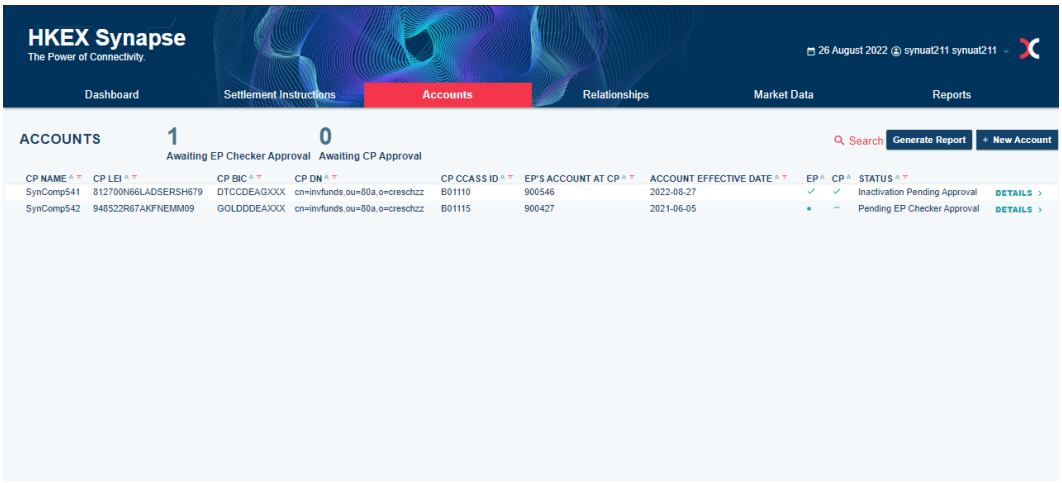


5. A pop-up window requesting the account deactivation effective date will appear. The effective date must be future date (i.e., at least one day after today’s date).

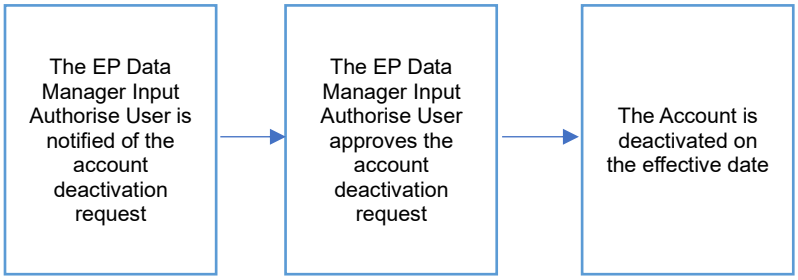


6. The EP Data Manager Input Only User enters the account deactivation effective date and clicks “Deactivate Account”, and the EP Data Manager Input Authorise User is informed in one way:
    a. Accounts List view: the EP column will have a ‘O’ icon and the status column will show “Inactivation Pending Approval”

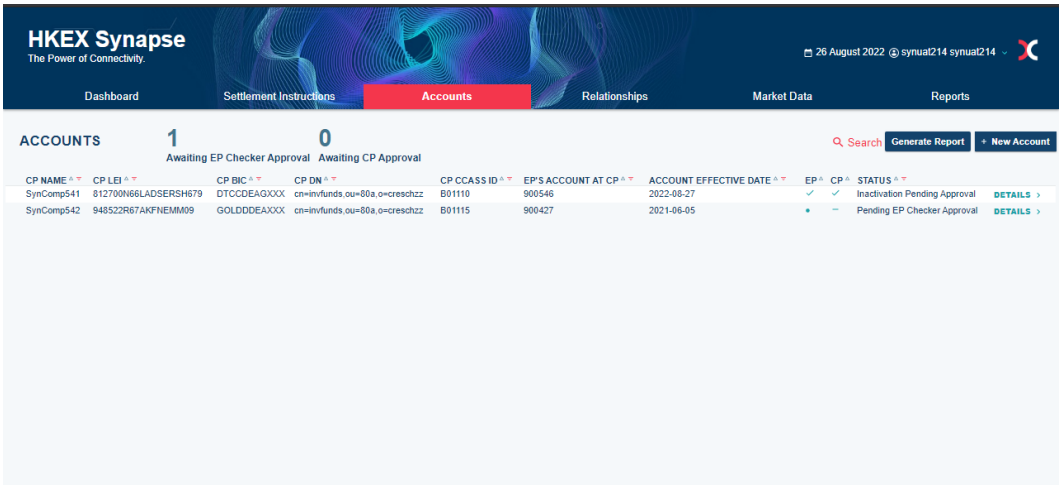
Classification – Internal



Approval by EP Data Manager Input Authorise User:



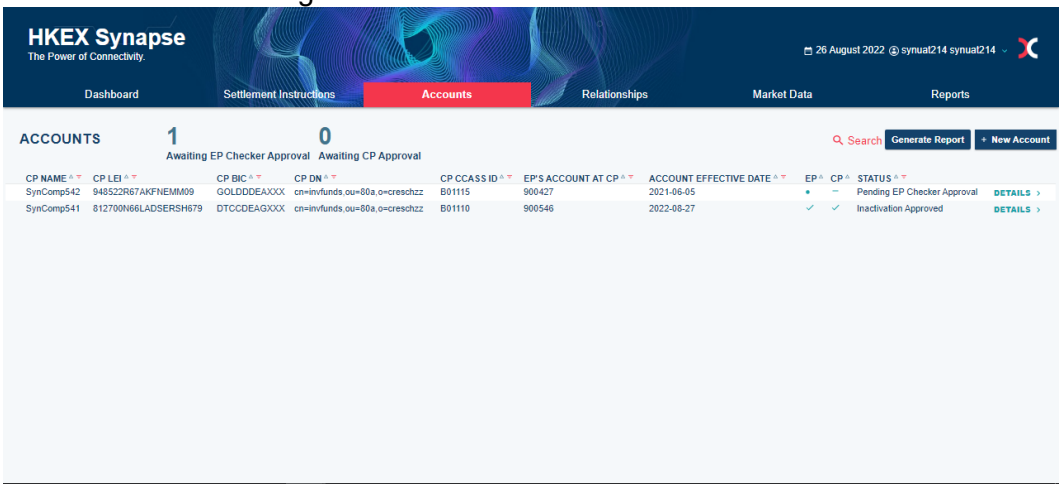
1. The EP Data Manager Input Authorise User is informed that there is an account deactivation request in one way:
    a. Account List view: the status column will show “Inactivation Pending Approval”



2. The EP Data Manager Input Authorise User can approve the deactivation request by clicking “Approve Deactivation”

Classification – Internal

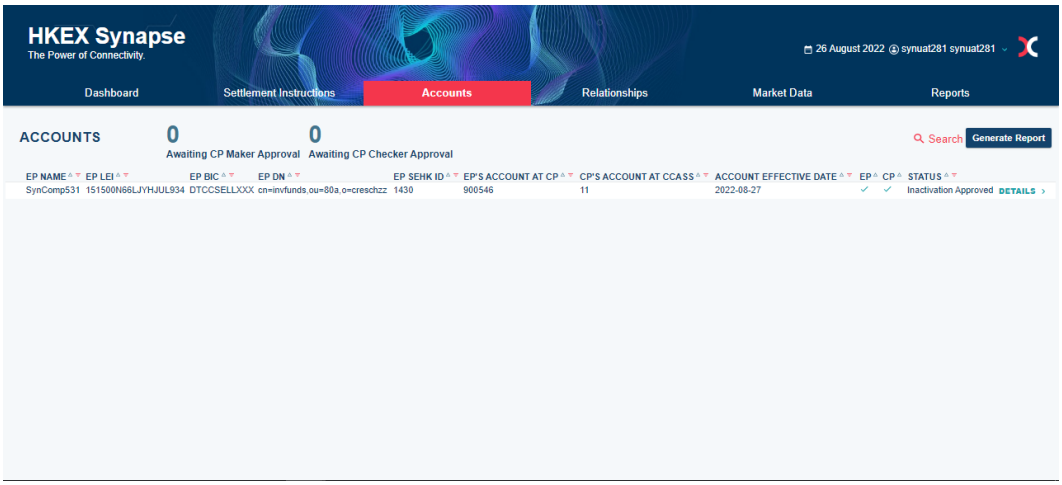
3. The EP Data Manager Input Only User will be informed of the account deactivation and its effective date in one way:
    a. Account List view: changed status to “Inactivation Approved”
        i. Note: the account will then be deactivated on the effective date, and the status will change to “Inactive”



Notification for Clearing Participant (CP):

1. Both the CP Data Manager Input Only User and CP Data Manager Input Authorise User will be informed of the account deactivation and its effective date in two ways:
    a. Account List view: changed status to “Inactivation Approved” (Note: the account will then be deactivated on the effective date, and the status will change to “Inactive”)

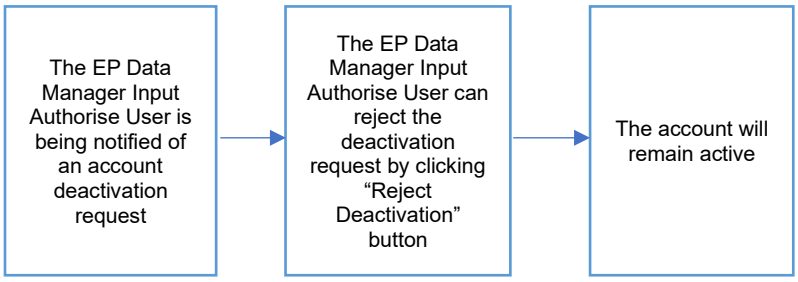
Classification – Internal



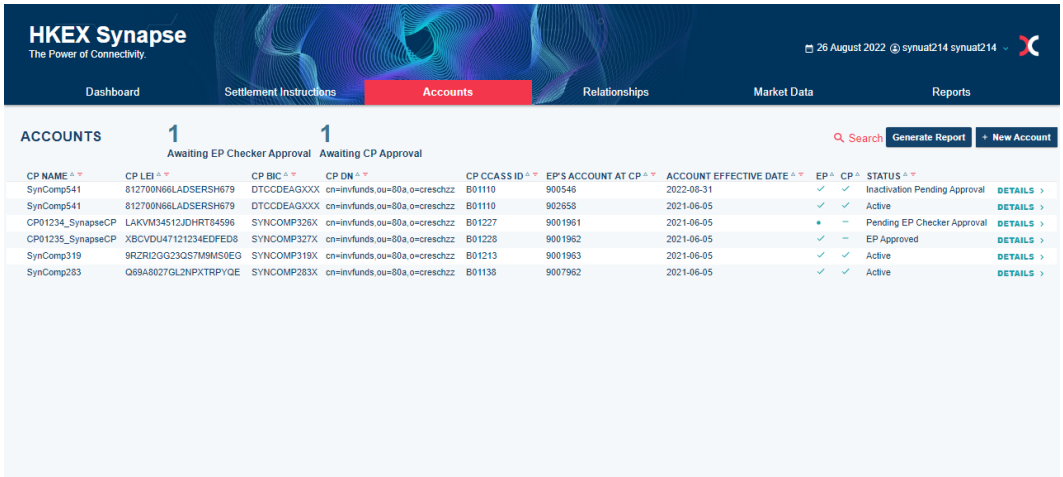
b. UI Notification on Dashboard page under Accounts

Approval by EP Data Manager Input Only User; Rejection by EP Data Manager Input Authorise User:

Rejection by EP Data Manager Input Authorise User:



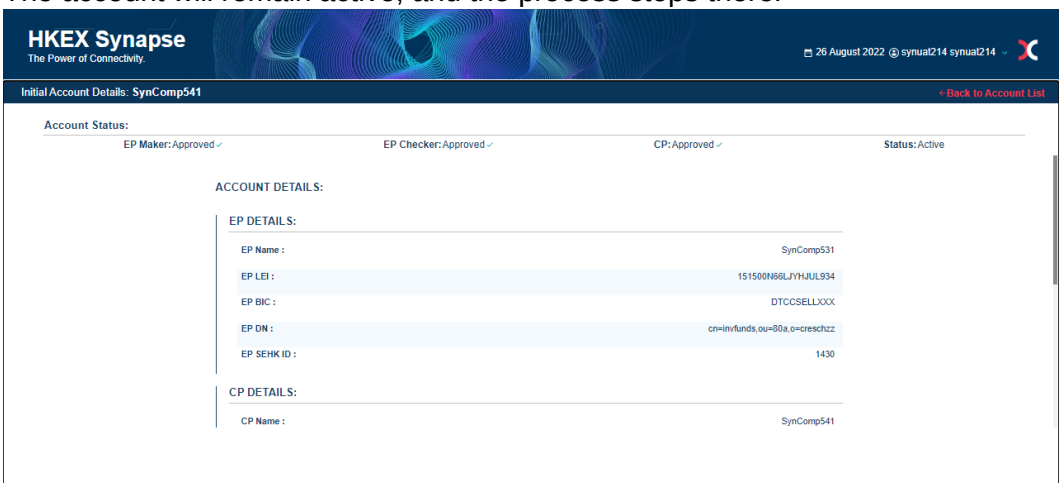
1. The EP Data Manager Input Authorise User is informed that there is an account deactivation request in one way:
   a. Account List view: the status column will show "Inactivation Pending Approval"



Classification – Internal

2. On the Accounts tab, the EP Data Manager Input Authorise User can go to the Accounts Details page and reject the deactivation request by clicking “Reject Deactivation” button.

3. The account will remain active, and the process stops there.



Note: the CP Data Manager Input Only User and CP Data Manager Input Authorise User only receive notification of an account deactivation after the EP Data Manager Input Authorise User approves the account deactivation. If the EP Data Manager Input Authorise User rejects the account deactivation request, then the process ends and no notification will be sent to any participants.

Classification – Internal

6.4 Accounts List View for Sell Side Participants

The Accounts List View provides an overview of the sell side participants' accounts and specific details.

6.4.1 Exchange Participant (EP)

Field Name	Description
CP Name	The Legal Entity name of the CP
CP LEI	Legal Entity Identifier for the Clearing Participant
CP BIC	BIC Code of Clearing Participant
CP DN	DN Code of Clearing Participant
CP CCASS ID	CCASS Participant ID of Clearing Participant
EP's Account at CP	Account No. for EP at CP
Account Effective Date	The date from which the Sell side Account mapping is active on the system
EP Status	Status of EP
CP Status	Status of CP
Status	Overall Status of the Account

6.4.2 Exchange Participant Outsourcing Operator (EPOO)

Field Name	Description
EP Name	The Legal Entity Name of the EP
CP Name	The Legal Entity name of the CP
CP LEI	Legal Entity Identifier for the Clearing Participant
CP BIC	BIC Code of Clearing Participant
CP DN	DN Code of Clearing Participant
CP CCASS ID	CCASS Participant ID of Clearing Participant
EP's Account at CP	Account No. for EP at CP
Account Effective Date	The date from which the Sell side Account mapping is active on the system
EP Status	Status of EP
CP Status	Status of CP
Status	Overall Status of the Account

Classification – Internal

6.4.3 Clearing Participant (CP)

Field Name	Description
EP Name	The Legal Entity Name of the EP
EP LEI	Legal Entity Identifier for the Exchange Participant
EP BIC	BIC Code of Exchange Participant
EP DN	DN Code of Clearing Participant
EP SEHK ID	Identification number for EP at Stock Exchange of Hong Kong
EP's Account at CP	Account No. for EP at CP
CP's Account at CCASS	Settlement Account No. at CCASS used by the CP for each of the Account No. for EP at CP
Account Effective Date	The date from which the Sell side Account mapping is active on the system
EP Status	Status of EP
CP Status	Status of CP
Status	Overall Status of the Account

6.4.4 Account Operator (AO)

Field Name	Description
CP Name	The Legal Entity Name of the CP
EP Name	The Legal Entity Name of the EP
EP LEI	Legal Entity Identifier for the Exchange Participant
EP BIC	BIC Code of Exchange Participant
EP DN	DN Code of Clearing Participant
EP SEHK ID	Identification number for EP at Stock Exchange of Hong Kong
EP's Account at CP	Account No. for EP at CP
CP's Account at CCASS	Settlement Account No. at CCASS used by the CP for each of the Account No. for EP at CP
Account Effective Date	The date from which the Sell side Account mapping is active on the system
EP Status	Status of EP
CP Status	Status of CP
Status	Overall Status of the Account

Classification – Internal

7. Instruction Processing

After receiving the SN from DTCC, Synapse will create the settlement instructions and user could locate the instruction in the “Settlement Instruction List View”, and also access the underlying settlement detail in the “Settlement Instruction Detail view”.

Synapse creates different types of Settlement Instructions. Settlement Instructions (SIs), Stock Segregated Account Transfer Instruction (STIs), and Special STIs (SSTIs) on behalf of its participants in CCASS after getting relevant participants’ approval.

- SIs occur when the buy side and sell side are different entity (i.e., different CCASS participants)
- STIs occur when both the buy side (LC) and sell side (CP) are the same entity (i.e., same CCASS participant)
- SSTIs occur when both buy side and sell side are the same entity (i.e., same CCASS participant) but only one side is on Synapse

CCASS does not differentiate between SSTI and STI and both STI and SSTI will follow the standard CCASS STI mechanism.

Classification – Internal

7.1 Settlement Instructions List View

The Settlement Instructions List View provides an overview of what actions need to be taken for SIs, STIs, and SSTIs by the instruction creation date. The ribbon provides an overview of instructions' statuses.

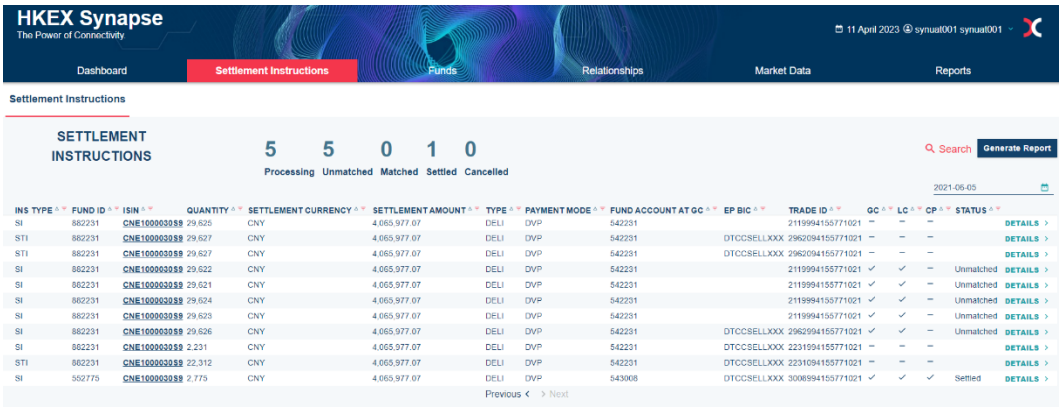
Section Sub-header	Description
Processing	Shows the total number of all Settlement Instructions pending approval or being rejected (please see below for list of Synapse rejection reasons) such that Settlement Instructions have not yet been submitted to CCASS, i.e., no CCASS Input Number has been received yet, on current HKT business day and within the past 31 calendar days. Transactions with the following Synapse status are included into that counter: • RJGC – rejected by Global Custodian – transaction is rejected by Global Custodian • RJLC – rejected by Local Custodian – transaction is rejected by Local Custodian • RJCP – rejected by Clearing Participant – transaction is rejected by Clearing Participant • RJCE – rejected by CCASS – transaction is rejected by CCASS as it carries information not recognized by CCASS, or due to system error Note: If the SCV is with Synapse status = CTHP (Cancelled by Third Party) but with no CCASS status (i.e., the SN is cancelled before being approved by GC/LC/CP (before directed to CCASS)), it will show as "Processing" in the list view instead of "Cancelled". If such SCV is subsequently being approved by GC/ LC / CP, then Synapse will send to CCASS and the unmatched / matched / settled counter will also be updated subsequently. Please refer to Section 7.5 for different CCASS status.
Unmatched	Shows the total number of Settlement Instructions (SI) with CCASS status "Unmatched" on current HKT business day and within the past 31 calendar days. Transactions with the following CCASS status are included into that counter: • NCRR – settlement currency unmatch

Classification – Internal

Section Sub-header	Description
	• DSEC – stock code/ISIN unmatch • DQUA – quantity unmatch • CMIS – no possible matching SI found • OTHR – other • FRAP – payment instruction unmatch • PODU – possible matching SI but not earmarked as pairs • SAFE – client A/C no. unmatch • DMON – money value unmatch • DDAT – settlement date unmatch • DELN – transaction direction unmatch
Matched	Shows the total number of Settlement Instructions (SI and STI) with CCASS Status “Matched” on current HKT business day and within the past 31 calendar days. The CCASS statuses supported by Synapse are: • MTCH – matched • CYCL – matched – payment validated • CVAL – matched – RDP shares on hold • PREA – matched – matched on hold or counterparty instruction on hold • CAIS – pending for transfer (STI only)
Settled	Shows the total number of Settlement Instructions (SI and STI) with CCASS Status “Settled” for SI or “Transferred” for STI on current HKT business day. If the settlement instruction settled on current HKT business day is not created today (e.g. created previously on T-1), the “Settled” counter will not be reflected. The CCASS statuses supported by Synapse are: • SETD – settled
Cancelled*	Shows the total number of all cancelled transaction of SI and STI (all end of lifecycle statuses) on current HKT business day which is the same as the creation date. Cancelled SI / STI before approval will not be reflected. The CCASS statuses supported by Synapse are: • CSUB – cancelled – revoked SI by counterparty • CANS – cancelled – SI/STI purged • CANI – cancelled or revoked SI OR unmatched SI deleted OR

Classification – Internal

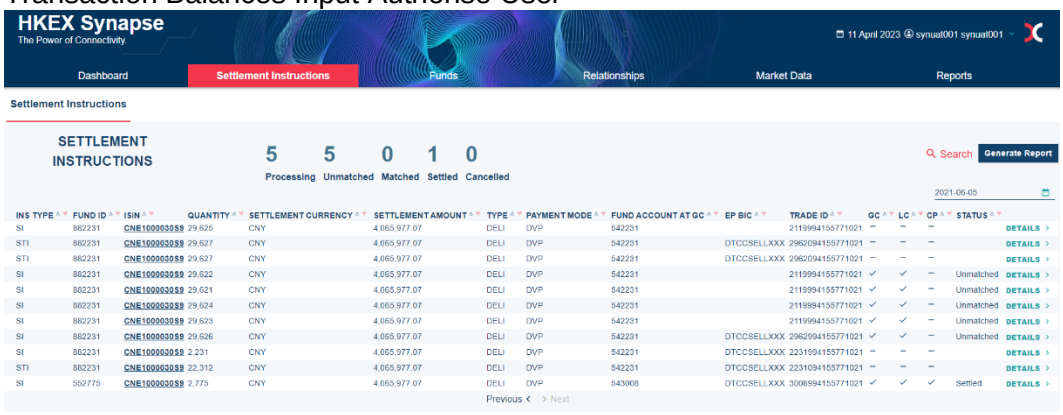
Section Sub-header	Description
	cancelled for STI



The type of instruction is indicated in the Instruction Type column 'INS TYPE' on the left. The date shown on the top right-hand corner of the SI List View is the SI creation date, the settlement instructions are shown by the creation date in the SI List View. A label reflects the date applied to the list view is next to the calendar date picker of SI creation date. Remaining column headers on each participants' views are unique and outlined further below.

The following shapes indicate what actions has been taken or need to be taken:

- '—'no action has been taken yet by the participant. This means that either the Transaction Balances Input Only User for the relevant participant needs to take action, or that participant is not on Synapse and no action will ever be taken, e.g. for a buy-side chain whose sell-side is not onboarded to Synapse, the CP column will always show '—'
- 'O 'there is a Transaction Balances Input Only User proposal that is pending Transaction Balances Input Authorise User to review and accept/reject within the same participant entity.
- '✓' the instruction has been approved by that Transaction Balances Input Only User and Transaction Balances Input Authorise User
- 'X' the instruction has been rejected by that Transaction Balances Input Only User and Transaction Balances Input Authorise User



Classification – Internal

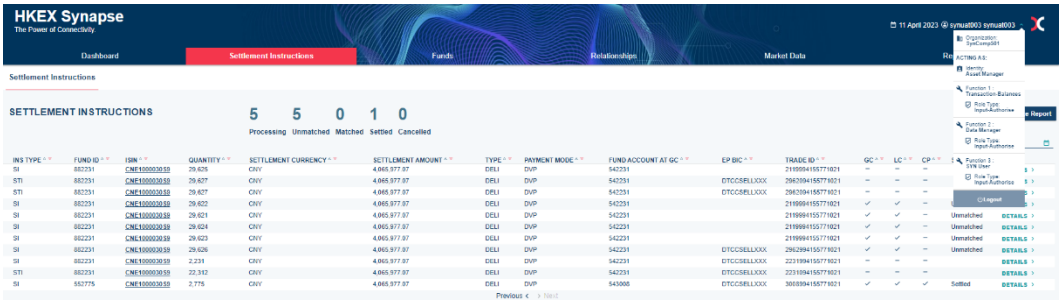
Each participant can click into the ‘Details’ button and be brought to the Settlement Instructions Details View where further action can be taken.

7.1.1 Buy Side

Buy side participants can view new SIs, STIs, and SSTIs on the Settlement Instructions List View screen to know which instructions are pending for their actions.

Settlement Instructions Status Bar mapping can be found in 1 Dashboard / 1.1 Buy Side / Settlement Instructions.

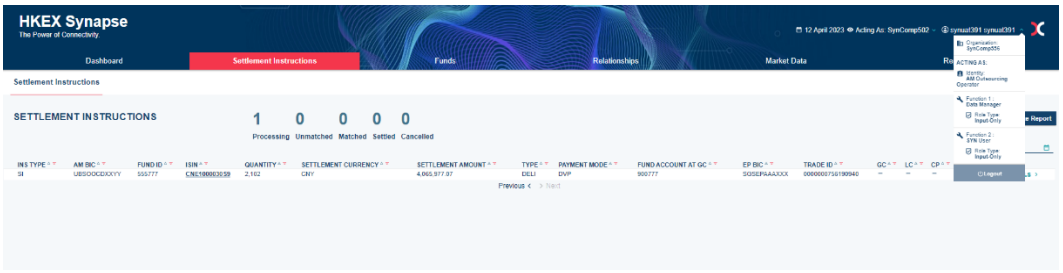
7.1.1.1 Asset Managers (AM)



Field	Description
INS TYPE	Indicating the settlement instruction type, (i.e., SI, STI, SSTI)
Fund ID	Fund ID of the Fund onboarded in Synapse
ISIN	International Securities Identification Number. It can be used as a unique identifier for a stock
Quantity	Trade quantity
Settlement Currency	Contractual settlement currency of the trade
Settlement Amount	Contractual settlement amount of the trade
Type	Securities movement type. It could be either "Receive" or "Deliver"
Payment Mode	Payment mode of the trade: - FOP (Free of Payment)
Fund Account at GC	Fund account No. at GC for the Fund of the trade
EP BIC	EP Business Identification Code
Trade ID	Assigned Trade ID created from DTCC
GC	Status of GC approval of the settlement instruction
LC	Status of LC approval of the settlement instruction
CP	Status of CP approval of the settlement instruction
Status	Unmatched, Matched, or Settled status of the settlement instruction

Classification – Internal

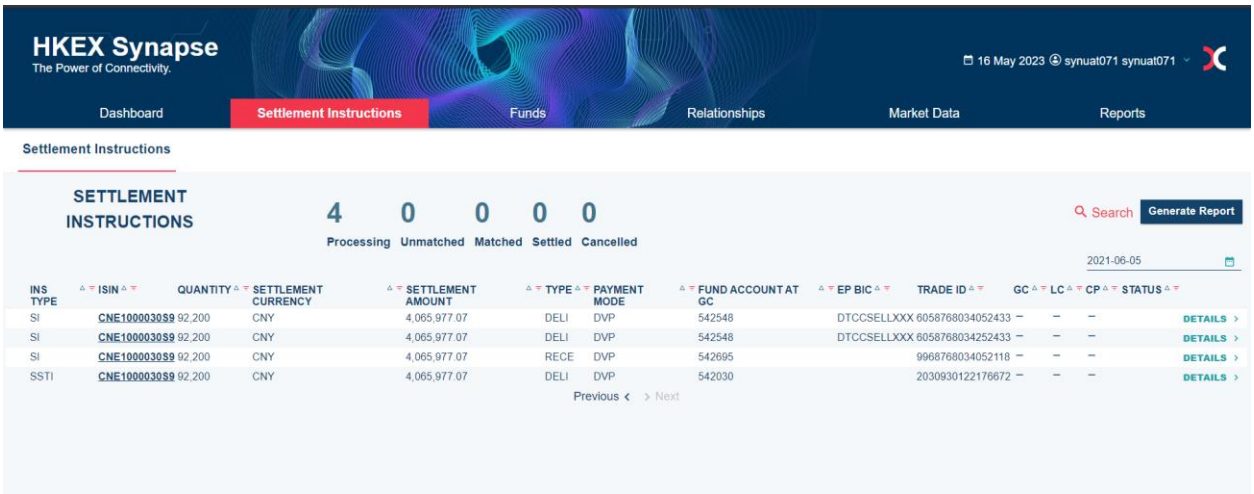
7.1.1.2 Asset Manager Middle Outsourcing Operator (AMOO)



Field	Description
INS TYPE	Indicating the instruction type, i.e., SI, STI, SSTI
AM BIC	AM Business Identification Code
Fund ID	Fund ID of the Fund onboarded in Synapse
ISIN	International Securities Identification Number. It can be used as a unique identifier for a stock
Quantity	Trade quantity
Settlement Currency	Contractual settlement currency of the trade
Settlement Amount	Contractual settlement amount of the trade
Type	Securities movement type. It could be either "Receive" or "Deliver"
Payment Mode	Payment mode of the trade: - RDP (Real time Deliver versus Payment) - DVP (Deliver versus Payment) - FOP (Free of Payment)
Fund Account at GC	Fund account No. at GC for the Fund of the trade
EP BIC	EP Business Identification Code
Trade ID	Assigned Trade ID created from DTCC
GC	Status of GC approval of the settlement instruction
LC	Status of LC approval of the settlement instruction
CP	Status of CP approval of the settlement instruction
Status	Unmatched, Matched, or Settled status of the settlement instruction

Classification – Internal

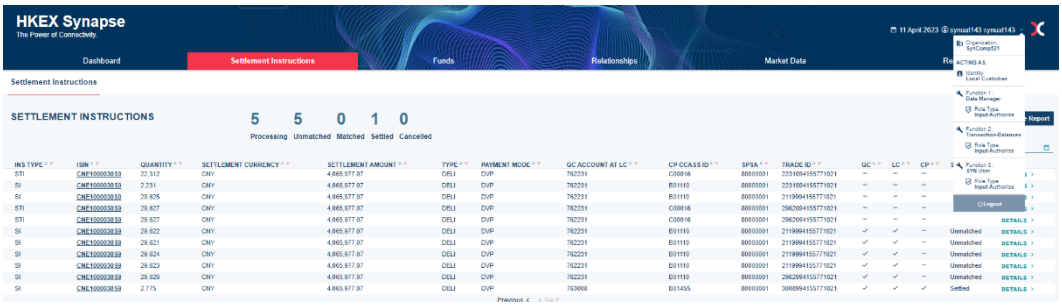
7.1.1.3 Global Custodians (GC)



Field	Description
INS TYPE	Indicating the instruction type, i.e., SI, STI, SSTI
ISIN	International Securities Identification Number. It can be used as a unique identifier for a stock
Quantity	Trade quantity
Settlement Currency	Contractual settlement currency of the trade
Settlement Amount	Contractual settlement amount of the trade
Type	Securities movement type. It could be either "Receive" or "Deliver"
Payment Mode	Payment mode of the trade: - RDP (Real time Deliver versus Payment) - DVP (Deliver versus Payment) - FOP (Free of Payment)
Fund Account at GC	Fund account No. at GC for the Fund of the trade
EP BIC	EP Business Identification Code
Trade ID	Assigned Trade ID created from DTCC
GC	Status of GC approval of the settlement instruction
LC	Status of LC approval of the settlement instruction
CP	Status of CP approval of the settlement instruction
Status	Unmatched, Matched, or Settled status of the settlement instruction

Classification – Internal

7.1.1.4 Local Custodians (LC)



Field	Description
INS TYPE	Indicating the instruction type, i.e., SI, STI, SSTI
ISIN	International Securities Identification Number. It can be used as a unique identifier for a stock
Quantity	Trade quantity
Settlement Currency	Contractual settlement currency of the trade
Settlement Amount	Contractual settlement amount of the trade
Type	Securities movement type. It could be either "Receive" or "Deliver"
Payment Mode	Payment mode of the trade: - RDP (Real time Deliver versus Payment) - DVP (Deliver versus Payment) - FOP (Free of Payment)
GC Account at LC	GC Account at LC for the Fund of the trade
CP CCASS ID	CP's CCASS Participant ID
SPSA	Special Segregated Account
Trade ID	Assigned Trade ID created from DTCC
GC	Status of GC approval of the settlement instruction
LC	Status of LC approval of the settlement instruction
CP	Status of CP approval of the settlement instruction
Status	Unmatched, Matched, or Settled status of the settlement instruction

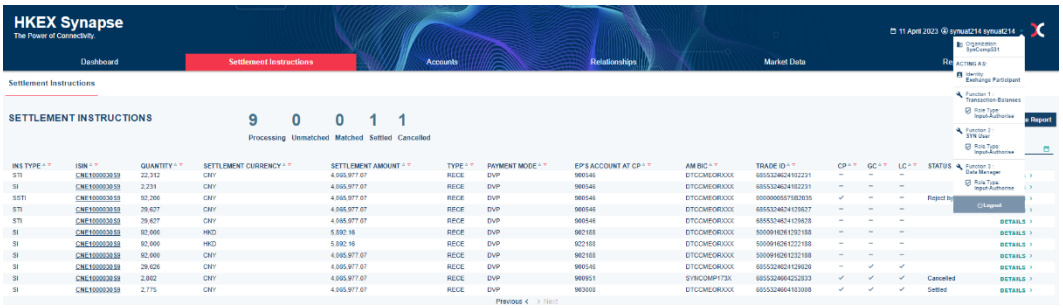
Classification – Internal

7.1.2 Sell Side

Sell side participants are able to view new SIs, STIs, and Special STIs on the Settlement Instruction List View screen to know which instructions need processing.

Settlement Instructions Status Bar mapping can be found in 1 Dashboard / 1.2 Sell Side / Settlement Instructions.

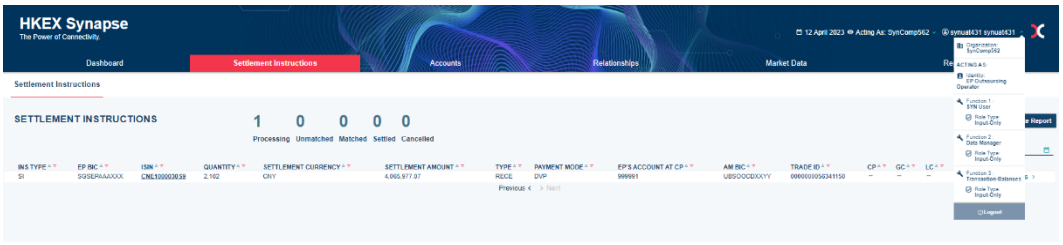
7.1.2.1 Exchange Participant (EP)



Field	Description
INS TYPE	Indicating the instruction type, i.e., SI, STI, SSTI
ISIN	International Securities Identification Number. It can be used as a unique identifier for a stock
Quantity	Trade quantity
Settlement Currency	Contractual settlement currency of the trade
Settlement Amount	Contractual settlement amount of the trade
Type	Securities movement type. It could be either "Receive" or "Deliver"
Payment Mode	Payment mode of the trade: - RDP (Real time Deliver versus Payment) - DVP (Deliver versus Payment) - FOP (Free of Payment)
EP's Account at CP	EP's Account No. at CP for the Account of the trade
AM BIC	AM Business Identification Code
Trade ID	Assigned Trade ID created from DTCC
GC	Status of GC approval of the settlement instruction
LC	Status of LC approval of the settlement instruction
CP	Status of CP approval of the settlement instruction
Status	Unmatched, Matched, or Settled status of the settlement instruction

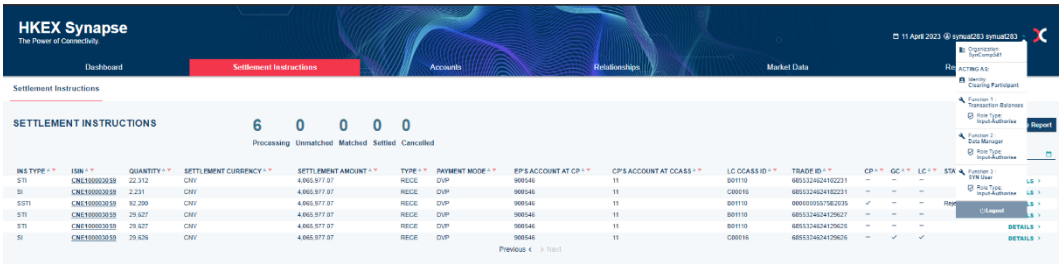
Classification – Internal

7.1.2.2 Exchange Participant Middle Outsourcing Operator (EPOO)



Field	Description
INS TYPE	Indicating the instruction type, i.e., SI, STI, SSTI
EP BIC	EP Business Identification Code
ISIN	International Securities Identification Number. It can be used as a unique identifier for a stock
Quantity	Trade quantity
Settlement Currency	Contractual settlement currency of the trade
Settlement Amount	Contractual settlement amount of the trade
Type	Securities movement type. It could be either "Receive" or "Deliver"
Payment Mode	Payment mode of the trade: - RDP (Real time Deliver versus Payment) - DVP (Deliver versus Payment) - FOP (Free of Payment)
EP's Account at CP	EP's Account No. at CP for the Account of the trade
AM BIC	AM Business Identification Code
Trade ID	Assigned Trade ID created from DTCC
GC	Status of GC approval of the settlement instruction
LC	Status of LC approval of the settlement instruction
CP	Status of CP approval of the settlement instruction
Status	Unmatched, matched, or settled status of the settlement instruction

7.1.2.3 Clearing Participant (CP)

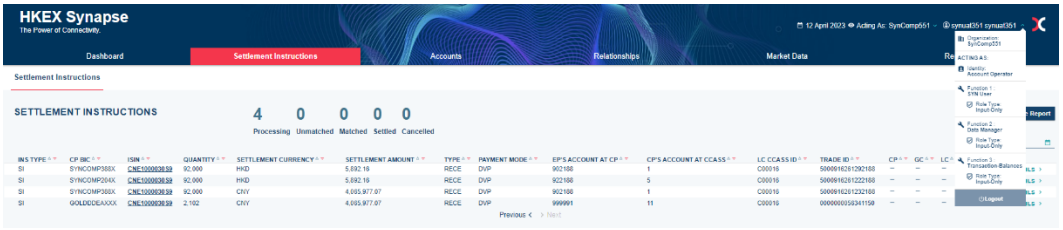


Field	Description
INST TYPE	Indicating the instruction type, i.e., SI, STI, SSTI
ISIN	International Securities Identification Number. It can be used as a unique identifier for a stock
Quantity	Trade quantity

Classification – Internal

Field	Description
Settlement Currency	Contractual settlement currency of the trade
Settlement Amount	Contractual settlement amount of the trade
Type	Securities movement type. It could be either "Receive" or "Deliver"
Payment Mode	Payment mode of the trade: - RDP (Real time Deliver versus Payment) - DVP (Deliver versus Payment) - FOP (Free of Payment)
EP's Account at CP	EP's Account No. at CP for the Account of the trade
CP's Account at CCASS	CP's Account No. at CCASS for the Account of the trade
LC CCASS ID	LC's CCASS Participant ID
Trade ID	Assigned Trade ID created from DTCC
GC	Status of GC approval of the settlement instruction
LC	Status of LC approval of the settlement instruction
CP	Status of CP approval of the settlement instruction
Status	Unmatched, matched, or settled status of the settlement instruction

Account Operator (AO)



Field	Description
INS TYPE	Indicating the instruction type, i.e., SI, STI, SSTI
CP BIC	Clearing Participant Business Identification Code
ISIN	Identification of Security. It can be used as a unique identifier for a stock
Quantity	Trade quantity
Settlement Currency	Contractual settlement currency of the trade
Settlement Amount	Contractual settlement amount of the trade
Type	Securities movement type. It could be either receive or deliver
Payment Mode	Payment mode of the trade: - RDP (Real time Deliver versus Payment) - DVP (Deliver versus Payment) - FOP (Free of Payment)
EP's Account at CP	Exchange Participant's Account at Clearing Participant
CP's Account at CCASS	Clearing Participant's Account at CCASS
LC CCASS ID	Local Custodian's CCASS ID
Trade ID	Assigned Trade ID created from DTCC
GC	Status of GC, approval
LC	Status of LC approval
CP	Status of CP approval

Classification – Internal

Field	Description
Status	Unmatched, Matched, or Settled status of the settlement instruction

7.2 Settlement Instruction Details View

Key Settlement Instruction Details

Each participant sees different Settlement Instruction Details and the details are outlined below.

7.2.1 Buy Side

7.2.1.1 Asset Managers (AM)

AMs can view the following:

Financial Instrument Details

Field	Description
ISIN	International Securities Identification Number. It can be used as a unique identifier for a stock
Local Code	Local stock code of the securities
Name	Financial instrument name

Settlement Details

Field	Description
Depository BIC	Depository Business Identification Code
Quantity	Trade quantity
Settlement Date	Contractual settlement date of the trade
Settlement Currency	Contractual settlement currency of the trade
Settlement Amount	Contractual settlement amount of the trade
Effective Settlement Date	Before the instruction is settled, this field reflects the latest settlement date in CCASS. Once the instruction is settled, it will become the actual settlement date of the trade
Settled Currency	Settled currency of the trade
Settled Amount	Before the instruction is settled, this field reflects the latest amount in CCASS. Once the instruction is settled, it will become the settled amount of the trade

Classification – Internal

Field	Description
	Note: LC and CP must enter a value for this field when they approve the SSTI. This applies to SSTI only
Real-Time Settlement Indicator	Securities real-time gross settlement indicator of a trade: - True - False

Trade Details

Field	Description
Trade Date	Trade date
Type	Securities movement type. It could be either "Receive" or "Deliver"
Payment	Payment mode of the trade: - RDP (Real time Deliver versus Payment) - DVP (Deliver versus Payment) - FOP (Free of Payment)
Deal Price Currency	Deal price currency of the trade
Deal Price	Deal price amount of the trade
Currency to Buy	Currency to buy for the trade
Currency to Sell	Currency to sell for the trade
FX Cancellation	In case of a cancellation, specifies whether an associated FX should be cancelled.

Fund Details

Field	Description
ID	Fund ID of the Fund onboarded in Synapse
Name	Financial instrument name
Fund Account at GC	Fund account No. at GC for the Fund of the trade

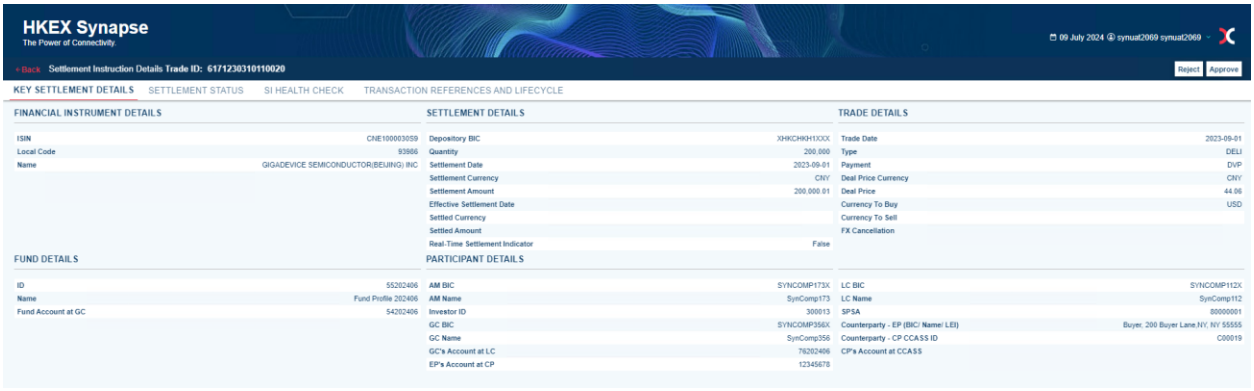
Participant Details

Field	Description
AM BIC	AM Business Identification Code
AM Name	AM Name
Investor ID	Investor ID for the Fund. The field Is a unique number assigned to each SPSA account by HKEX Note: Synapse will populate the following fields based on the Investor ID: • SPSA Account # • LC Name • LC CCASS Participant ID • LC LEI • LC BIC • LC DN Investor ID is also known as “SPSA ID” in CCASS
GC BIC	GC Business Identification Code
GC Name	GC Name
LC BIC	LC Business Identification Code
LC Name	LC Name

Classification – Internal

Field	Description
SPSA	Special Segregated Account
Counterparty – EP (BIC/Name/LEI)	Counterparty details (EP) including Business Identification Code, Name, and Legal Entity Identifier
Counterparty – CP CCASS ID	Counterparty details (CP) CCASS Participant ID
CP's Account at CCASS	CP's Account No. at CCASS for the Account of the trade Note: LC must enter a value for this field when they approve the SSTI. This applies to SSTI only

7.2.1.2 Global Custodian (GC)



Financial Instrument Details

Field	Description
ISIN	International Securities Identification Number. It can be used as a unique identifier for a stock
Local Code	Local stock code of the securities
Name	Financial instrument name

Settlement Details

Field	Description
Depository BIC	Depository Business Identification Code
Quantity	Trade quantity
Settlement Date	Contractual settlement date of the trade
Settlement Currency	Contractual settlement currency of the trade
Settlement Amount	Contractual settlement amount of the trade
Effective Settlement Date	Before the instruction is settled, this field reflects the latest settlement date in CCASS. Once the instruction is settled, it will become the actual settlement date of the trade
Settled Currency	Settled currency of the trade
Settled Amount	Before the instruction is settled, this field reflects the latest amount in CCASS. Once the instruction is settled, it will become the settled amount of the trade Note: LC and CP must enter a value for this field when they approve the SSTI. This applies to SSTI only
Real-Time Settlement Indicator	Securities real-time gross settlement indicator of a trade: - True

Classification – Internal

Field	Description
	- False

Trade Details

Field	Description
Trade Date	Trade date
Type	Securities movement type. It could be either "Receive" or "Deliver"
Payment	Payment mode of the trade: - RDP (Real time Deliver versus Payment) - DVP (Deliver versus Payment) - FOP (Free of Payment)
Deal Price Currency	Deal price currency of the trade
Deal Price	Deal price amount of the trade
Currency to Buy	Currency to buy for the trade
Currency to Sell	Currency to sell for the trade
FX Cancellation	In case of a cancellation, specifies whether an associated FX should be cancelled.

Fund Details

Field	Description
ID	Fund ID of the Fund onboarded in Synapse
Name	Financial instrument name
Fund Account at GC	Fund account No. at GC for the Fund of the trade

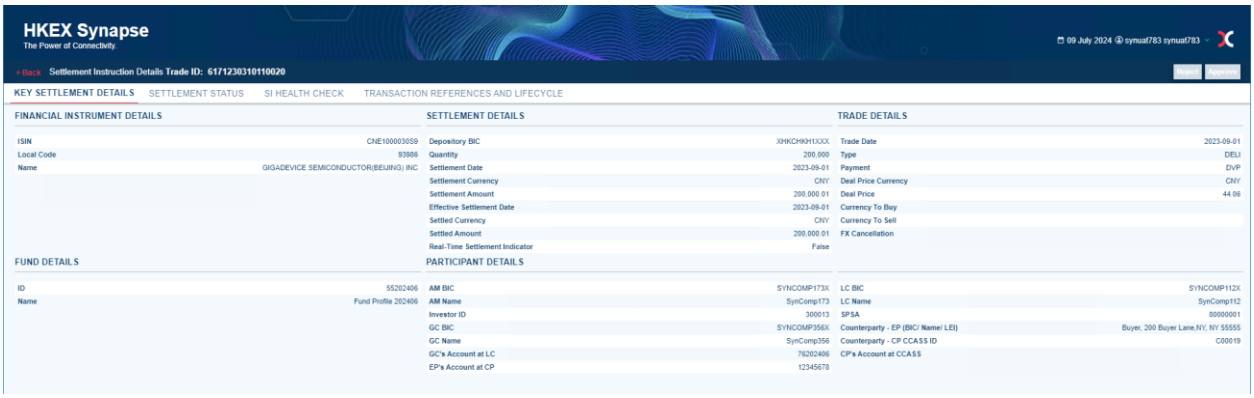
Participant Details

Field	Description
AM BIC	AM Business Identification Code
AM Name	AM Name
Investor ID	Investor ID for the Fund. The field Is a unique number assigned to each SPSA account by HKEX Note: Synapse will populate the following fields based on the Investor ID: • SPSA Account # • LC Name • LC CCASS Participant ID • LC LEI • LC BIC • LC DN Investor ID is also known as “SPSA ID” in CCASS
GC BIC	GC Business Identification Code
GC Name	GC Name
GC’s Account at LC	GC Account No. at LC for the Fund of the trade
LC BIC	LC Business Identification Code
LC Name	LC Name
SPSA	Special Segregated Account
Counterparty – EP (BIC/Name/LEI)	Counterparty details (EP) including Business Identification Code, Name, and Legal Entity Identifier

Classification – Internal

Field	Description
Counterparty – CP CCASS ID	Counterparty details (CP) CCASS Participant ID
EP's Account at CP	EP Account No. at CP, sourced from DTCC's SN
CP's Account at CCASS	CP's Account No. at CCASS for the Account of the trade Note: LC must enter a value for this field when they approve the SSTI. This applies to SSTI only

7.2.1.3 Local Custodian (LC)



Financial Instrument Details

Field	Description
ISIN	International Securities Identification Number. It can be used as a unique identifier for a stock
Local Code	Local stock code of the securities
Name	Financial instrument name

Settlement Details

Field	Description
Depository BIC	Depository Business Identification Code
Quantity	Trade quantity
Settlement Date	Contractual settlement date of the trade
Settlement Currency	Contractual settlement currency of the trade
Settlement Amount	Contractual settlement amount of the trade
Effective Settlement Date	Before the instruction is settled, this field reflects the latest settlement date in CCASS. Once the instruction is settled, it will become the actual settlement date of the trade
Settled Currency	Settled currency of the trade
Settled Amount	Before the instruction is settled, this field reflects the latest settlement amount in CCASS. Once the instruction is settled, it will become the actual settlement amount of the trade Note: LC and CP must enter a value for this field when they approve the SSTI. This applies to SSTI only
Real-Time Settlement Indicator	Securities real-time gross settlement indicator of a trade: - True - False

Classification – Internal

Trade Details

Field	Description
Trade Date	Trade date
Type	Securities movement type. It could be either "Receive" or "Deliver"
Payment	Payment mode of the trade: - RDP (Real time Deliver versus Payment) - DVP (Deliver versus Payment) - FOP (Free of Payment)
Deal Price Currency	Deal price currency of the trade
Deal Price	Deal price amount of the trade
Currency to Buy	Currency to buy for the trade
Currency to Sell	Currency to sell for the trade
FX Cancellation	In case of a cancellation, specifies whether an associated FX should be cancelled.

Fund Details

Field	Description
ID	Fund ID of the Fund onboarded in Synapse
Name	Financial instrument name

Participant Details

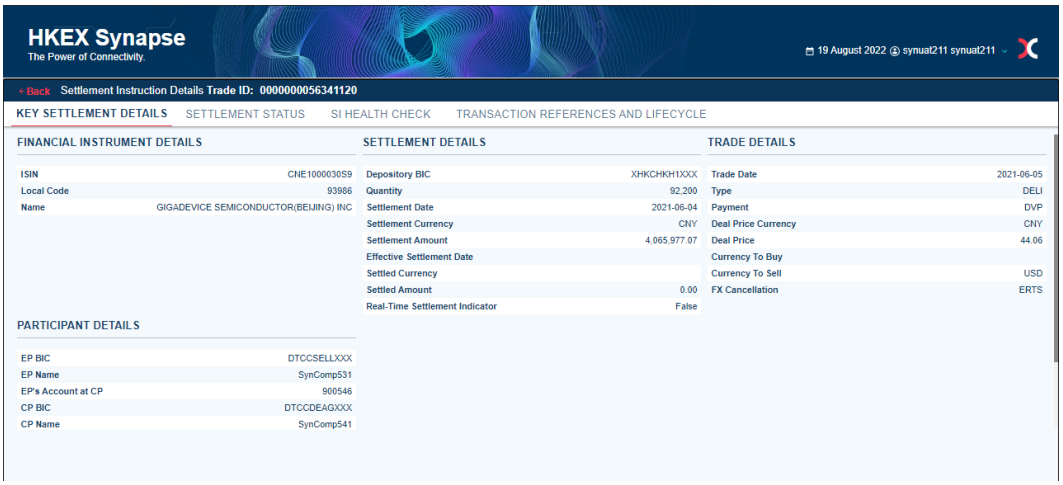
Field	Description
AM BIC	AM Business Identification Code
AM Name	AM Name
Investor ID	Investor ID for the Fund. The field Is a unique number assigned to each SPSA account by HKEX Note: Synapse will populate the following fields based on the Investor ID: • SPSA Account # • LC Name • LC CCASS Participant ID • LC LEI • LC BIC • LC DN Investor ID is also known as “SPSA ID” in CCASS
GC BIC	GC Business Identification Code
GC Name	GC Name
GC’s Account at LC	GC Account No. at LC for the Fund of the trade
LC BIC	LC Business Identification Code
LC Name	LC Name
SPSA	Special Segregated Account
Counterparty – EP (BIC/Name/LEI)	Counterparty details (EP) including Business Identification Code, Name, and Legal Entity Identifier
Counterparty – CP CCASS ID	Counterparty details (CP) CCASS Participant ID
EP’s Account at CP	EP Account No. at CP, sourced from DTCC’s SN
CP’s Account at CCASS	CP's Account No. at CCASS for the Account of the trade Note: LC must enter a value for this field when they approve the SSTI. This

Classification – Internal

Field	Description
	applies to SSTI only

7.2.2 Sell Side

7.2.2.1 Exchange Participant (EP)



Financial Instrument Details

Field	Description
ISIN	International Securities Identification Number. It can be used as a unique identifier for a stock
Local Code	Local stock code of the securities
Name	Financial instrument name

Settlement Details

Field	Description
Depository BIC	Depository Business Identification Code
Quantity	Trade quantity
Settlement Date	Contractual settlement date of the trade
Settlement Currency	Contractual settlement currency of the trade
Settlement Amount	Contractual settlement amount of the trade
Effective Settlement Date	Before the instruction is settled, this field reflects the latest settlement date in CCASS. Once the instruction is settled, it will become the actual settlement date of the trade
Settled Currency	Settled currency of the trade
Settled Amount	Before the instruction is settled, this field reflects the latest settlement amount in CCASS. Once the instruction is settled, it will become the actual settlement amount of the trade Note: LC and CP must enter a value for this field when they approve the SSTI. This applies to SSTI only

Classification – Internal

Field	Description
Real-Time Settlement Indicator	Securities real-time gross settlement indicator of a trade: - True - False

Trade Details

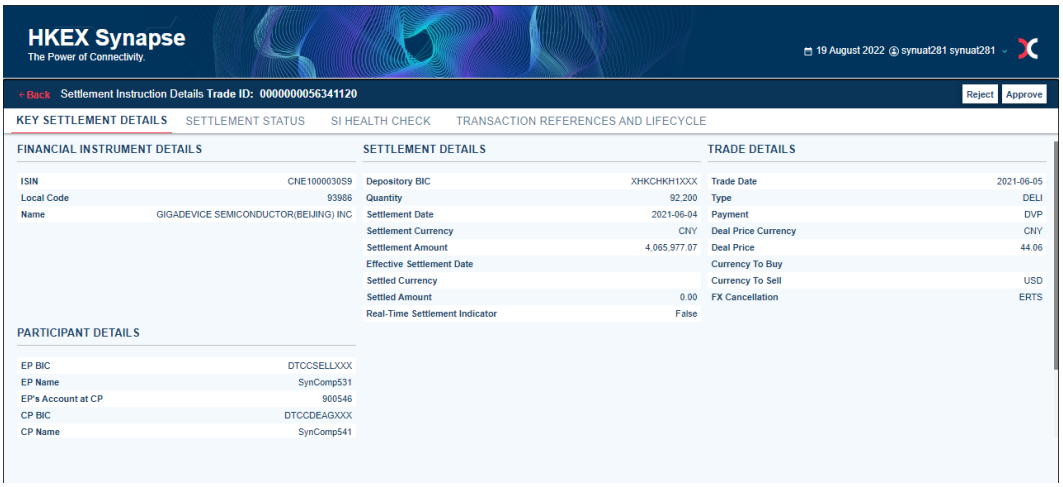
Field	Description
Trade Date	Trade date
Type	Securities movement type. It could be either "Receive" or "Deliver"
Payment	Payment mode of the trade: - RDP (Real time Deliver versus Payment) - DVP (Deliver versus Payment) - FOP (Free of Payment)
Deal Price Currency	Deal price currency of the trade
Deal Price	Deal price amount of the trade
Currency to Buy	Currency to buy for the trade
Currency to Sell	Currency to sell for the trade
FX Cancellation	In case of a cancellation, specifies whether an associated FX should be cancelled.

Participant Details

Field	Description
EP BIC	EP Business Identification Code
EP Name	EP Name
EP's Account at CP	EP's Account No. at CP for the Account of the trade
CP BIC	CP Business Identification Code
CP Name	CP Name
CP's Account at CCASS	CP's Account No. at CCASS for the Account of the trade Note: LC must enter a value for this field when they approve the SSTI. This applies to SSTI only
Counterparty – AM (BIC/Name/LEI)	Counterparty details (AM) including Business Identification Code, Name, and Legal Entity Identifier
Counterparty – LC CCASS ID	Counterparty details (LC) CCASS Participant ID
LC's Account at CCASS	LC's Account No. at CCASS Note: CP must enter a value for this field when they approve the SSTI. This applies to SSTI only
GC's Account at LC	GC Account No. at LC for the Fund of the trade

Classification – Internal

7.2.2.2 Clearing Participant (CP)



Financial Instrument Details

Field	Description
ISIN	International Securities Identification Number. It can be used as a unique identifier for a stock
Local Code	Local stock code of the securities
Name	Financial instrument name

Settlement Details

Field	Description
Depository BIC	Depository Business Identification Code
Quantity	Trade quantity
Settlement Date	Contractual settlement date of the trade
Settlement Currency	Contractual settlement currency of the trade
Settlement Amount	Contractual settlement amount of the trade
Effective Settlement Date	Before the instruction is settled, this field reflects the latest settlement date in CCASS. Once the instruction is settled, it will become the actual settlement date of the trade
Settled Currency	Settled currency of the trade
Settled Amount	Before the instruction is settled, this field reflects the latest settlement amount in CCASS. Once the instruction is settled, it will become the actual settlement amount of the trade Note: LC and CP must enter a value for this field when they approve the SSTI. This applies to SSTI only
Real-Time Settlement Indicator	Securities real-time gross settlement indicator of a trade: - True - False

Trade Details

Field	Description
Trade Date	Trade date
Type	Securities movement type. It could be either "Receive" or "Deliver"

Classification – Internal

Field	Description
Payment	Payment mode of the trade: - RDP (Real time Deliver versus Payment) - DVP (Deliver versus Payment) - FOP (Free of Payment)
Deal Price Currency	Deal price currency of the trade
Deal Price	Deal price amount of the trade
Currency to Buy	Currency to buy for the trade
Currency to Sell	Currency to sell for the trade
FX Cancellation	In case of a cancellation, specifies whether an associated FX should be cancelled.

Participant Details

Field	Description
EP BIC	EP Business Identification Code
EP Name	EP Name
EP's Account at CP	EP's Account No. at CP for the Account of the trade
CP BIC	CP Business Identification Code
CP Name	CP Name
CP's Account at CCASS	CP's Account No. at CCASS for the Account of the trade Note: LC must enter a value for this field when they approve the SSTI. This applies to SSTI only
Counterparty – AM (BIC/Name/LEI)	Counterparty details (AM) including Business Identification Code, Name, and Legal Entity Identifier
Counterparty – LC CCASS ID	Counterparty details (LC) CCASS Participant ID
LC's Account at CCASS	LC's Account No. at CCASS Note: CP must enter a value for this field when they approve the SSTI. This applies to SSTI only
GC's Account at LC	GC Account No. at LC for the Fund of the trade

Classification – Internal

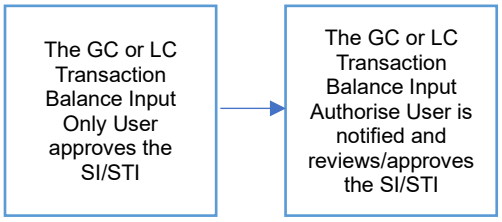
7.3 SI/STI Approvals and Rejections

SIs and STIs can be approved or rejected on the Settlement Instruction Details view. Only users belonging to the same Participant Entity can see the internal approval status of Transaction Balance Input Only User and Transaction Balance Input Authorise User. Other Participants involved in the transaction can only see approvals from the entity level. E.g. if the GC maker has approved but the GC checker not yet approve, other entity (e.g. AM / LC) will not know it (they will not know the internal approval process), until the GC checker also approved, other entity will see a tick under GC column in the SI list view.

GCs, LCs, and CPs are the only participants required to approve an SI/STI. AMs and EPs can only view the Settlement Instruction Details.

Approval or rejections of the SIs and STIs by the GC, LC, or CP do not need to be done in a specific order. For example, an SI does not require a specific buy side participant to approve before the other, and the SI does not require the sell side participant to approve before the buy-side.

7.3.1 Buy Side



7.3.1.1 Content of DTCC's SN containing Investment Manager counterparty data

The fields that store EP's account at CP and relevant information in Synapse contain the investment manager counterparty account information, of the broker itself or another intermediary used, at the level of the CCASS participant servicing the broker's custody chain.
As such, these fields might contain account information received by Synapse from matching platform provider DTCC via SWIFT MT541 and MT543 in:

- BUYR/SELL block, i.e. the broker's account at the level of the CCASS participant servicing the broker.
- DECU/RECU block, i.e. the broker's custodian's account at the level of the CCASS participant servicing the broker.
- DEI1/REI1 block, i.e. the broker-custodian's intermediary's account at the level of the CCASS participant servicing the broker.

To determine the block to be utilized for retrieving the EP's account at CP, Synapse will determine the level of clearing from the settlement notification from DTCC via SWIFT MT541 and MT543 . Below table documents the extraction logic that drives the retrieval of EP's account at CP retrieval from settlement notification and execution sequence starts from 3-Level of Clearing to 1-Level of Clearing.

Classification – Internal

Extraction Logic of EP's account at CP

Level of Clearing	Conditions	Execute the retrieval logic if the condition is true	Examples
3-Level of Clearing	DEL1/REI1, DECU/RECU and BUYR/SELL block are sent via SWIFT MT54x and DEI1/REL1 block is identified	Retrieve 97A block from BUYR/SELL	:95P::REI1//[BIC] :97A::SAFE//**12345**
			:95Q::REI1//[Name and Address] :97A::SAFE//**23456**
2-Level of Clearing	DECU/RECU and BUYR/SELL blocks are sent via SWIFT MT54x and DECU/RECU block is identified	Retrieve 97A block from DECU/RECU	:95P::RECU//[BIC] :97A::SAFE//**12345**
			:95Q::RECU//[Name and Address] :97A::SAFE//**23456**
1-Level of Clearing	BUYR/SELL block is sent via SWIFT MT54x and BUYR/SELL block is identified	Retrieve 97A block from DEI1/REL1	:95P::BUYR//[BIC] :97A::SAFE//**12345**
			:95Q::BUYR//[Name and Address] :97A::SAFE//**23456**

7.3.1.2 Input the Client Account Number and Processing Reference in CCASS SI

After successfully loading the investment manager counterparty data into Synapse, Synapse will display the EP's account at CP, under KEY SETTLEMENT DETAILS tab under Participants section. Synapse users will be able to see the field during the review of settlement details.

Also, the EP's account at CP will be populated in either CCASS field Client Account Number or Processing Reference and sent to CCASS from Synapse. Whether Client Account Number and Processing Reference are populated is depending on whether the broker's CCASS-intermediary's CCASS ID is beginning with "- B" or "- C". The following table shows how these 2 fields will be populated by Synapse in a CCASS SI:

Buy Side instructing Receipt / Sell Side instructing Delivery				
	Broker's CCASS-intermediary's CCASS ID starting with - B		Broker's CCASS-intermediary's CCASS ID starting with - C	
	Population of Client account number	Population of Processing reference	Population of Client account number	Population of Processing reference
Investment Manager's CCASS-intermediary's CCASS ID starting with - C	GC's account at LC	"" + SYN-EP's account at CP	GC's account at LC	"" + SYN-EP's account at CP
• Missing/Empty value found				

Classification – Internal

Display Result in CCASS C3T	N/A, as the value is sourced from Synapse Fund Profile	SYN-	N/A, as the value is sourced from Synapse Fund Profile	SYN-
Buy Side Delivering / Sell Side Receiving				
	Broker's CCASS-intermediary's CCASS ID starting with - B		Broker's CCASS-intermediary's CCASS ID starting with - C	
	Population of Client account number	Population of Processing reference	Population of Client account number	Population of Processing reference
Investment Manager's CCASS-intermediary's CCASS ID starting with - C	GC's account at LC	"" + SYN-EP's account at CP	EP's account at CP	"" + SYN-GC's account at LC
• Missing/Empty value found				
Display Result in CCASS C3T	N/A, as the value is sourced from Synapse Fund Profile	SYN-	<EMPTY>	N/A, as the value is sourced from Synapse Fund Profile.

7.3.1.3 Asset Managers (AM)

AMs have view only rights to SI/STI processing.

7.3.1.4 Global Custodian (GC)

Approval by GC Transaction Balance Input Only User;
Approval by GC Transaction Balance Input Authorise User:

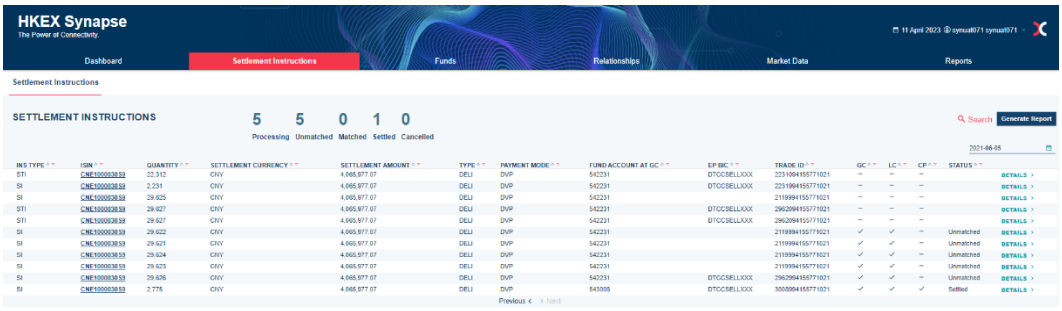
The GC Transaction Balance Input Only User approves the SI/STI. → The GC Transaction Balance Input Authorise User is notified and reviews/approves the SI/STI.

Classification – Internal

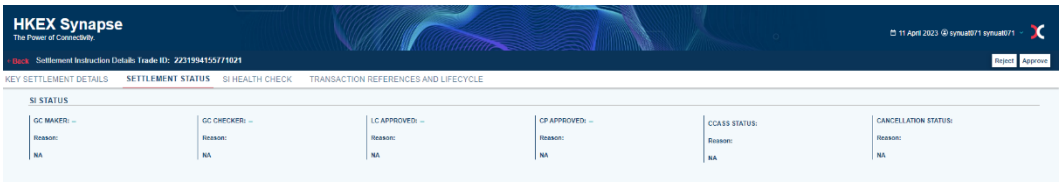
Approval by GC Transaction Balance Input Only User:

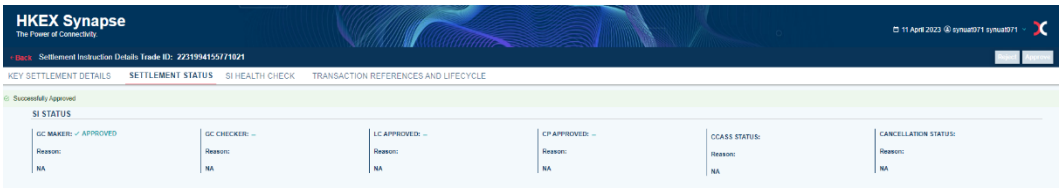
1. The GC Transaction Balance Input Only User logs in to Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

2. The GC Transaction Balance Input Only User then navigates to the Settlement Instructions List view and goes to the Settlement Instructions Details view by clicking “Details”.



3. The GC Transaction Balance Input Only User views the details of an SI/STI and clicks “Approve”.

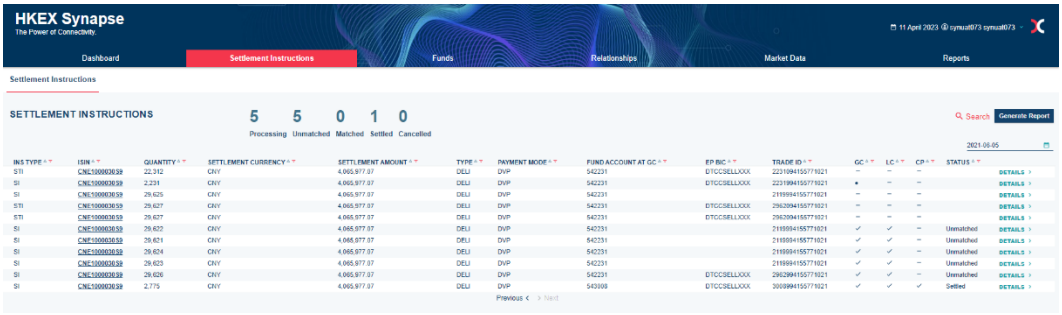




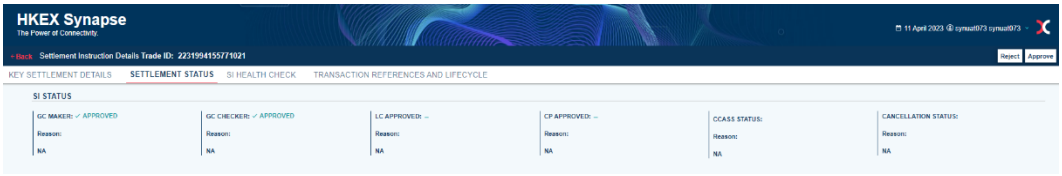
Approval by GC Transaction Balance Input Authorise User:

Classification – Internal

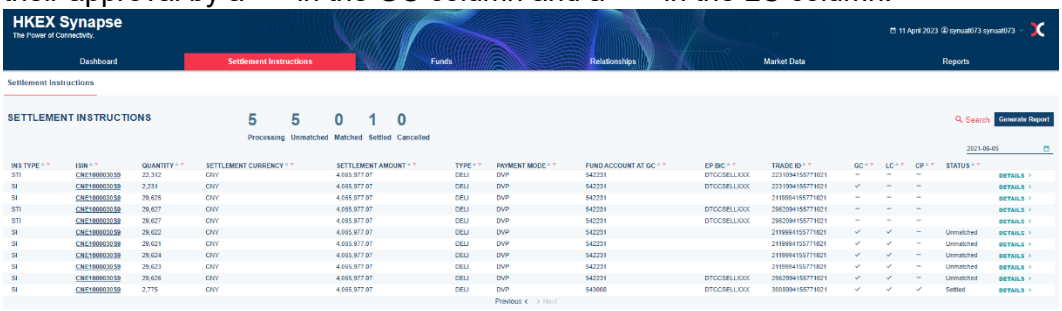
1. On the Settlement Instructions List view, the GC Transaction Balance Input Authorise User is informed that the GC Transaction Balance Input Only User has approved an SI/STI that is pending their approval by a change in icon from '—' to 'O' in the GC column.



The GC Transaction Balance Input Authorise User clicks "Details" to view the details of the settlement instruction and then clicks "Approve".



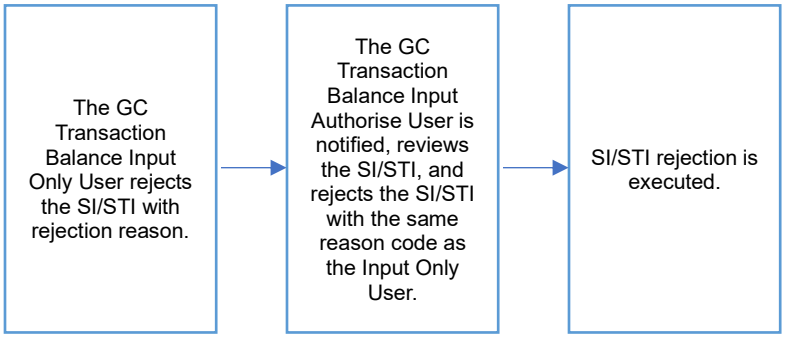
2. If the LC has not yet approved the SI/STI, then the LC Transaction Balance Input Only User is informed on the Settlement Instructions List view that there is an SI/STI pending their approval by a '✓' in the GC column and a '—' in the LC column.



Classification – Internal

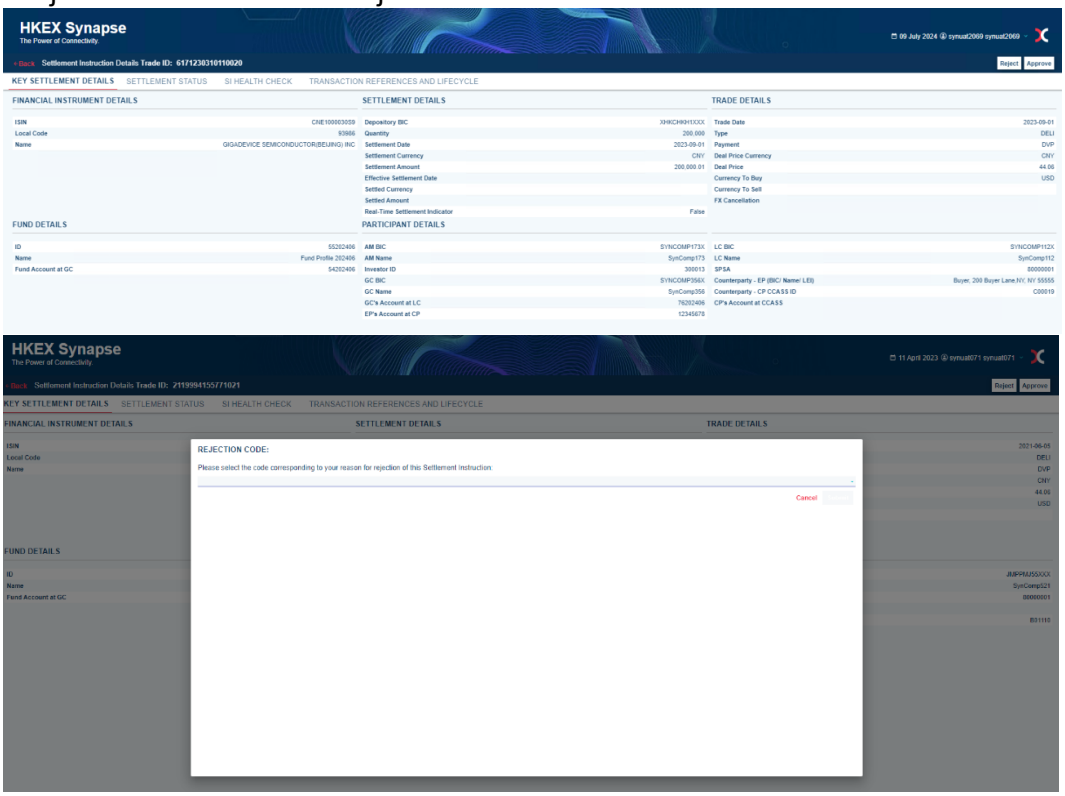
Classification – Internal

Rejection by GC Transaction Balance Input Only User;
Rejection by GC Transaction Balance Input Authorise User (same rejection reason(s) between Input Only User and Input Authorise User):

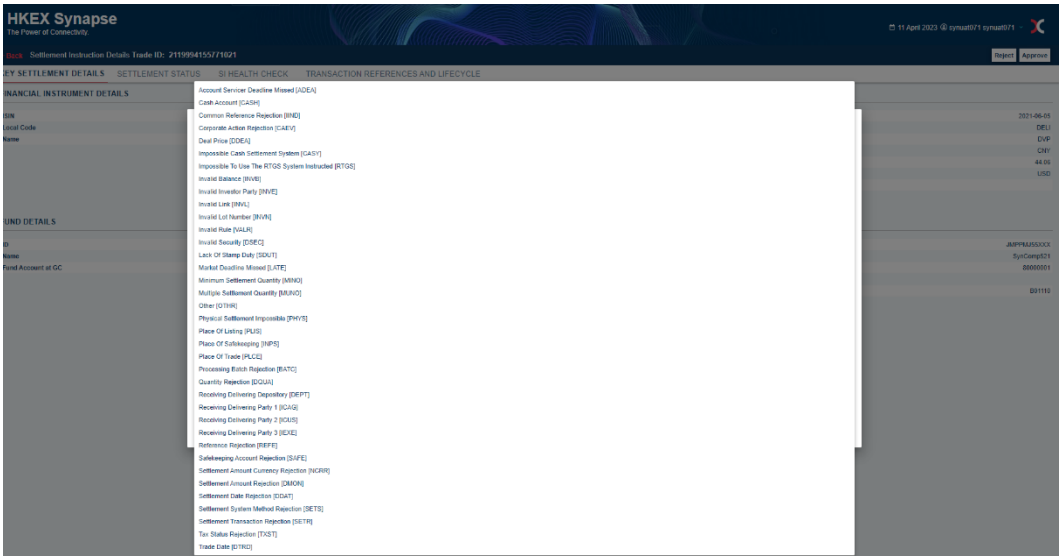


Rejection by GC Transaction Balance Input Only User:

1. The GC Transaction Balance Input Only User views the details of an SI/STI and clicks “Reject” and must select a rejection reason.

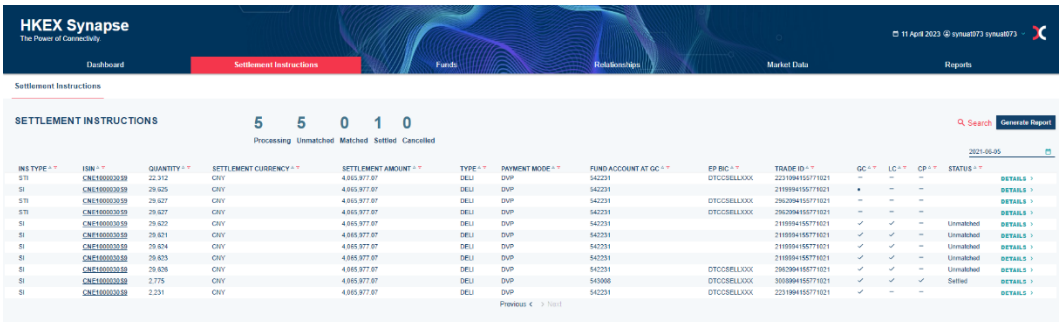


Classification – Internal



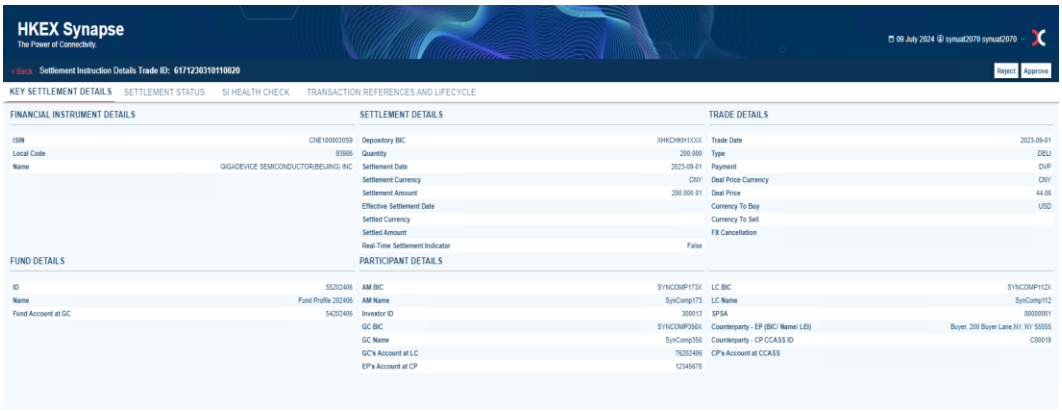
Rejection by GC Transaction Balance Input Authorise User:

1. On the Settlement Instructions List view, the GC Transaction Balance Input Authorise User is informed that the GC Transaction Balance Input Only User has rejected an SI/STI that is pending their approval by a change in icon from '—' to 'O' in the GC column.

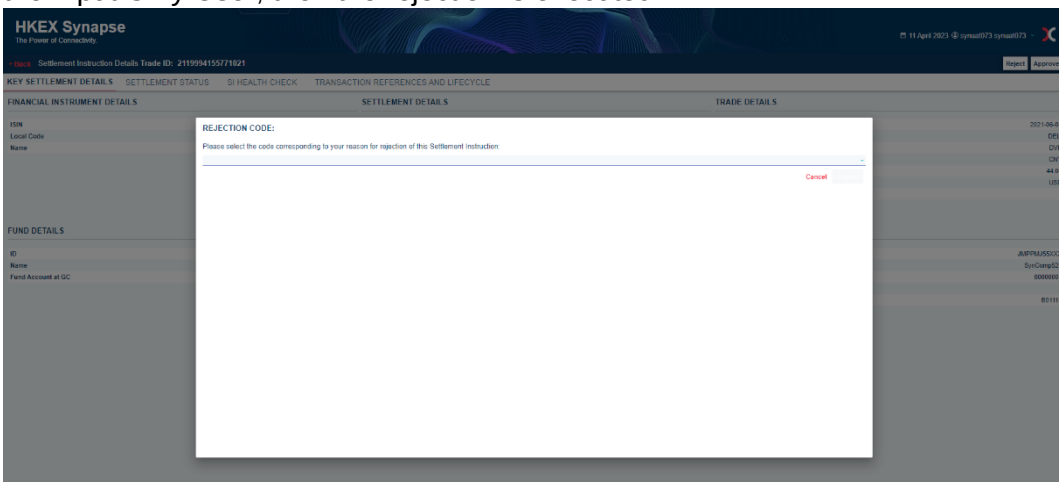


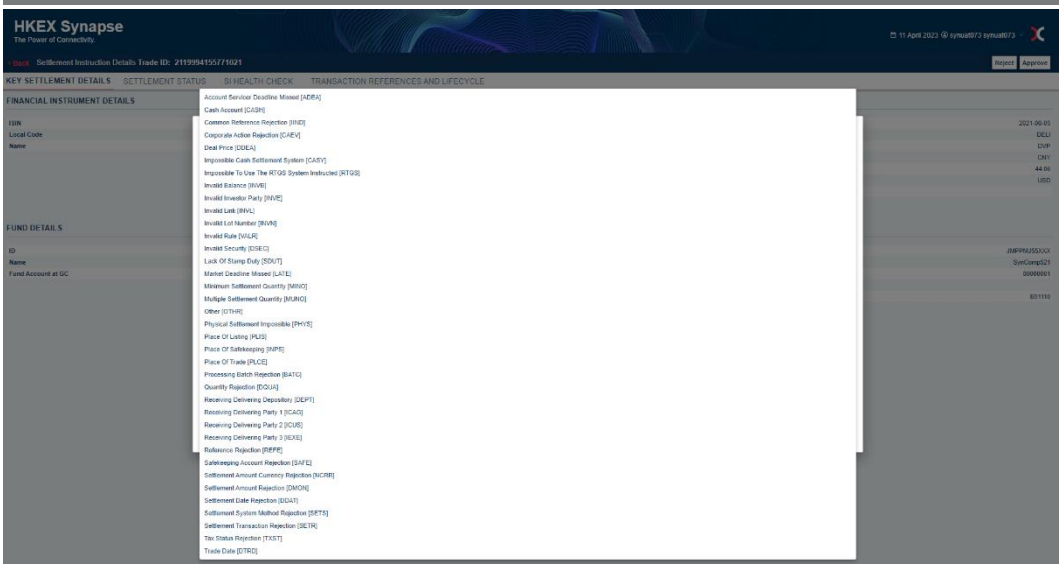
2. The GC Transaction Balance Input Authorise User clicks "Details" to view the details of the settlement instruction and then clicks "Reject" and must select a rejection reason.

Classification – Internal

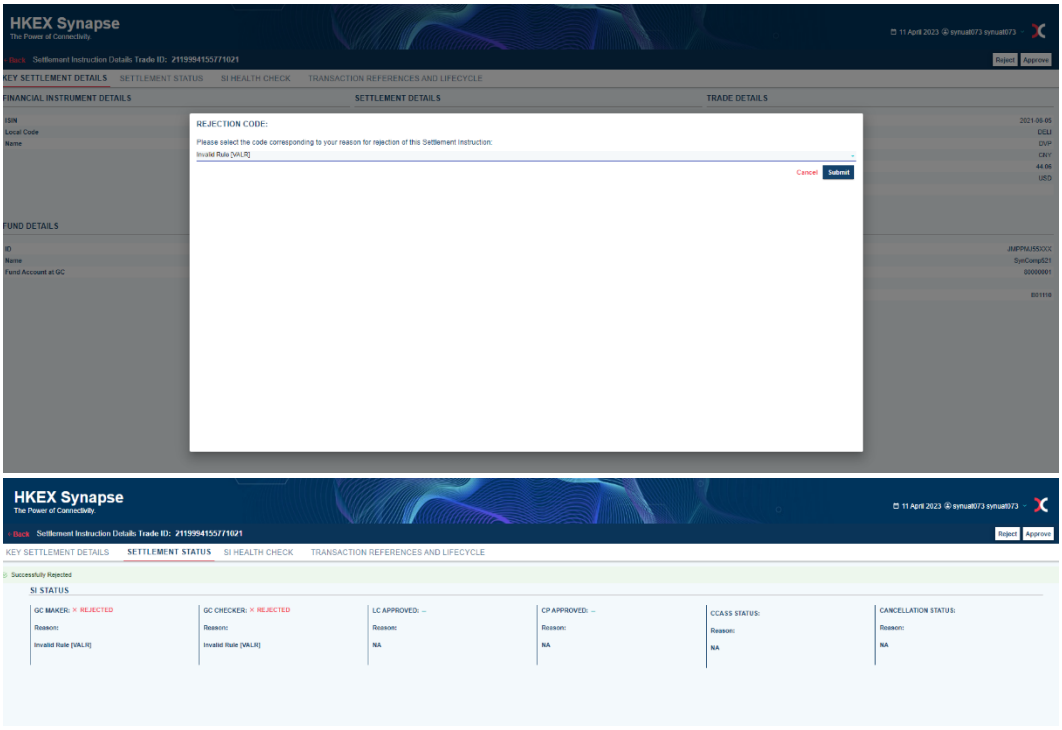


3. The GC Transaction Balance Input Authorise User selects the same rejection reason as the Input Only User, then the rejection is executed.

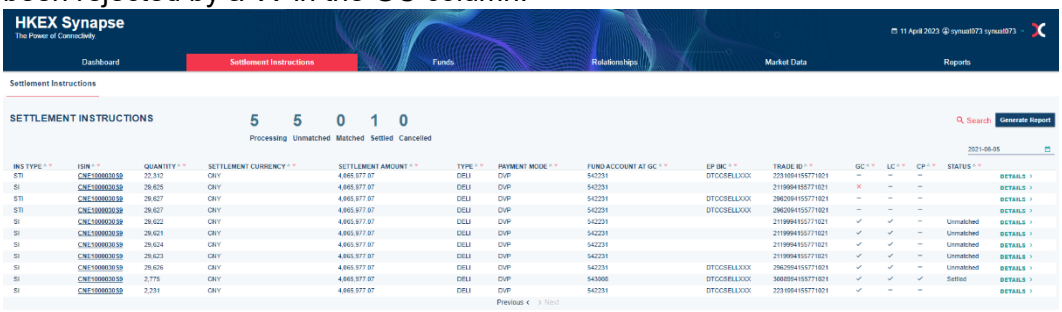




Classification – Internal



4. If the LC has not yet approved the SI/STI, then the LC Transaction Balance Input Only User is informed on the Settlement Instructions List view that there is an SI/STI that has been rejected by a ‘X’ in the GC column.

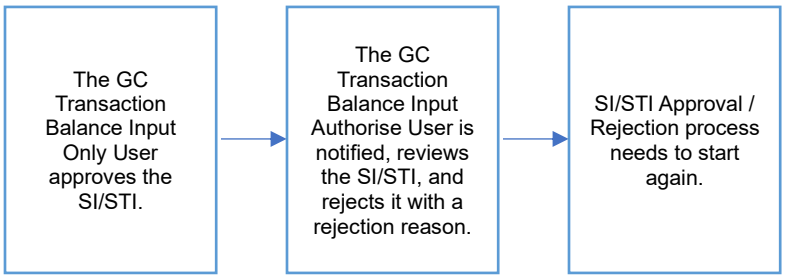


5. This settlement instruction can be re-approved by GC Transaction Balance Input Only and Input Authoriser Users again once the issues have been resolved. The re-approval process is the same as approval.

6. The settlement instruction can also be re-rejected by GC Transaction Balance Input Only and Input Authoriser Users again if the rejection reason needs to be updated. The re-rejection process is the same as rejection.

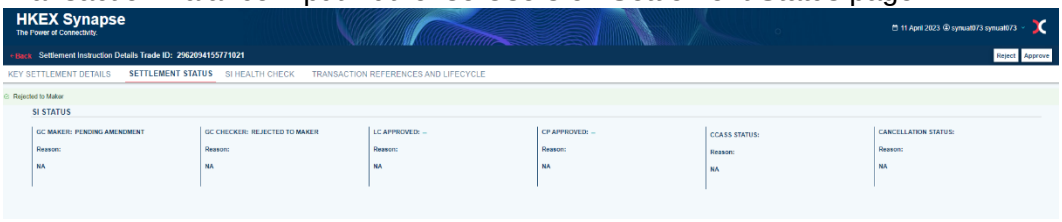
Classification – Internal

Approval by GC Transaction Balance Input Only User;
Rejection by GC Transaction Balance Input Authorise User:

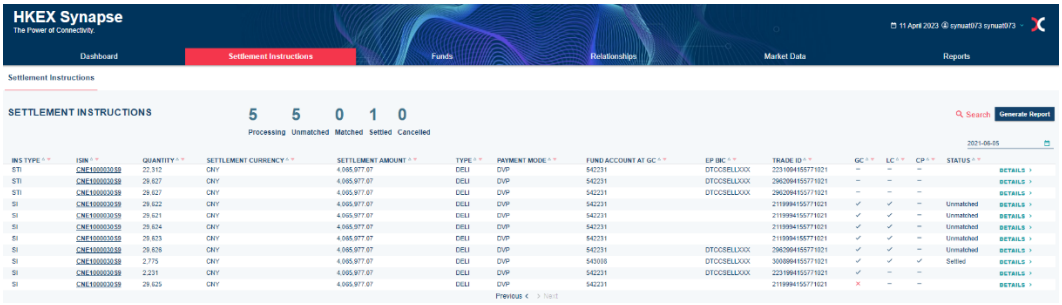


1. Since the decisions between the GC Transaction Balance Input Only and the GC Transaction Balance Input Authorise Users are different, the process will effectively start over.

2. GC Transaction Balance Input Only User can see the Approval is rejected by GC Transaction Balance Input Authorise Users on Settlement Status page.



3. On SI List View, the icon will change from ‘O’ to ‘-’ under GC column as the process needs to start again from GC Transaction Balance Input Only User. The GC Transaction Balance Input Only User can then re-approve or re-reject the rejected settlement instruction.
   The re-approval process is the same as approval, while the re-reject process is the same as rejection.



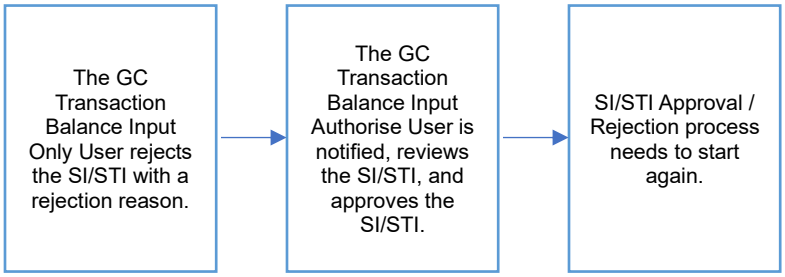
Rejection by GC Transaction Balance Input Only User;
Rejection by GC Transaction Balance Input Authorise User (different rejection reason(s) between Input Only User and Input Authorise User):

1. On SI List View, the icon will change from ‘O’ to ‘-’ under GC column as the process needs to start again from GC Transaction Balance Input Only User. The GC Transaction

Classification – Internal

Balance Input Only User can then re-approve or re-reject the rejected settlement instruction.
The re-approval process is the same as approval, while the re-reject process is the same as rejection.

Rejection by GC Transaction Balance Input Only User; Approval by GC Transaction Balance Input Authorise User:



1. Since the decisions between the GC Transaction Balance Input Only and the GC Transaction Balance Input Authorise Users are different, the process will effectively start over.

2. GC Transaction Balance Input Only User can see the Rejection is rejected by GC Transaction Balance Input Authorise Users on Settlement Status page.

3. On SI List View, the icon will change from ‘O’ to ‘-’ under GC column as the process needs to start again from GC Transaction Balance Input Only User. The GC Transaction Balance Input Only User can then re-approve or re-reject the rejected settlement instruction.
The re-approval process is the same as approval, while the re-reject process is the same as rejection.

Classification – Internal

Health check findings in SI Health Check tab

Background

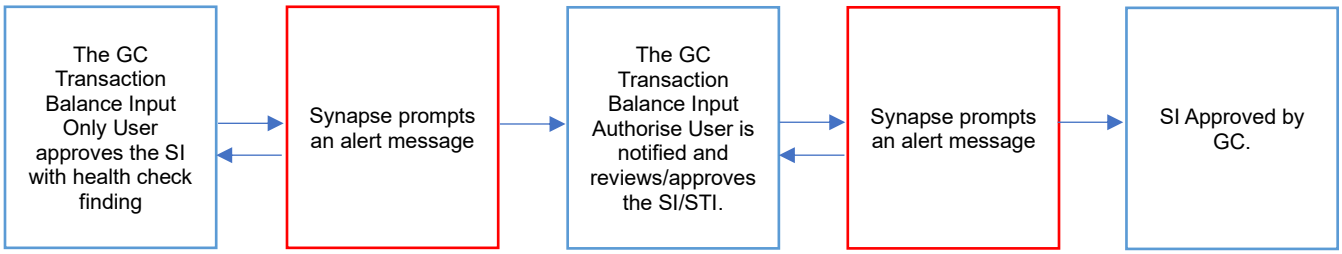
To reduce the risk of settlement failure, the health check provides additional business validation on the incoming settlement instruction from DTCC when Synapse users starts the approval workflow. Regardless of failure reasons, Synapse will trigger an alert message when the reason is detected.

Workflow and Process

For a buy-side instruction, an alert message will be prompted in the approval workflow to both GC Transaction Balance Input Only User and GC Transaction Balance Input Authorise User when failure reason(s) is/are displayed in the SI Health Check tab.

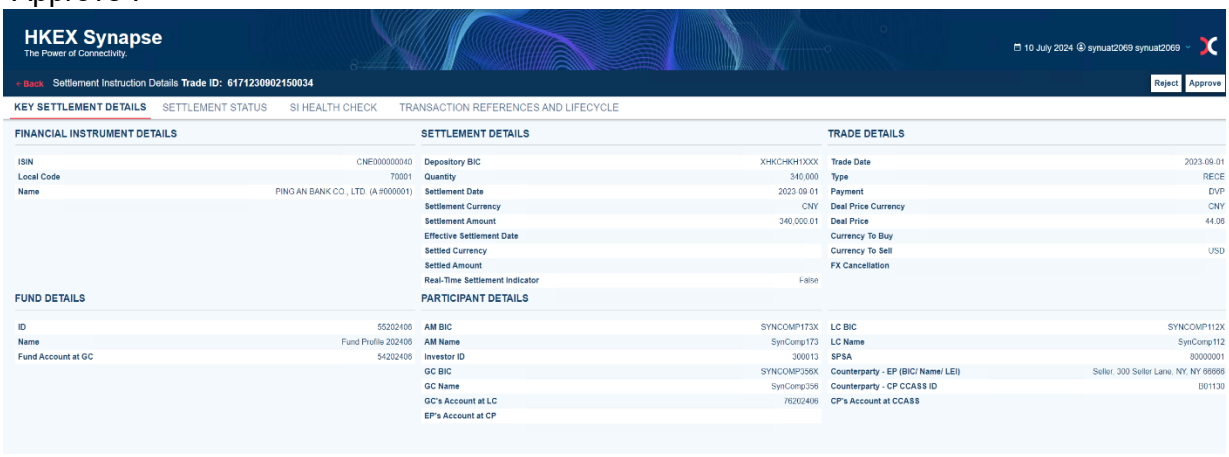
Recommendation

Refer to the chapter 7.6 for business validations of settlement instruction and recommendations on resolving health check findings.

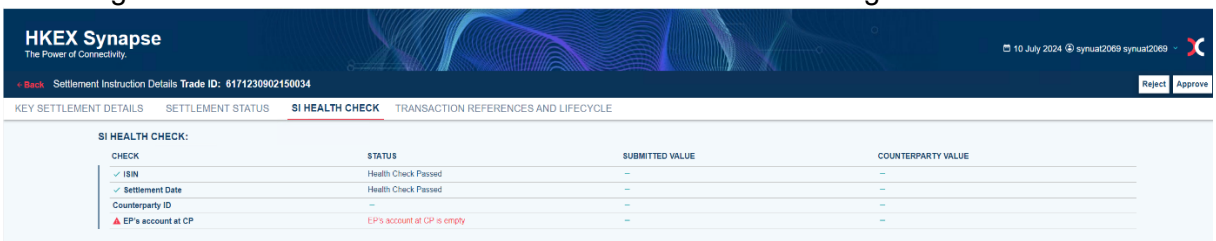


Classification – Internal

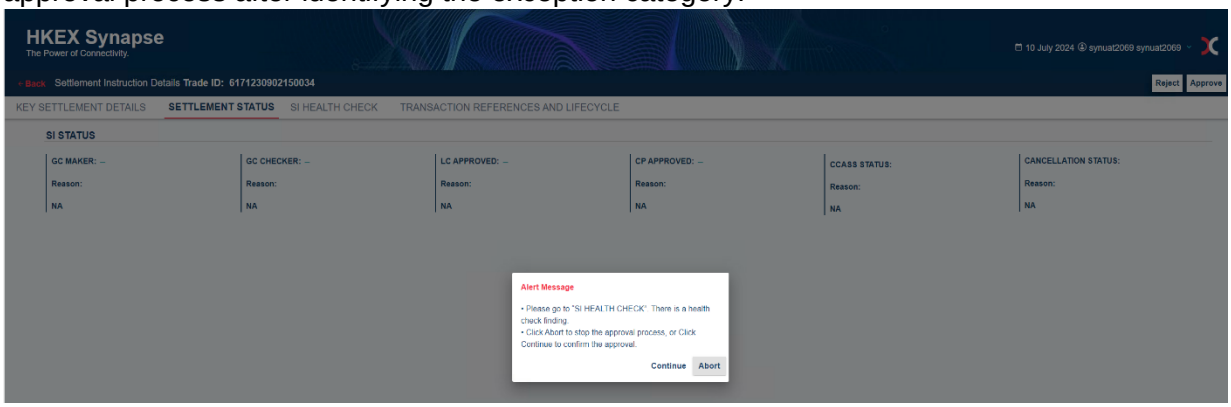
1. The GC Transaction Balance Input Only User views the details of an SI/STI and clicks “Approve”.



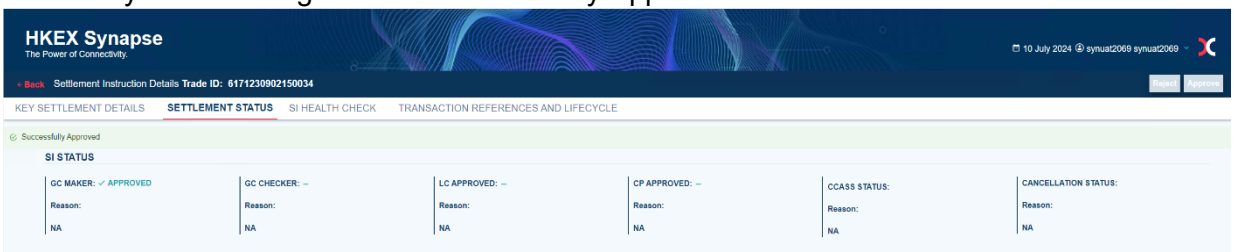
2. If a settlement instruction fails the health check, an alert message will be prompted up “Please go to “SI HEALTH CHECK”. There is a health check finding.”.



3. The GC Transaction Balance Input Only User could either click **Continue** to confirm the approval or **Abort** to stop the approval process and check the exception found in the tab “SI Health Check”. The GC Transaction Balance Input Only User can restart the approval process after identifying the exception category.



4. The GC Transaction Balance Input Only User clicked **Continue** to confirm the approval and the system message shows “Successfully Approved”.

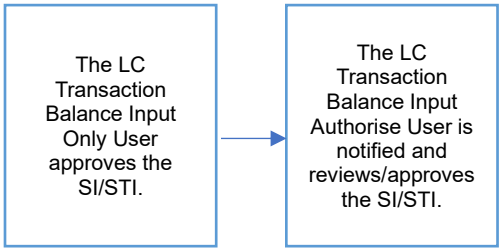


Classification – Internal

5. The same approval process will be applied to the GC Transaction Balance Input Authorise User.

7.3.1.5 Local Custodian (LC)

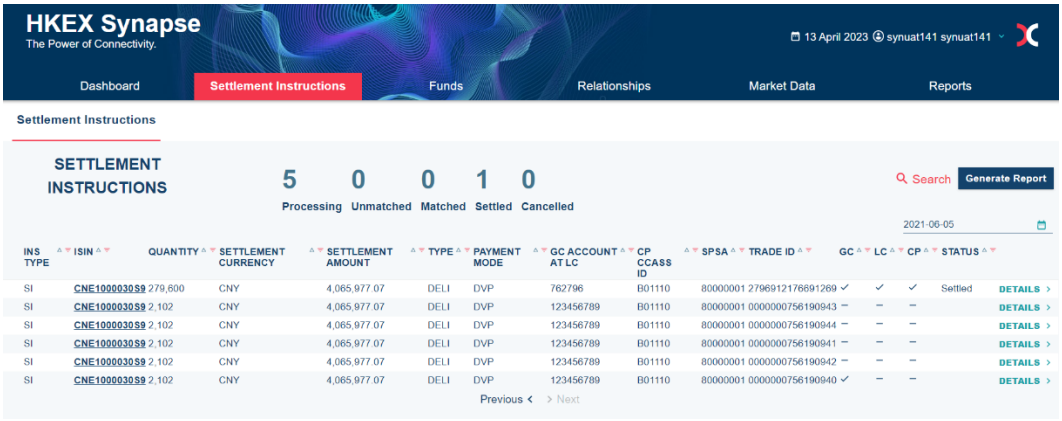
Approval by LC Transaction Balance Input Only User; Approval by LC Transaction Balance Input Authorise User



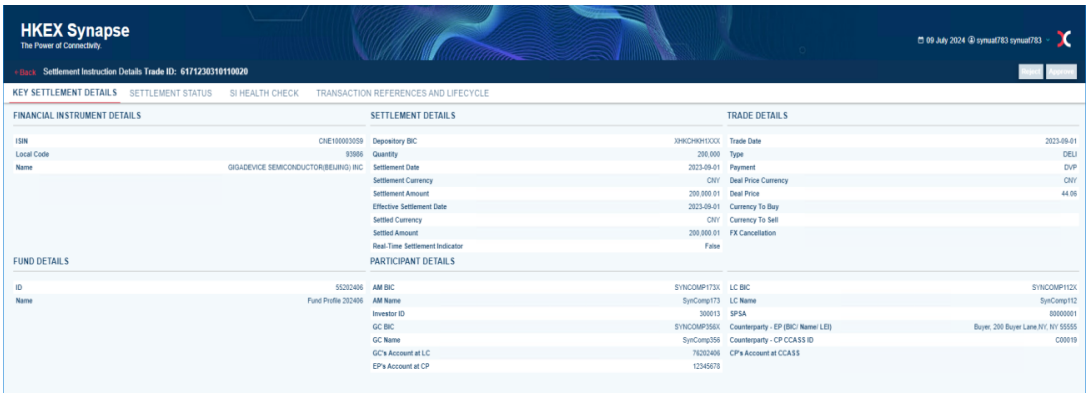
Approval by LC Transaction Balance Input Only User:

1. The LC Transaction Balance Input Only User logs in to Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

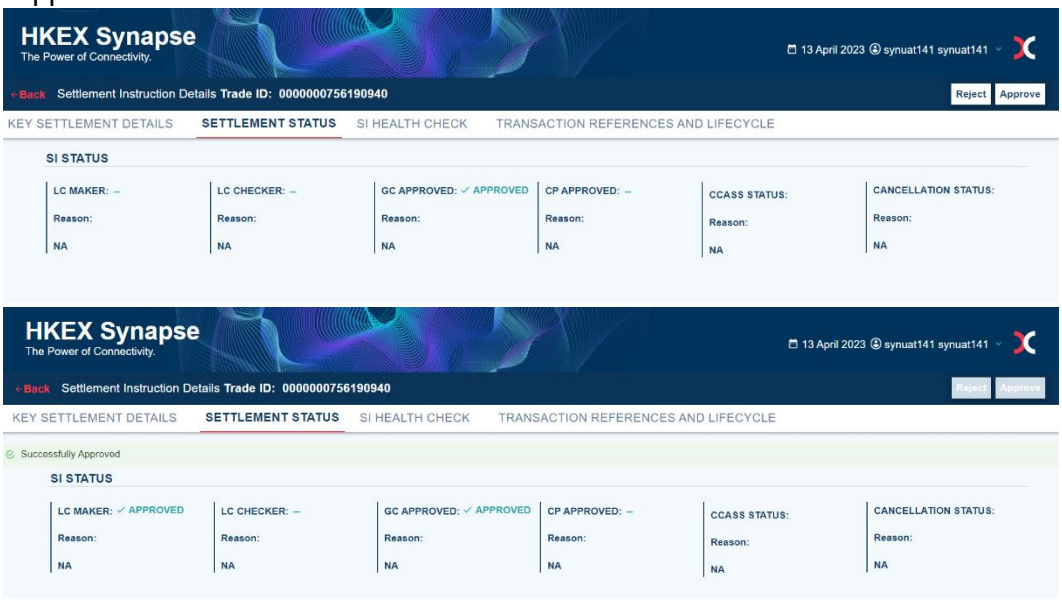
2. The LC Transaction Balance Input Only User then navigates to the Settlement Instructions List view and goes to the Settlement Instructions Details view by clicking “Details”.



Classification – Internal



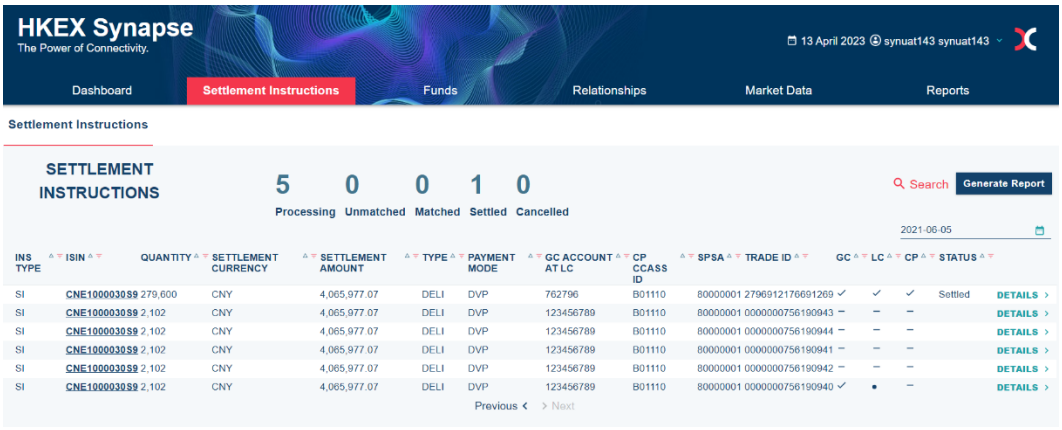
3. The LC Transaction Balance Input Only User views the details of an SI/STI and clicks “Approve”.



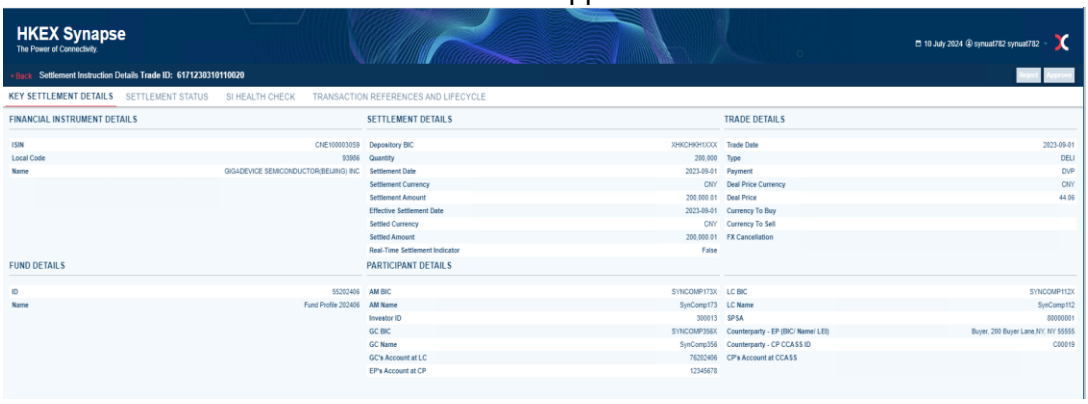
Approval by LC Transaction Balance Input Authorise User:

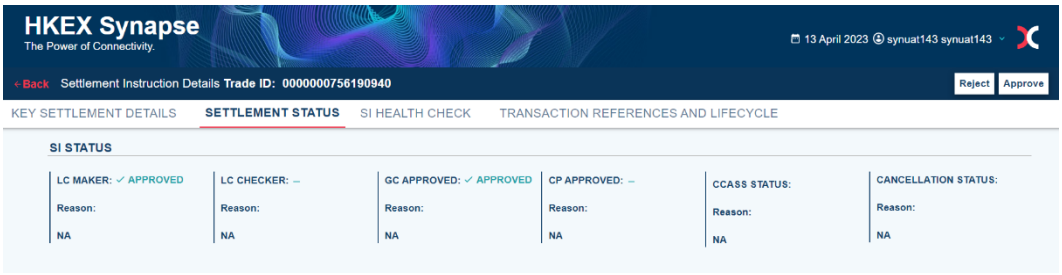
1. On the Settlement Instructions List view, the LC Transaction Balance Input Authorise User is informed that the LC Transaction Balance Input Only User has approved an SI/STI that is pending their approval by a change in icon from ‘—’ to ‘O’ in the LC column.

Classification – Internal



2. The LC Transaction Balance Input Authorise User clicks “Details” to view the details of the settlement instruction and then clicks “Approve”.

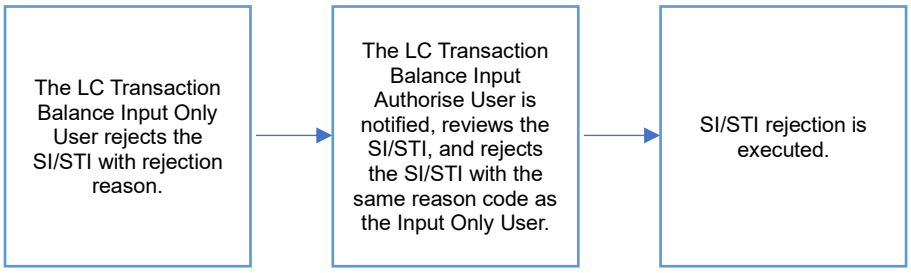




3. If the GC has not yet approved the SI/STI, then the GC Transaction Balance Input Only User is informed on the Settlement Instructions List view that there is an SI/STI pending their approval by a ‘✓’ in the LC column and a ‘—’ in the GC column.

Classification – Internal

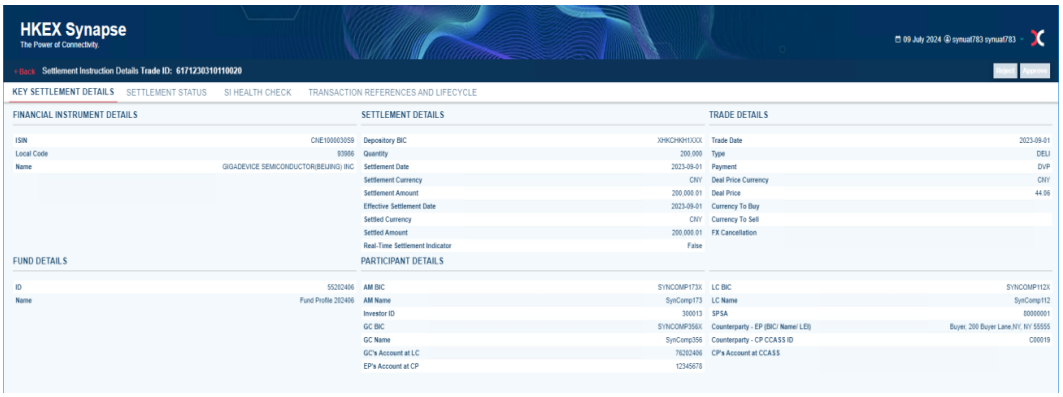
Rejection by LC Transaction Balance Input Only User; Rejection by LC Transaction Balance Input Authorise User (same rejection reason(s) between Input Only User and Input Authorise User):



Rejection by LC Transaction Balance Input Only User:

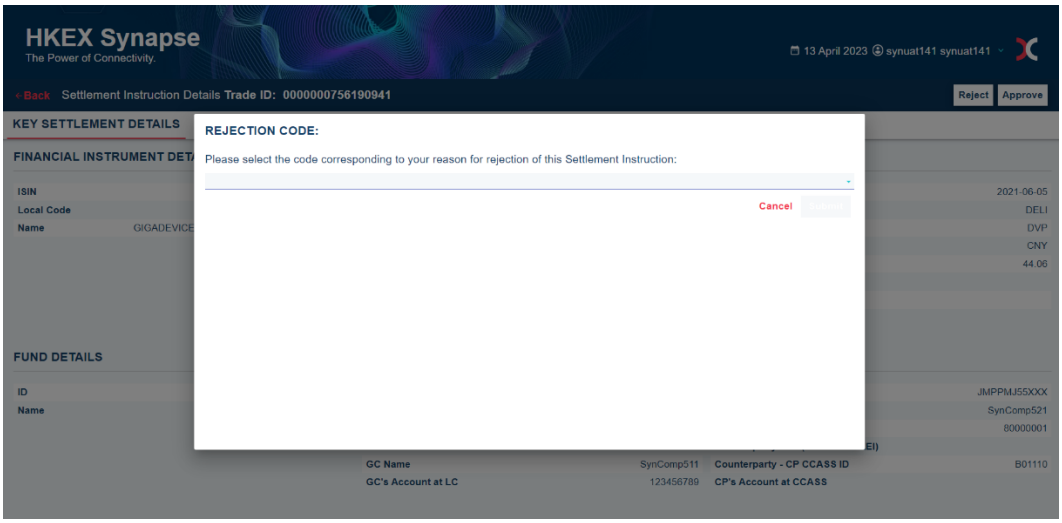
1. The LC Transaction Balance Input Only User logs in to Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

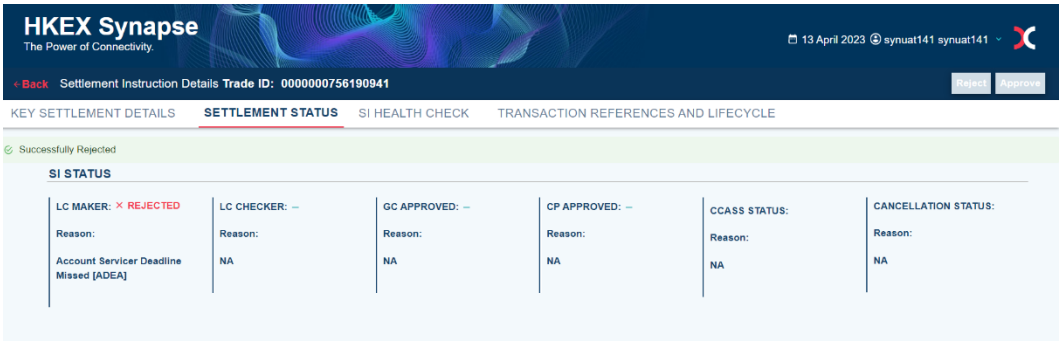
2. The LC Transaction Balance Input Only User then navigates to the Settlement Instructions List view and goes to the Settlement Instructions Details view by clicking “Details”.



3. The LC Transaction Balance Input Only User views the details of an SI/STI and clicks “Reject” and must select a rejection reason.

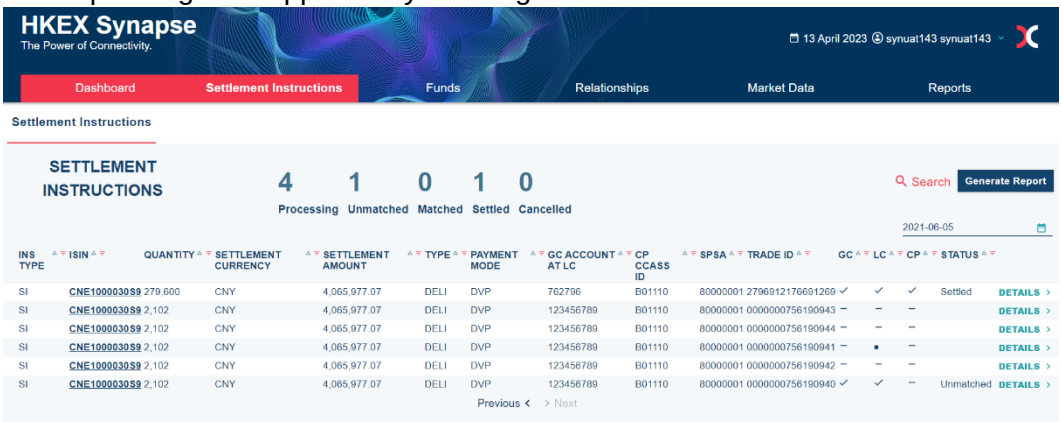
Classification – Internal





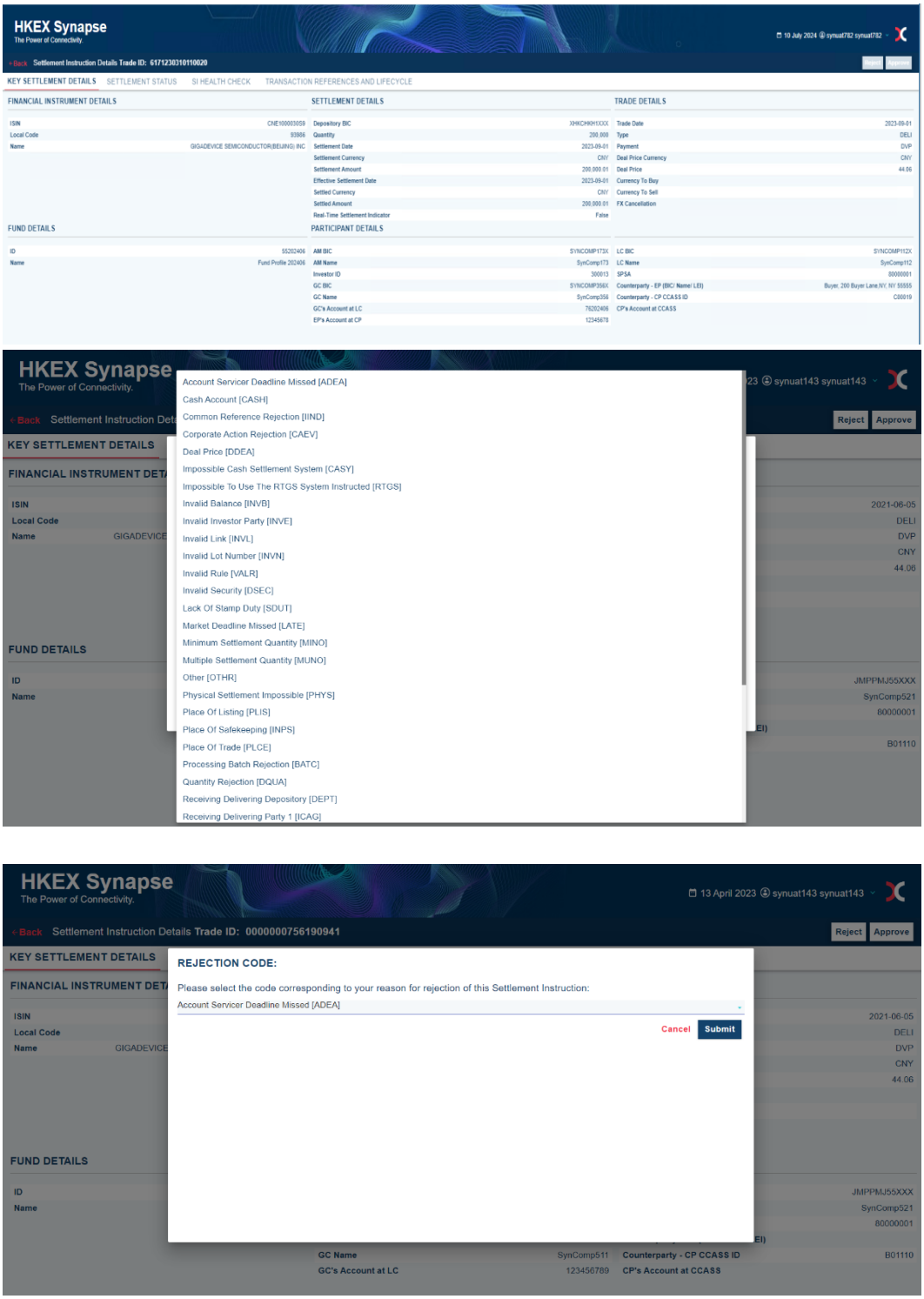
Rejection by LC Transaction Balance Input Authorise User:

1. On the Settlement Instructions List view, the LC Transaction Balance Input Authorise User is informed that the LC Transaction Balance Input Only User has rejected an SI/STI that is pending their approval by a change in icon from '—' to 'O' in the LC column.



2. The LC Transaction Balance Input Authorise User clicks "Details" to view the details of the settlement instruction and then clicks "Reject" and must select a rejection reason.

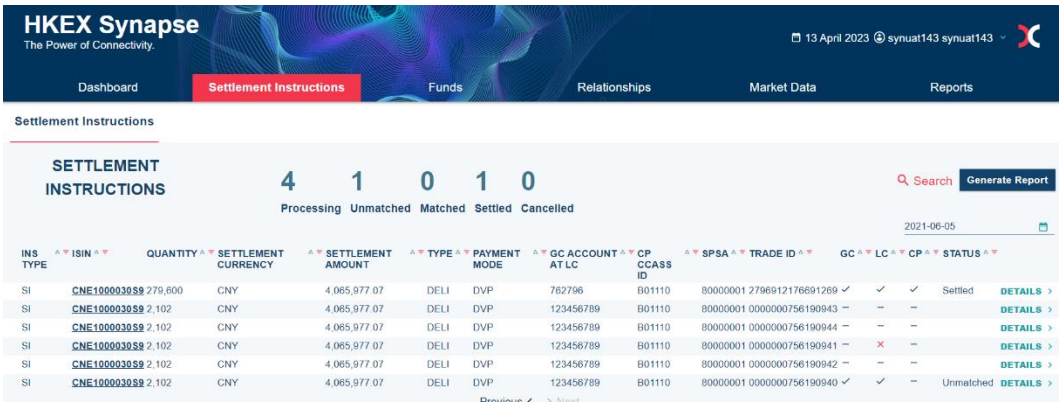
Classification – Internal



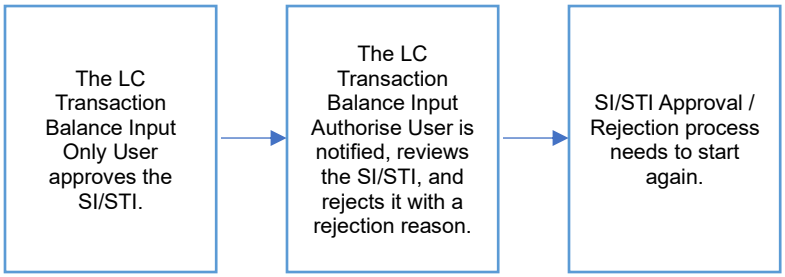
3. Since LC Transaction Balance Input Authorise User selects the same rejection reason as the Input Only User, then the rejection is executed.

Classification – Internal

4. If the GC has not yet approved the SI/STI, then the GC Transaction Balance Input Only User is informed on the Settlement Instructions List view that there is an SI/STI that has been rejected by a ‘X’ in the LC column.
   This settlement instruction can be re-approved by LC Transaction Balance Input Only and Input Authorise Users again once the issues have been resolved. The re-approval process is the same as approval.
   The settlement instruction can also be re-rejected by LC Transaction Balance Input Only and Input Authoriser Users again if the rejection reason needs to be updated. The re-rejection process is the same as rejection.



Approval by LC Transaction Balance Input Only User; Rejection by LC Transaction Balance Input Authorise User):



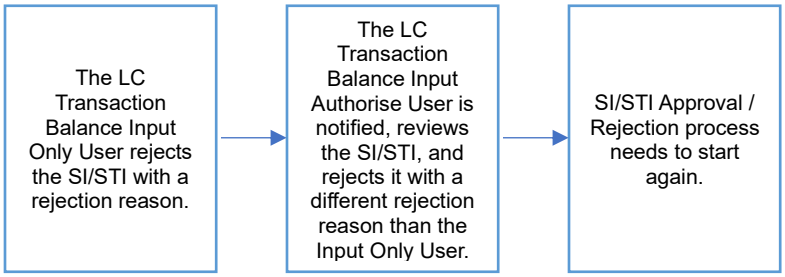
Classification – Internal

1. Since the decisions between the LC Transaction Balance Input Only and the LC Transaction Balance Input Authorise Users are different, the process will effectively start over.

2. LC Transaction Balance Input Only User can see the Approval is rejected by LC Transaction Balance Input Authorise Users on Settlement Status page.

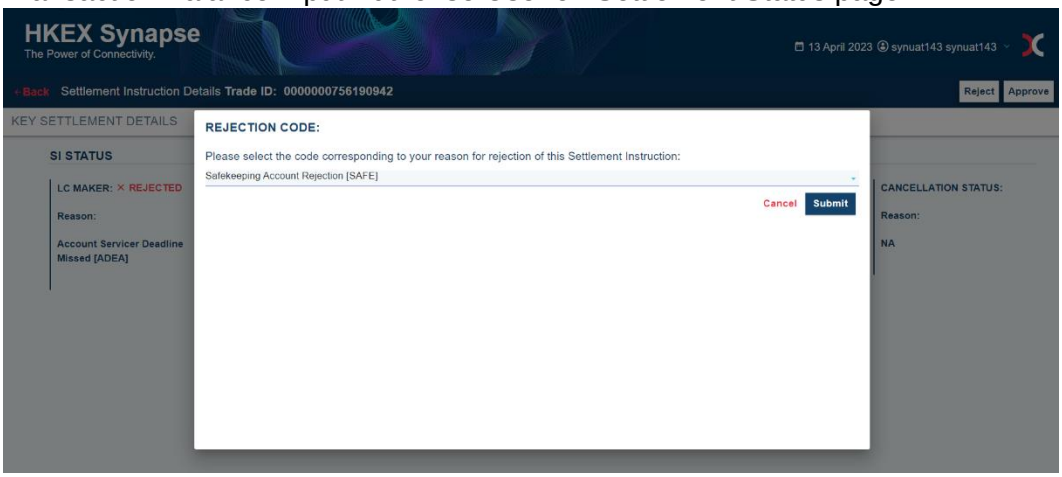
3. On SI List View, the icon will change from 'O' to '-' under LC column as the process needs to start again from LC Transaction Balance Input Only User. This settlement instruction can then be re-approved or re-reject by LC Transaction Balance Input Only and Input Authorise Users.
   The re-approval process is the same as approval, while the re-rejection process is the same as rejection.

Rejection by LC Transaction Balance Input Only User; Rejection by LC Transaction Balance Input Authorise User (different rejection reason(s) between Input Only User and Input Authorise User):



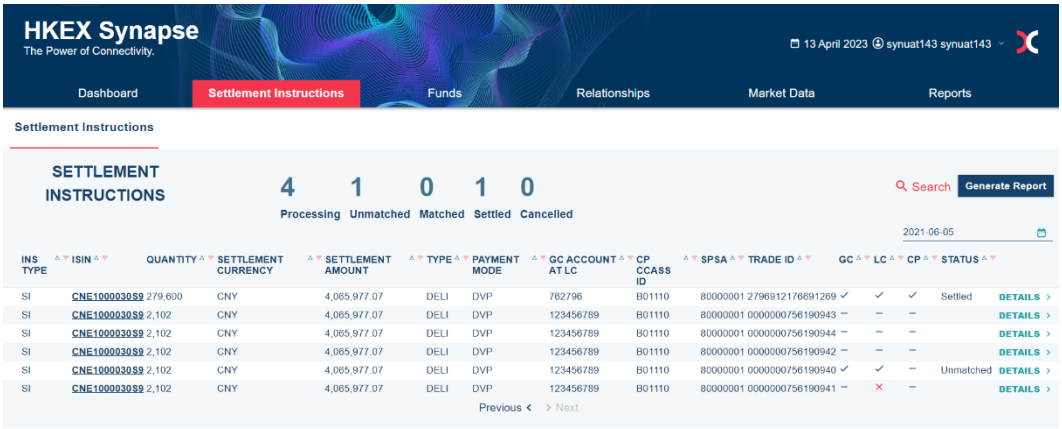
1. Since the LC Transaction Balance Input Authorise User selects a different rejection reason than the Input Only User, the rejection is not executed, and the SI/STI process effectively starts over.

2. LC Transaction Balance Input Only User can see the Rejection is rejected by LC Transaction Balance Input Authorise User on Settlement Status page.

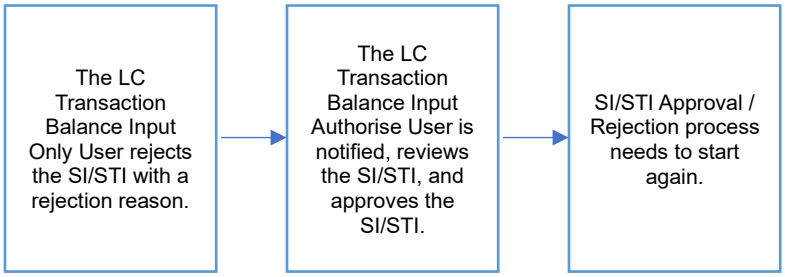


Classification – Internal

3. On SI List View, the icon will change from 'O' to '-' under LC column as the process needs to start again from LC Transaction Balance Input Only User. This settlement instruction can then be re-approved or re-reject by LC Transaction Balance Input Only and Input Authorise Users.
   The re-approval process is the same as approval, while the re-rejection process is the same as rejection.



Rejection by LC Transaction Balance Input Only User; Approval by LC Transaction Balance Input Authorise User):



1. Since the decisions between the LC Transaction Balance Input Only and the LC Transaction Balance Input Authorise Users are different, the process will effectively start over.

2. LC Transaction Balance Input Only User can see the Rejection is rejected by LC Transaction Balance Input Authorise Users on Settlement Status page.

Classification – Internal

3. On SI List View, the icon will change from ‘O’ to ‘-’ under LC column as the process needs to start again from LC Transaction Balance Input Only User. This settlement instruction can then be re-approved or re-reject by LC Transaction Balance Input Only and Input Authorise Users.
   The re-approval process is the same as approval, while the re-rejection process is the same as rejection.

Health check findings in SI Health Check tab

Background

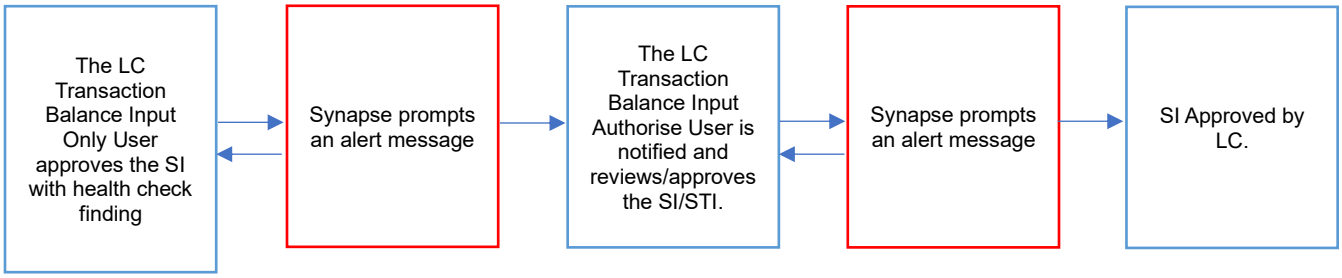
To reduce the risk of settlement failure, the health check provides additional business validation on the incoming settlement instruction from DTCC when Synapse users starts the approval workflow. Regardless of failure reasons, Synapse will trigger an alert message when the reason is detected.

Workflow and Process

For buy-side instruction, an alert message will be prompted up in the approval workflow to both LC Transaction Balance Input Only User and LC Transaction Balance Input Authorise User when failure reason(s) is/are displayed in the SI Health Check tab.

Recommendation

Refer to the chapter 7.6 for business validations of settlement instruction and recommendations on resolving health check findings.

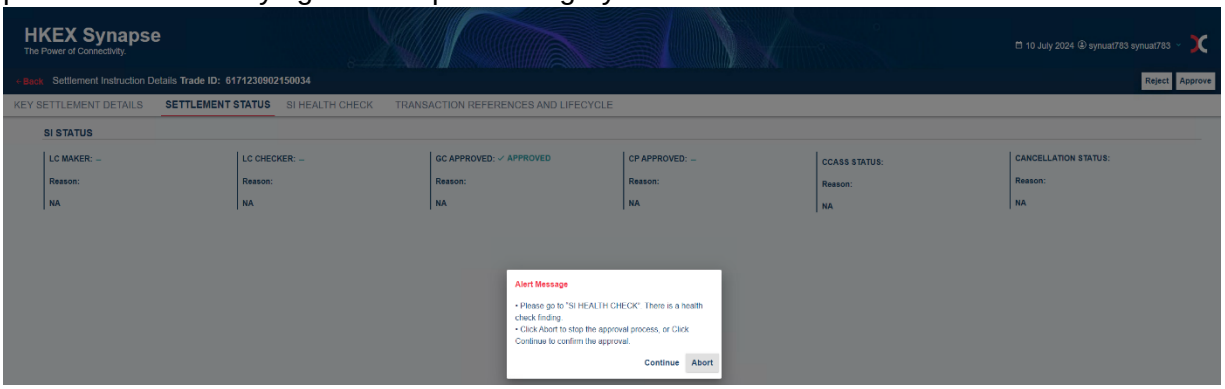


1. The LC Transaction Balance Input Only User views the details of an SI/STI and clicks “Approve”.

Classification – Internal

2. If a settlement instruction fails the health check, an alert message will be prompted up “Please go to “SI HEALTH CHECK”. There is a health check finding.”.

3. The LC Transaction Balance Input Only User could either click **Continue** to confirm the approval or **Abort** to stop the approval process and check the exception found in the tab “SI Health Check”. The LC Transaction Balance Input Only User can restart the approval process after identifying the exception category.



4. The LC Transaction Balance Input Only User clicked **Continue** to confirm the approval and the system message shows “Successfully Approved”.

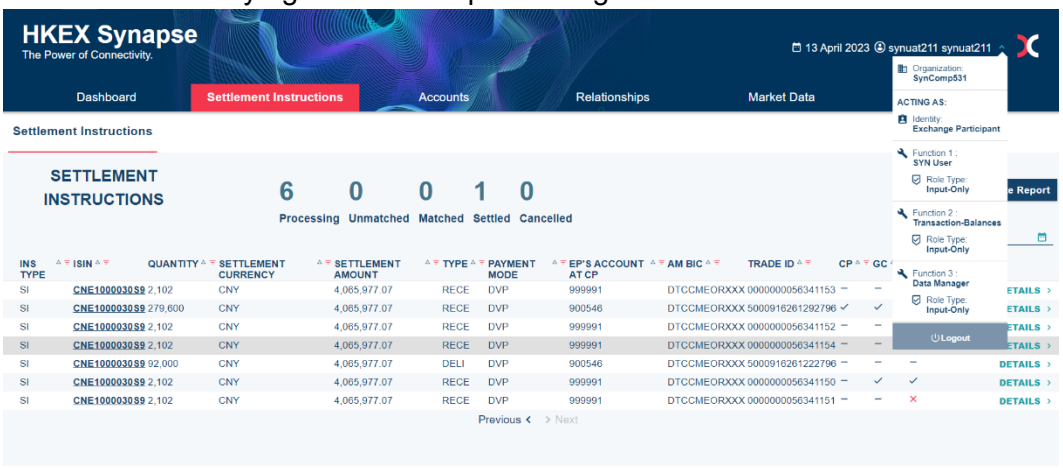
5. The same approval process will be applied to the LC Transaction Balance Input Authorise User.

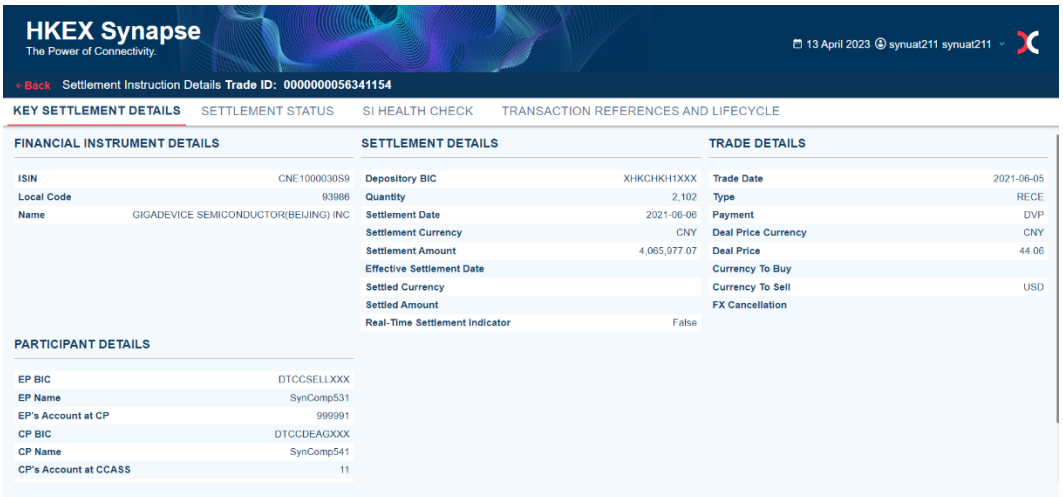
Classification – Internal

7.3.2 Sell Side

7.3.2.1 Exchange Participant (EP)

EPs have view only rights to SI/STI processing.

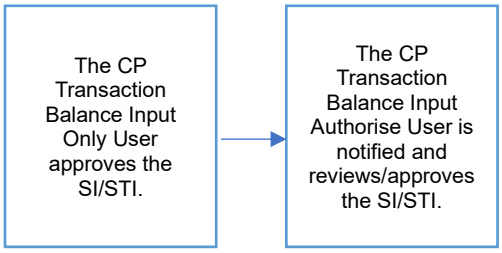




Classification – Internal

7.3.2.2 Clearing Participant (CP)

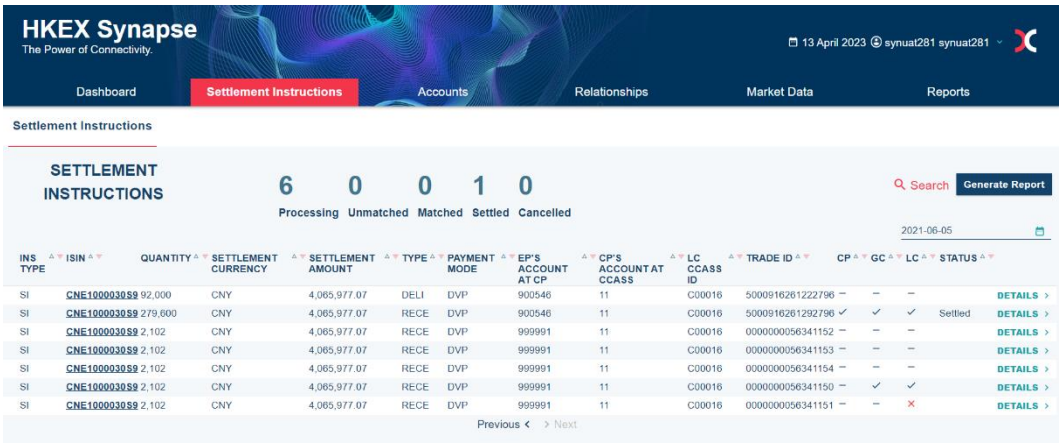
Approval by CP Transaction Balance Input Only User; Approval by CP Transaction Balance Input Authorise User:



Approval by CP Transaction Balance Input Only User:

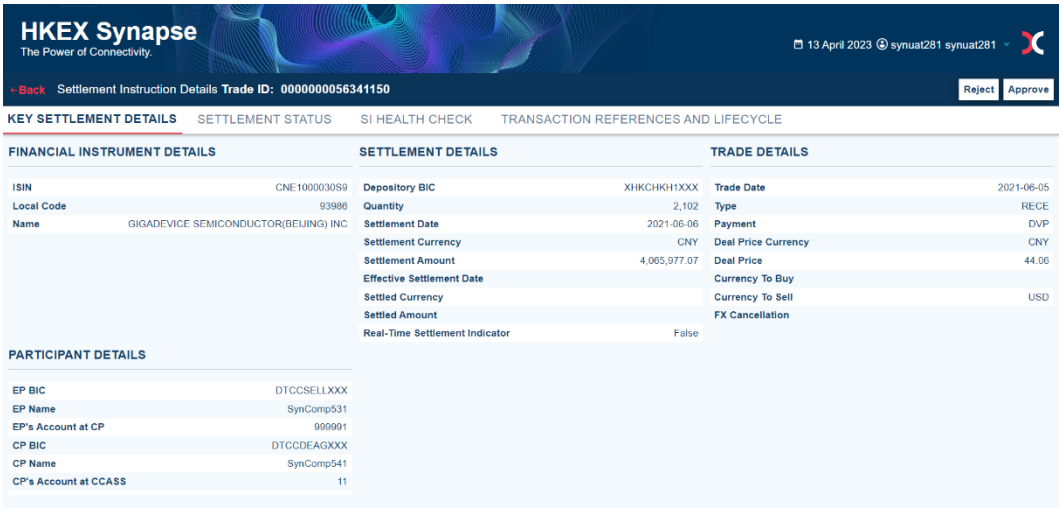
1. The CP Transaction Balance Input Only User logs in to Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

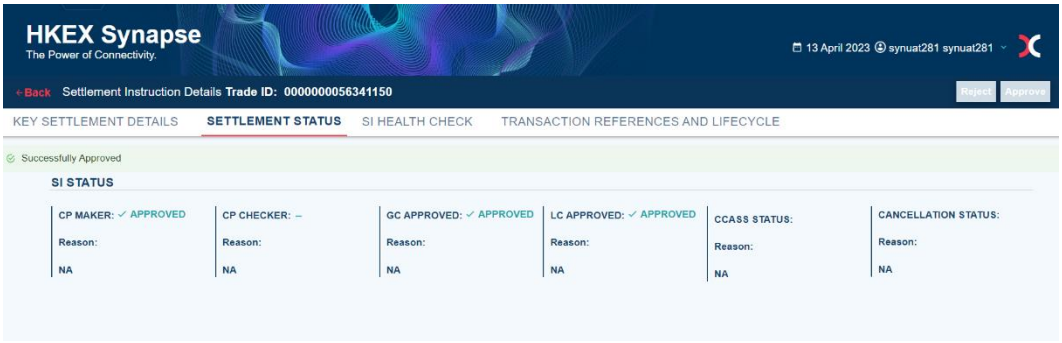
2. The CP Transaction Balance Input Only User then navigates to the Settlement Instructions List view and goes to the Settlement Instructions Details view by clicking “Details”.



3. The CP Transaction Balance Input Only User views the details of an SI/STI and clicks “Approve”.

Classification – Internal

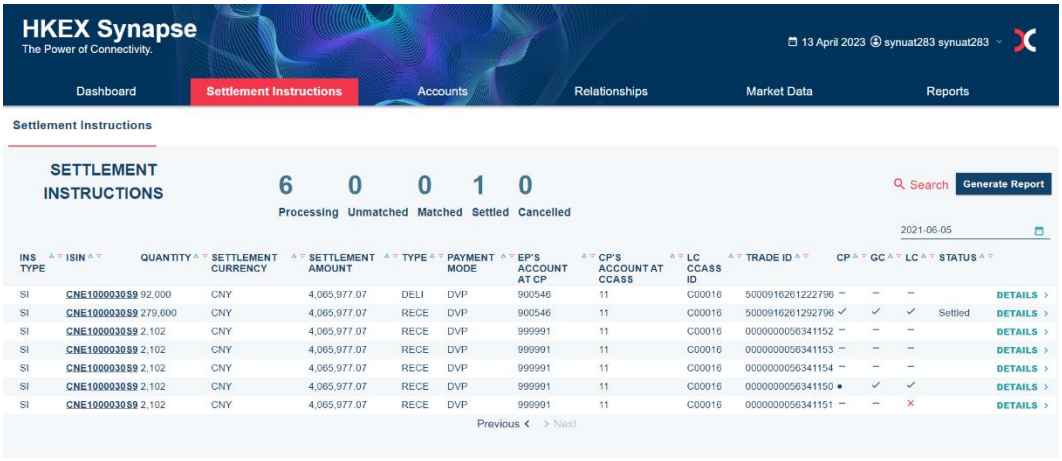




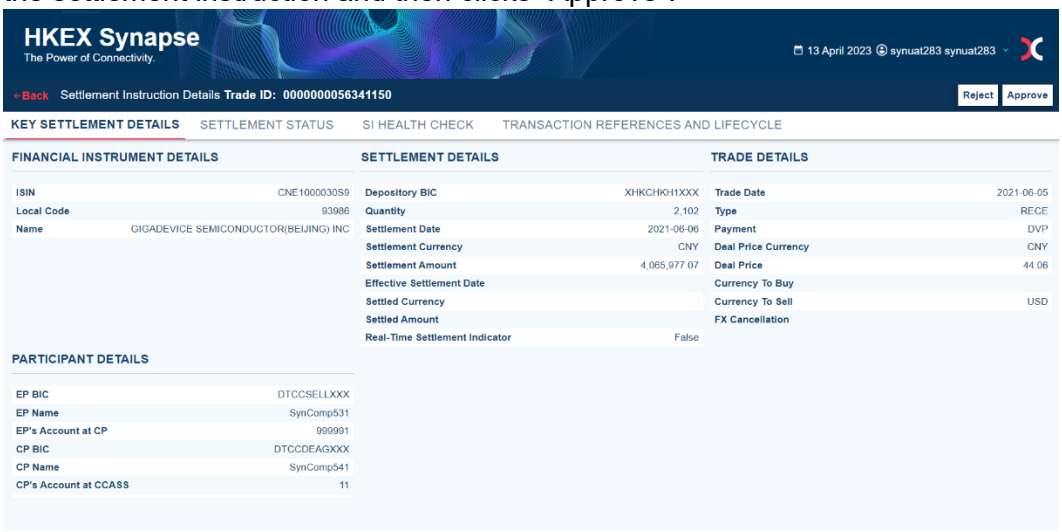
Approval by CP Transaction Balance Input Authorise User:

1. On the Settlement Instructions List view, The CP Transaction Balance Input Authorise User is informed that the CP Transaction Balance Input Only User has approved an SI/STI that is pending their approval by a change in icon from '—' to 'O' in the CP column.

Classification – Internal

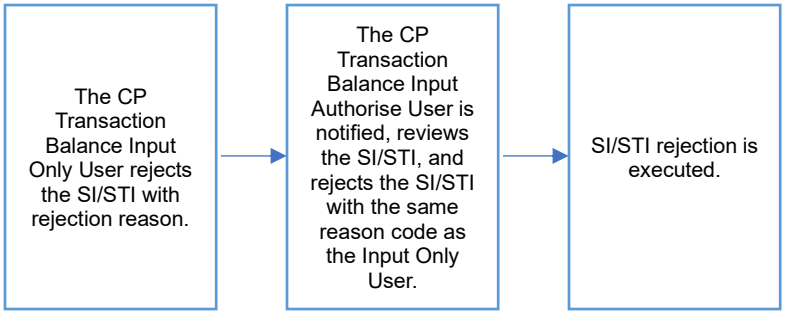


2. The CP Transaction Balance Input Authorise User clicks “Details” to view the details of the settlement instruction and then clicks “Approve”.



Classification – Internal

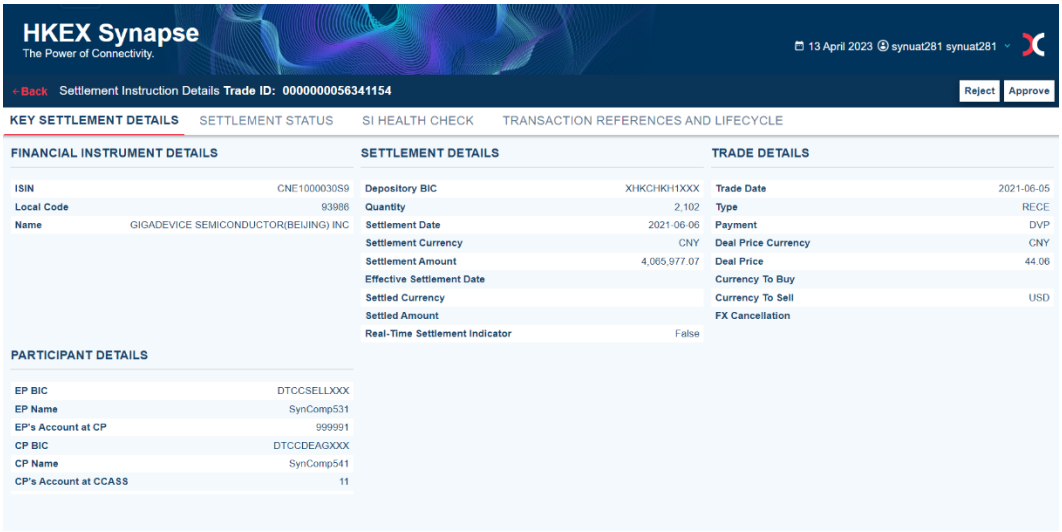
Rejection by CP Transaction Balance Input Only User; Rejection by CP Transaction Balance Input Authorise User (same rejection reason(s) between Input Only User and Input Authorise User):



Rejection by CP Transaction Balance Input Only User:

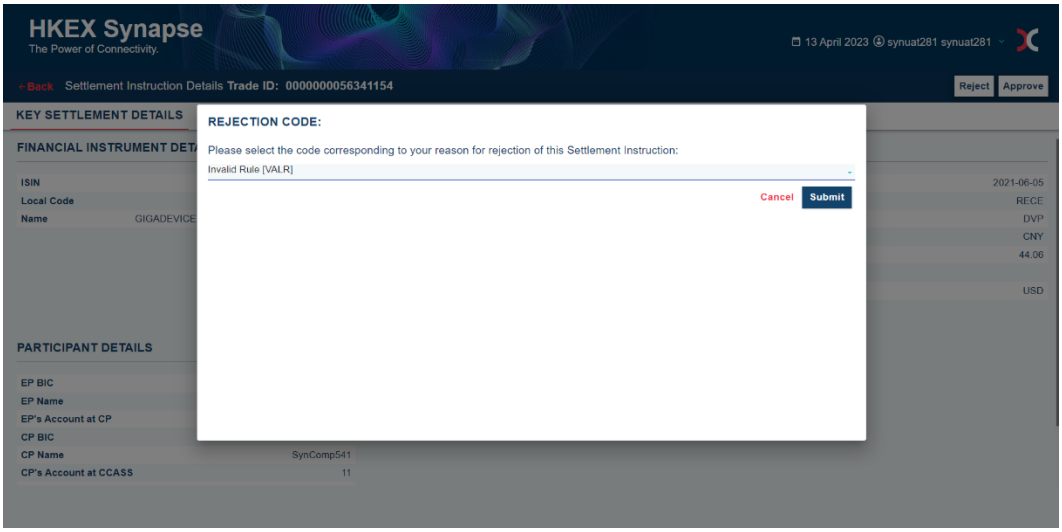
1. The CP Transaction Balance Input Only User logs in to Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

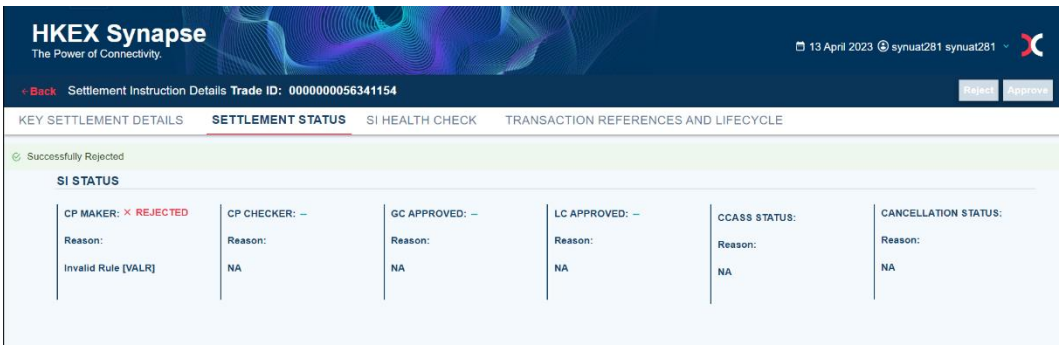
2. The CP Transaction Balance Input Only User then navigates to the Settlement Instructions List view and goes to the Settlement Instructions Details view by clicking “Details”.



3. The CP Transaction Balance Input Only User views the details of an SI/STI and clicks “Reject” and must select a rejection reason.

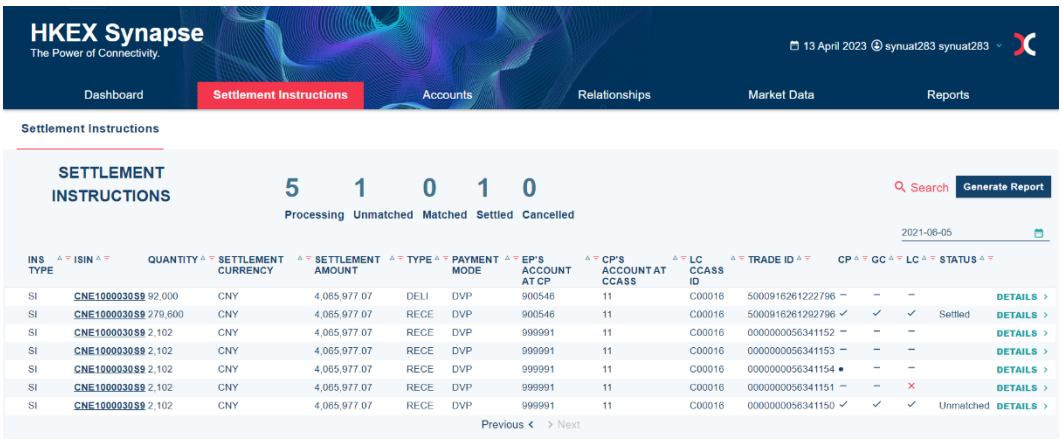
Classification – Internal





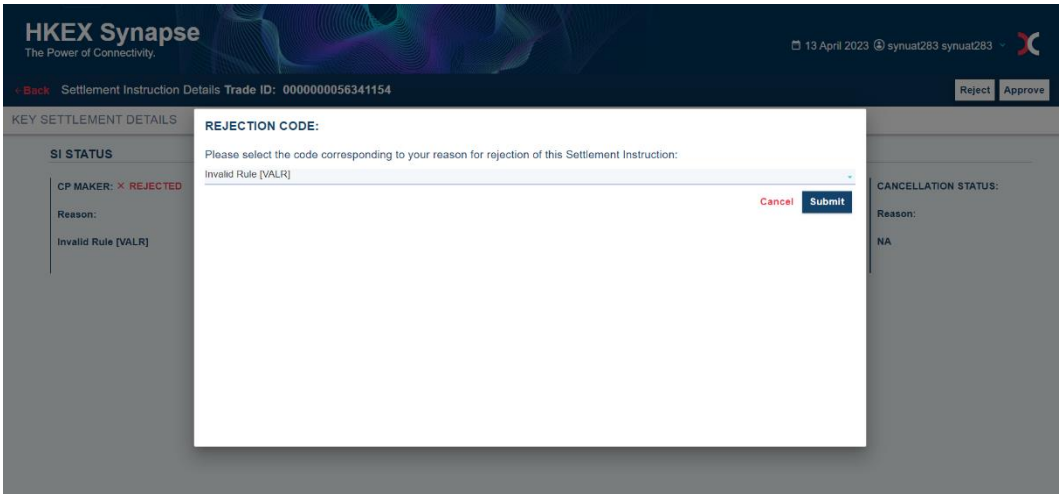
Rejection by CP Transaction Balance Input Authorise User:

1. On the Settlement Instructions List view, the CP Transaction Balance Input Authorise User is informed that the CP Transaction Balance Input Only User has rejected an SI/STI that is pending their approval by a change in icon from '—' to 'O' in the CP column.

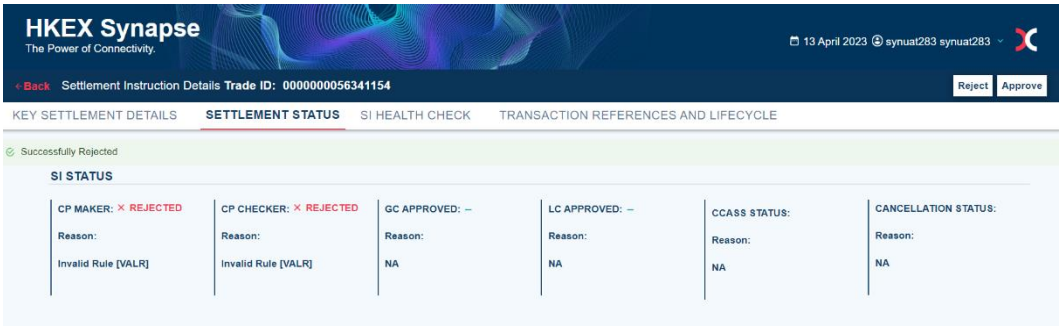


2. The CP Transaction Balance Input Authorise User clicks "Details" to view the details of the settlement instruction and then clicks "Reject" and must select a rejection reason.

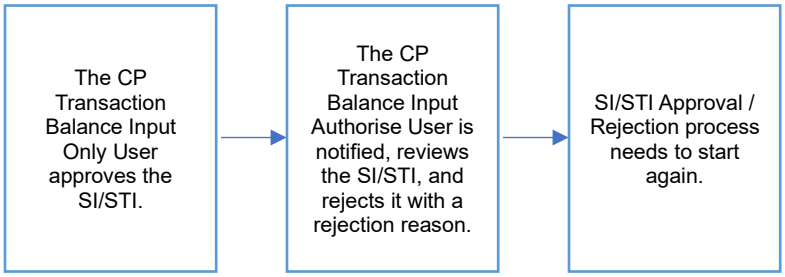
Classification – Internal



3. The CP Transaction Balance Input Authorise User selects the same rejection reason as the Input Only User, and the rejection is executed. This settlement instruction can be re-approved by CP Transaction Balance Input Only and Input Authoriser Users again once the issues have been resolved.
   The re-approval process is the same as approval, while the settlement instruction can also be re-rejected by CP Transaction Balance Input Only and Input Authoriser Users again if the rejection reason is needed to update. The re-rejection process is the same as rejection.



Approval by CP Transaction Balance Input Only User; Rejection by CP Transaction Balance Input Authorise User

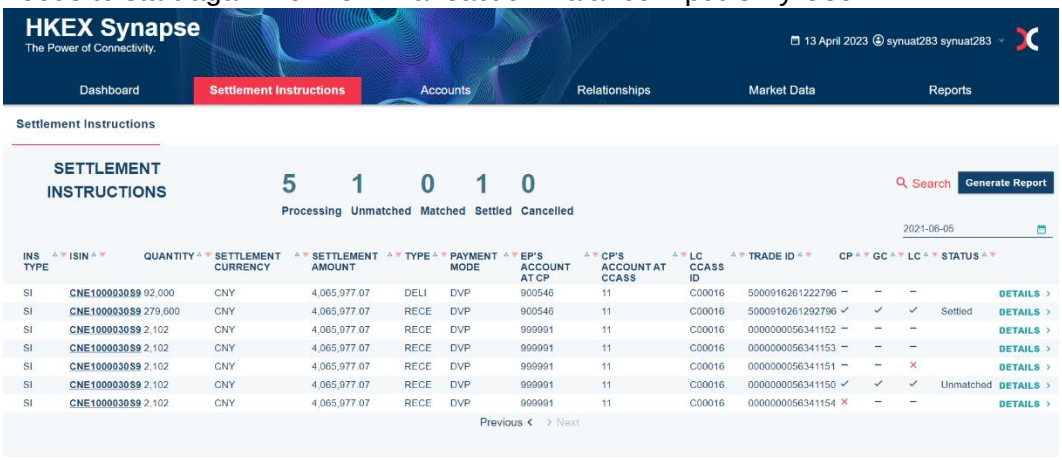


1. Since the decisions between the CP Transaction Balance Input Only and the CP Transaction Balance Input Authorise Users are different, the process will effectively start over.

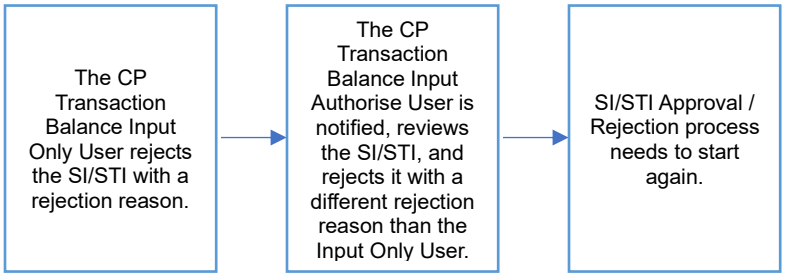
Classification – Internal

2. CP Transaction Balance Input Only User can see the Approval is rejected by CP Transaction Balance Input Authorise Users on Settlement Status page.

3. On SI List View, the icon will change from 'O' to '-' under CP column as the process needs to start again from CP Transaction Balance Input Only User.



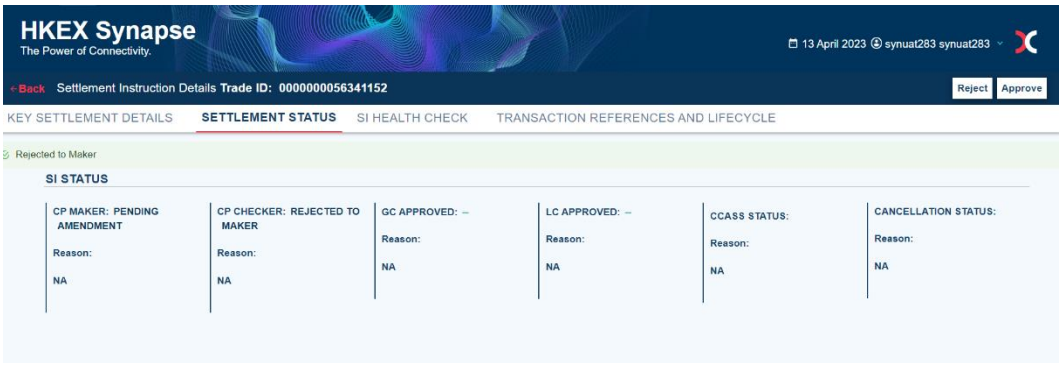
Rejection by CP Transaction Balance Input Only User; Rejection by CP Transaction Balance Input Authorise User (different rejection reason(s) between Input Only User and Input Authorise User):



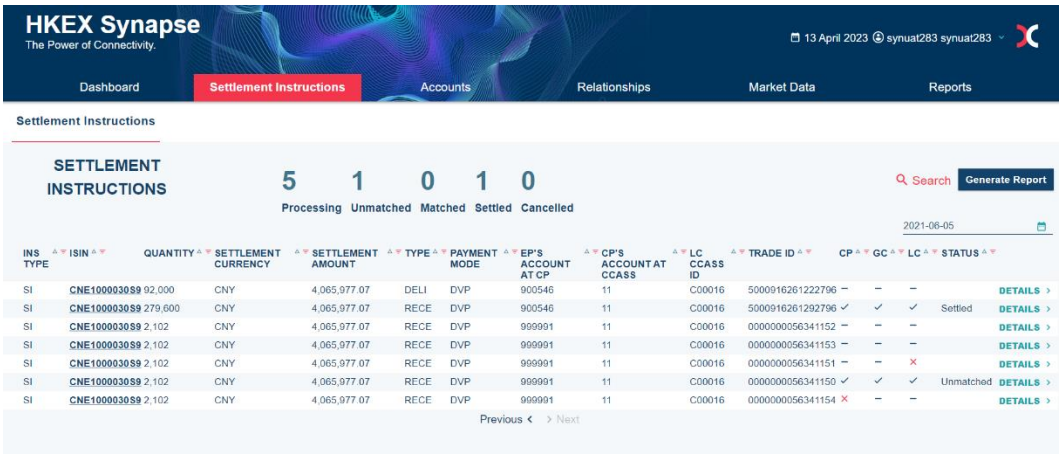
1. Since the CP Transaction Balance Input Authorise User selects a different rejection reason than the Input Only User, the rejection is not executed, and the SI/STI process effectively starts over.

2. CP Transaction Balance Input Only User can see the Rejection is rejected by CP Transaction Balance Input Authorise Users on Settlement Status page.

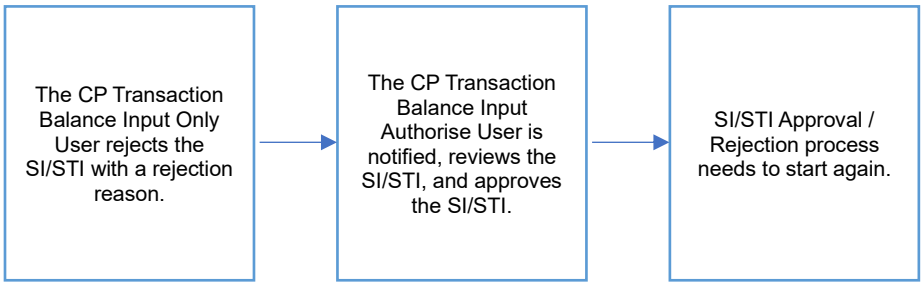
Classification – Internal



3. On SI List View, the icon will change from 'O' to '-' under CP column as the process needs to start again from CP Transaction Balance Input Only User. The CP Transaction Balance Input Only User can then re-approve or re-reject the settlement instruction. The re-approval process is the same with the approval, while the re-rejection process is the same with the rejection.



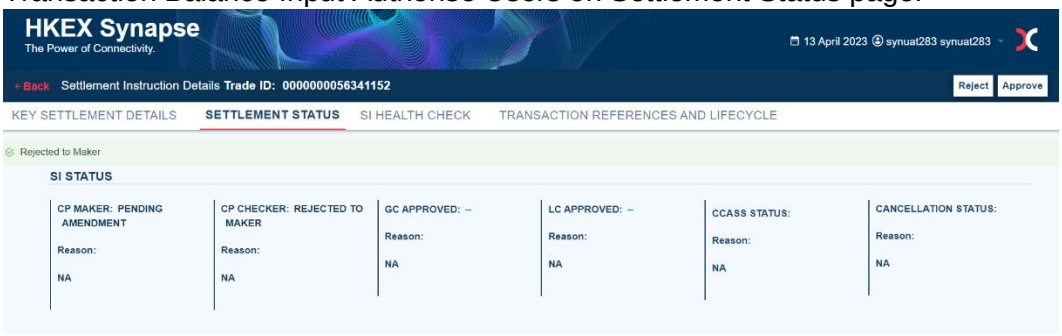
Rejection by CP Transaction Balance Input Only User; Approval by CP Transaction Balance Input Authorise User):



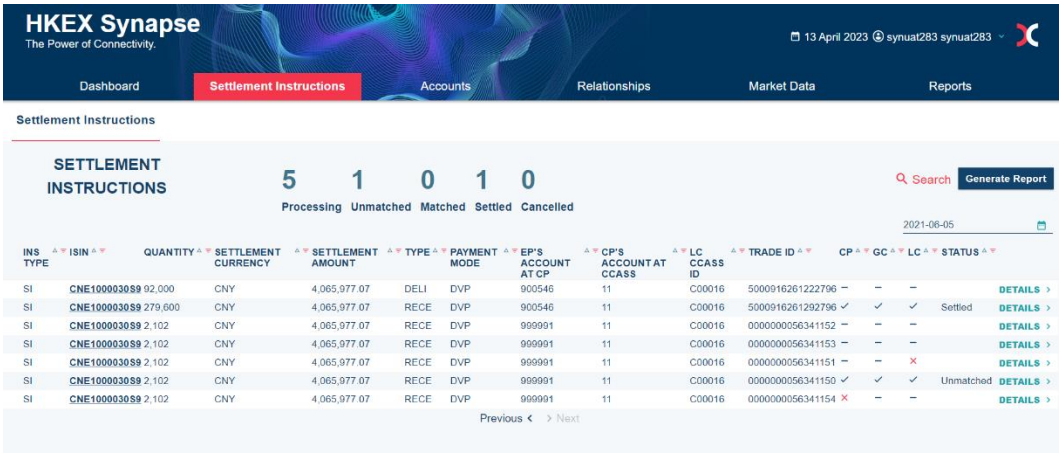
1. Since the decisions between the CP Transaction Balance Input Only and the CP Transaction Balance Input Authorise Users are different, the process will effectively start over.

Classification – Internal

2. CP Transaction Balance Input Only User can see the Rejection is rejected by CP Transaction Balance Input Authorise Users on Settlement Status page.



3. On SI List View, the icon will change from 'O' to '-' under CP column as the process needs to start again from CP Transaction Balance Input Only User. The CP Transaction Balance Input Only User can then re-approve or re-reject the settlement instruction. The re-approval process is the same with the approval, while the re-rejection process is the same with the rejection.



7.4 Special STI (SSTI) Approvals and Rejections

Special STIs (SSTIs) can be approved or rejected on the Settlement Instruction Details view. Only Users belonging to the same Participant Entity can see the internal approval status of Transaction Balance Input Only User and Transaction Balance Input Authorise User. Other Participants involved in the transaction can only see entity level approvals. E.g. Only GC can see its internal approval status (e.g. GC maker have already approved), but the other entity (e.g. AM / LC) cannot see such detail until both GC maker and checker have approved.

AM / EP are obliged to ensure their reference data setup in DTCC is correct and that any transaction is not "matched" in DTCC side, i.e. remains single sided and DTCC only send one SN for such transaction.

GCs, LCs and CPs are the only participants required to approve or reject an SSTI. AMs and EPs can only view the Settlement Instructions details.

Classification – Internal

Approvals or rejections of SSTIs by the GC, LC, or CP do not need to be done in a specific order. For example, an SSTI does not require a specific buy side participant to approve or reject before the other.

7.4.1 Buy Side

7.4.1.1 Asset Managers (AM)

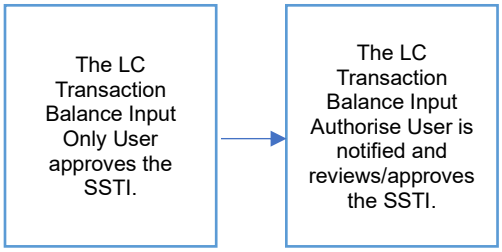
AMs have view only rights to SSTI processing.

7.4.1.2 Global Custodian (GC)

SSTI processing for GCs is the same process as for SI/STIs.

7.4.1.3 Local Custodian (LC)

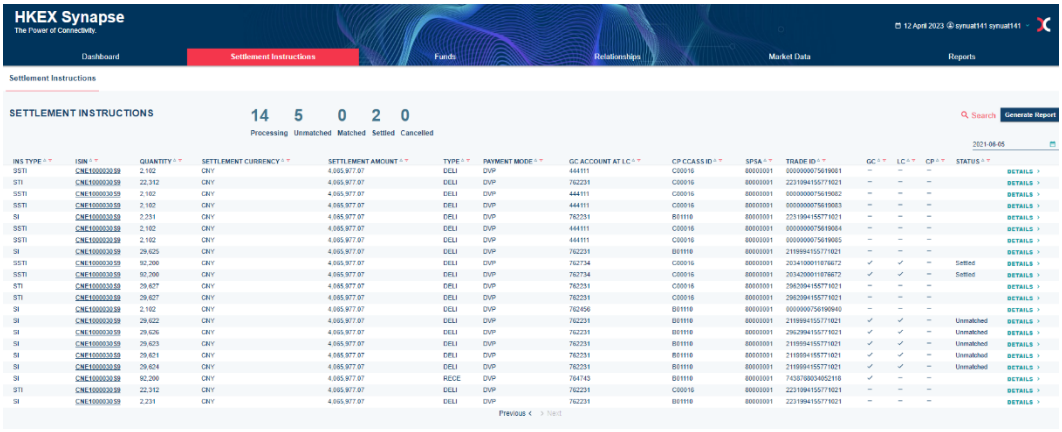
Approval by LC Transaction Balance Input Only User;
Approval by LC Transaction Balance Input Authorise User:



Approval by LC Transaction Balance Input Only User:

1. The LC Transaction Balance Input Only User logs in to Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.
2. The LC Transaction Balance Input Only User then navigates to the Settlement Instructions List view and goes to the Settlement Instructions Details view by clicking “Details”.

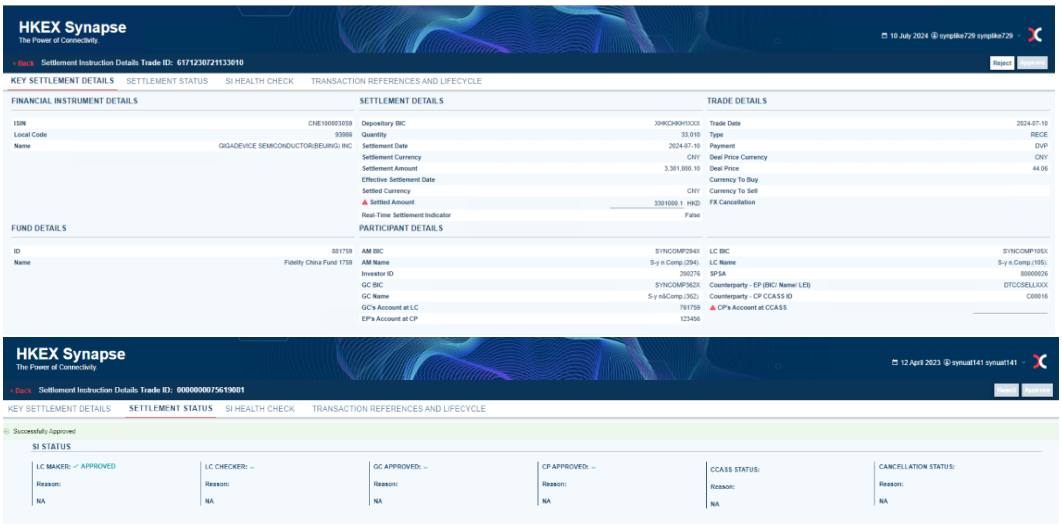
Classification – Internal



3. The LC Transaction Balance Input Only User views the details of an SSTI and to provide the following details:
    a. Settled Amount (optional)
    b. CP's Account at CCASS (mandatory)

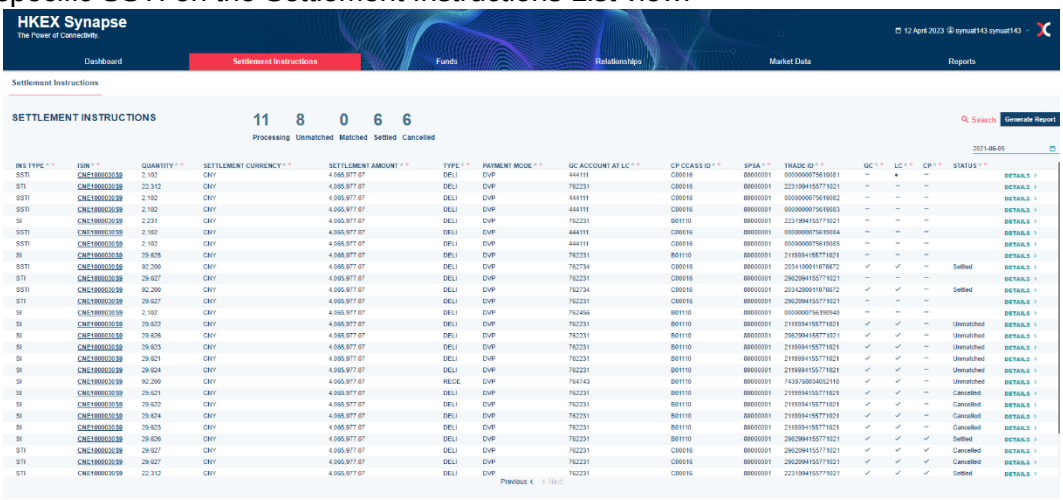
4. After adding those details, the LC Transaction Balance Input Only User can approve the SSTI by clicking "Approve".

Classification – Internal



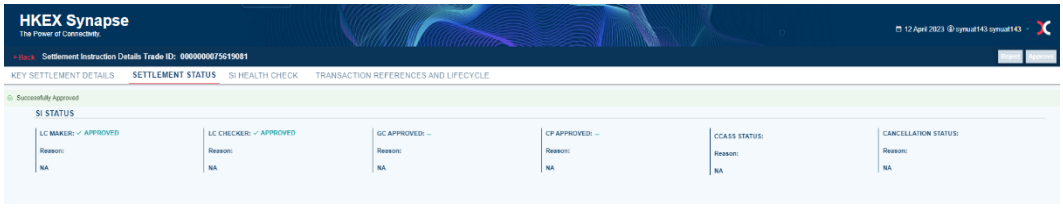
Approval by LC Transaction Balance Input Authorise User:

1. The LC Transaction Balance Input Authorise User will be notified that there is an SSTI pending their approval by a changed icon from '—' to 'O' in the LC column for a specific SSTI on the Settlement Instructions List view.

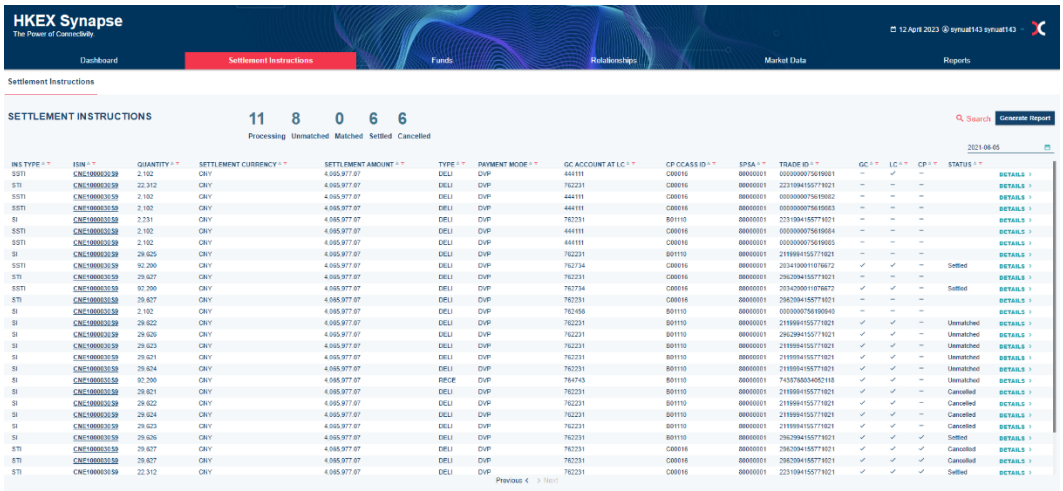


2. The LC Transaction Balance Input Authorise User clicks "Details" to view the details of the settlement instruction and then clicks "Approve".

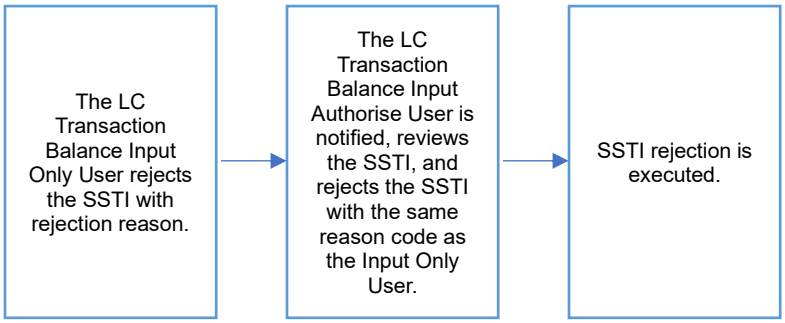
Classification – Internal



3. If the GC has not yet approved the SSTI, then the GC Transaction Balance Input Only User will be notified that there is an SSTI pending their approval by a '✓' in the LC column and a '—' in the GC column.



Rejection by LC Transaction Balance Input Only User; Rejection by LC Transaction Balance Input Authorise User (same rejection reason(s) between Input Only User and Input Authorise User):

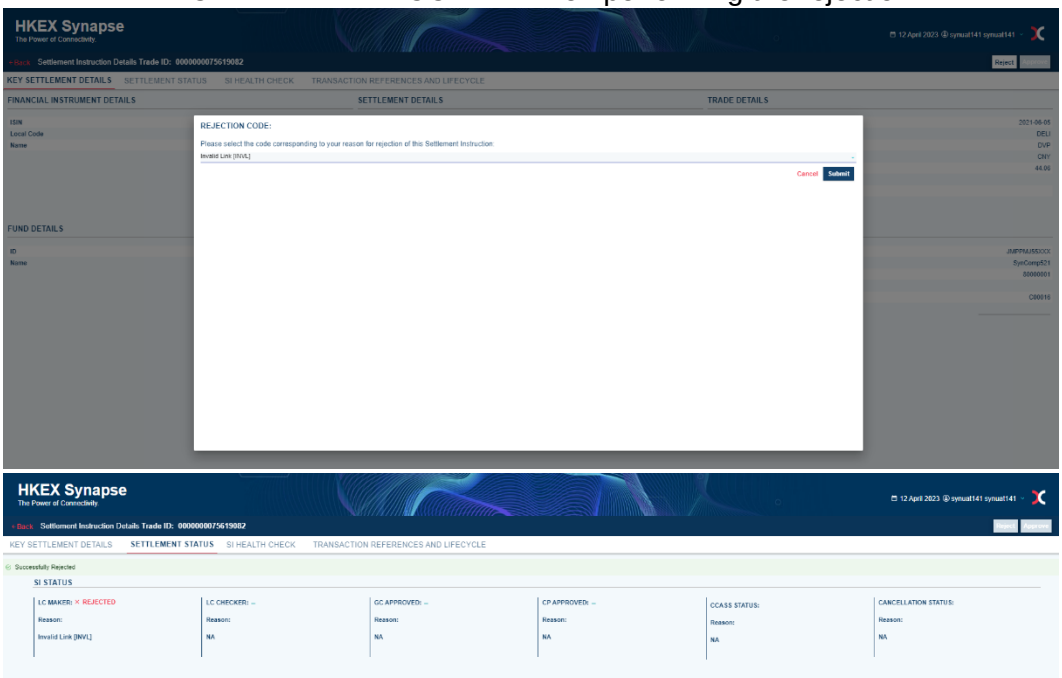


Rejection by LC Transaction Balance Input Only User:

1. The LC Transaction Balance Input Only User logs in to Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.
2. The LC Transaction Balance Input Only User then navigates to the Settlement Instructions List view and goes to the Settlement Instructions Details view by clicking "Details".

Classification – Internal

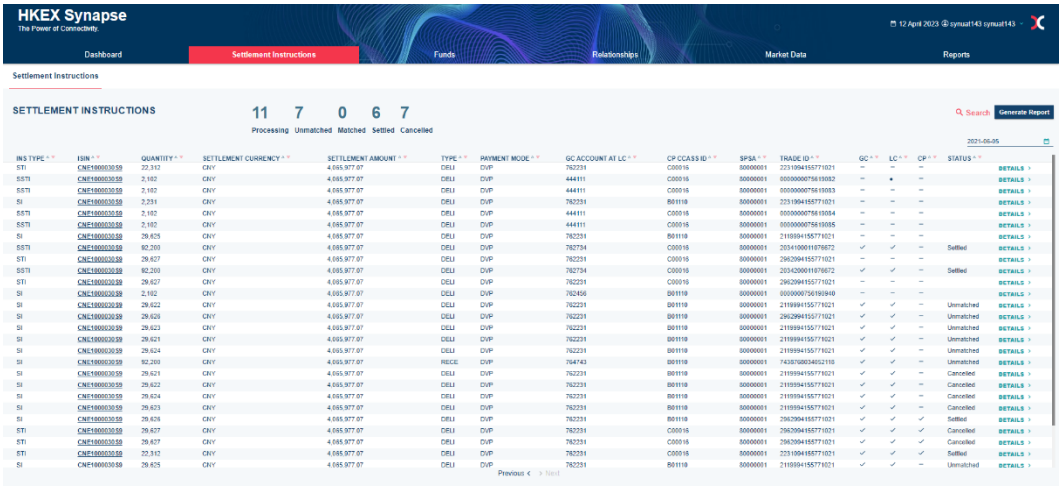
3. The LC Transaction Balance Input Only User views the details of an SSTI and clicks “Reject” and must select a rejection reason. It is not required to fill in the fields “Settled Amount” and “CP’s Account at CCASS” when performing the rejection.



Rejection by LC Transaction Balance Input Authorise User:

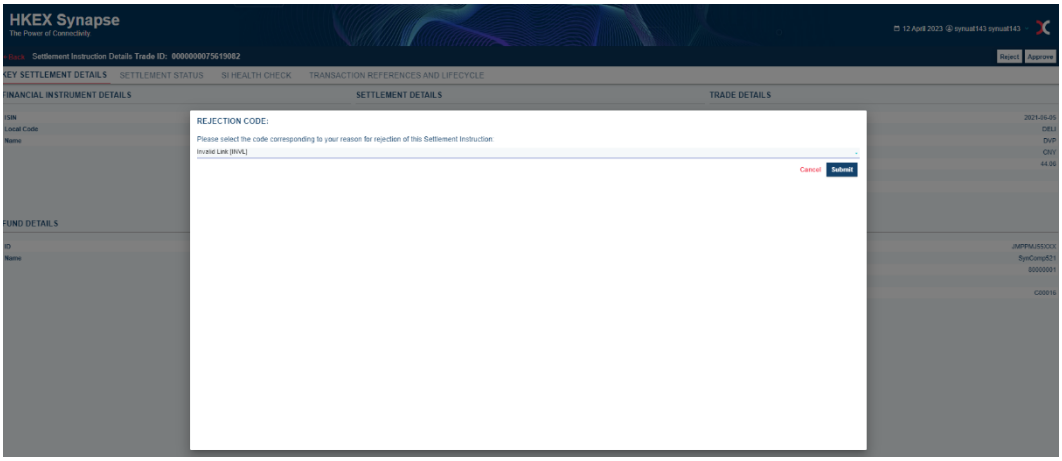
1. On the Settlement Instructions List view, the LC Transaction Balance Input Authorise User is informed that the LC Transaction Balance Input Only User has rejected an SSTI that is pending their approval by a change in icon from ‘—’ to ‘O’ in the LC column.

Classification – Internal

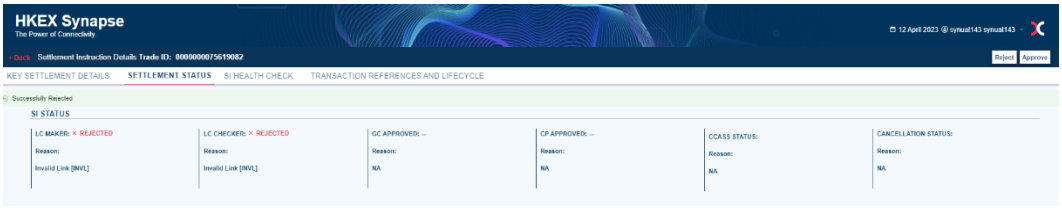


2. The LC Transaction Balance Input Authorise User clicks “Details” to view the details of the settlement instruction and then clicks “Reject” and must select a rejection reason.

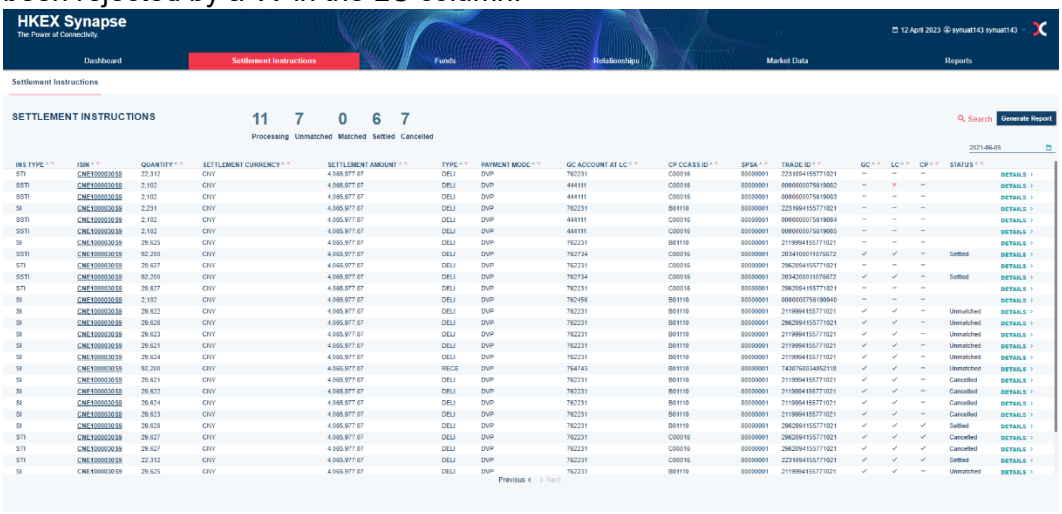
3. The LC Transaction Balance Input Authorise User selects the same rejection reason as the Input Only User, and the rejection is executed. This SSTI can be re-approved by LC Transaction Balance Input Only and Input Authoriser Users again once the issues have been resolved.
The re-approval process is the same as approval.



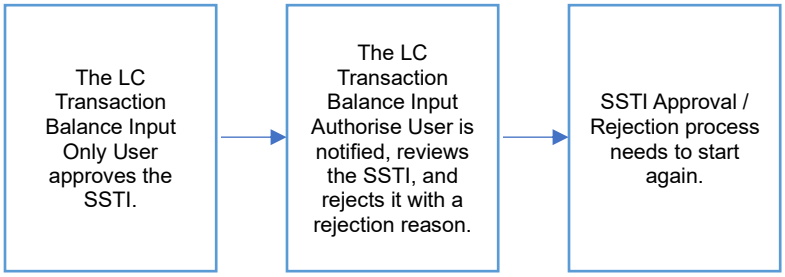
Classification – Internal



4. If the GC has not yet approved the SSTI, then the GC Transaction Balance Input Only User is informed on the Settlement Instructions List view that there is an SSTI that has been rejected by a 'X' in the LC column.



Approval by LC Transaction Balance Input Only User; Rejection by LC Transaction Balance Input Authorise User):



1. Since the decisions between the LC Transaction Balance Input Only and the LC Transaction Balance Input Authorise Users are different, the process will effectively start over.

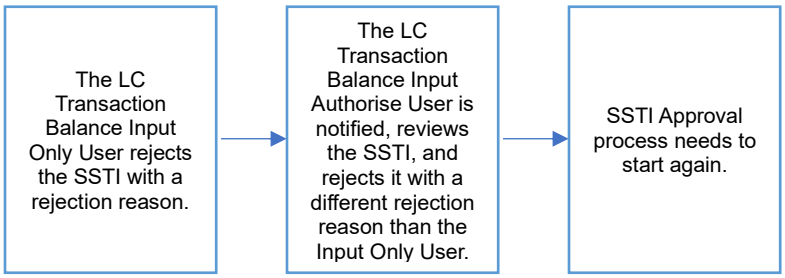
2. LC Transaction Balance Input Only User can see the Approval is rejected by LC Transaction Balance Input Authorise Users on Settlement Status page.

3. On SI List View, the icon will change from 'O' to '-' under LC column as the process needs to start again from LC Transaction Balance Input Only User. The LC Transaction Balance Input Only User can then re-approve or re-reject the rejected SSTI.

Classification – Internal

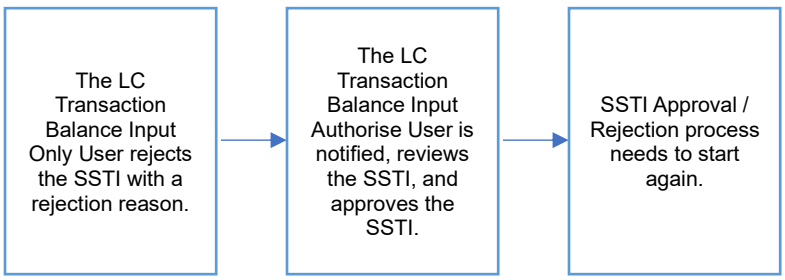
The re-approval process is the same as approval, while the re-reject process is the same as rejection.

Rejection by LC Transaction Balance Input Only User; Rejection by LC Transaction Balance Input Authorise User (different rejection reason(s) between Input Only User and Input Authorise User):



1. Since the LC Transaction Balance Input Authorise User selects a different rejection reason than the Input Only User, the rejection is not executed, and the SSTI process effectively starts over.
2. LC Transaction Balance Input Only User can see the Rejection is rejected by LC Transaction Balance Input Authorise Users on Settlement Status page.
3. On SI List View, the icon will change from 'O' to '-' under LC column as the process needs to start again from LC Transaction Balance Input Only User. The LC Transaction Balance Input Only User can then re-approve or re-reject the rejected SSTI.
   The re-approval process is the same as approval, while the re-reject process is the same as rejection.

Rejection by LC Transaction Balance Input Only User; Approval by LC Transaction Balance Input Authorise User:



Classification – Internal

1. Since the decisions between the LC Transaction Balance Input Only and the LC Transaction Balance Input Authorise Users are different, the process will effectively start over.
2. LC Transaction Balance Input Only User can see the Rejection is rejected by LC Transaction Balance Input Authorise Users on Settlement Status page.
3. On SI List View, the icon will change from 'O' to '-' under LC column as the process needs to start again from LC Transaction Balance Input Only User. The LC Transaction Balance Input Only User can then re-approve or re-reject the rejected SSTI.
   The re-approval process is the same as approval, while the re-reject process is the same as rejection.

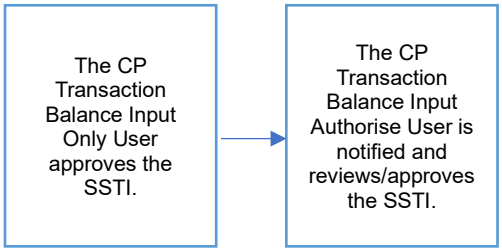
7.4.2 Sell Side

7.4.2.1 Exchange Participant (EP)

EPs have view only rights to SSTI processing.

7.4.2.2 Clearing Participant (CP)

Approval by CP Transaction Balance Input Only User;
Approval by CP Transaction Balance Input Authorise User:

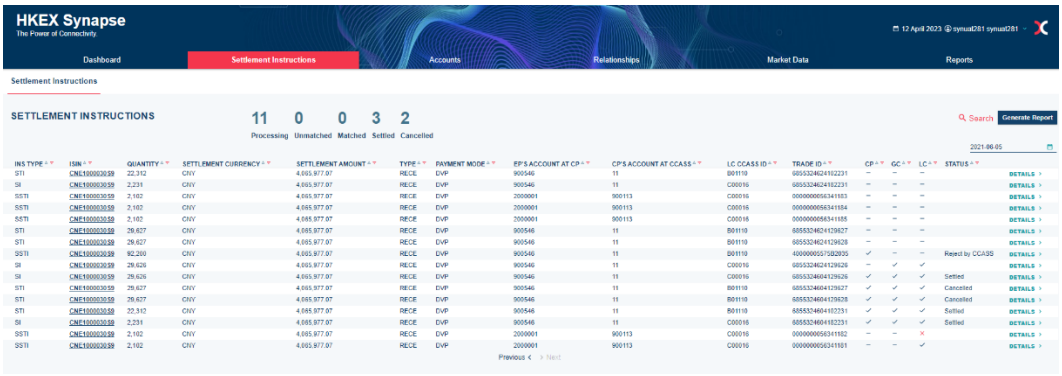


Approval by CP Transaction Balance Input Only User:

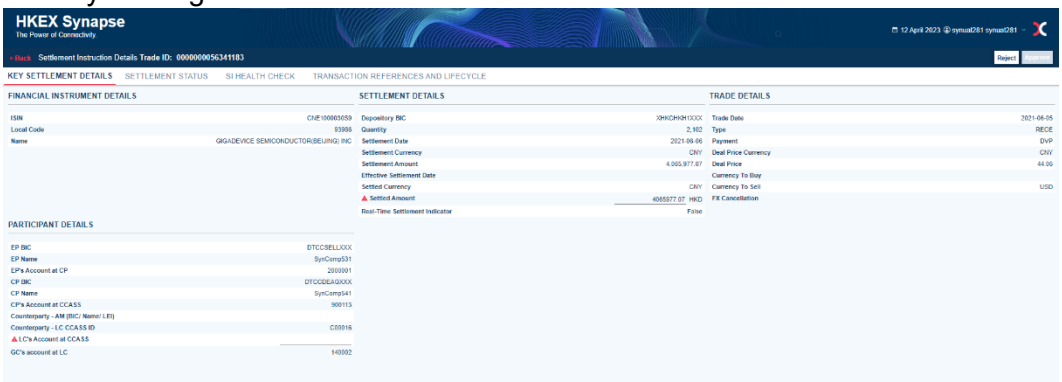
Classification – Internal

1. The CP Transaction Balance Input Only User logs in to Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

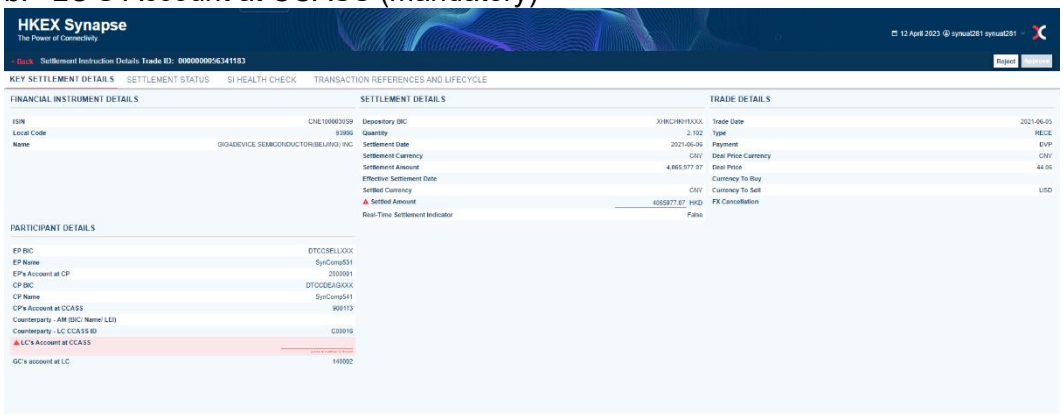
2. The CP Transaction Balance Input Only User then navigates to the Settlement Instructions List view and is informed that there is an SSTI pending their approval by a '—' in the CP column.



3. The CP Transaction Balance Input Only User goes to the Settlement Instructions Details view by clicking "Details".

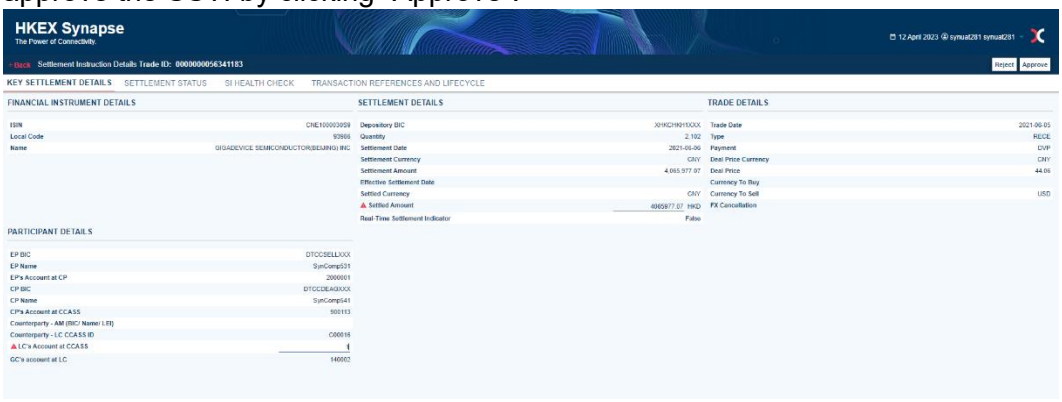


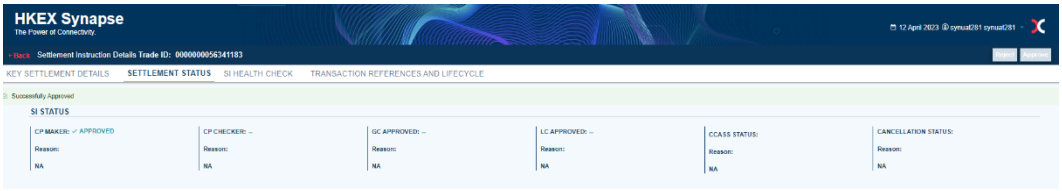
4. The CP Transaction Balance Input Only User views the details of an SSTI. When approving SSTIs, the CP to enter two fields:
    a. Settled Amount (optional)
    b. LC'S Account at CCASS (mandatory)



Classification – Internal

5. After entering in those two fields, then the CP Transaction Balance Input Only User can approve the SSTI by clicking “Approve”.

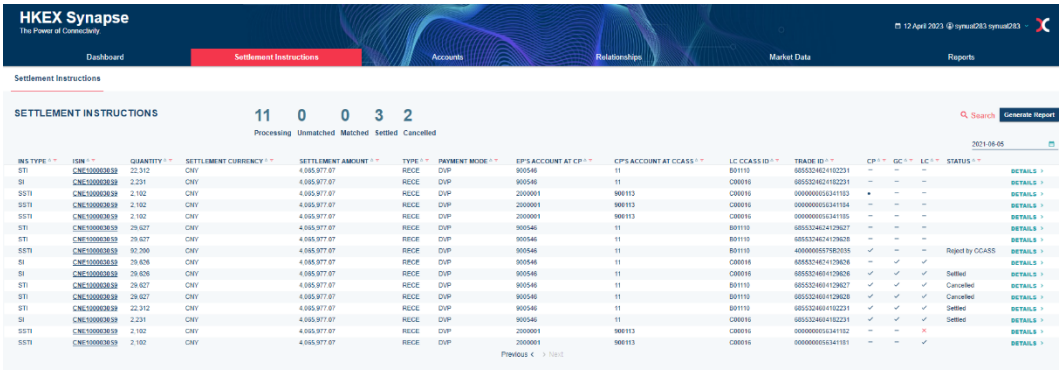




Approval by CP Transaction Balance Input Authorise User:

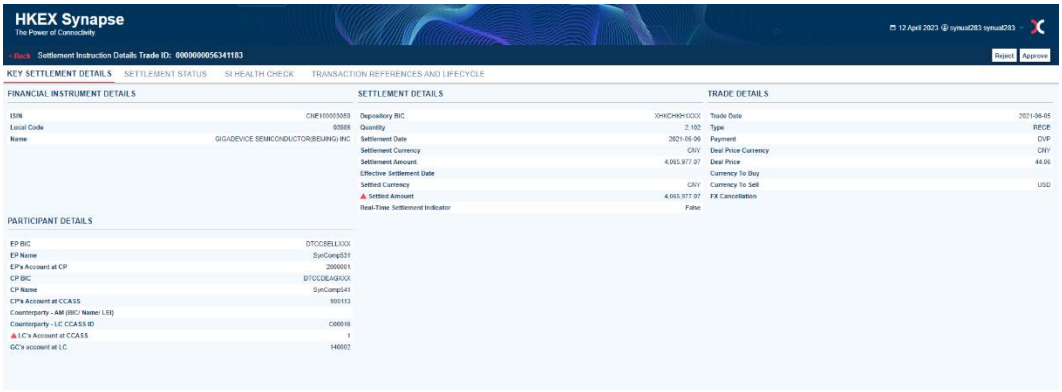
1. The CP Transaction Balance Input Authorise User logs in to Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

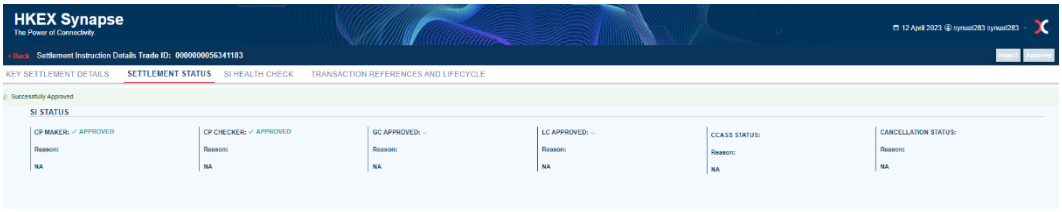
   On the Settlement Instructions List view, the CP Transaction Balance Input Authorise User is informed that the CP Transaction Balance Input Only User has approved an SSTI that is pending their approval by a change in icon from ‘—’ to ‘O’ in the CP column.



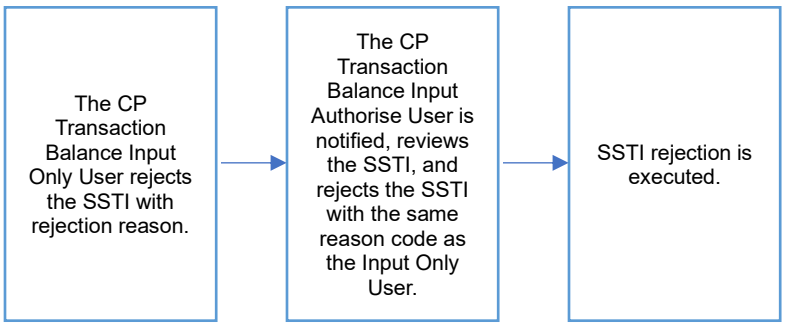
2. The CP Transaction Balance Input Authorise User clicks “Details” to view the details of the SSTI and approves it by clicking “Approve”.

Classification – Internal





Rejection by CP Transaction Balance Input Only User; Rejection by CP Transaction Balance Input Authorise User (same rejection reason(s) between Input Only User and Input Authorise User):

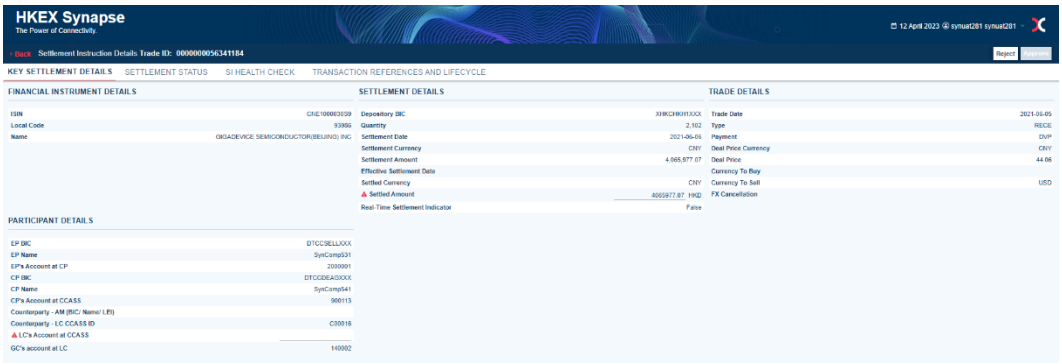


Rejection by CP Transaction Balance Input Only User:

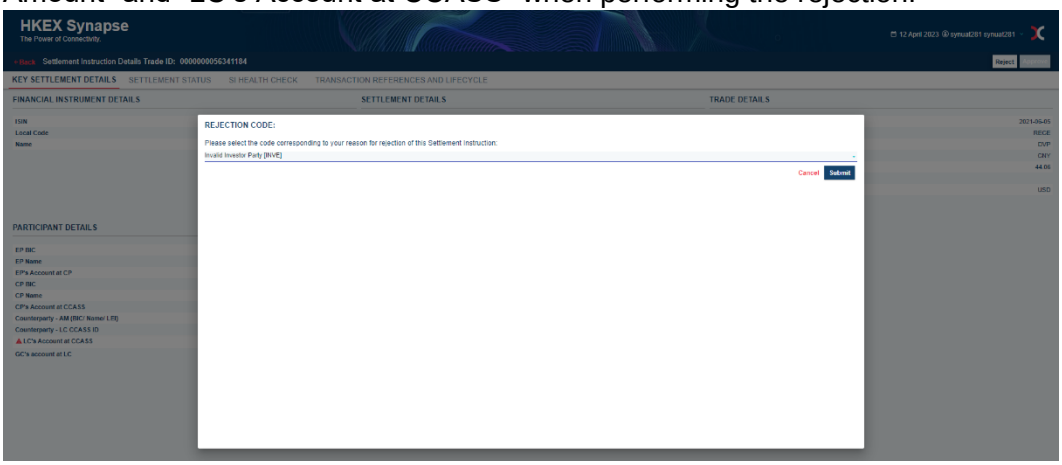
1. The CP Transaction Balance Input Only User logs in to Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

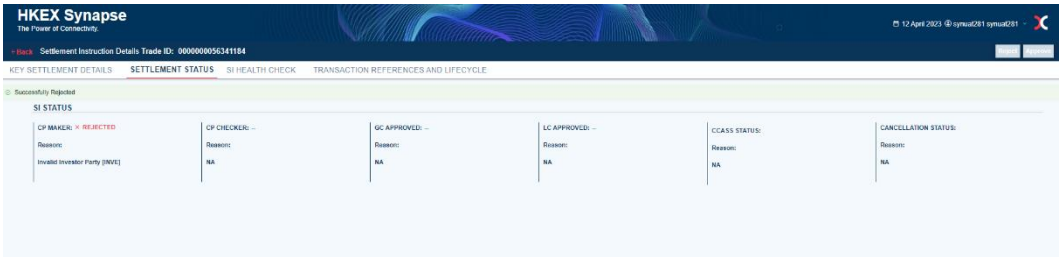
2. The CP Transaction Balance Input Only User then navigates to the Settlement Instructions List view and goes to the Settlement Instructions Details view by clicking “Details”.

Classification – Internal



3. The CP Transaction Balance Input Only User views the details of an SSTI and clicks “Reject” and must select a rejection reason. It is not required to fill in the fields “Settled Amount” and “LC’s Account at CCASS” when performing the rejection.

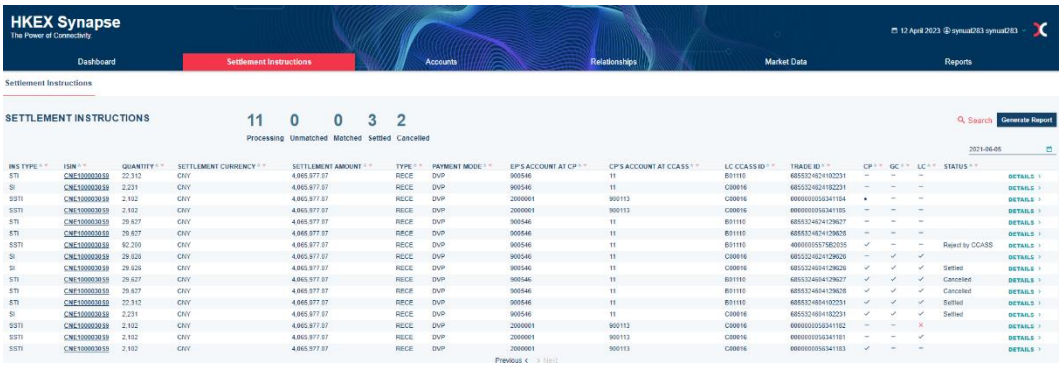




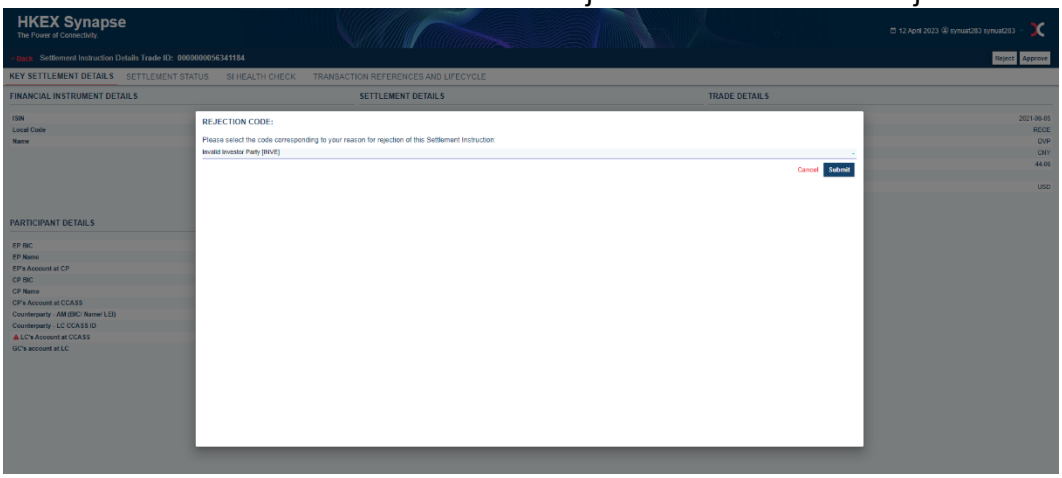
Rejection by CP Transaction Balance Input Authorise User:

1. On the Settlement Instructions List view, the CP Transaction Balance Input Authorise User is informed that the CP Transaction Balance Input Only User has rejected an SSTI that is pending their approval by a change in icon from ‘—’ to ‘O’ in the CP column.

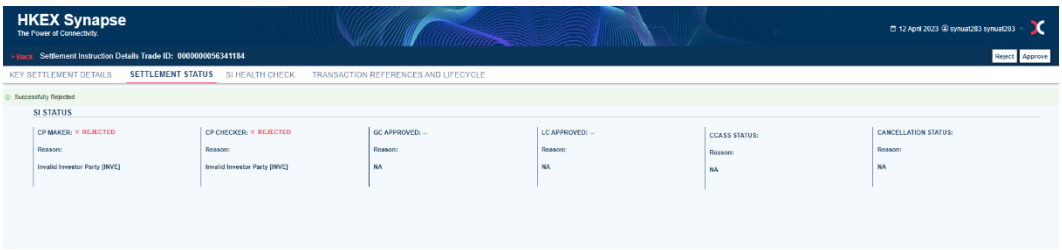
Classification – Internal



2. The CP Transaction Balance Input Authorise User clicks “Details” to view the details of the settlement instruction and then clicks “Reject” and must select a rejection reason.



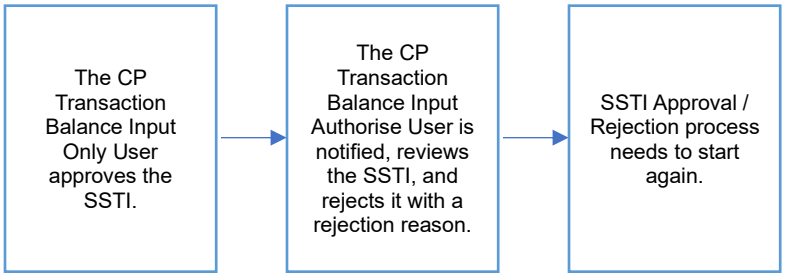
3. The CP Transaction Balance Input Authorise User selects the same rejection reason as the Input Only User, and the rejection is executed. This SSTI can be re-approved by CP Transaction Balance Input Only and Input Authoriser Users again once the issues have been resolved.
The re-approval process is the same as approval.



4. If the CP has not yet approved the SSTI, then the CP Transaction Balance Input Only User is informed on the Settlement Instructions List view that there is an SSTI that has been rejected by a ‘X’ in the CP column.

Classification – Internal

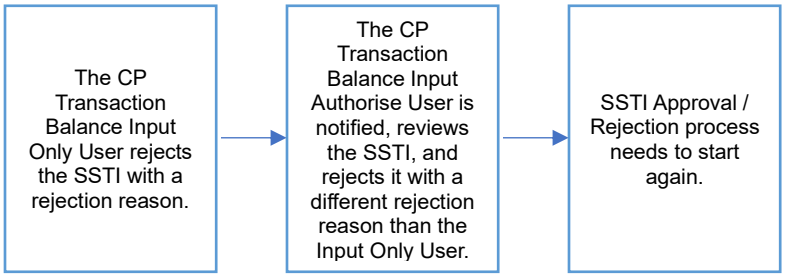
Approval by CP Transaction Balance Input Only User; Rejection by CP Transaction Balance Input Authorise User):



1. Since the decisions between the CP Transaction Balance Input Only and the CP Transaction Balance Input Authorise Users are different, the process will effectively start over.
2. CP Transaction Balance Input Only User can see the Approval is rejected by CP Transaction Balance Input Authorise Users on Settlement Status page.

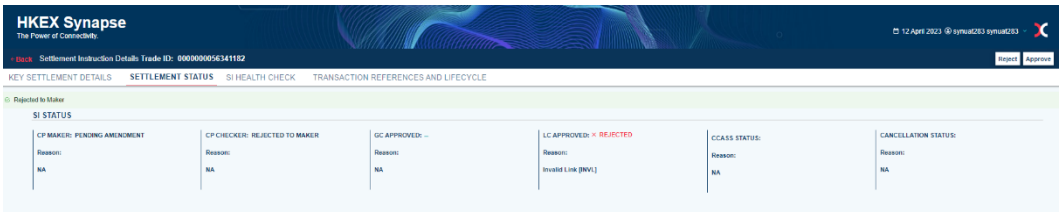
4. On SI List View, the icon will change from 'O' to '-' under CP column as the process needs to start again from CP Transaction Balance Input Only User. The CP Transaction Balance Input Only User can then re-approve or re-reject the rejected SSTI.
   The re-approval process is the same as approval, while the re-reject process is the same as rejection.

Rejection by CP Transaction Balance Input Only User; Rejection by CP Transaction Balance Input Authorise User (different rejection reason(s) between Input Only User and Input Authorise User):



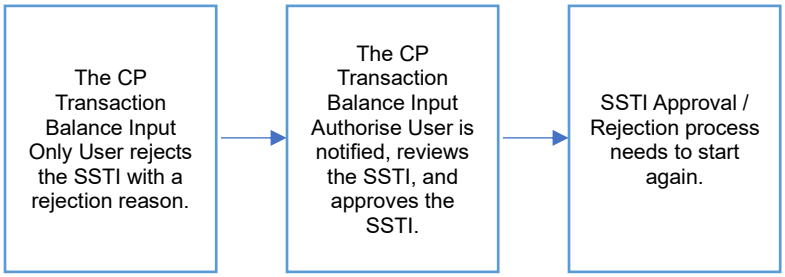
1. Since the CP Transaction Balance Input Authorise User selects a different rejection reason than the Input Only User, the rejection is not executed, and the SSTI process effectively starts over.
2. CP Transaction Balance Input Only User can see the Rejection is rejected by CP Transaction Balance Input Authorise Users on Settlement Status page.

Classification – Internal



3. On SI List View, the icon will change from 'O' to '-' under CP column as the process needs to start again from CP Transaction Balance Input Only User. The CP Transaction Balance Input Only User can then re-approve or re-reject the rejected SSTI.
   The re-approval process is the same as approval, while the re-reject process is the same as rejection.

Rejection by CP Transaction Balance Input Only User; Approval by CP Transaction Balance Input Authorise User:



1. Since the decisions between the CP Transaction Balance Input Only and the CP Transaction Balance Input Authorise Users are different, the process will effectively start over.
2. CP Transaction Balance Input Only User can see the Rejection is rejected by CP Transaction Balance Input Authorise Users on Settlement Status page.
3. On SI List View, the icon will change from 'O' to '-' under CP column as the process needs to start again from CP Transaction Balance Input Only User. The CP Transaction Balance Input Only User can then re-approve or re-reject the rejected SSTI.
   The re-approval process is the same as approval, while the re-reject process is the same as rejection.

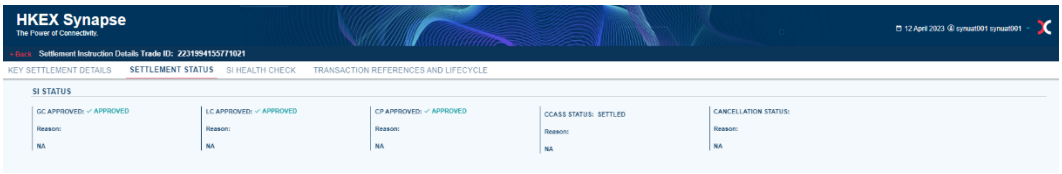
Classification – Internal

7.5 Settlement Status

The Settlement Status tab within the Settlement Instruction Details View shows the status of where the instruction is across the various market participants.

7.5.1 Buy Side

7.5.1.1 Asset Managers (AM)



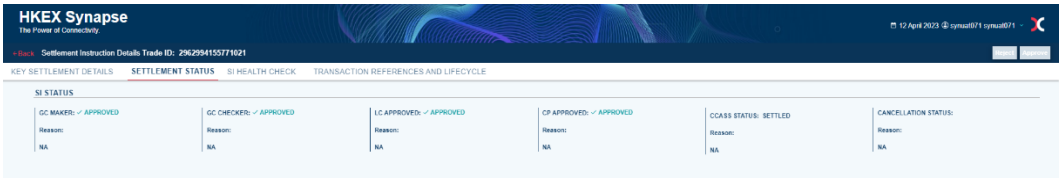
Settlement Status Indicator

Field	Description
GC	Indication that GC has approved or rejected the instruction
Reason	Reason for GC rejection
LC	Indication that LC has approved or rejected the instruction
Reason	Reason for LC rejection
CP	Indication that CP has approved or rejected the instruction
Reason	Reason for CP rejection
CCASS Status	Indicated reason for CCASS status: - CSUB – cancelled – revoked SI by counterparty - CANS – cancelled – SI/STI purged - CANI – cancelled or revoked SI OR unmatched SI deleted OR cancelled for STI - MTCH – matched - CYCL – matched – payment validated - CAIS – pending for transfer - CVAL – matched – RDP shares on hold - PREA – matched – matched on hold or counterparty instruction on hold - NCRR – unmatched – settlement currency unmatch - DSEC – unmatched – stock code/ISIN unmatch - DQUA – unmatched – quantity unmatch - CMIS – unmatched – no possible matching SI found - OTHR – unmatched – other - FRAP – unmatched – payment instruction unmatch - PODU – unmatched – possible matching SI but not earmarked as pairs - SAFE – unmatched – client A/C no. unmatch - DMON – unmatched – money value unmatch - DDAT – unmatched – settlement date unmatch - DELN – unmatched – transaction direction unmatch - SETD – Settled
Reason	Indicated reason for CCASS unmatched status: - NCRR – settlement currency unmatch + description - DSEC – stock code/ISIN unmatch + description - DQUA – quantity unmatch + description - CMIS – no possible matching SI found + description - OTHR – other + description - FRAP – payment instruction unmatch + description - PODU – possible matching SI but not earmarked as pairs + description - SAFE – client A/C no. unmatch + description - DMON – money value unmatch + description

Classification – Internal

Field	Description
	- DDAT – settlement date unmatch + description - DELN – transaction direction unmatch + description Note: “Description” next to unmatched status refers to the value provided by counterparty.
Cancellation Status	Indication that the instruction is cancelled by third party (CTHP)
Reason	Not Applicable

7.5.1.2 Global Custodian (GC)



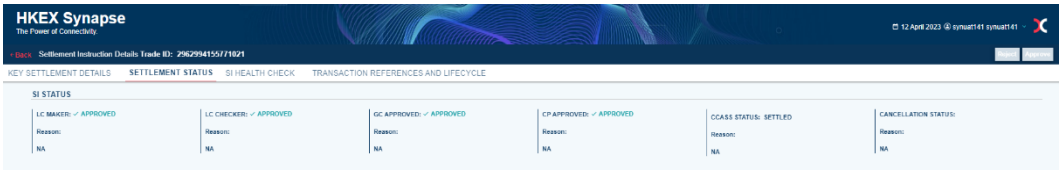
Settlement Status Indicator

Field	Description
GC Maker	Indication that GC Transaction Balance Input Only User has approved or rejected the instruction or the instruction is pending amendment by GC Transaction Balance Input Only User
Reason	Reason for GC rejection input by GC Transaction Balance Input Only User
GC Checker	Indication that GC Transaction Balance Input Authorise User has approved or rejected the instruction or the instruction is rejected back to GC Transaction Balance Input Only User for amendment
Reason	Reason for GC rejection input by GC Transaction Balance Input Authorise User
LC	Indication that LC has approved or rejected the instruction
Reason	Reason for LC rejection
CP	Indication that CP has approved or rejected the instruction
Reason	Reason for CP rejection
CCASS Status	Indicated reason for CCASS status: - CSUB – cancelled – revoked SI by counterparty - CANS – cancelled – SI/STI purged - CANI – cancelled or revoked SI OR unmatched SI deleted OR cancelled for STI - MTCH – matched - CYCL – matched – payment validated - CAIS – pending for transfer - CVAL – matched – RDP shares on hold - PREA – matched – matched on hold or counterparty instruction on hold - NCRR – unmatched – settlement currency unmatch - DSEC – unmatched – stock code/ISIN unmatch - DQUA – unmatched – quantity unmatch - CMIS – unmatched – no possible matching SI found - OTHR – unmatched – other - FRAP – unmatched – payment instruction unmatch - PODU – unmatched – possible matching SI but not earmarked as pairs - SAFE – unmatched – client A/C no. unmatch - DMON – unmatched – money value unmatch

Classification – Internal

Field	Description
	- DDAT – unmatched – settlement date unmatch - DELN – unmatched – transaction direction unmatch - SETD - Settled
Reason	Indicated reason for CCASS unmatched status: - NCRR – settlement currency unmatch + description - DSEC – stock code/ISIN unmatch + description - DQUA – quantity unmatch + description - CMIS – no possible matching SI found + description - OTHR – other + description - FRAP – payment instruction unmatch + description - PODU – possible matching SI but not earmarked as pairs + description - SAFE – client A/C no. unmatch + description - DMON – money value unmatch + description - DDAT – settlement date unmatch + description - DELN – transaction direction unmatch + description Note: “Description” next to unmatched status refers to the value provided by counterparty.
Cancellation Status	Indication that the instruction is cancelled by third party (CTHP)
Reason	Not Applicable

7.5.1.3 Local Custodian (LC)



Settlement Status Indicator

Field	Description
LC Maker	Indication that LC Transaction Balance Input Only User has approved or rejected the instruction or the instruction is pending amendment by LC Transaction Balance Input Only User
Reason	Reason for GC rejection input by LC Transaction Balance Input Only User
LC Checker	Indication that LC Transaction Balance Input Authorise User has approved or rejected the instruction or the instruction is rejected back to LC Transaction Balance Input Only User for amendment
Reason	Reason for LC rejection input by LC Transaction Balance Input Authorise User
GC	Indication that GC has approved or rejected the instruction
Reason	Reason for GC rejection
CP	Indication that CP has approved or rejected the instruction
Reason	Reason for CP rejection
CCASS Status	Indicated reason for CCASS status: - CSUB – cancelled – revoked SI by counterparty - CANS – cancelled – SI/STI purged - CANI – cancelled or revoked SI OR unmatched SI deleted OR cancelled for STI

Classification – Internal

Field	Description
	- MTCH – matched - CYCL – matched – payment validated - CAIS – pending for transfer - CVAL – matched – RDP shares on hold - PREA – matched – matched on hold or counterparty instruction on hold - NCRR – unmatched – settlement currency unmatch - DSEC – unmatched – stock code/ISIN unmatch - DQUA – unmatched – quantity unmatch - CMIS – unmatched – no possible matching SI found - OTHR – unmatched – other - FRAP – unmatched – payment instruction unmatch - PODU – unmatched – possible matching SI but not earmarked as pairs - SAFE – unmatched – client A/C no. unmatch - DMON – unmatched – money value unmatch - DDAT – unmatched – settlement date unmatch - DELN – unmatched – transaction direction unmatch - SETD - Settled
Reason	Indicated reason for CCASS unmatched status: - NCRR – settlement currency unmatch + description - DSEC – stock code/ISIN unmatch + description - DQUA – quantity unmatch + description - CMIS – no possible matching SI found + description - OTHR – other + description - FRAP – payment instruction unmatch + description - PODU – possible matching SI but not earmarked as pairs + description - SAFE – client A/C no. unmatch + description - DMON – money value unmatch + description - DDAT – settlement date unmatch + description - DELN – transaction direction unmatch + description Note: “Description” next to unmatched status refers to the value provided by counterparty.
Cancellation Status	Indication that the instruction is cancelled by third party (CTHP)
Reason	Not Applicable

7.5.2 Sell Side

7.5.2.1 Exchange Participant (EP)

Settlement Status Indicator

Field	Description
CP	Indication that CP has approved or rejected the instruction

Classification – Internal

Field	Description
Reason	Reason for CP rejection
GC	Indication that GC has approved or rejected the instruction
Reason	Reason for GC rejection
LC	Indication that LC has approved or rejected the instruction
Reason	Reason for LC rejection
CCASS Status	Indicated reason for CCASS status: - CSUB – cancelled – revoked SI by counterparty - CANS – cancelled – SI/STI purged - CANI – cancelled or revoked SI OR unmatched SI deleted OR cancelled for STI - MTCH – matched - CYCL – matched – payment validated - CAIS – pending for transfer - CVAL – matched – RDP shares on hold - PREA – matched – matched on hold or counterparty instruction on hold - NCRR – unmatched – settlement currency unmatch - DSEC – unmatched – stock code/ISIN unmatch - DQUA – unmatched – quantity unmatch - CMIS – unmatched – no possible matching SI found - OTHR – unmatched – other - FRAP – unmatched – payment instruction unmatch - PODU – unmatched – possible matching SI but not earmarked as pairs - SAFE – unmatched – client A/C no. unmatch - DMON – unmatched – money value unmatch - DDAT – unmatched – settlement date unmatch - DELN – unmatched – transaction direction unmatch - SETD - Settled
Reason	Indicated reason for CCASS unmatched status: - NCRR – settlement currency unmatch + description - DSEC – stock code/ISIN unmatch + description - DQUA – quantity unmatch + description - CMIS – no possible matching SI found + description - OTHR – other + description - FRAP – payment instruction unmatch + description - PODU – possible matching SI but not earmarked as pairs + description - SAFE – client A/C no. unmatch + description - DMON – money value unmatch + description - DDAT – settlement date unmatch + description - DELN – transaction direction unmatch + description Note: “Description” next to unmatched status refers to the value provided by counterparty.
Cancellation Status	Indication that the instruction is cancelled by third party (CTHP)
Reason	Not Applicable

Classification – Internal

7.5.2.2 Clearing Participant (CP)

Settlement Status Indicator

Field	Description
CP Maker	Indication that CP Transaction Balance Input Only User has approved or rejected the instruction or the instruction is pending amendment by CP Transaction Balance Input Only User
Reason	Reason for CP rejection input by CP Transaction Balance Input Only User
CP Checker	Indication that CP Transaction Balance Input Authorise User has approved or rejected the instruction or the instruction is rejected back to CP Transaction Balance Input Only User for amendment
Reason	Reason for CP rejection input by CP Transaction Balance Input Authorise User
GC	Indication that GC has approved or rejected the instruction
Reason	Reason for GC rejection
LC	Indication that LC has approved or rejected the instruction
Reason	Reason for LC rejection
CCASS Status	Indicated reason for CCASS status: - CSUB – cancelled – revoked SI by counterparty - CANS – cancelled – SI/STI purged - CANI – cancelled or revoked SI OR unmatched SI deleted OR cancelled for STI - MTCH – matched - CYCL – matched – payment validated - CAIS – pending for transfer - CVAL – matched – RDP shares on hold - PREA – matched – matched on hold or counterparty instruction on hold - NCRR – unmatched – settlement currency unmatch - DSEC – unmatched – stock code/ISIN unmatch - DQUA – unmatched – quantity unmatch - CMIS – unmatched – no possible matching SI found - OTHR – unmatched – other - FRAP – unmatched – payment instruction unmatch - PODU – unmatched – possible matching SI but not earmarked as pairs - SAFE – unmatched – client A/C no. unmatch - DMON – unmatched – money value unmatch - DDAT – unmatched – settlement date unmatch - DELN – unmatched – transaction direction unmatch - SETD - Settled
Reason	Indicated reason for CCASS unmatched status: - NCRR – settlement currency unmatch + description - DSEC – stock code/ISIN unmatch + description - DQUA – quantity unmatch + description - CMIS – no possible matching SI found + description - OTHR – other + description

Classification – Internal

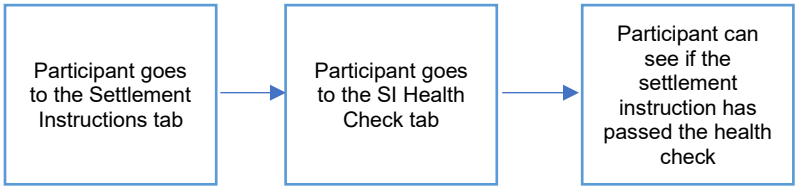
Field	Description
	- FRAP – payment instruction unmatch + description - PODU – possible matching SI but not earmarked as pairs + description - SAFE – client A/C no. unmatch + description - DMON – money value unmatch + description - DDAT – settlement date unmatch + description - DELN – transaction direction unmatch + description Note: “Description” next to unmatched status refers to the value provided by counterparty.
Cancellation Status	Indication that the instruction is cancelled by third party (CTHP)
Reason	Not Applicable

Classification – Internal

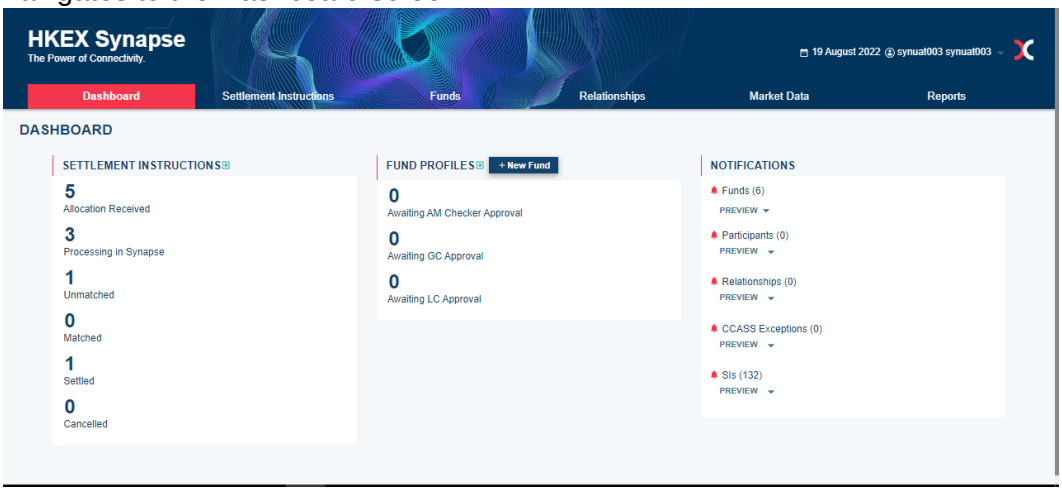
7.6 Health Check

Health Check is an additional business validation of settlement instructions that Synapse performs after receiving the settlement instruction (e.g., SI, STI, and SSTI) from DTCC. If the business validation results in non-fatal error(s), then Health Check will display the failure reason, but settlement instruction processing can still continue.

Health Check functionality is the same for both buy side and sell side participants. There is no difference in functionality for either Input Only Users or Input Authorise Users. The sample screens below are illustrative and are from buy side participants.

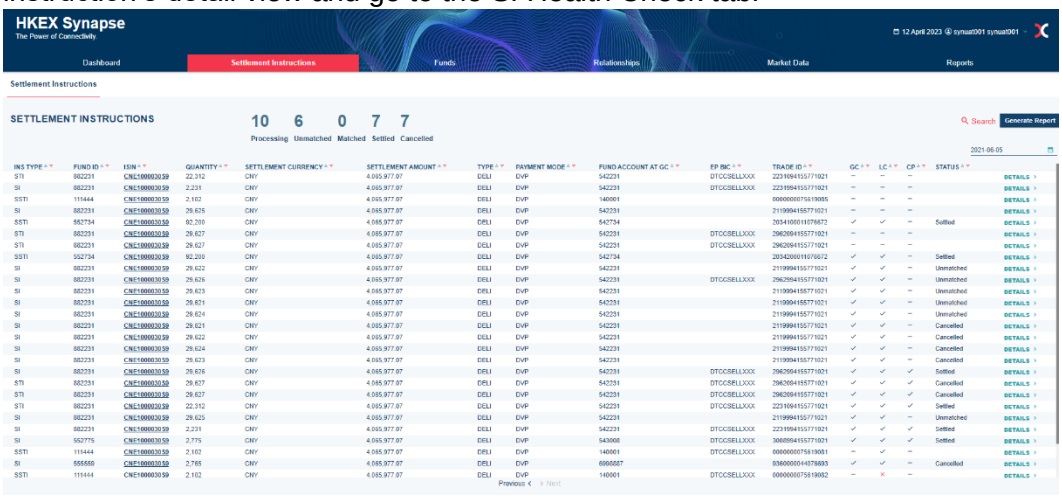


1. The AM participant logs in to Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

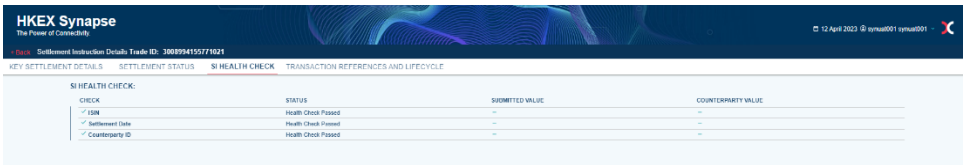


Classification – Internal

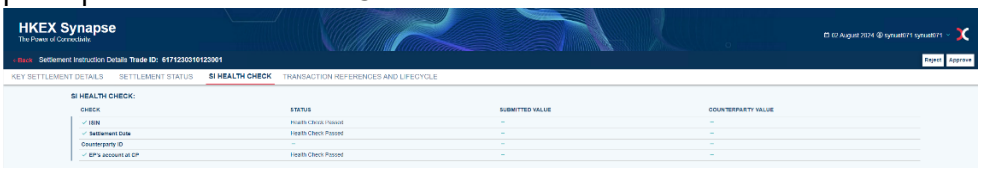
2. On the Settlement Instructions tab, the AM participant can go to a specific settlement instruction's detail view and go to the SI Health Check tab.



3. The display table will show if the settlement instruction passed or failed the health check.
   a. (i) For AM
   If the settlement instruction passes the health check, then the AM participant will see "Health Check Passed".



   (ii) For GC and LC
   Health check provides additional business validation on EP's account at CP. If the settlement instruction passes this health check, then the GC and LC participant will see "Health Check Passed".

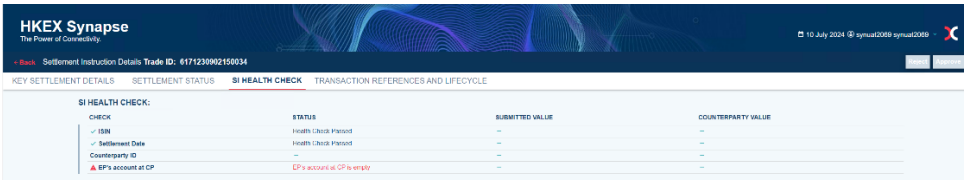


   b. (i) For AM
   If the settlement instruction fails the health check, then the AM participant will see the specific reason.

   (ii) For GC and LC

Classification – Internal

Health check provides additional business validation on EP's account at CP. If the settlement instruction fails this health check, then the GC and LC participant will see "EP's account at CP is empty".



Field Name	Failure Reason Example
ISIN	ISIN started with CN but the rest of the ISIN cannot be recognized by CCASS
Settlement Date	Settlement Date of the SN is < admission date of the ISIN or >= delisted date of the ISIN
Counterparty	It is only applicable when both buy and sell sides are onboarded to Synapse. I.e. when Synapse receives a pair of SN from buy side and sell side, which are joined by the same UTI. The purpose of this counterparty ID health check is to provide an early alert to Synapse users that such pair of settlement instruction may not be possible to match in CCASS. Using below as an example to illustrate the scenario that will trigger the health check warning message "Potential Counterparty Misaligned": **Setup for this pair of SN joint by the same UTI** Synapse LC user's CCASS Participant ID = C00040 Synapse CP user's CCSAS Participant ID = C00016 **Submitted value quoted on the buy side SN in the REAG/DEAG block** = C55555 **The CCASS participant ID of the relevant Clearing Participant (CP) of the sell side SN jointed by the same UTI** = C00016 Under this scenario, by referring to the account stated on the sell side SN joined by the same UTI, the buy side should be facing C00016 as the Clearing Participant (CP) for this particular pair of settlement instruction. However, in the buy side SN REAG/DEAG block, it is quoted as facing C55555 as counterparty at CCASS level. In this situation, health check warning message will be triggered.
EP's account at CP	It is only applicable to buy-side instruction when investment manager counterparty data (i.e., EP's Account at CP) is not present in the SN. Under this scenario, Synapse will still create the SI with empty client account number or processing reference sending to CCASS for matching and settlement processing. These 2 CCASS fields in C3T will be shown as below in C3T: • Client Account Number: "" **OR** • Processing Reference: ""SYN- The **LC could update the "Client Account Number" and "Processing Reference" in C3T** if needed. It is recommended to input these missing fields for operational efficiency.

Classification – Internal

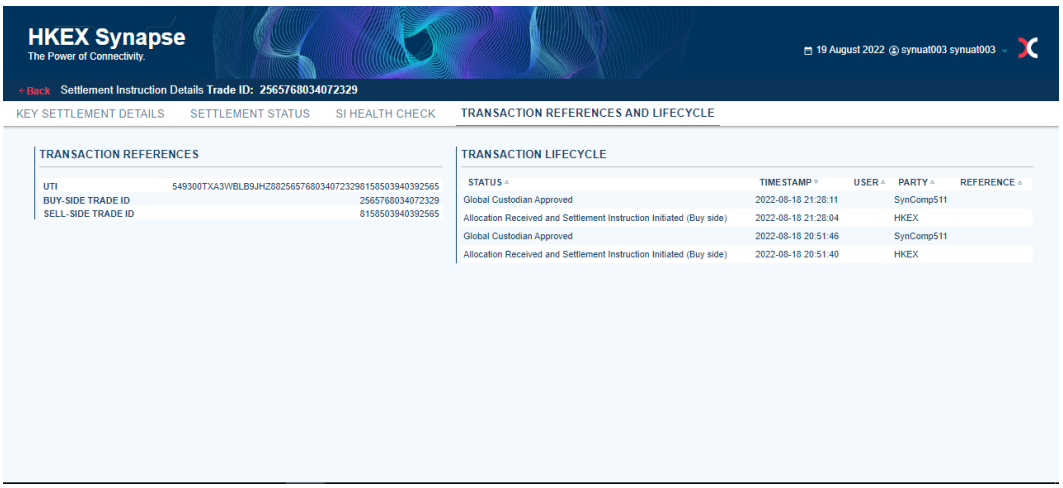
Field Name	Failure Reason Example
	Before matching Northbound Stock Connect transactions with an EP/broker for the first time, investment managers should ensure with their EP/broker that the EP/broker maintains correct and up to date Standing Settlement Instruction (SSI) data in DTCC systems. Having correct EP/broker SSI maintained in DTCC systems is precondition for a smooth and efficient settlement experience in Synapse and CCASS. Investment Managers facing EP/broker who are not sure on whether their SSI data is setup correctly, should ask their EP/broker to contact DTCC to investigate.

4. Even if the settlement instruction does not pass the health check, the settlement instruction can still be approved.

Classification – Internal

7.7 Transaction References and Lifecycle

Transaction References and Lifecycle shows the major events of an instruction. Timestamp is provided



Transaction References

Field	Description
UTI	Universal Trade Identifier associated with a unique pair of matched allocation
Buy-side Trade ID	Buy-side assigned trade ID created from DTCC
Sell-side Trade ID	Sell-side assigned trade ID created from DTCC

Transaction Lifecycle

Once the instruction arrives Synapse, the transaction lifecycle will show “Allocation Received and Settlement Instruction Initiated (Buy / Sell side). Subsequently, it will show the approval / rejection status of different Synapse Users of the buy or sell side to reflect the approval / rejection activity. Once the complete buy / sell side have approved the instruction and the instruction has transmitted to CCASS, it will show “Unmatched (without any unmatched reason code)” immediately, and Synapse will enquire any unmatched reason from CCASS regularly for displaying in the transaction lifecycle. Finally, Matched and Settled status will also be shown here.

Prior to “Settled” status, the instruction can also be cancelled subsequently via different ways, such as cancellation SN sent from DTCC by AM / EP, cancelled / revoked by CP / LC in CCASS. The cancellation activity will be reflected in the transaction lifecycle.

Field	Description
Status	Descriptive status of where the instruction is in processing. Examples include: - Allocation Received and Settlement Instruction Initiated (Buy side) - Allocation Received and Settlement Instruction Initiated (Sell side) - Global Custodian Approved - Global Custodian Rejected - Local Custodian Approved

Classification – Internal

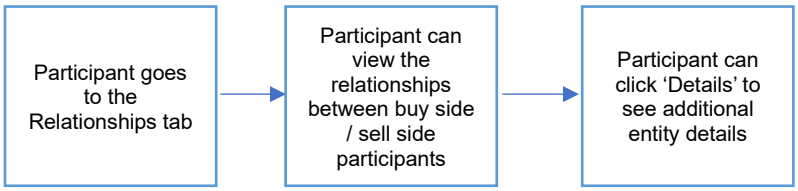
Field	Description
	- Local Custodian Rejected - Clearing Participant Approved - Clearing Participant Rejected - Cancelled - Corporate Action – Conversion - Manual Amendment - Pending Cancellation - Cancelled (Revoked CP SI) - Cancelled (SI/STI Purged) - Cancelled (SI/STI Revoked or SI Deleted) - Matched - Unmatched (Settlement currency unmatched) - Unmatched (Stock code/ISIN unmatched) - Unmatched (Quantity unmatched) - Unmatched (No possible matching SI found) - Unmatched (Without any unmatched reason code) - Unmatched (Without any unmatched reason code) - Unmatched (Payment Instruction Unmatched) - Unmatched (Possible Matching SI but not earmarked as pairs) - Unmatched (Client A/C No. Unmatched) - Unmatched (Money Value Unmatched) - Unmatched (Money Value Unmatched) - Unmatched (Settlement Date Unmatched) - Unmatched (Instruction Type Unmatched) - Matched (RDP Payment Validated) - Pending for Transfer (Stock Segregated Account Transfer Instructions) - Matched (On-hold by Counterparty) - Matched (RDP Shares On-hold) - Matched (On-hold) - Settled - CCASS Rejection (Buy side) - CCASS Rejection (Sell side)
Timestamp	The date and time of each transaction activity Note: The timestamp shown on UI is indicating the Hong Kong Time (UTC+8); while the API fetching result is indicating the Universal Time (UTC+0).
User	System UID of the approver of each activity. Visibility of this field is dependent on the acting participant, e.g., a GC participant will only be able to see the approval/rejection actions taken by a GC and cannot see any actions taken by other participants, e.g., AM, LC, etc.
Party	Party of the approver of each activity. Participants will be able to see what actions are taken by HKEX
Reference	Always blank and reserved for the future use to show unique message reference for ISO20022 message generated (this information is only available to ISO message users). Visibility of this field is dependent on the acting participant, e.g., a GC participant will only be able to see the approval/rejection actions taken by a GC and cannot see any actions taken by other participants, e.g., AM, LC, etc. Synapse Users using GUI / API can ignore this field.

Classification – Internal

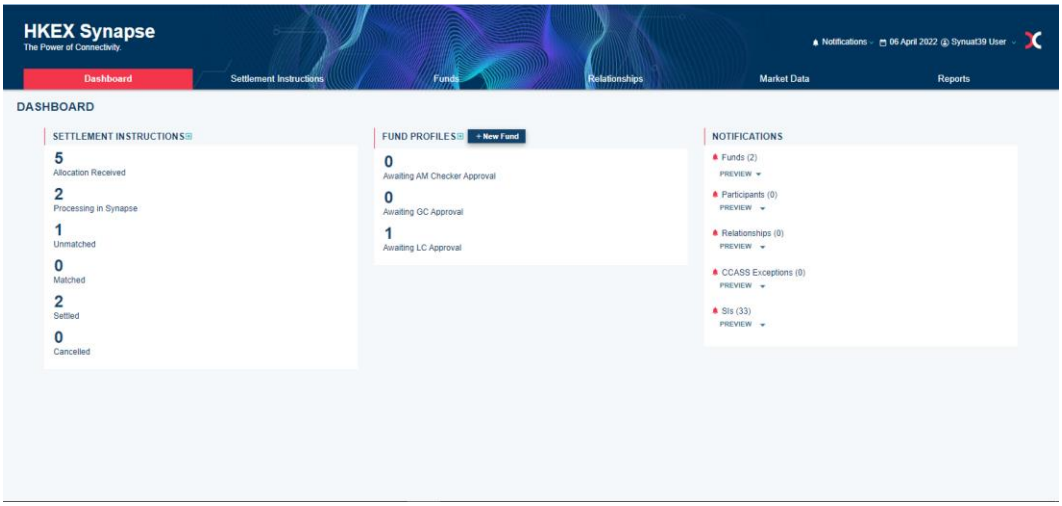
8. Relationships

The Relationships tab shows how participants relate to one another and provides additional entity details.

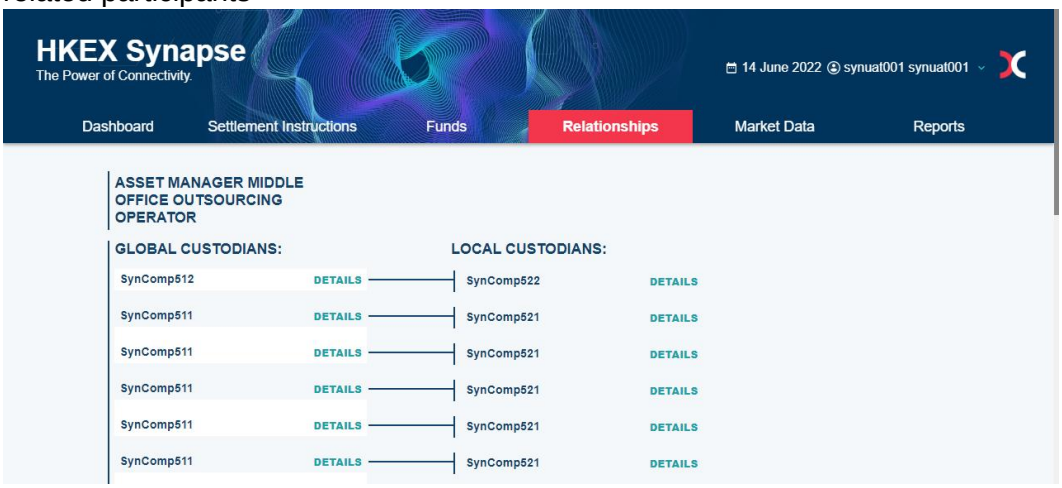
Participants can see how they relate to one another and view additional entity details. There is no difference in functionality for different user types. The sample screens below are illustrative and are from the Asset Manager participant.



1. The participant logs in to Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

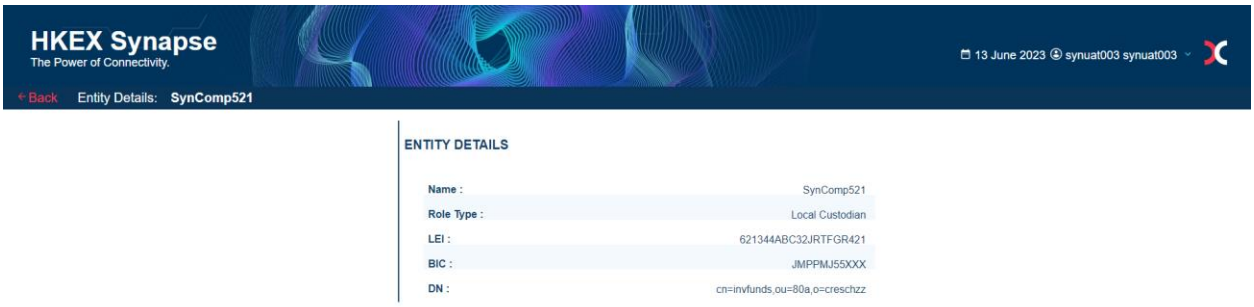


2. On the Relationships tab, the participant can view their relationships between their related participants



Classification – Internal

3. The participant can click on ‘Details’ to see additional entity details:



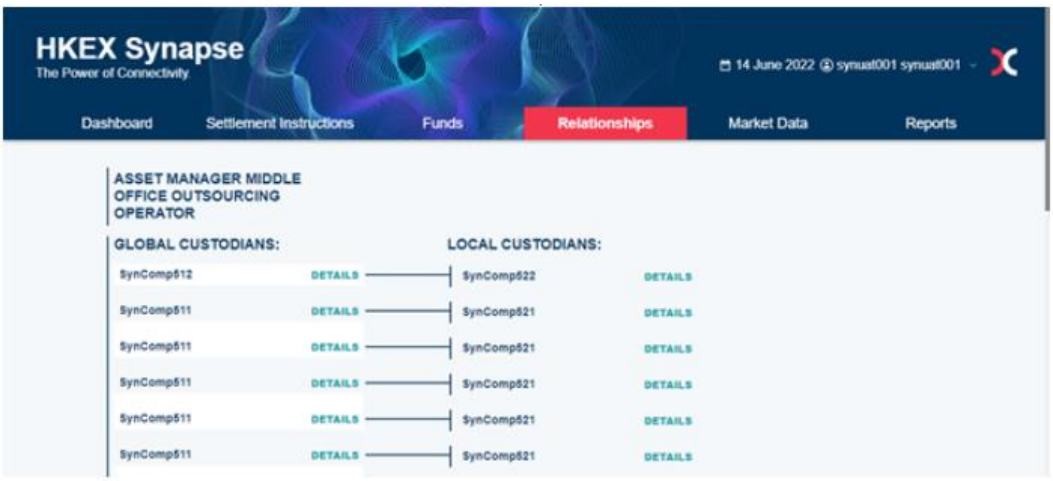
Field Name	Description
Name	The Legal Entity name of the entity
Role Type	Role of the entity
LEI	Legal Entity Identifier for the entity
BIC	Depository Business Identification Code
DN	Distinguished Name Code for the entity

Below are the relationship screens for each participant type.

8.1 Buy Side

Asset Manager (AM) – who does not appoint AMOO

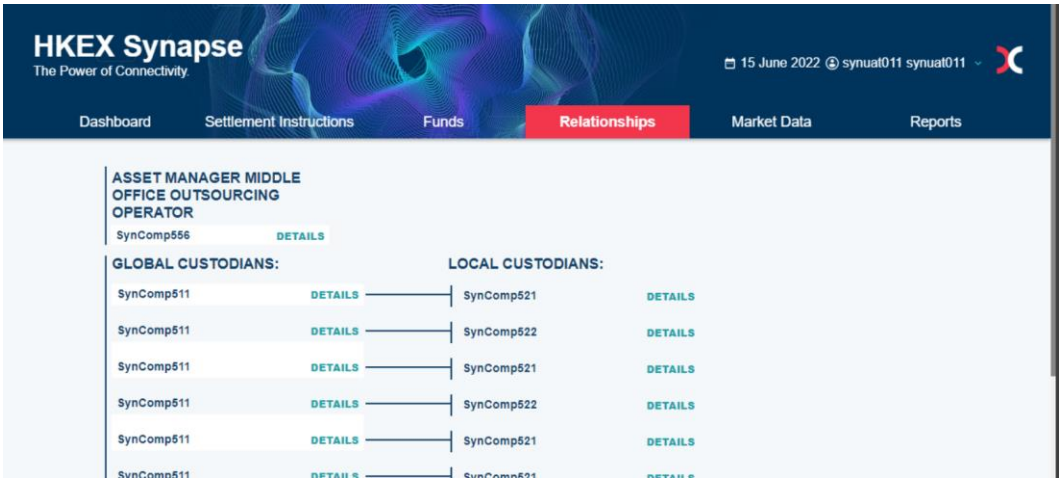
On the Relationships tab, the AM participant can view the relationships between buy side participants, e.g., GC and LC.



Classification – Internal

Asset Manager (AM) – who appoints AMOO

On the Relationships tab, the AM participant can view the relationships between buy side participants, e.g., GC, LC, and AMOO if an AMOO has been appointed by the AM.

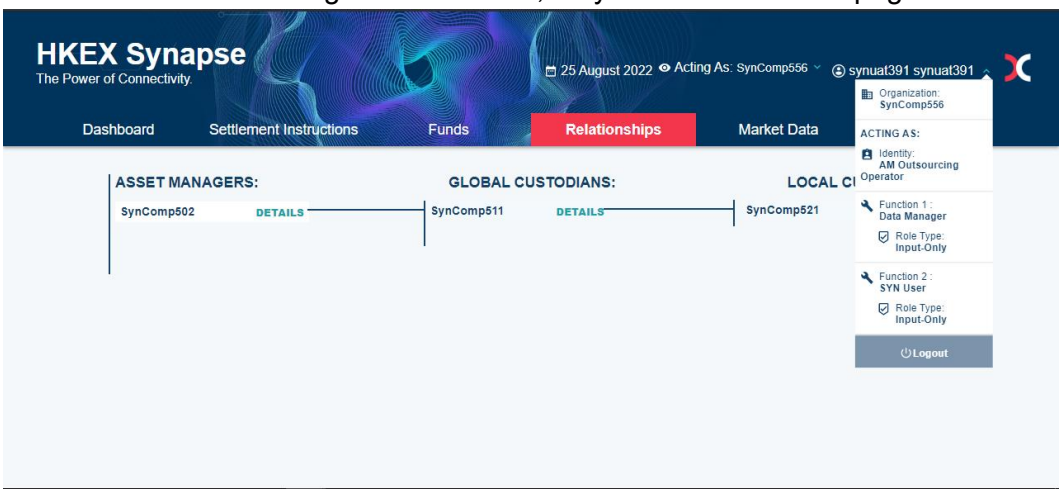


Asset Manager Middle Office Outsourcing Operator (AMOO)

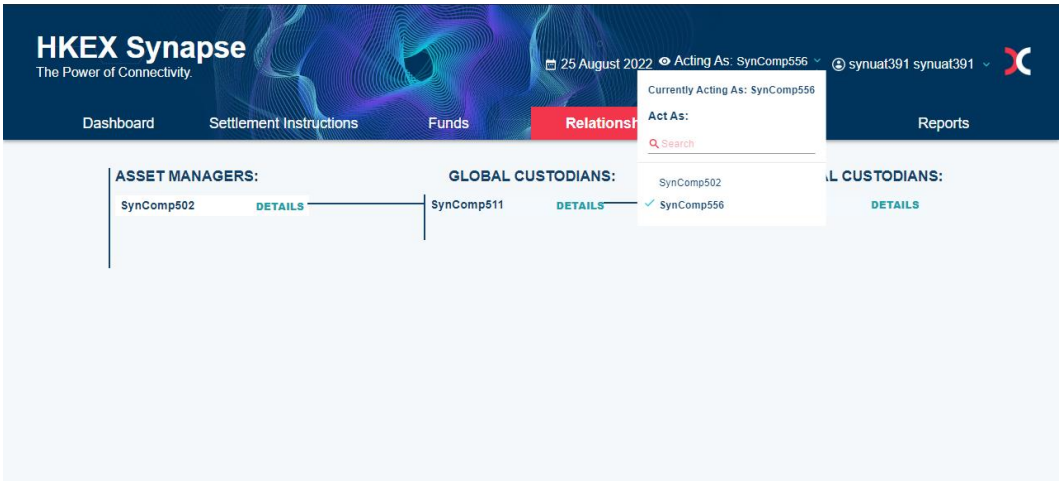
If the AMOO is being has appointed by multiple AM, then the AMOO can choose which AM to act as and sees the same as what the relevant AM would see.

The AMOO can click the participant dropdown in the top right corner and then click “Act as Different Identity” to change which AM they act as. They can choose to act as any AM that has appointed them or as themselves as AMOO.

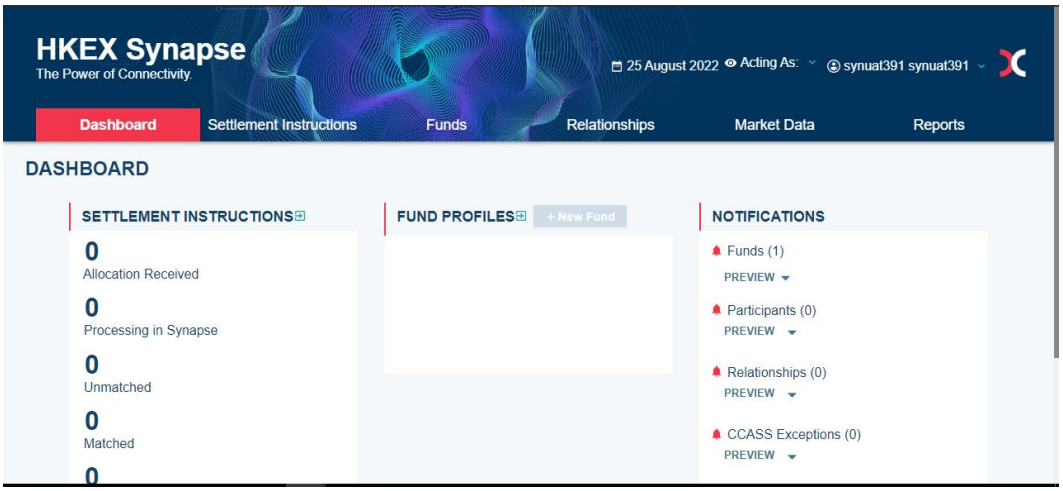
When the AMOO is acting as themselves, they will see the below page.

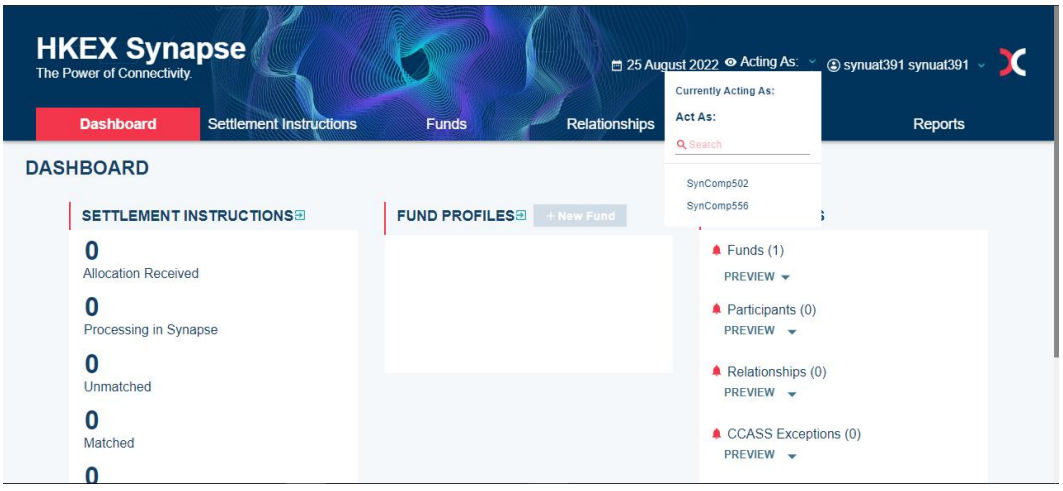


Classification – Internal

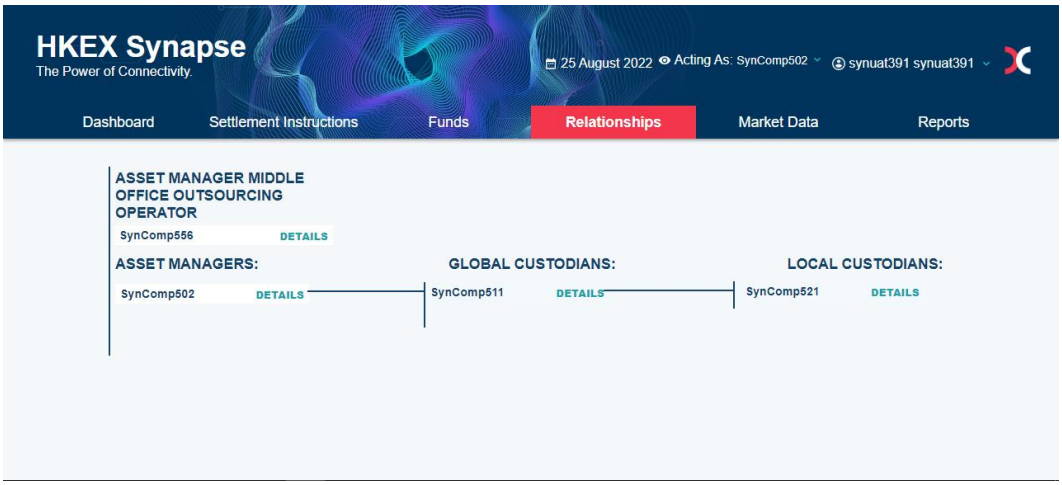


When the AMOO is acting as an AM, they will see the below page.



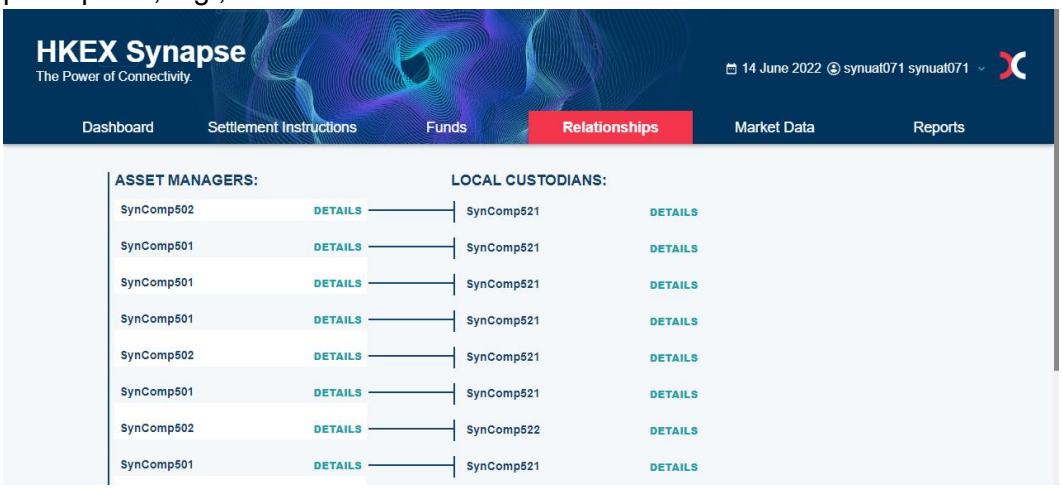


Classification – Internal



Global Custodian (GC)

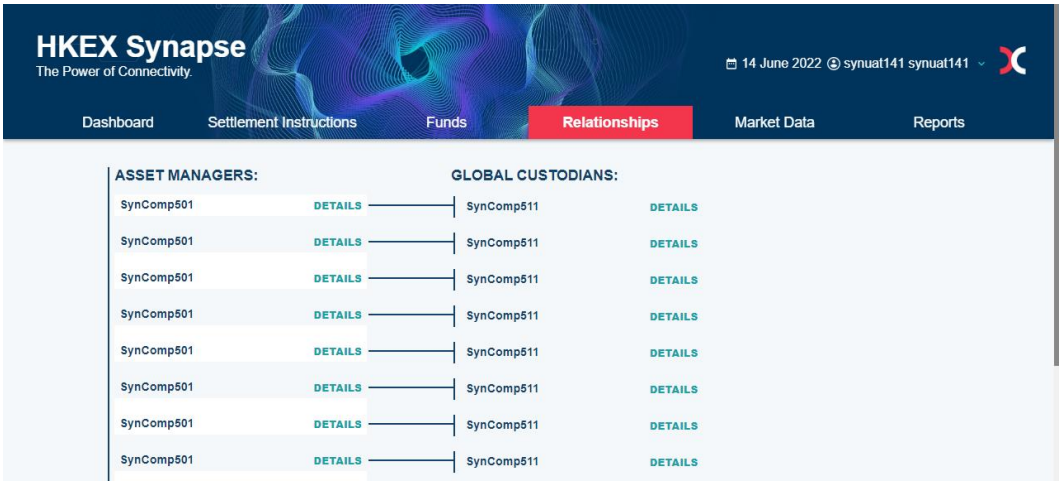
On the Relationships tab, the GC participant can view the relationships between buy side participants, e.g., AM and LC.



Local Custodian (LC)

On the Relationships tab, the LC participant can view the relationships between buy side participants, e.g., AM and GC.

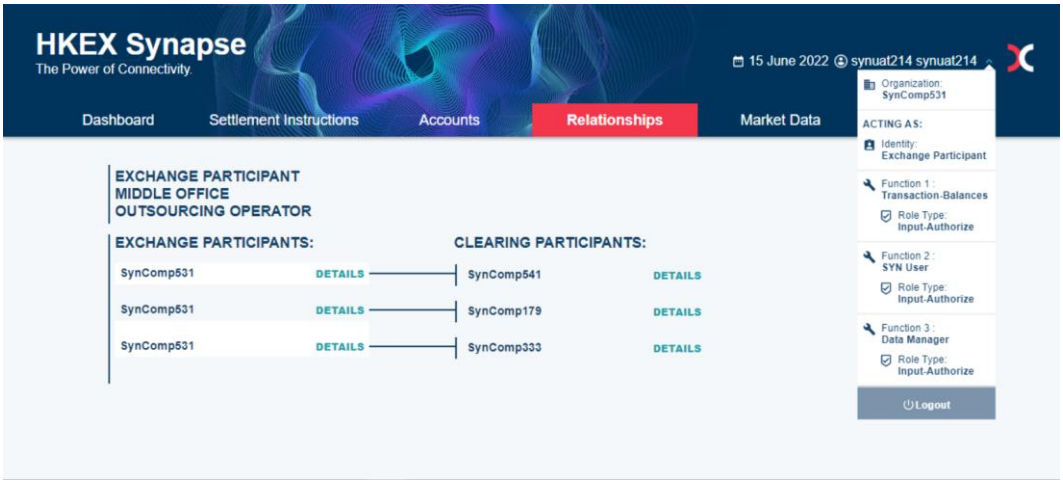
Classification – Internal



8.2 Sell Side

Exchange Participant (EP) – who does not appoint EPOO

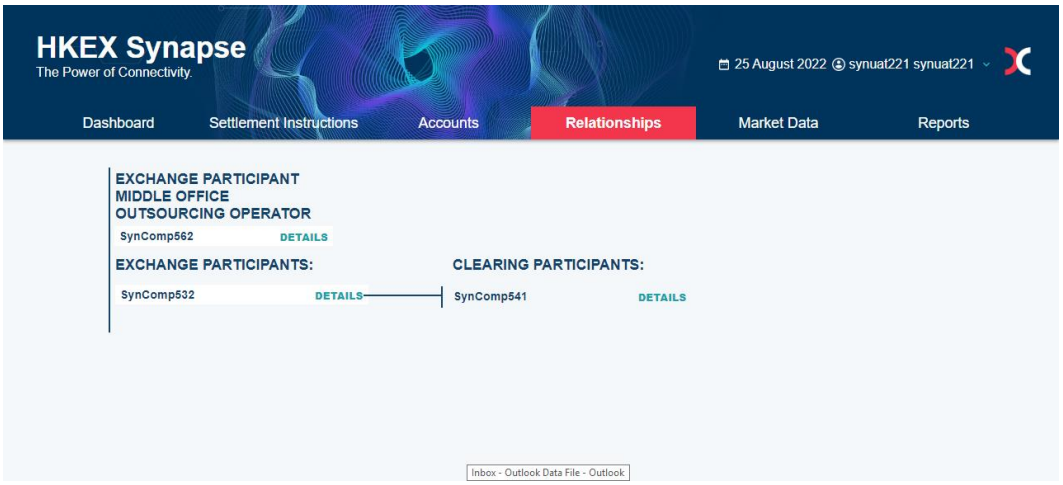
On the Relationships tab, the EP participant can view the relationships between sell side participants, e.g., CP and EP



Exchange Participant (EP) – who appoints EPOO

On the Relationships tab, the EP participant can view the relationships between sell side participants, e.g., CP, EP, and EPOO if an EPOO has been appointed by the EP.

Classification – Internal

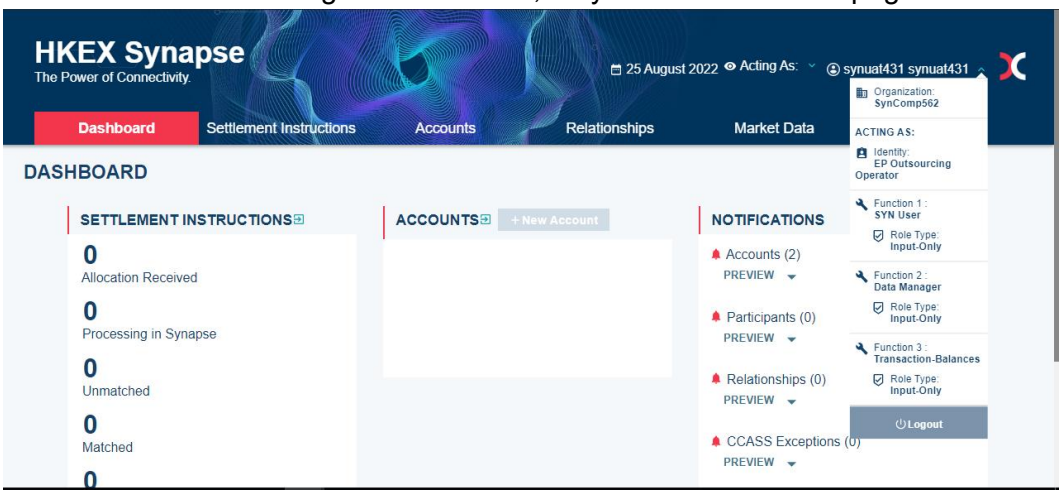


Exchange Participant Middle Office Outsourcing Operator (EPOO)

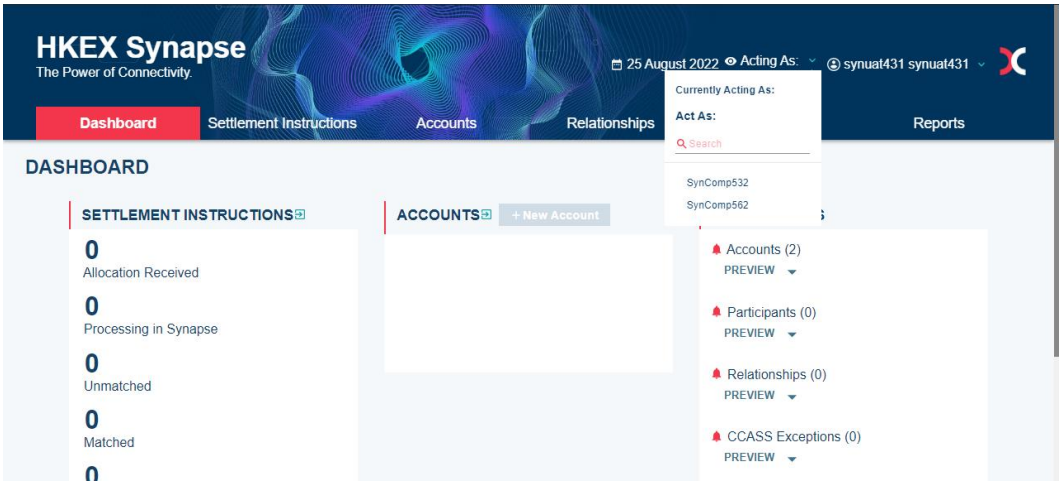
If the EP has appointed an EPOO, then the EPOO chooses which EP to act as and sees the same as what the relevant EP would see.

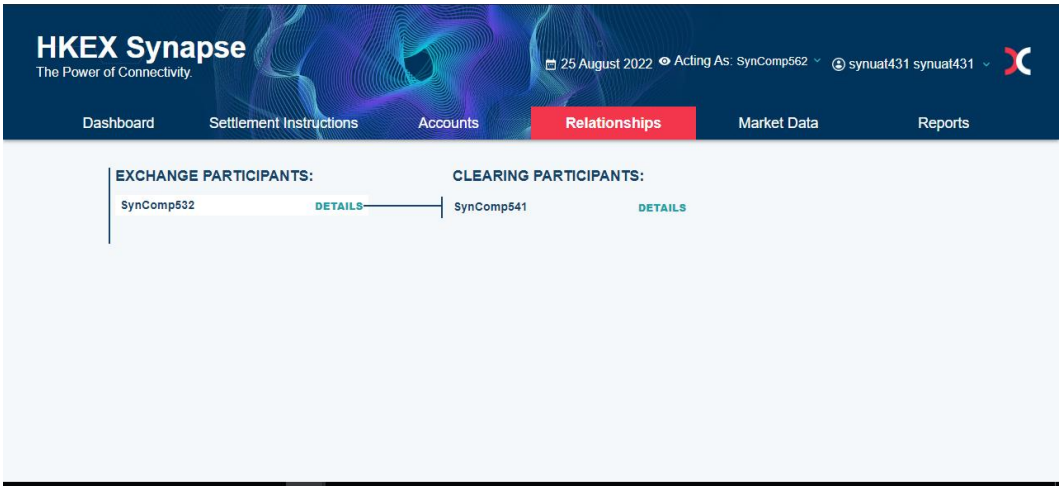
The EPOO can click the participant dropdown in the top right corner and then click “Act as Different Identity” to change which EP they act as. They can choose to act as any EP that has appointed them or as themselves as EPOO.

When the EPOO is acting as themselves, they will see the below page.

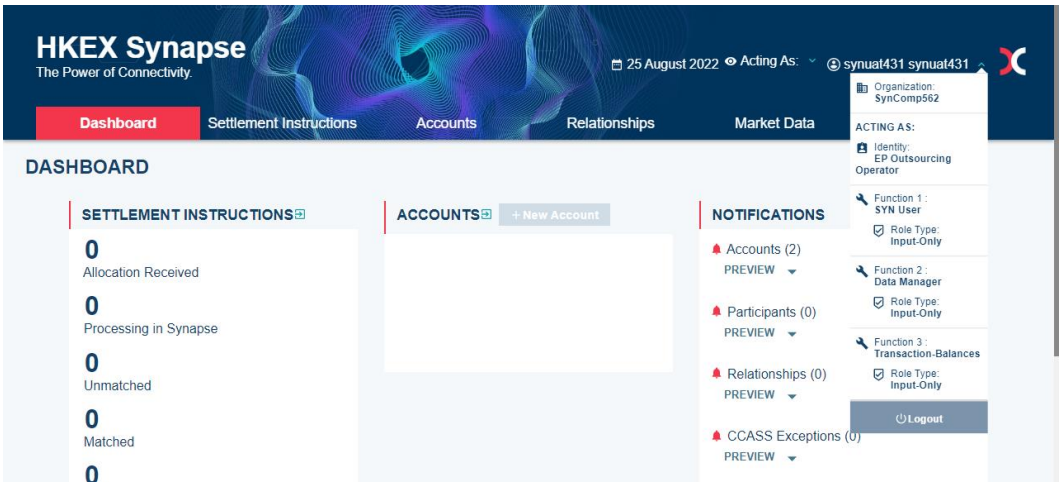


Classification – Internal

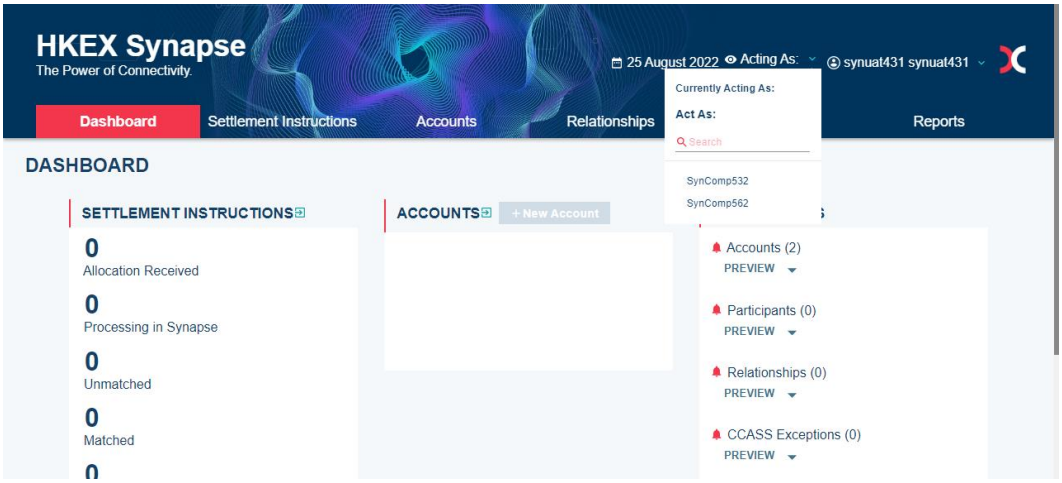


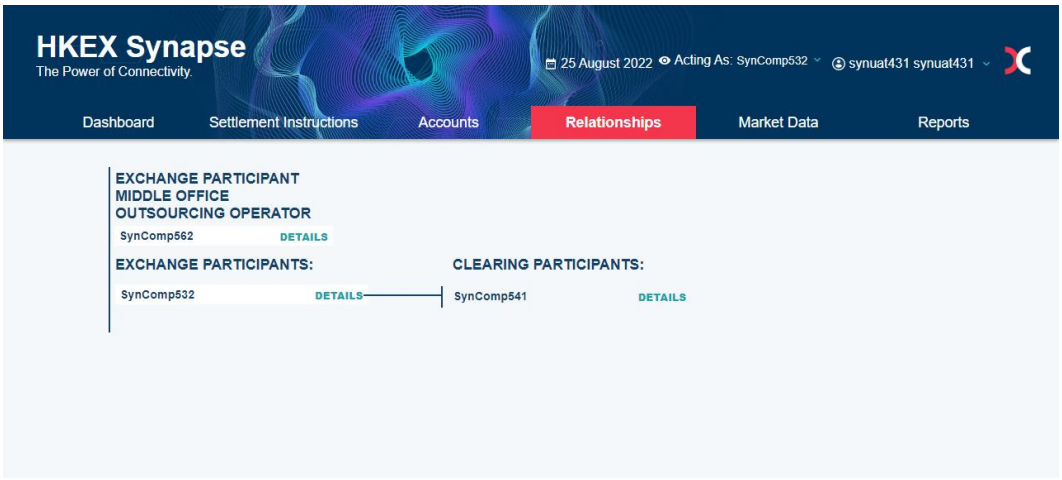


When the EPOO is acting as an EP, they will see the below page.



Classification – Internal

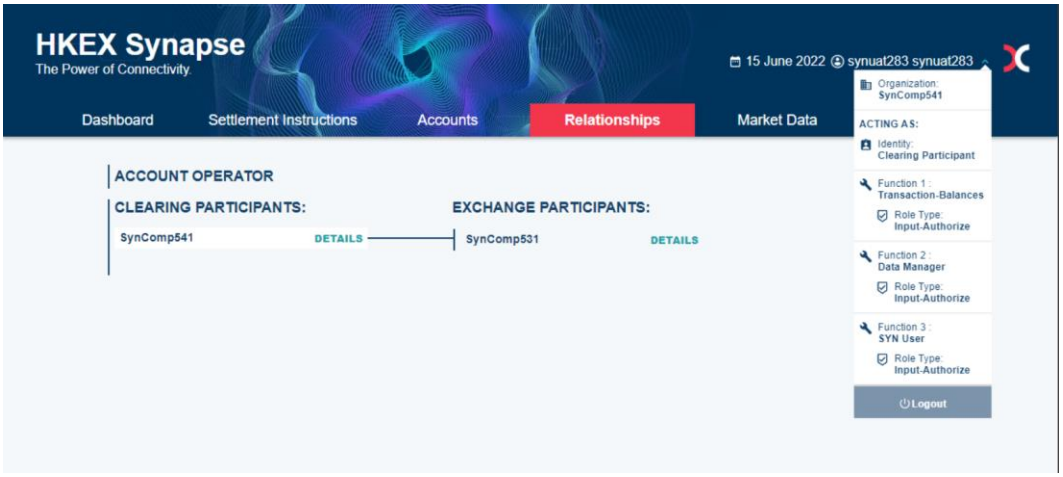




Classification – Internal

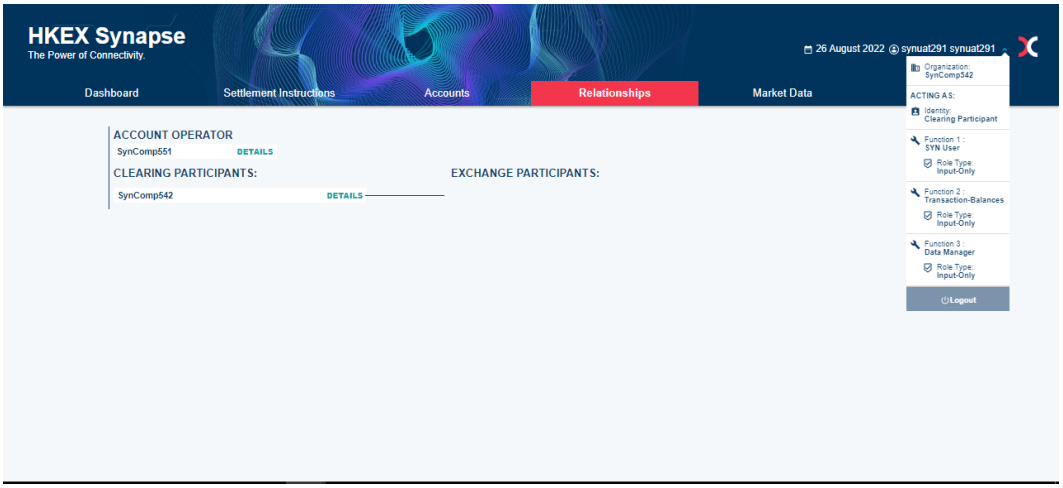
Clearing Participant (CP) – who does not appoint AO

On the Relationships tab, the CP participant can view the relationships between sell side participants, e.g., EP and CP.



Clearing Participant (CP) – who appoints AO

On the Relationships tab, the CP participant can view the relationships between sell side participants, e.g., EP, CP, and AO if an AO has been appointed by the CP.

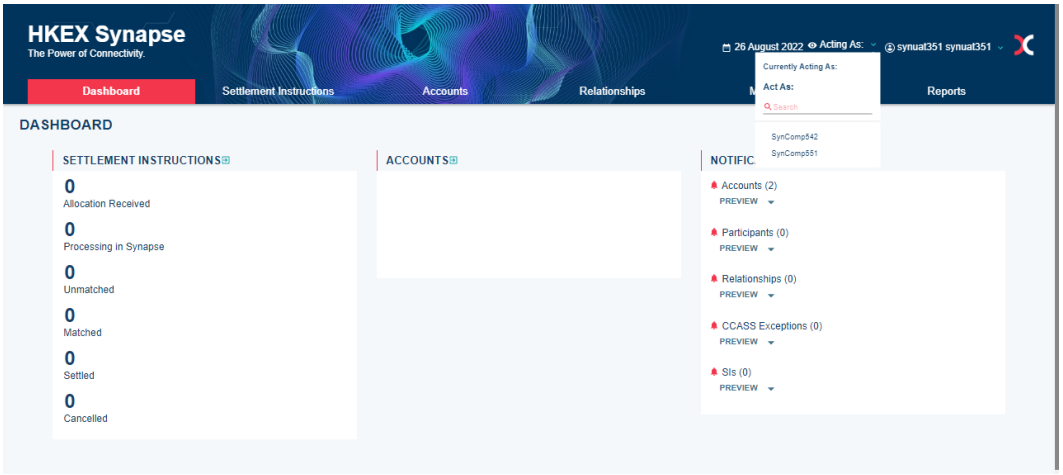


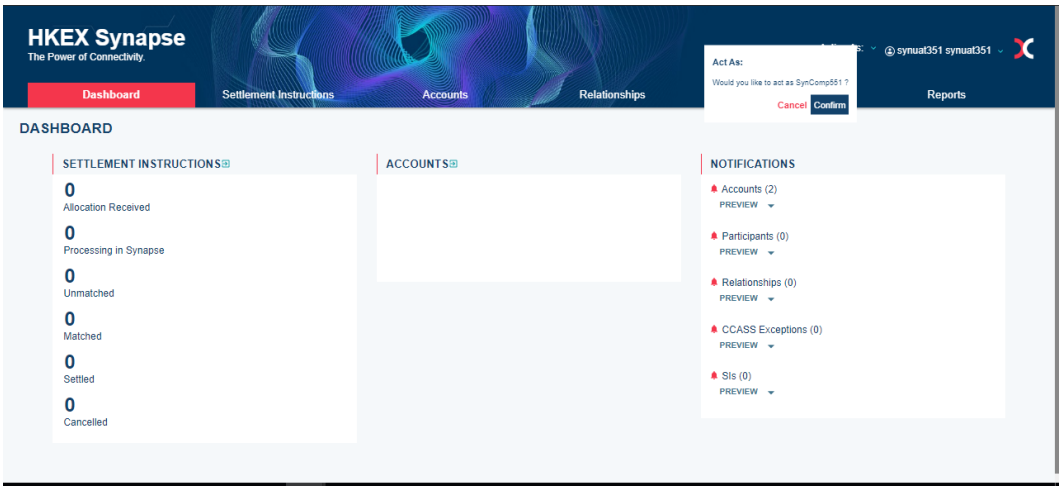
Classification – Internal

Account Operator (AO)

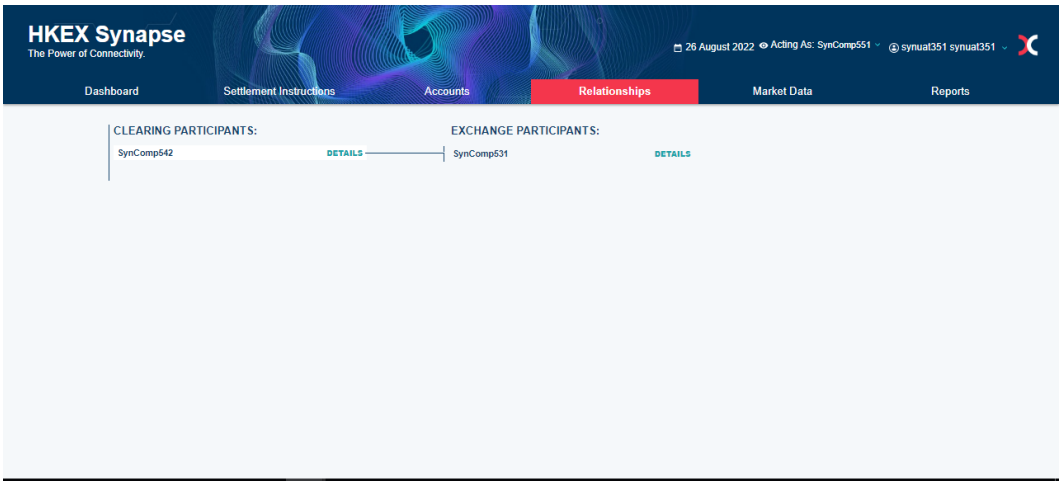
If the CP has appointed an AO, then the AO chooses which CP to act as and sees the same as what the relevant CP would see.

The AO can click the participant dropdown in the top right corner and then click “Act as Different Identity” to change which CP they act as. They can choose to act as any CP that has appointed them or as themselves as AO

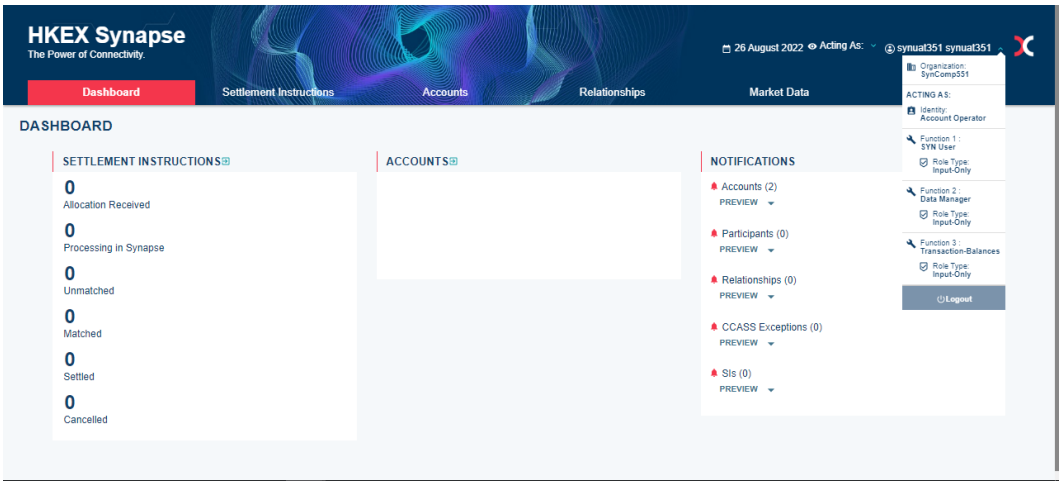


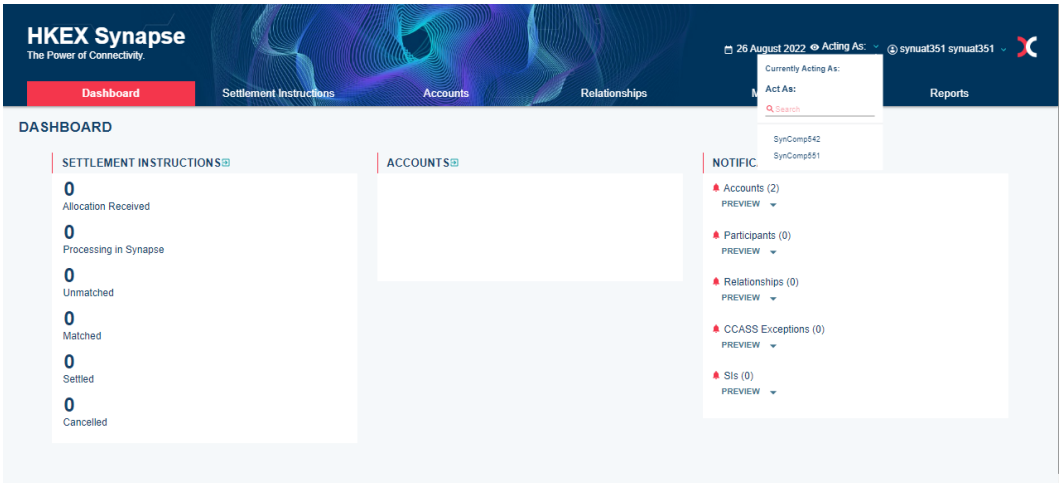


Classification – Internal

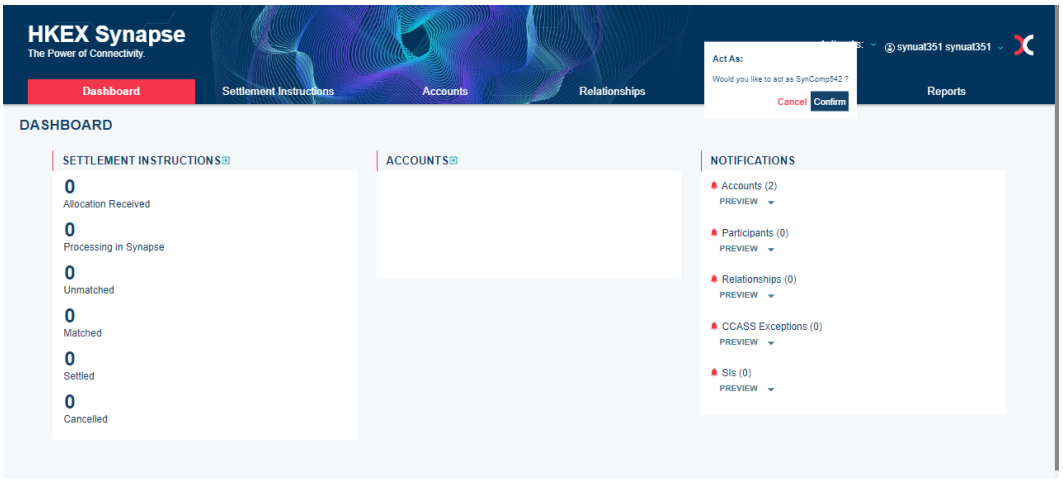


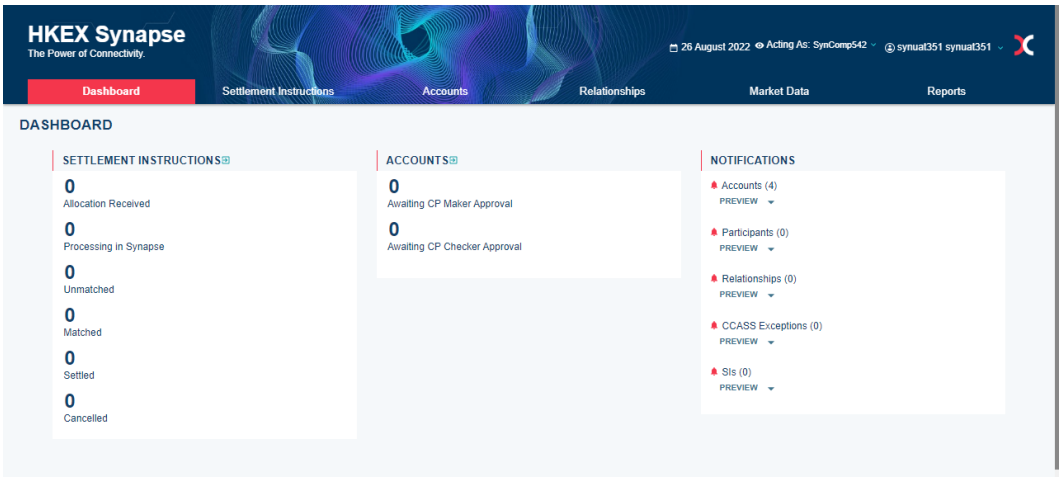
When the AO is acting as an CP, they will see the below page.

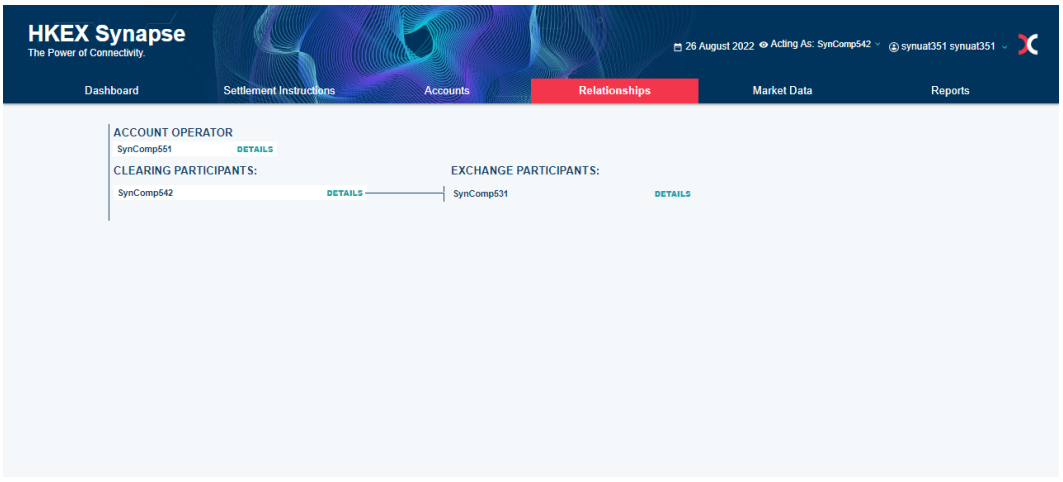




Classification – Internal





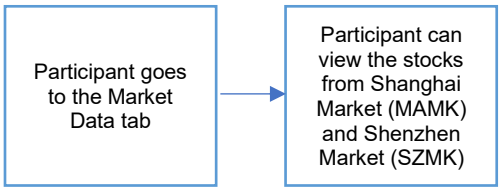


Classification – Internal

9. Market Data

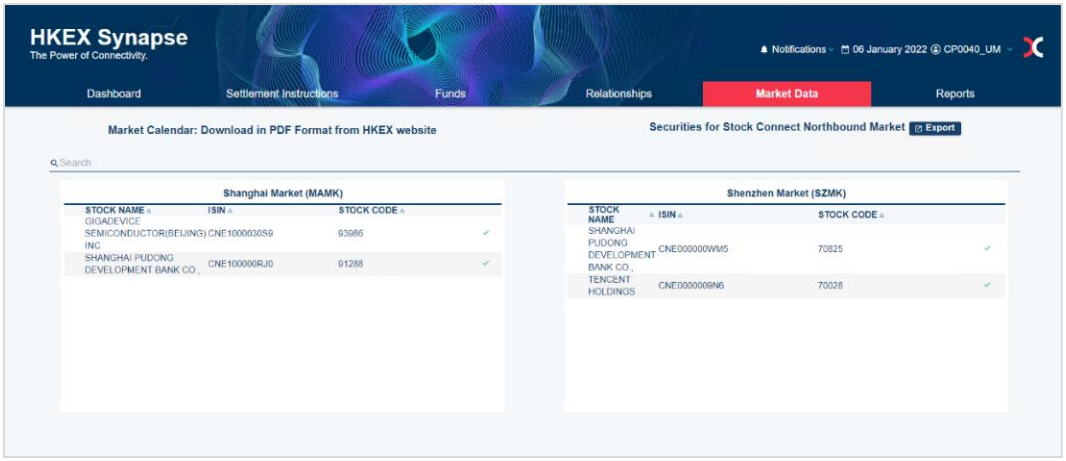
Market Data allows buy side and sell side participants to see the eligible Northbound securities from two markets: Shanghai Market (MAMK) and Shenzhen Market (SZMK). There is the functionality to export the stock list to CSV format.

Market Data functionality is the same for both buy side and sell side participants. There is no difference in functionality for different user types. The sample screens below are illustrative and are from the Asset Manager participant.



1. The AM participant logs in to Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

2. On the Market Data tab, the AM participant can view the eligible Northbound securities from two markets: Shanghai Market (MAMK) and Shenzhen Market (SZMK).



3. The AM participant can export the Stock List to CSV format by clicking the “Export” button.

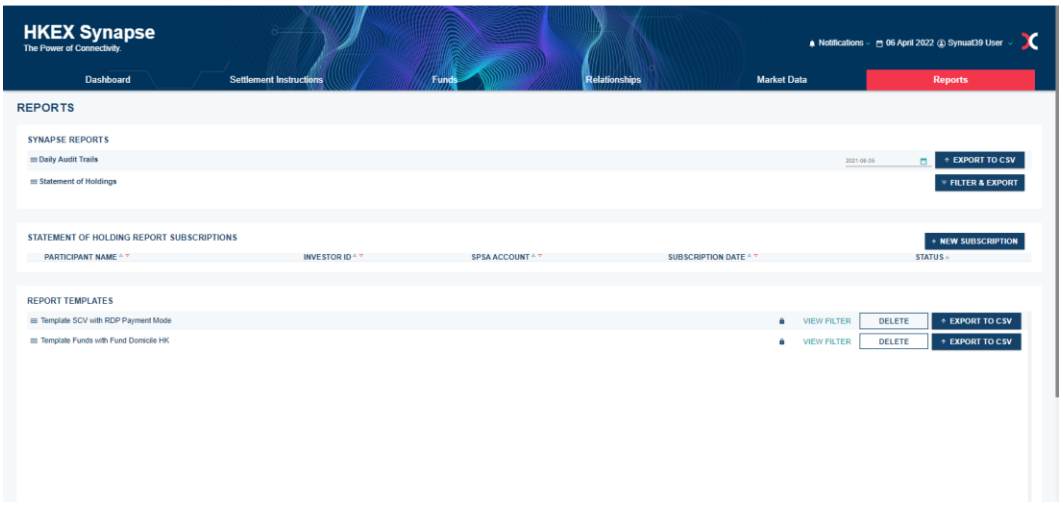
Column	Description
stockCode	Stock code
isinCode	ISIN code; ISIN is the International Securities Identification Number. It can be used as a unique identifier for a stock
stockShortName	Short form of the stock name
marketCode	Indicated the stock market: - SZMK – Shenzhen Market - MAMK – Shanghai Market
listedDate	The date that the stock is listed
delistedDate	The date that the stock is delisted

Classification – Internal

10. Reports

Synapse offers participants the ability to export all its accessible data (e.g. Funds, Accounts, Settlement Instruction and Market Data) in CSV format.

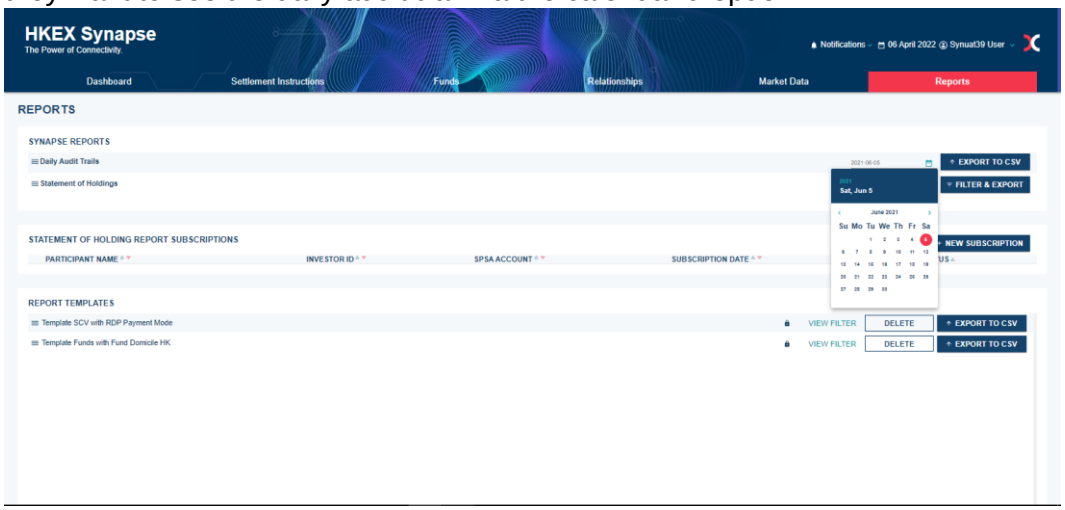
10.1 Synapse Reports



10.1.1 Daily Audit Trail

On the Reports tab, Synapse users can access a daily audit trail for all activities related to them (Funds, Accounts, and Settlement Instructions) in the form of a CSV. The daily audit trail report will be made available at the start of the day to show the previous day's system and user activities. Please note activities related to report download (e.g. SOH subscription / report template creation) and the mapping of outsourcing service provider will not be captured in the Daily Audit Trail.

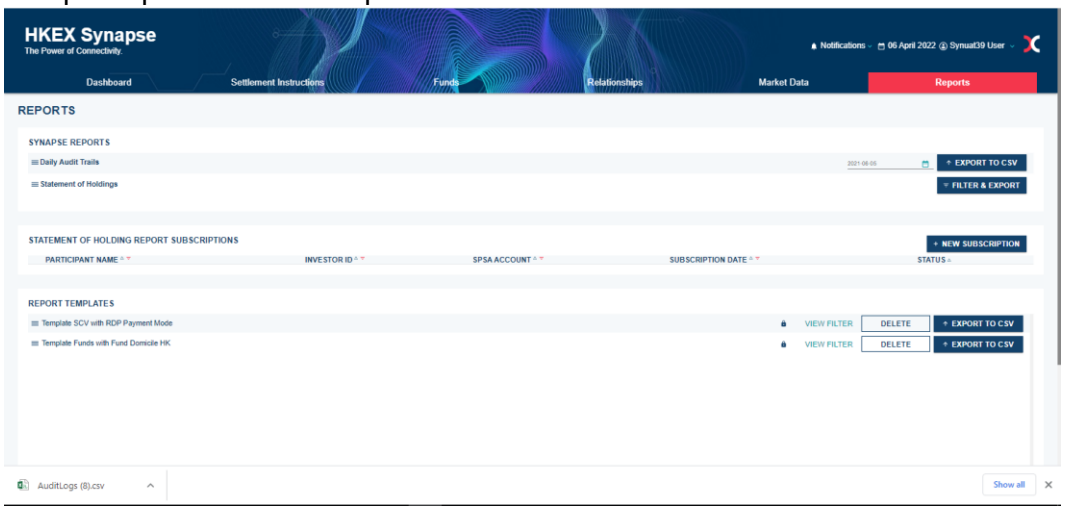
1. On the Reports tab, the buy side and sell side participant can select a date for which they want to see the daily audit trail via the calendar dropdown.



   a. Note: 31 calendar days' worth of audit trail reports are available for selection

Classification – Internal

2. The participant will click “Export to CSV” to download.



Column	Description
Timestamp	Date/time when the transaction was recorded (in HKT)
Identification	Information to be displayed for different type of records: For SN - maps to CTM Transaction Identification For SCV - maps to UTI For Entity - maps to BIC/PID For Fund - maps to Fund ID and Fund Account at GC For Account - maps to Acct EP at CP
Message Type	Indicated the sub-categories of the record ***For Settlement Processing*** - Settlement Notification Received (Buy side) - Settlement Notification Received (Sell side) - SCV Created (Buy Side) SCV Created (Sell Side) - GC Approved - LC Approved - CP Approved - GC Rejected - LC Rejected - CP Rejected - Synapse Rejected (Buy Side) - Synapse Rejected (Sell Side) - SCV Cancelled (Buy Side) - SCV Cancelled (Sell Side) - Input SI Request (Buy Side) - Input SI Request (Sell Side) - Unmatched - OTHR (Buy Side) - Unmatched - OTHR (Sell Side) - Unmatched - SAFE (Buy Side) - Unmatched - SAFE (Sell Side) - Unmatched - DSEC (Buy Side) - Unmatched - DSEC (Sell Side) - Unmatched - DELN (Buy Side) - Unmatched - DELN (Sell Side) - Unmatched - FRAP (Buy Side) - Unmatched - FRAP (Sell Side)

Classification – Internal

Column	Description
	- Unmatched - DQUA (Buy Side) - Unmatched - DQUA (Sell Side) - Unmatched - DMON (Buy Side) - Unmatched - DMON (Sell Side) - Unmatched - DDAT (Buy Side) - Unmatched - DDAT (Sell Side) - Unmatched - DCUR (Buy Side) - Unmatched - DCUR (Sell Side) - Unmatched - NPOS (Buy Side) - Unmatched - NPOS (Sell Side) - Unmatched - PMNE (Buy Side) - Unmatched - PMNE (Sell Side) - Unmatched - URNA (Buy Side) - Unmatched - URNA (Sell Side) - Matched - MTCH (Buy Side) - Matched - MTCH (Sell Side) - Settled - SETD (Buy Side) - Settled - SETD (Sell Side) - Cancelled - CANI (Buy Side) - Cancelled- CANI (Sell Side) - Cancelled (CP) - CSUB (Buy Side) - Cancelled (CP) - CSUB (Sell Side) - Shares on Hold - CVAL (Buy Side) - Shares on Hold - CVAL (Sell Side) - Payment Validated - CYCL (Buy Side) - Payment Validated - CYCL (Sell Side) - Matched On-Hold - PREA (Buy Side) - Matched On-Hold - PREA (Sell Side) - Pending for Transfer - CAIS (Buy Side) - Pending for Transfer - CAIS (Sell Side) - Counter Party Instruction On-Hold - PRCY (Buy Side) - Counter Party Instruction On-Hold - PRCY (Sell Side) - Cancelled - CANS (Buy Side) - Cancelled - CANS (Sell Side) ***For Participant Onboarding*** - New Active GC Entity - New Active LC Entity - New Active AM Entity - New Active EP Entity - New Active CP Entity - New Active AMOO Entity - New Active EPOO Entity - New Active AO Entity - Entity Details Amended - Entity Status Amended ***For Fund Onboarding*** - New Fund Created - New Fund Profile Approved by GC - New Fund Profile Approved by LC - New Fund Profile Rejected by GC - New Fund Profile Rejected by LC - LC-Reappointment Approved by GC - LC-Reappointment Approved by LC

Classification – Internal

Column	Description
	- LC-Reappointment Rejected by GC - LC-Reappointment Rejected by LC - Fund Details Amended - Fund Status Changed - Fund Profile Status Changed ***For Account Onboarding*** - New Account Created - New Account Approved by CP - New Account Rejected by CP - Account Status Changed
Details	Description of the record. Please note for message types related to Fund / Account Onboarding, both maker ID and checker ID will be shown. For message type related to Settlement Processing, only entity ID will be shown.
Category	Indicated the categories of the record - Settlement Processing - Participant Onboarding - Fund Onboarding - Account Onboarding
Party	The company name of the entity who triggered the record
Audit Log Date	Date of the audit log generated

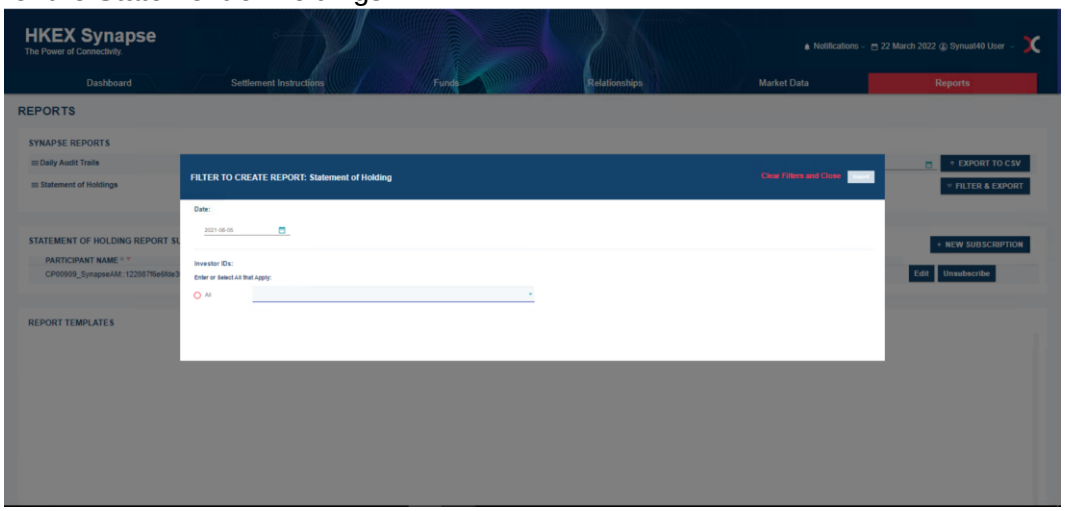
Classification – Internal

10.1.2 Statement of Holdings

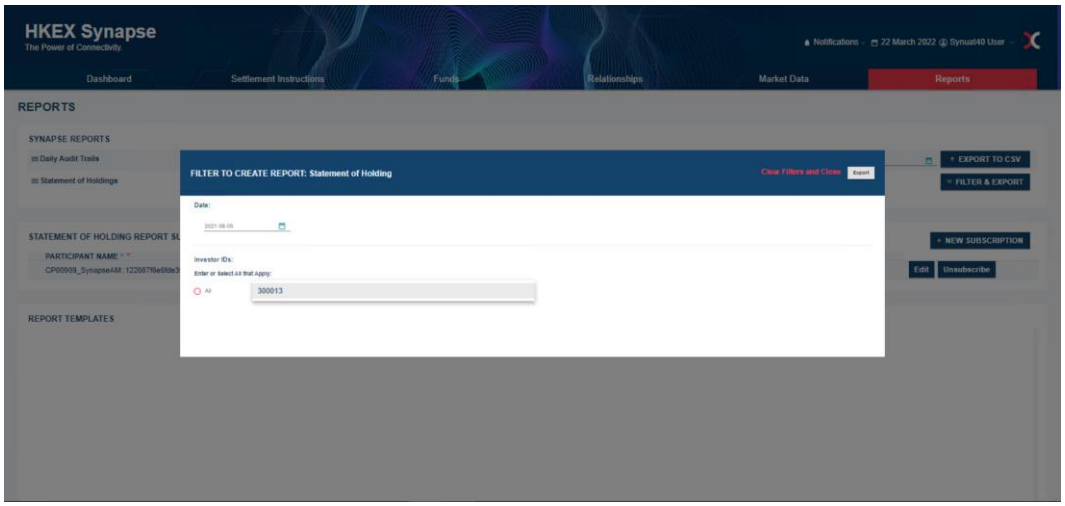
On the Reports tab, only buy side participants can download the Statement of Holdings in the form of CSV file. By on-boarding a fund onto Synapse, the relevant LC is taken to have authorized that (1) the Statement of Holdings in relation to the fund on-boarded onto Synapse in accordance with instructions from the relevant AM and GC can be provided to or through Synapse from time to time; and (2) the relevant LC, AM and GC can download such Statement of Holdings from Synapse following the steps set out in this section.

Buy Side

1. On the Reports tab, the buy side participant can click “Filter & Export” to create a filter for the Statement of Holdings.



2. The buy side participant will select a date via the calendar dropdown and the investor ID(s) they want to select.
    a. Note: 31 calendar days are available for selection
    b. Note: the Investor ID list is based on the Statement of Holdings subscription that was created.



3. If the incorrect date or incorrect investor ID(s) were selected, then the buy side participant can click “Clear Filters and Close” to remove any selections.

Classification – Internal

4. When the correct date and investor ID(s) have been selected, the buy side participant then clicks “Export” to download the Statement of Holdings into CSV file.

Column	Description
partId	Participant ID
marketCode	Indicated the stock market: - HKMK – Hong Kong Market - SZMK – Shenzhen Market - MAMK – Shanghai Market
stockAccountCode	Stock account code
investorId	Investor ID for the Fund. The field Is a unique number assigned to each SPSA account by HKEX Investor ID is also known as “SPSA ID” in CCASS
currencyCode	Indicate the currency used: - HKD – Hong Kong Dollar - CNY – Chinese Yuan - USD – United States Dollar
exchangeRate	Exchange rate
iSIN	International Securities Identification Number. It can be used as a unique identifier for a stock
signOfStockBalance	Indicated the stock balance is positive or negative: - Blank = 0 or positive balance - ‘*’ = negative balance
signOfStockValue	Indicated the stock value is positive or negative: - Blank = 0 or positive balance - ‘*’ = negative balance
stockAccountBalance	Balance of stock account
stockAccountValue	Value of stock account
stockCode	Stock Code
stockReferencePrice	Reference price of the stock
stockWithCAConversion	Indicated whether the stock is with CA conversion: - Blank = Stock without CA conversion at day end - ‘*’ = Stock with CA conversion at day end
stockWithCAConversion2	Indicated whether the stock is with CA conversion: - Blank = Stock without CA conversion at day end - ‘*’ = Stock with CA conversion at day end

10.1.2.1 Subscribe to Statement of Holding Report

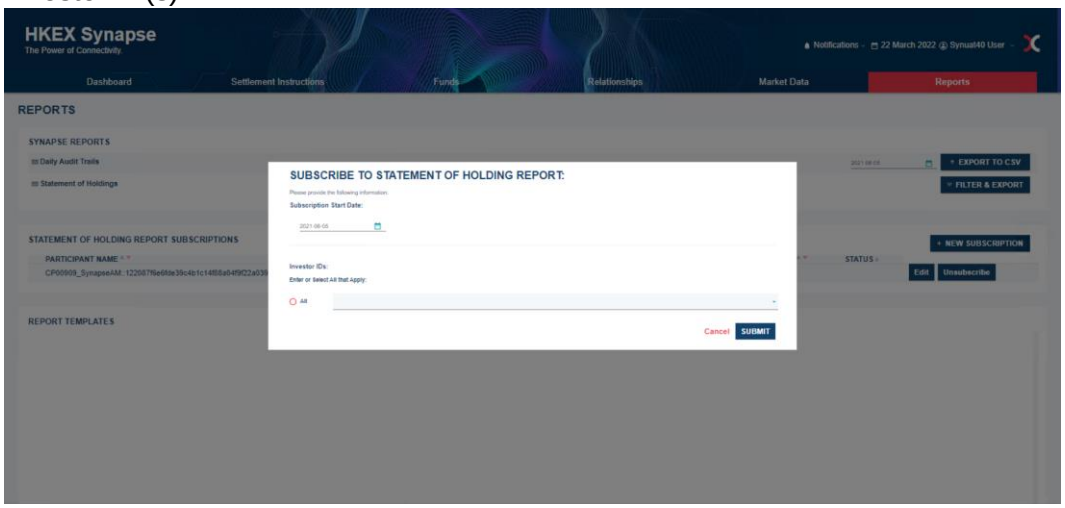
Only buy side participants, e.g., AM, AMOO, GC, and LC, can create a Statement of Holding report subscription. If the AMOO is performing SOH subscription for a specific AM, both AMOO and that specific AM (provided that the AM has also opted for ISO connectivity channel) will receive the SOH via ISO connectivity channel.

Buy Side

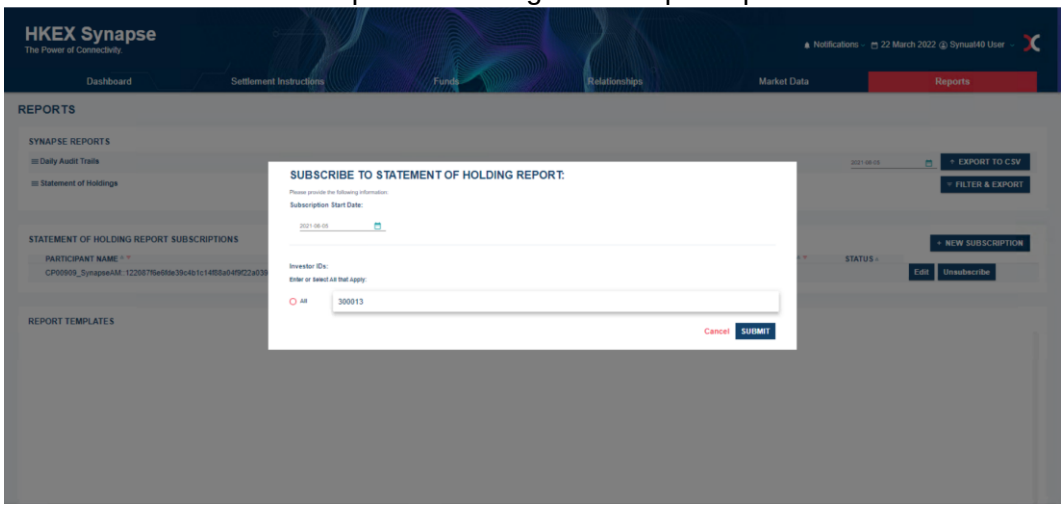
Buy Side Data Manager Input Only User

Classification – Internal

1. On the Reports tab, the Buy Side Data Manager Input Only User clicks “+ New Subscription” and adds the date from which the subscription would begin and select investor ID(s).

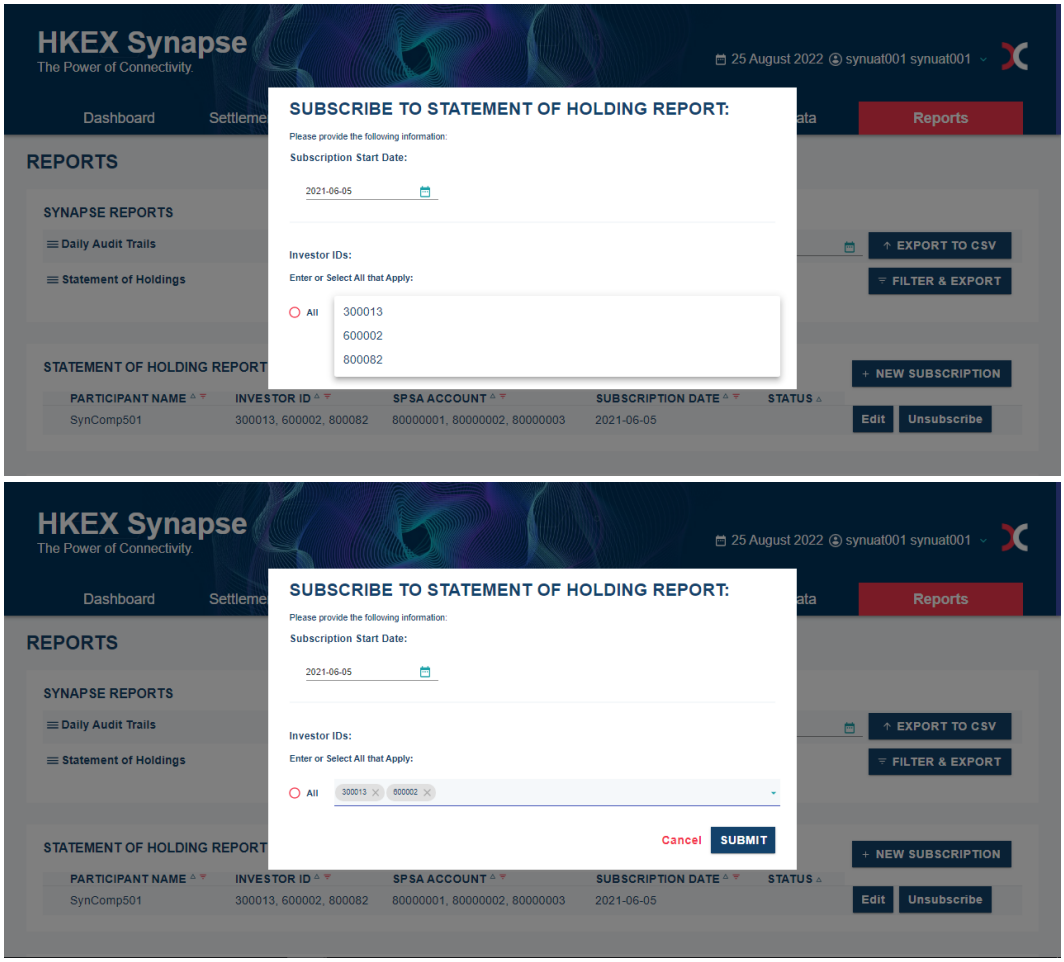


   a. Note: participants will only see investor IDs that are relevant to themselves, i.e. Investor IDs of active fund profiles belonged to the participants.



   When the participant click the drop down, the participant will see a list of investor IDs that are relevant to themselves. They can select which investor IDs in particular they want to subscribe the Statement of Holding Report.

Classification – Internal

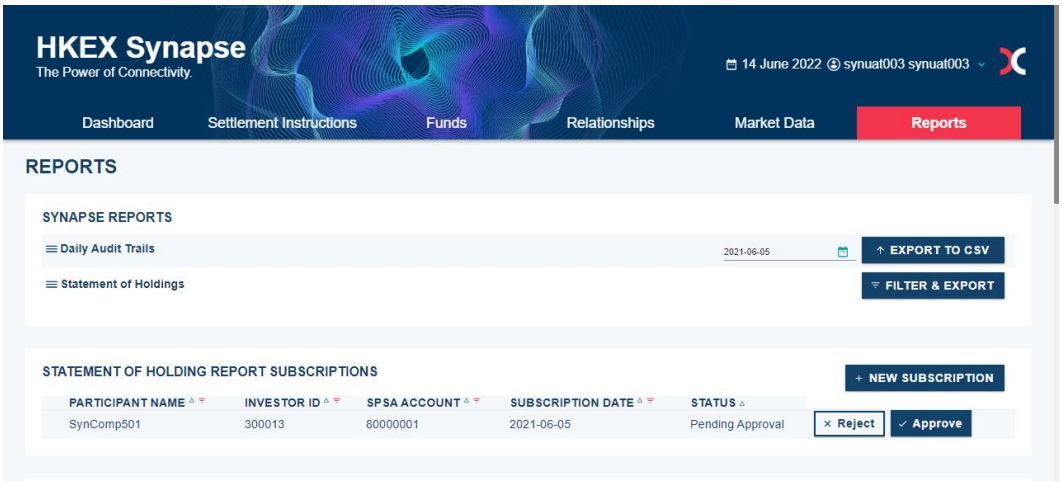


2. The Buy Side Data Manager Input Only User clicks “Submit”.
3. A new row is created in the Statement of Holding Report Subscriptions table with the status “Pending approval”.

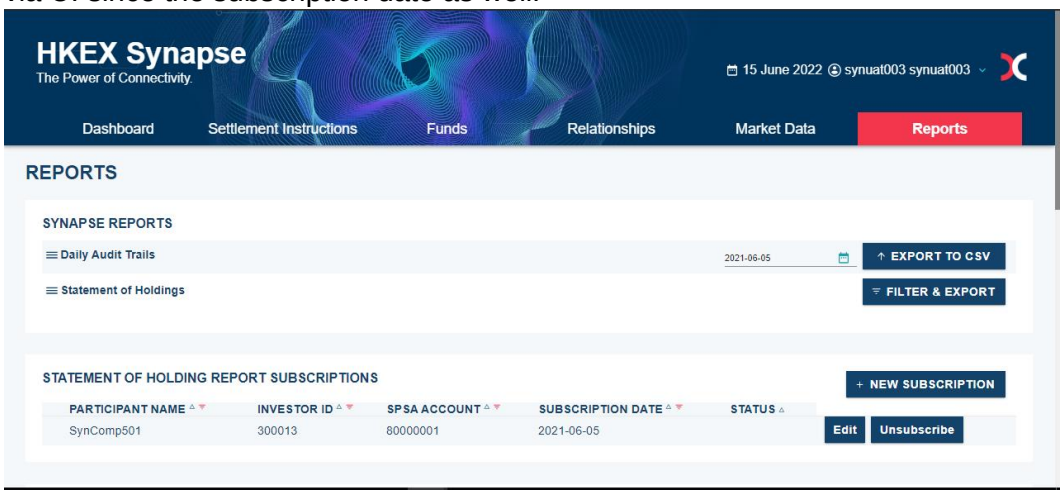
Buy Side Data Manager Input Authorise User

1. On the Reports tab, the Buy Side Data Manager Input Authorise User will see the row in the Statement of Holding Report Subscriptions table with the status “Pending approval”.

Classification – Internal



2. They can either click “Reject” or “Approve”.
    a. If Buy Side Data Manager Input Authorise User clicks “Approve”, then the Statement of Holding report subscription is approved and will start on the date provided by the Input Only User. The Statement of Holding report will be distributed to the Buy Side participants since the subscription date through the channel(s) the participant connected to Synapse such as ISO and/or API. In any cases, Buy Side participants can also download the Statement of Holding report via UI since the subscription date as well.



    b. If Buy Side Data Manager Input Authorise User clicks “Reject”, then the subscription process will be ended.

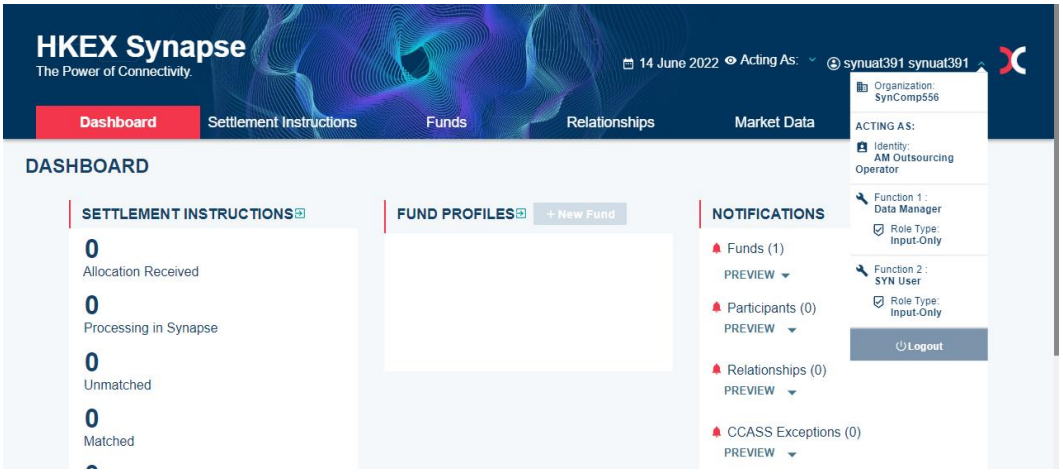
Asset Manager Middle Office Outsourcing Operator (AMOO)

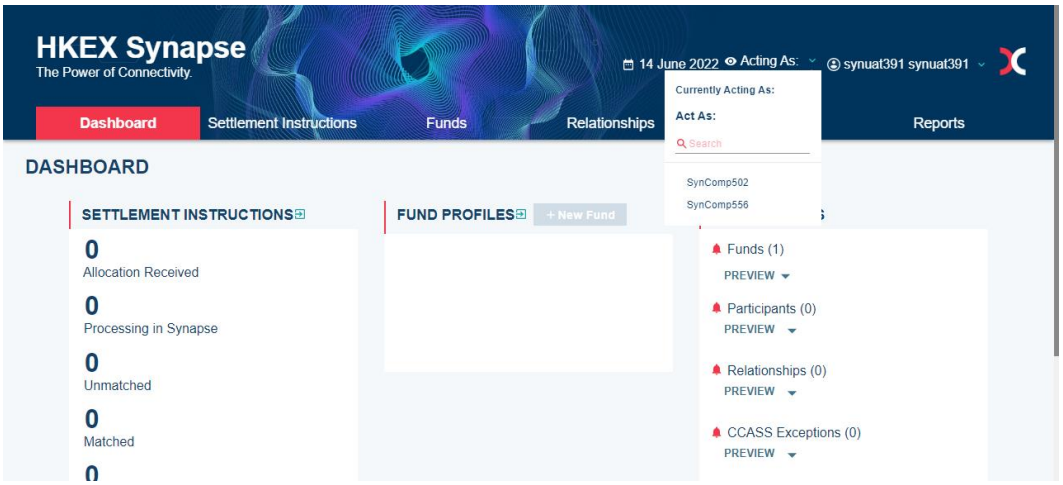
AMOOs can either act as AM or as themselves when perform Statement of Holding report subscription.

AMOO Acting as AM

AMOO can choose to act as AM. The AMOO Data Manager Input Only User logs into Synapse via HKEX Access Management Portal and select to act as an AM from the participant dropdown in the top right corner.

Classification – Internal





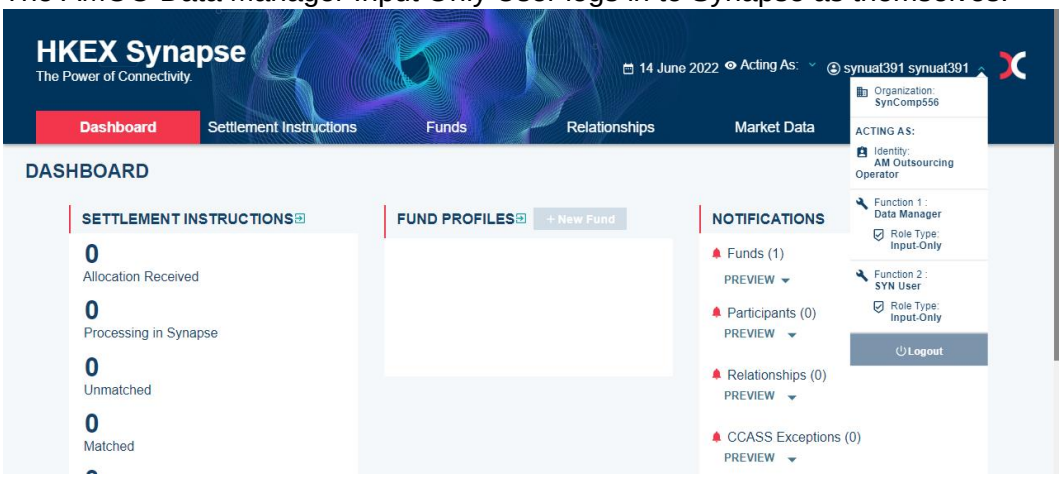
AMOO can proceed with the above process to subscribe to Statement of Holding report.

AMOO Acting as AMOO

The AMOO can also choose to act as themselves for subscription of Statement of Holding Report.

AMOO Data Manager Input Only User

1. The AMOO Data Manager Input Only User logs in to Synapse as themselves.

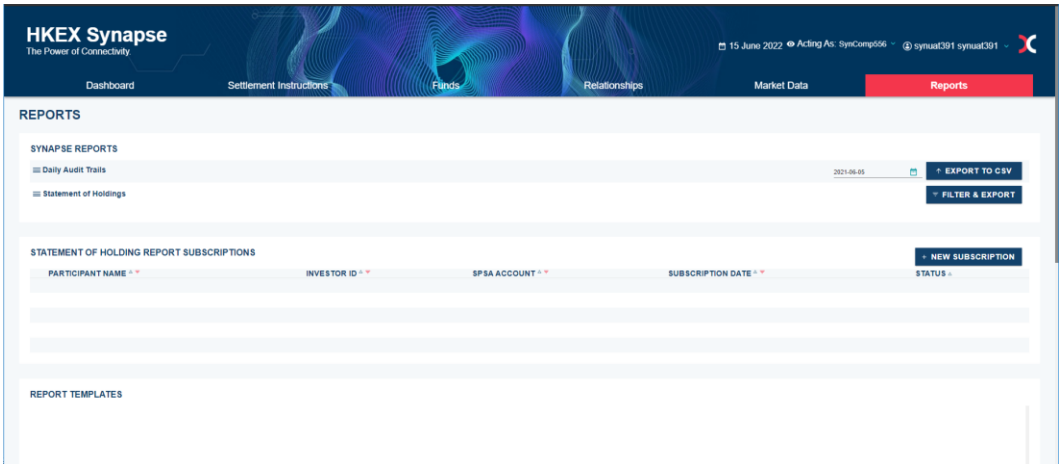


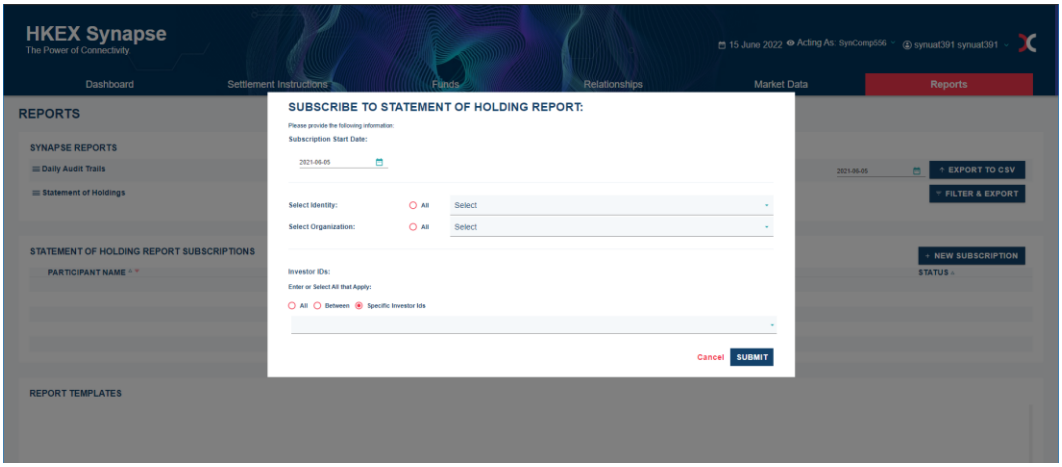
Classification – Internal

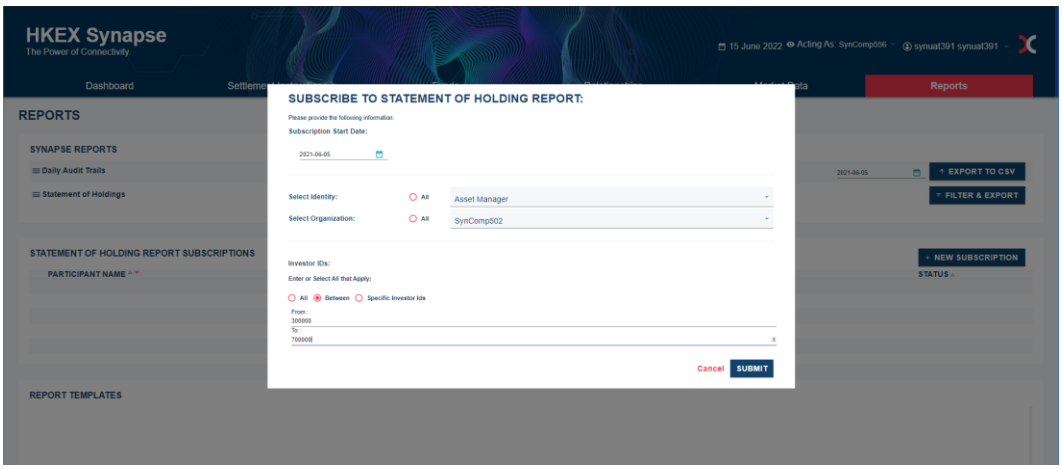
2. On the Reports tab, the AMOO Data Manager Input Only User will select the subscription start date and choose the identity, e.g., “Asset Manager”, and the participant name. The AMOO Data Manager Input Only User can select individual AM or all of the AMs.

Classification – Internal

a. Note: selecting all of the AMs means that the AMOO wants to subscribe to the statements of holding for all of the organizations for which they are acting as.







3. The AMOO Data Manager Input Only User can select all investor IDs related to them by choosing 1 out of the 3 radio buttons:
    a. All – Selecting “All” to apply to all investor IDs related to them.

Classification – Internal

b. Between – Selecting “between” and providing x and y parameters means that the investors between x and y, inclusive, will be selected.
c. Specific Investor IDs – Selecting “Specific Investor IDs” to select one or multiple investor IDs.

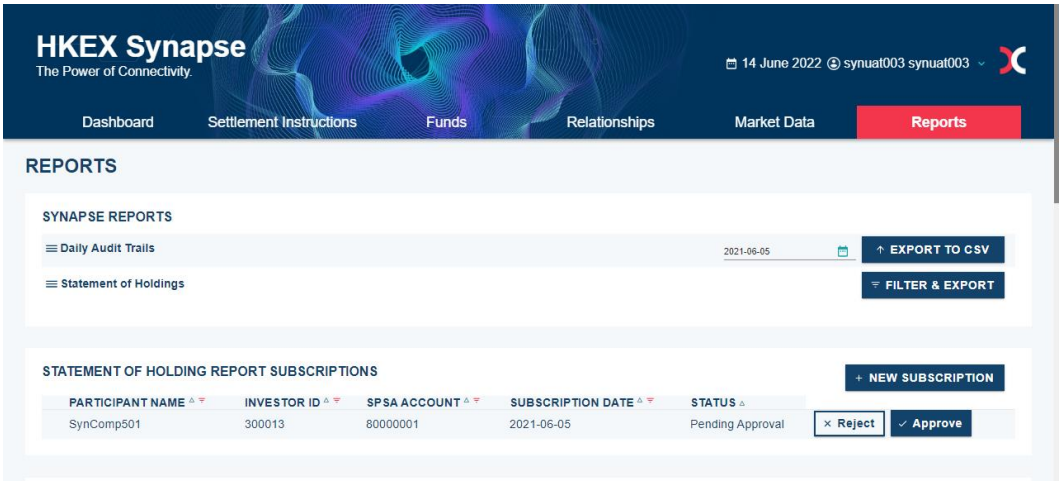
4. The AMOO Data Manager Input Only User clicks “Submit”.

5. A new row is created in the Statement of Holding Report Subscriptions table with the status “Pending approval”.

AMOO Data Manager Input Authorise User

1. On the Reports tab, the AMOO Data Manager Input Authorise User will see the row in the Statement of Holding Report Subscriptions table with the status “Pending approval”.

2. AMOO Data Manager Input Authorise User can either click “Reject” or “Approve”.
   a. If AMOO Data Manager Input Authorise User clicks “Approve”, then the Statement of Holding Report subscription is approved and will start on the date provided by the Input Only User. The Statement of Holding Report will be distributed to AMOO since the subscription date through the channel AMOO connected to Synapse, such as ISO. In any cases, AMOO can also download the Statement of Holding report via UI since the subscription date as well.
   b. If AMOO Data Manager Input Authorise User clicks “Reject”, then the subscription process will be ended.



10.1.2.2 Unsubscribe from Statement of Holding Report

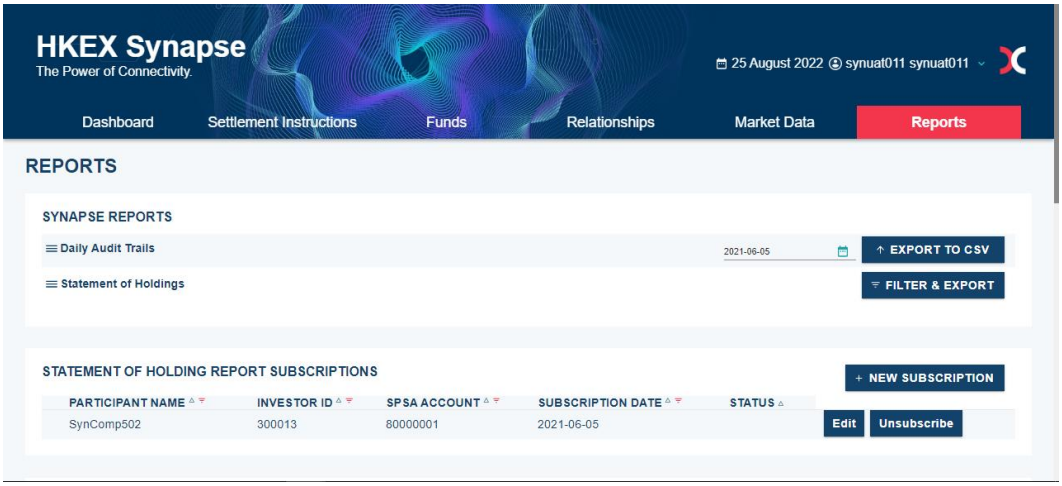
Buy side participants can choose to unsubscribe the Statement of Holding Report if consider the information is not necessary.

Buy Side

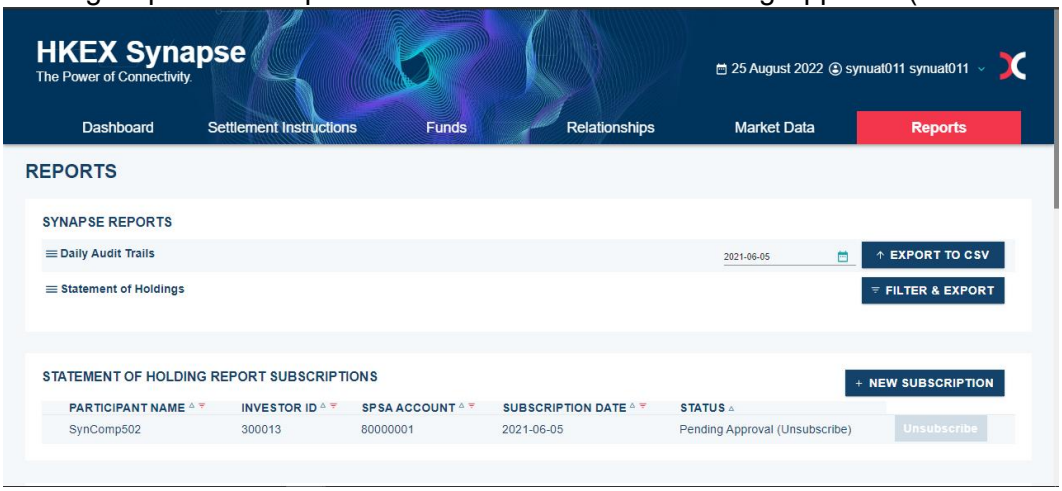
Buy Side Data Manager Input Only User

1. On the Reports tab, the Buy Side Data Manager Input Only User clicks “Unsubscribe” in the relevant row in the Statement of Holding Report subscription table

Classification – Internal

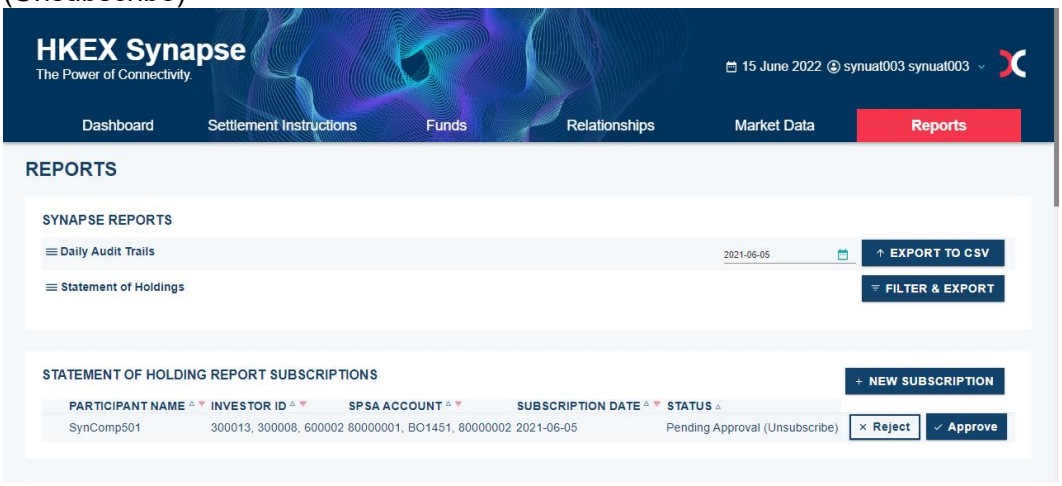


2. The Buy Side Data Manager Input Only User will see the row in the Statement of Holding Report Subscriptions table with the status “Pending Approval (Unsubscribe)”



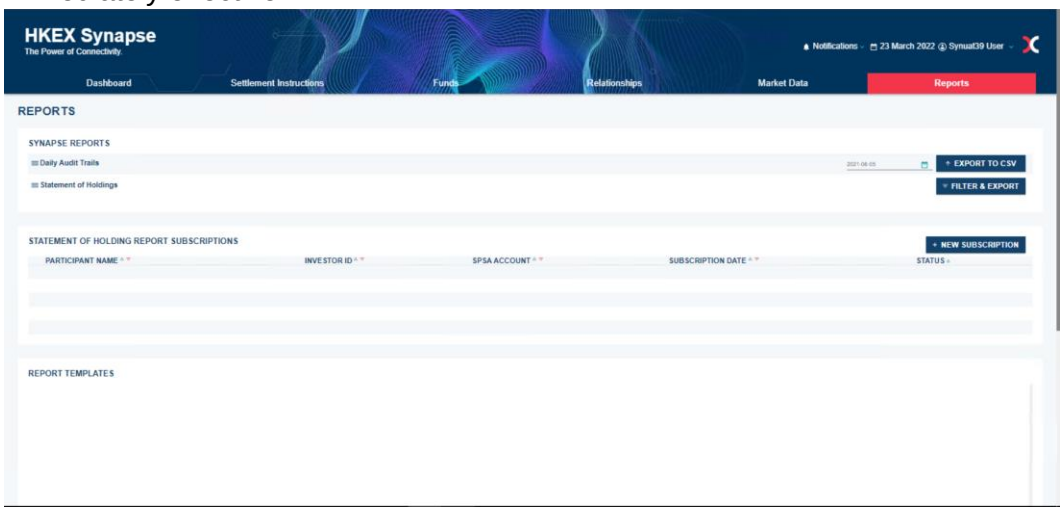
Buy Side Data Manager Input Authorise User

1. On the Reports tab, the Buy Side Data Manager Input Authorise User will see the row in the Statement of Holding Report Subscriptions table with the status “Pending Approval (Unsubscribe)”



Classification – Internal

2. Buy Side Data Manager Input Authorise User can either click “Reject” or “Approve”.
    a. If Buy Side Data Manager Input Authorise User clicks “Approve”, then the Statement of Holding Report unsubscription is approved, the previous subscription record will be removed from the list and the unsubscription will be immediately effective.



    b. If Buy Side Data Manager Input Authorise User clicks “Reject”, then the unsubscription process will be ended.

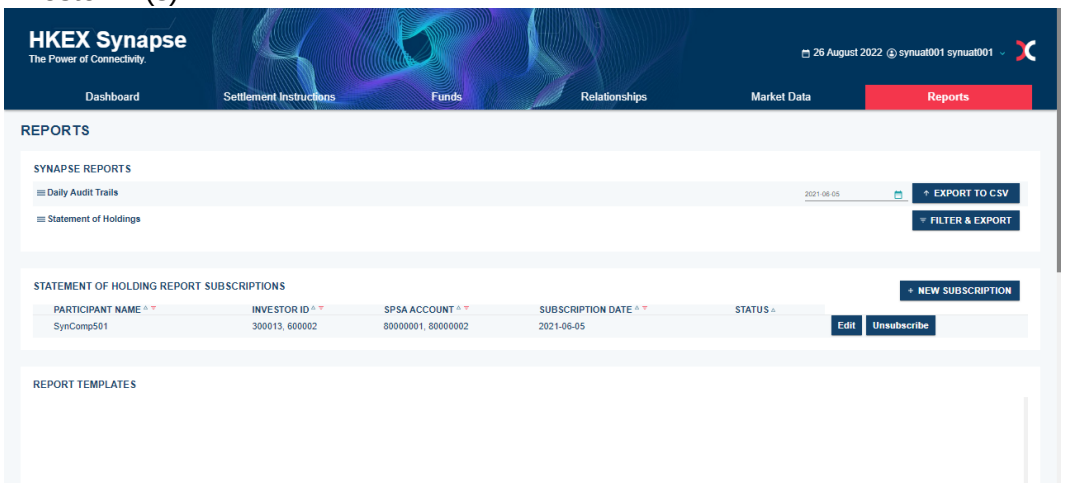
10.1.2.3 Amend the Subscription to the Statement of Holding Report

If a buy side participant wants to amend a Statement of Holding subscription, then they can update the selection of the Investor IDs. They can select “All” investor ID, select / add new investor ID or remove existing investor ID.

Buy Side

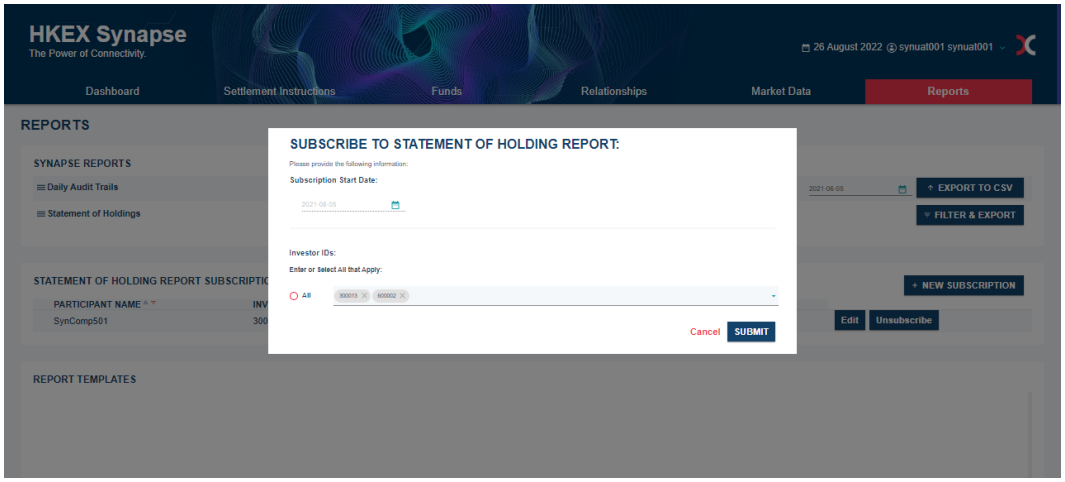
Buy Side Data Manager Input Only User

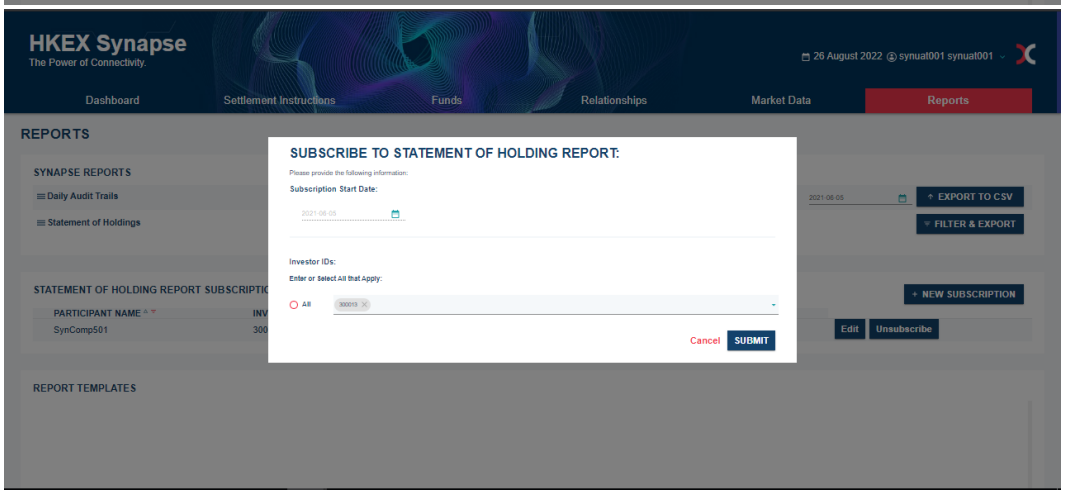
1. On the Reports tab, the Buy Side Data Manager Input Only User clicks “Edit” and select investor ID(s).



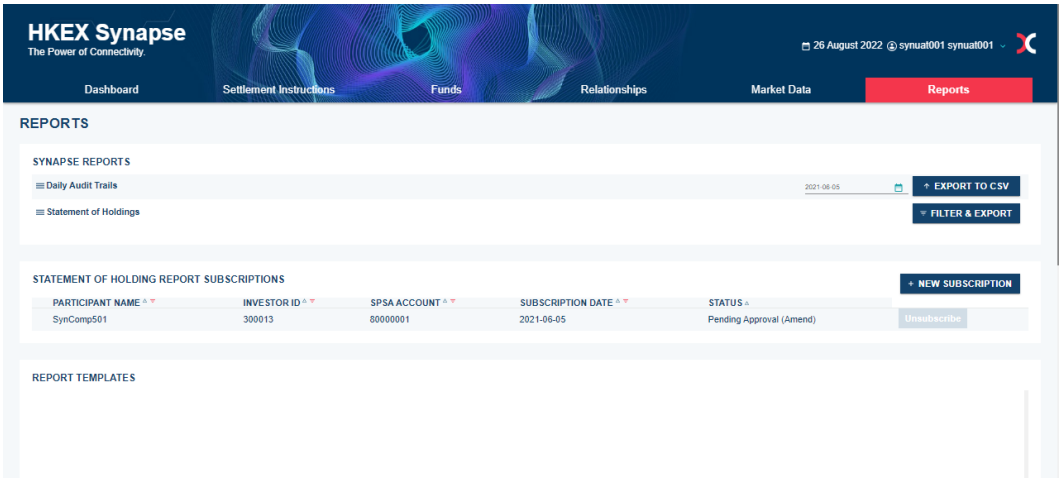
2. The Buy Side Data Manager Input Only User clicks “Submit”.

Classification – Internal





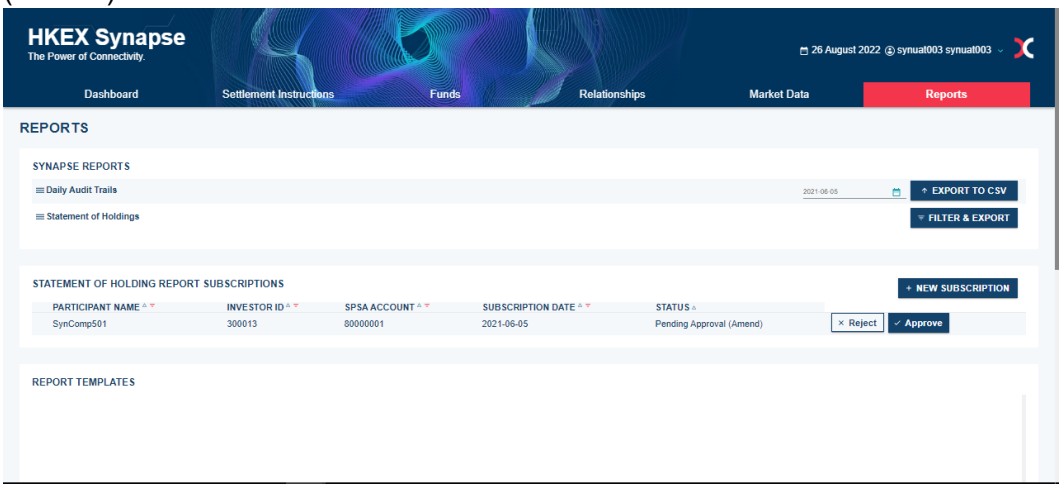
3. The row related to that Statement of Holding subscription in the Statement of Holding Report Subscriptions table is updated with the status “Pending Approval (Amend)”.



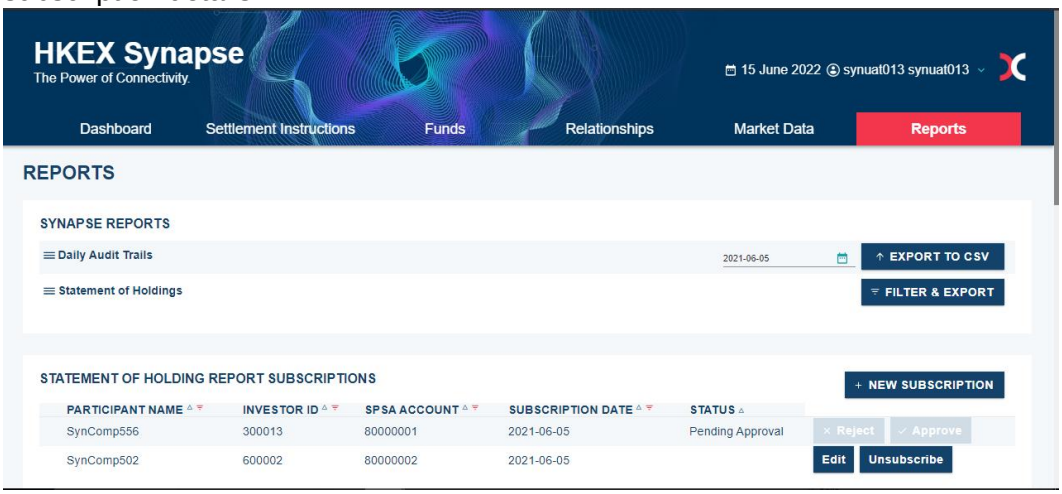
Classification – Internal

Buy Side Data Manager Input Authorise User

1. On the Reports tab, the Buy Side Data Manager Input Authorise User will see the row in the Statement of Holding Report Subscriptions table with the status “Pending approval (Amend)”.



2. Buy Side Data Manager Input Authorise User can either click “Reject” or “Approve”.
   a. If Buy Side Data Manager Input Authorise User clicks “Approve”, then the amendment of Statement of Holding Report subscription is approved and will start on the date provided by the Input Only User. That means the previous subscription details will be replaced by the new subscription and the participant will no longer receive the Statement of Holding Report based on previous subscription details.



   b. If Buy Side Data Manager Input Authorise User clicks “Reject”, then the amendment process will be ended.

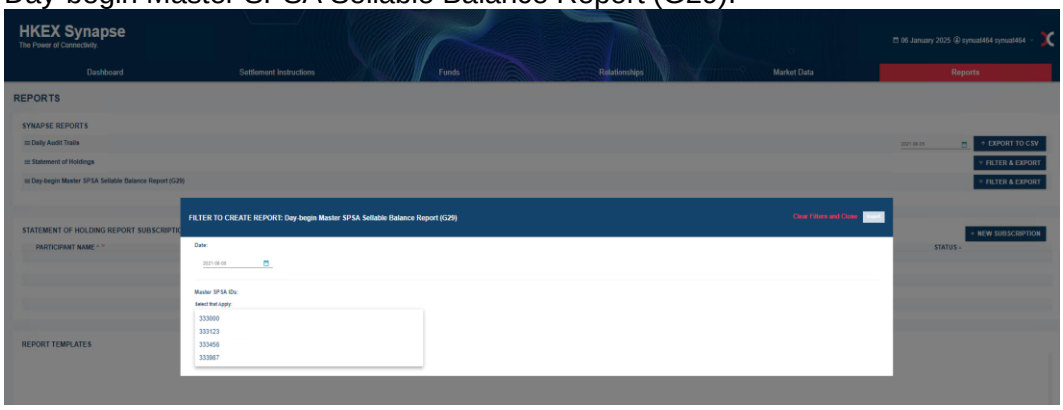
Classification – Internal

10.1.3 Day-begin Master SPSA Sellable Balance Report (G29)

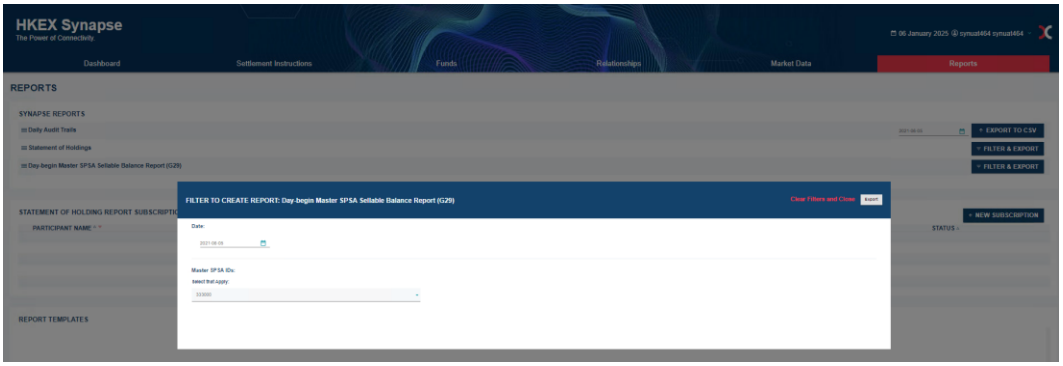
On the Reports tab, Asset Managers can download the Day-begin Master SPSA Sellable Balance Report (G29) in the form of CSV file. The sellable balance report will be made available at the start of the day and the relevant AM can download such report from Synapse following the steps set out in this section. Please note the report will be available for retrieval for 31 calendar days.

Asset Manager

1. On the Reports tab, Asset Manager can click “Filter & Export” to create a filter for the Day-begin Master SPSA Sellable Balance Report (G29).



2. Asset Manager can select a date via the calendar dropdown and the Master SPSA ID they want to select via the Master SPSA IDs dropdown list.
    a. Note: 31 calendar days are available for selection
    b. Note: The latest Master SPSA ID list will be available for selection .



3. When the correct date and Master SPSA ID have been selected, the Asset Manager then clicks “Export” to download the Day-begin Master SPSA Sellable Balance Report into CSV file.

Column	Field Length (Max)	Remark
Master SPSA ID	6	Numeric value
Market Code	4	“ASHR” for Shanghai or “ASZR” for Shenzhen
CSC Stock Code	6	Numeric value
CCASS Stock Code	5	Numeric value
Master SPSA ID Sellable Balance	18	Numeric value
SPSA ID	6	Numeric value

Classification – Internal

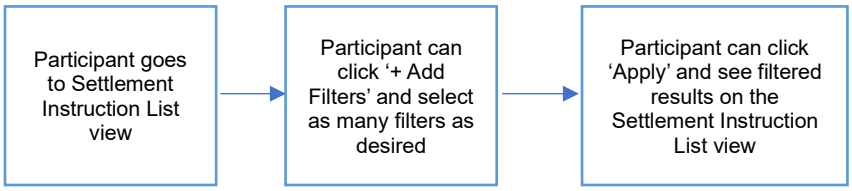
SPSA ID Sellable Balance	15	Numeric value

10.2 Report Templates

10.2.1 Filters

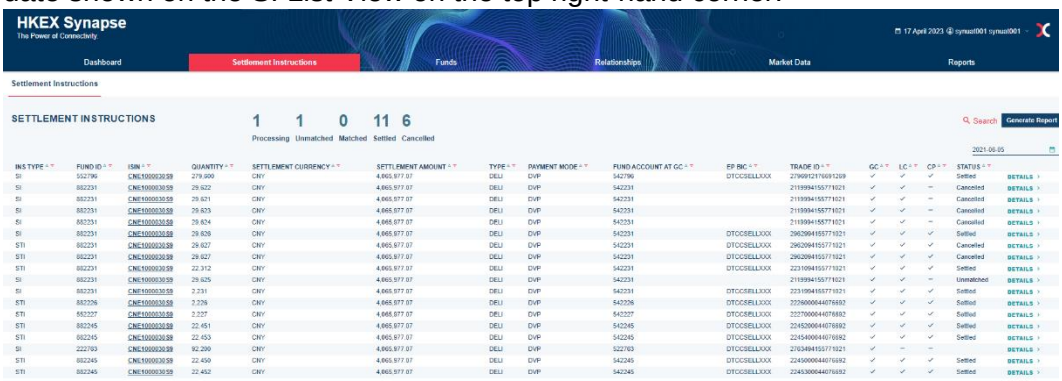
Synapse offers participants the ability to filter on list view results.

Buy side and sell side participants can apply filtering function on the Settlement Instruction List view. The filters applied can be applied against all fields on the list view and details view. There is no difference in functionality for either Input Only Users or Input Authorise Users. The sample screens below are illustrative and are from the Asset Manager participant on the Settlement Instruction List View.

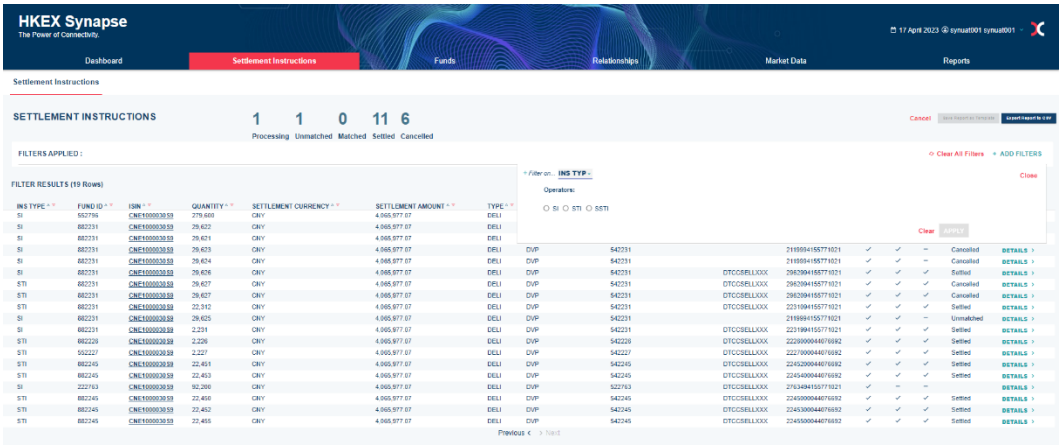


1. The AM participant logs in to Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

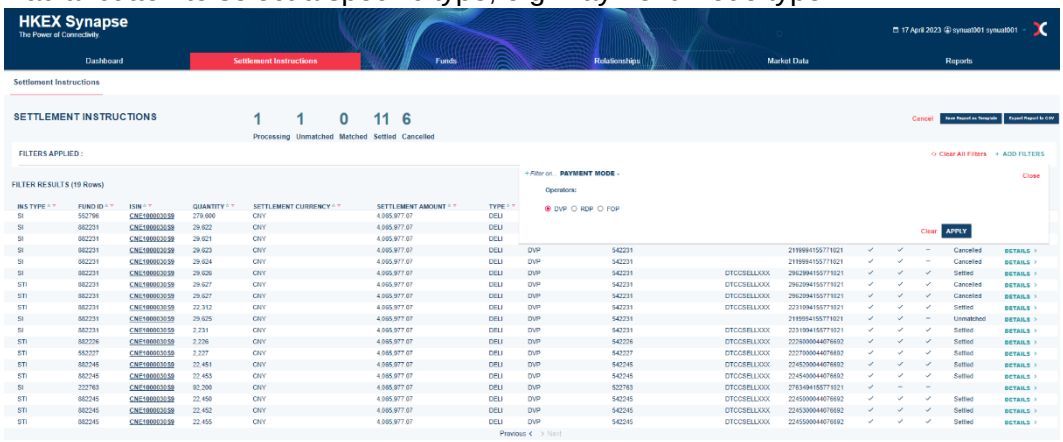
2. On the Settlement Instruction List view, for example, the AM participant can click on the red downward triangle. Clicking the red triangle will create a 'Filters Applied:' box at the top of the screen. Please note the filtering function is applying on top of the SI creation date shown on the SI List View on the top right-hand corner.



Classification – Internal

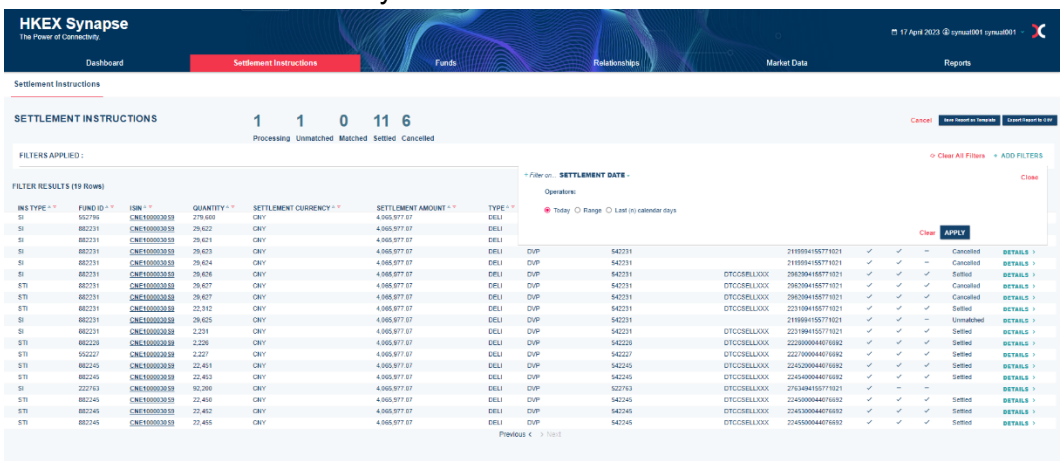


3. The AM participant can click '+ Add Filters'. Then the AM participant will see a module with a dropdown of all fields that the Settlement Instruction List view can be filtered on. There is no maximum number of filters that can be added. There are four types of filters:
    a. Radial button to select a specific type, e.g. Payment Mode type



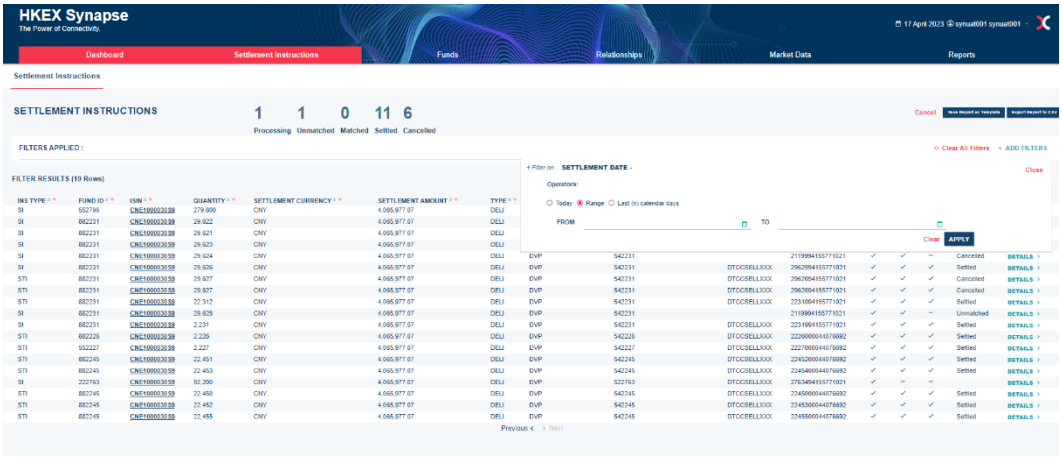
    b. Date filter wherein specific date(s) can be selected, e.g. today, range, or the last (n) calendar days (April 4, 1900)

    When the user selects "Today"

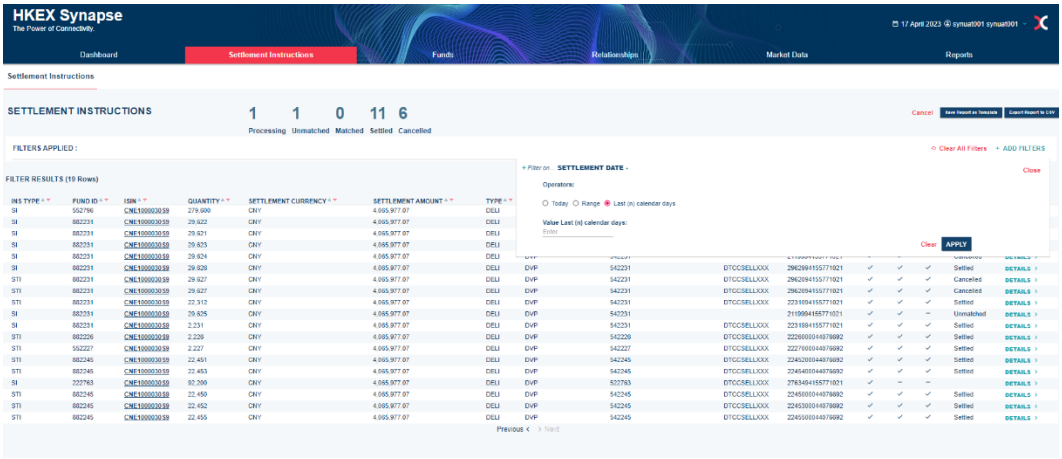


Classification – Internal

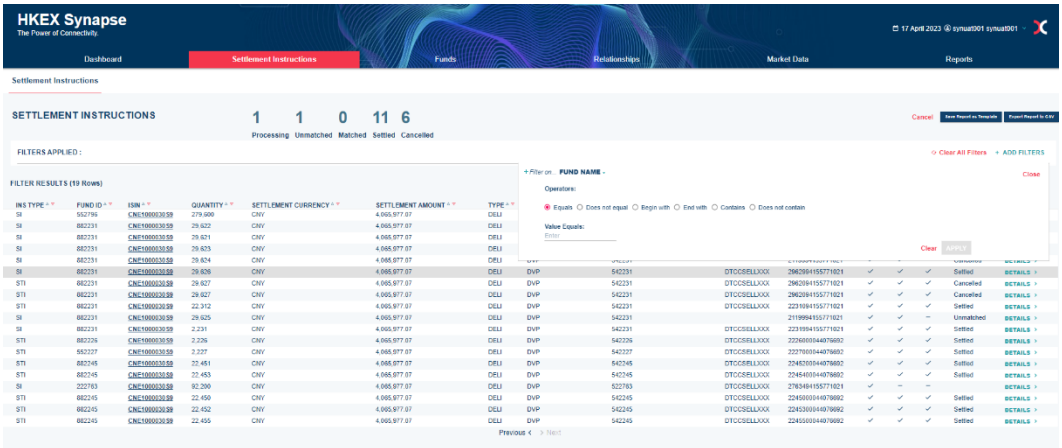
When the user selects “Range”, please note the from date and to date are exclusive



When the user selects “Last (n) calendar days”

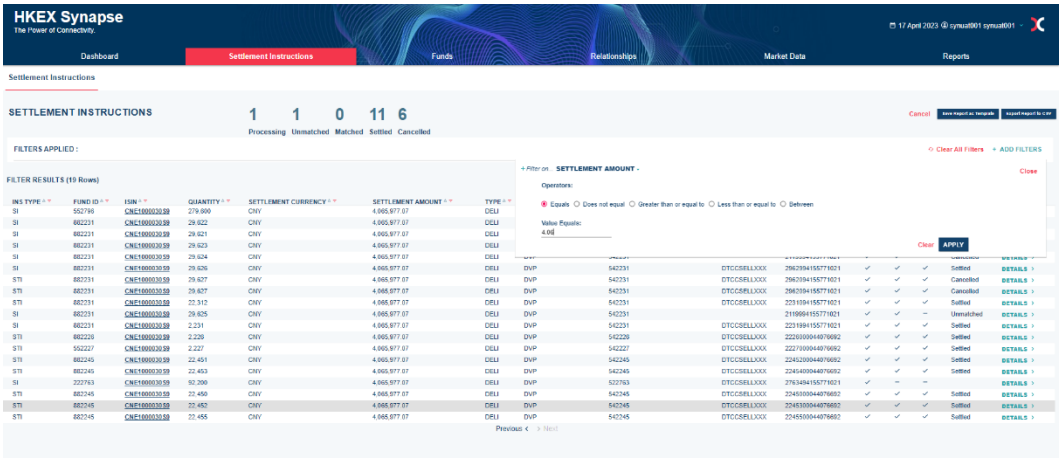


c. String filter wherein the participant can enter a string of text on which to filter, e.g. Fund Umbrella name



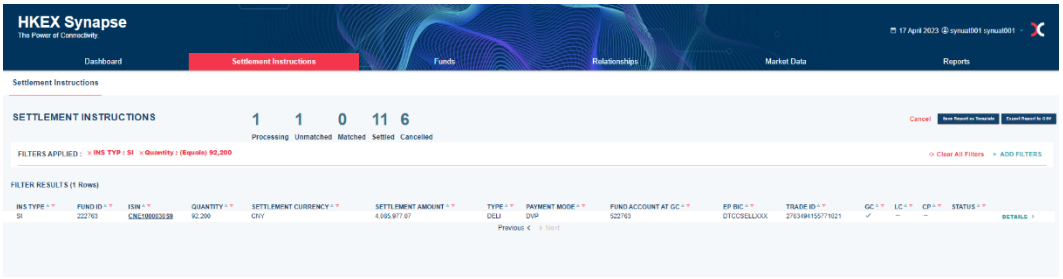
Classification – Internal

d. Numerical filter wherein the participant can enter an integer on which to filter, e.g. Settlement Amount



4. After the AM participant adds all of the desired filters, they click ‘Apply’.

5. All of the desired filters will show on the top of the screen, and the Settlement Instruction List view will show the filtered results.

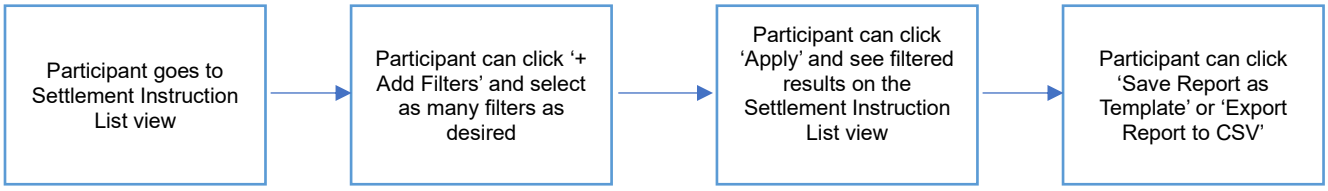


10.2.2 Create Report Templates

Both buy side and sell side participants can create report templates for individual use or for sharing with others.

Create report templates functionality for both buy side and sell side participants is on the Report Feature on the Settlement Instruction List view. The filters applied from the create report template functionality can be applied against all fields on the list view and details view. There is no difference in functionality for either Input Only Users or Input Authorise Users.

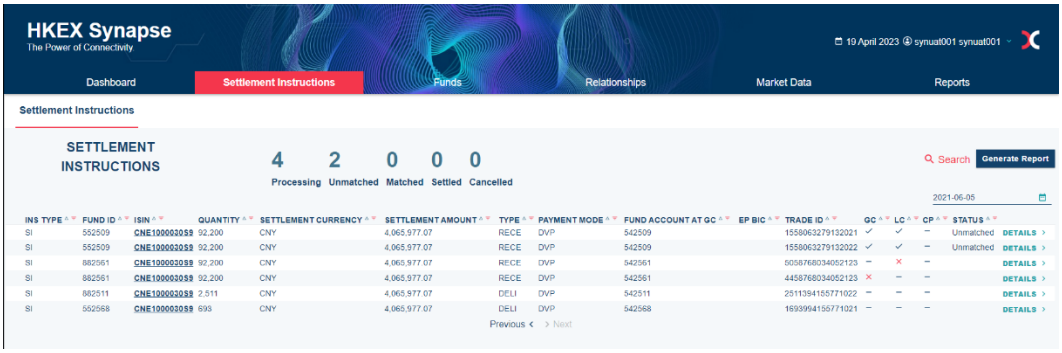
The sample screens below are illustrative and are from the Asset Manager participant on the Settlement Instruction List View.



Classification – Internal

1. The AM participant logs in to Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

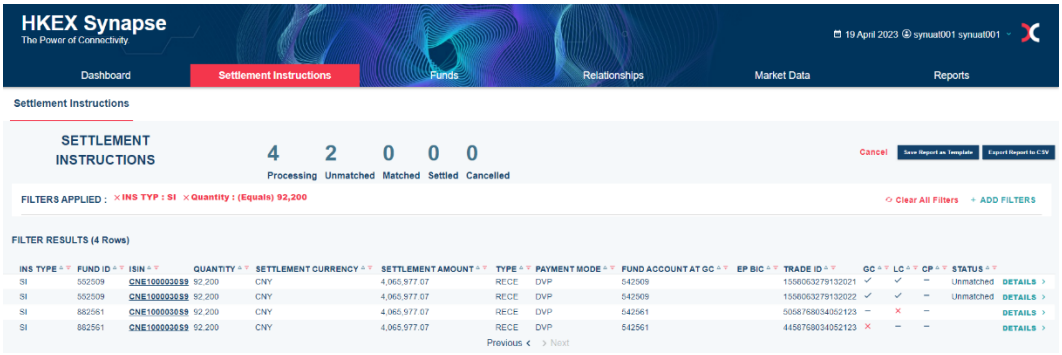
2. On the Settlement Instructions, the AM participant can generate a report from the Settlement Instruction List view.



3. The AM participant can click ‘Generate Report’ from the Settlement Instruction List view, for example, and clicks ‘+ Add Filters’. Then the AM participant will see a module with a dropdown of all fields that the List view can be filtered on. There is no maximum number of filters that can be added. There are four types of filters:
    a. Radial button to select a specific type, e.g., Payment Mode type to
    b. Date filter wherein specific date(s) can be selected, e.g., today, range, or the last (n) calendar days
    c. String filter wherein the participant can enter a string of text on which to filter, e.g., Fund Umbrella name
    d. Numerical filter wherein the participant can enter an integer on which to filter, e.g., Settlement Amount

4. After the AM participant adds all of the desired filters, they click ‘Apply’.

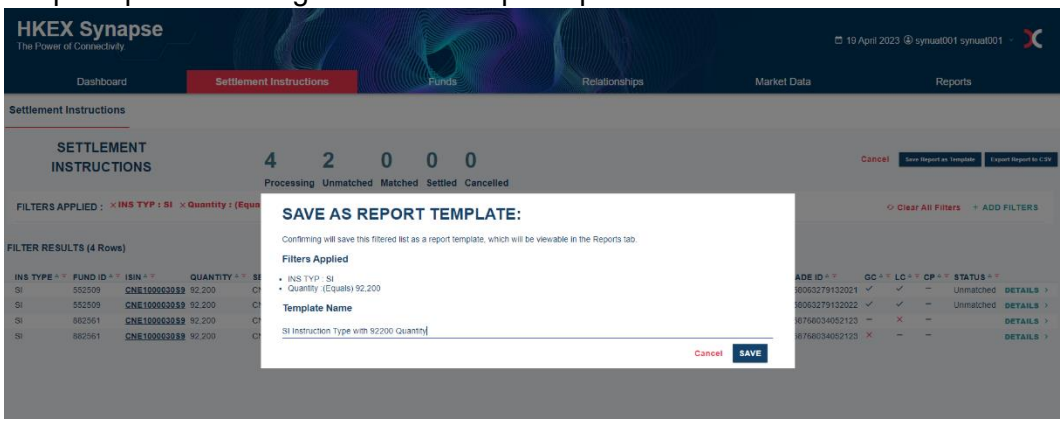
5. All of the desired filters will show on the top of the screen, and the List view will show the filtered results.



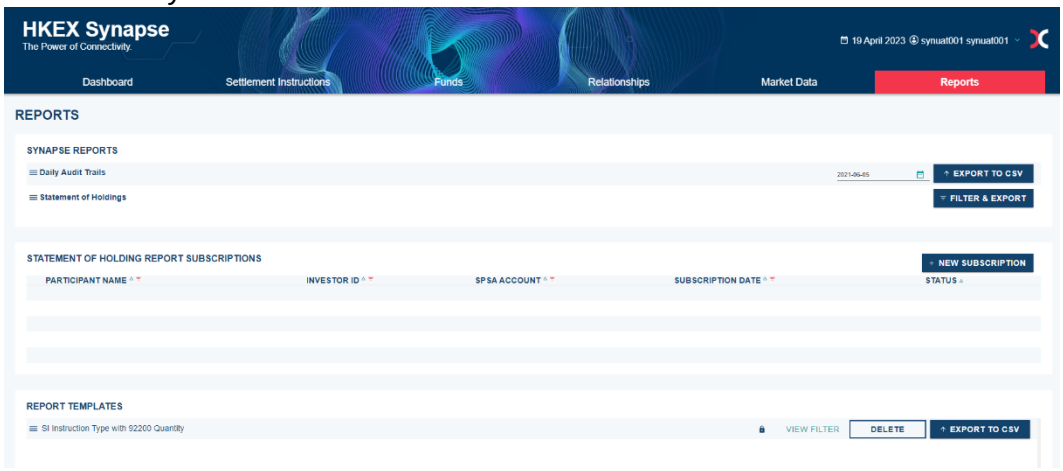
6. The AM participant can select ‘Export Report to CSV’ to export the filtered results into CSV format. The generated report will show the filtered results and have all of the fields that the AM participant is allowed to see.

Classification – Internal

7. The AM participant can select ‘Save Report as Template’ to create the report template
    a. ‘Save Report as Template’ will require the AM participant to add a name to the template prior to saving. Then the AM participant clicks ‘Save’ button



    b. Once the report template is successfully saved, the report template record is shown under the ‘Report Templates’ section under ‘Reports’ tab with a lock icon by default. The lock icon indicates that the report template has not yet been shared to anyone.

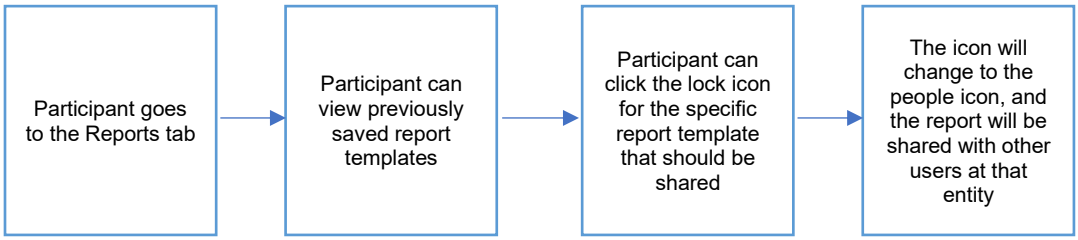


On the ‘Report Templates’ section under ‘Reports’ tab, the AM participant can click ‘Export to CSV’ button to export the filtered results based on the report template into CSV. Once click ‘Export to CSV’ button, the generated report will show the filtered results and have all of the fields that the AM participant is allowed to see. The report content is based on the latest system records as of the time of report generation.

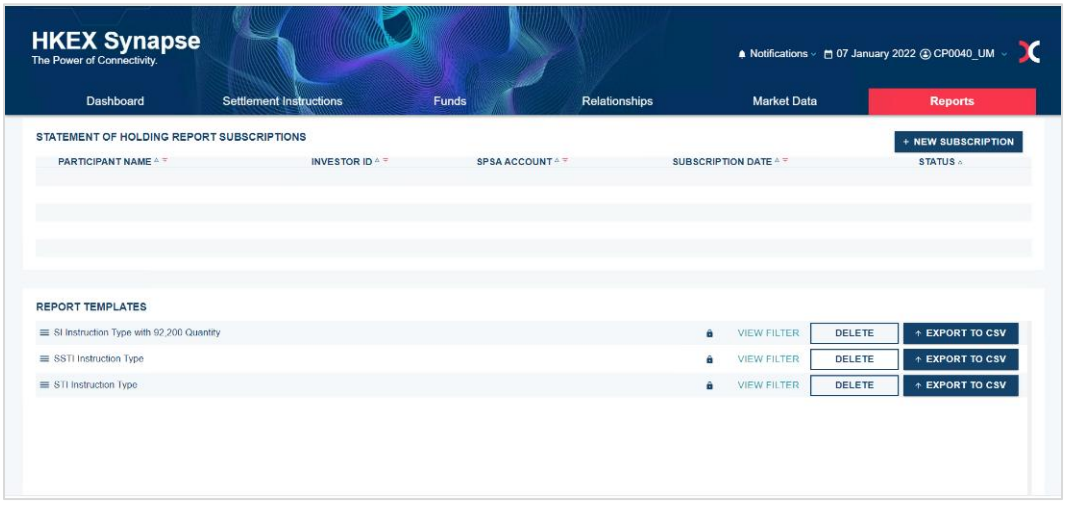
Classification – Internal

10.2.3 Share Report Templates

Synapse offers participants the ability to share report templates to other users within the same entity. Share report templates functionality is limited to the reports that buy side and sell side participants are allowed to see. There is no difference in functionality for different user types. The sample screens below are illustrative and are from the Asset Manager participant.

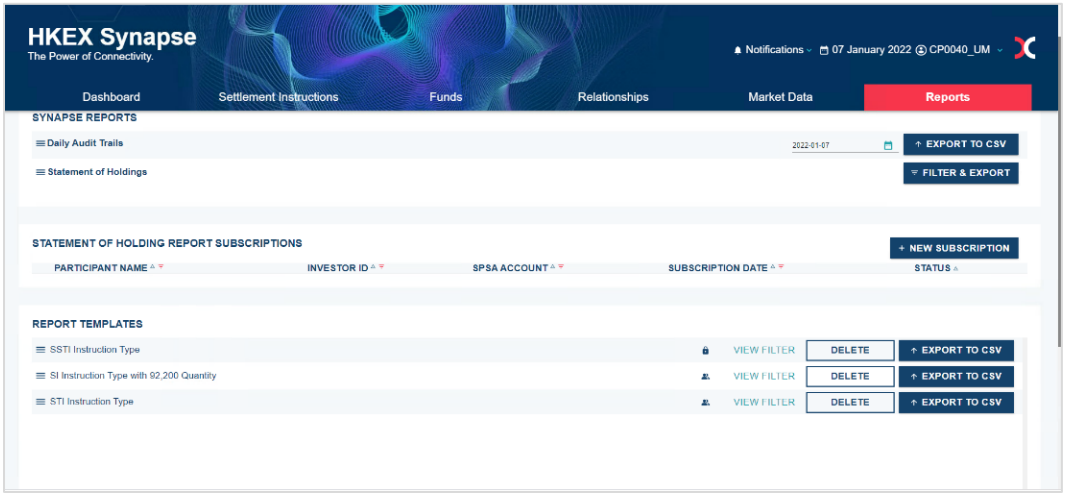


1. The AM participant logs in to Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.
2. On the Reports tab, the AM participant can see the previously saved report templates. There are two types of saved report templates as indicated through an icon:
    a. Lock icon – these are saved report templates accessed by an individual



Classification – Internal

b. People icon – these are saved report templates created and shared with multiple people within same entity



3. To share a report template with other users at the entity, the AM participant can click that report's lock icon, which will change to a people icon. The report template will automatically be shared with all other users within the entity, where an additional row will immediately appear in the Report Template section for the rest of the users within that entity.

    a. Note: If the AM participant does not want to share the report template with other users, the AM participant can click the people icon, which will change back to a lock icon. The report template will not be shared with other users immediately.

10.2.4 Delete Report Templates

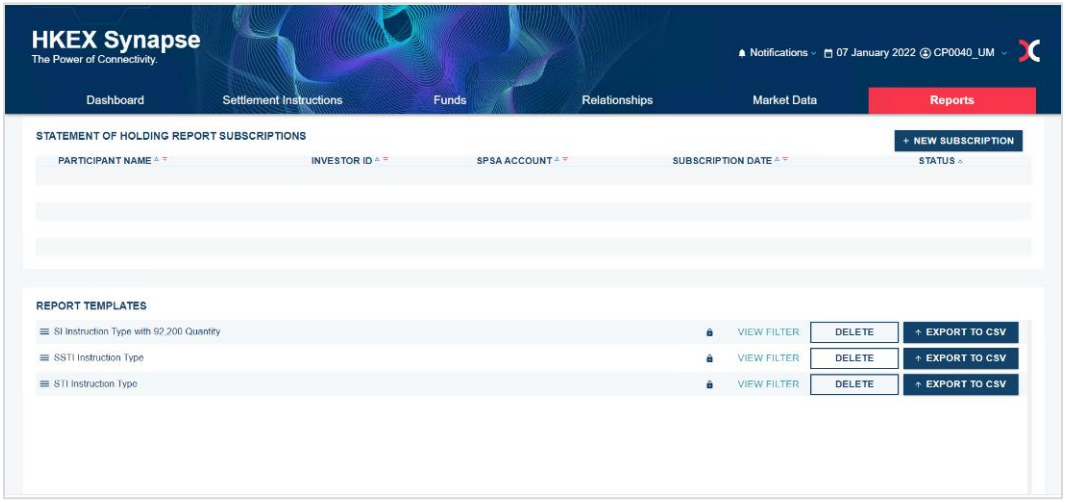
Synapse offers participants the ability to delete previously created report templates. Delete report templates functionality is limited to the reports that buy side and sell side participants are allowed to see. There is no difference in functionality for either Input Only Users or Input Authorise Users. The sample screens below are illustrative and are from the Asset Manager participant.

1. The AM participant logs in to Synapse via HKEX Access Management Portal and navigates to the Dashboard screen.

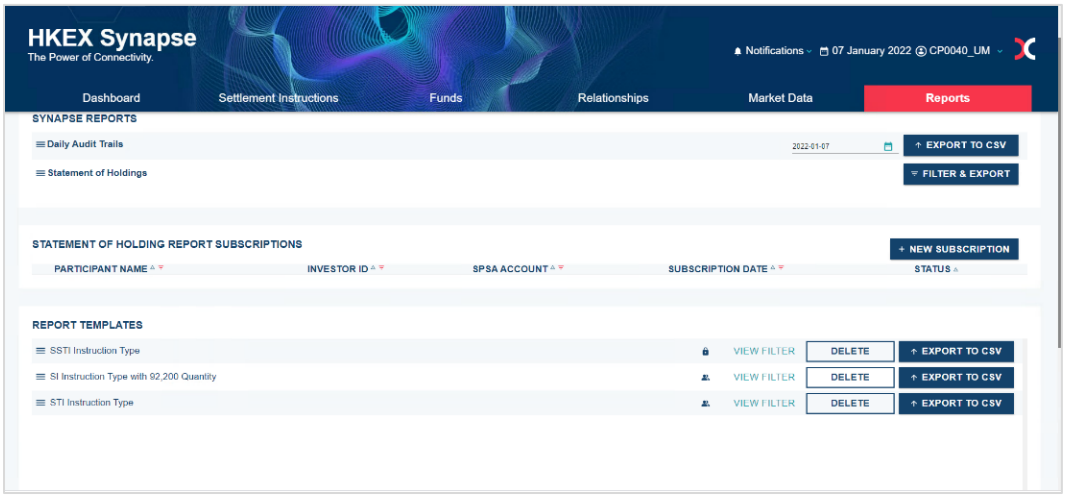
2. On the Reports tab, the AM participant can see the previously saved report templates. There are two types of saved report templates as indicated through an icon:

Classification – Internal

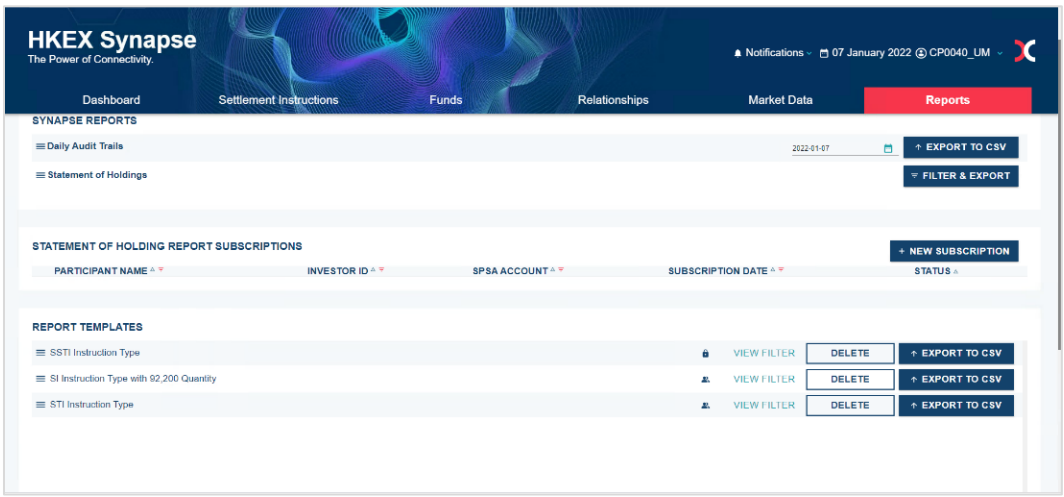
a. Lock icon – these are saved report templates accessed by an individual



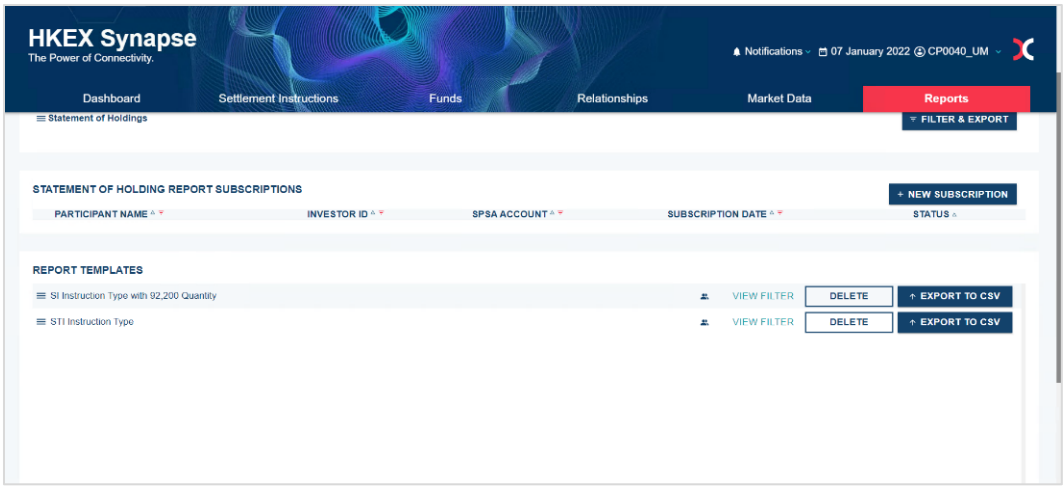
b. People icon – these are saved report templates created and shared with multiple people within the entity



3. The AM participant can click ‘Delete’ on the row of the specific report template that should be deleted.



Classification – Internal



Note: the report template will be deleted even if it is shared with multiple people within an entity, and such record under the Report Template section will also be removed for all users within that entity upon the deletion. The individuals with who the report is shared will not receive a notification for the deletion of the report template.

Classification – Internal

11. Error Message

In this section, we document the error messages built into Synapse and its business rules, and provide suggestions for catering the message. For examples,

1. When encountering the error message "*No action required by your end* ***[Category (number)]***, the participant could refer to the table below to indicate their corresponding use case/scenario for further communication with the checker.
2. When encountering the error message "*System busy. Please try again later*.", the participant should wait and resubmit the request later.
3. When encountering the error message "*Unexpected error encountered. Please contact support. Error reference:* ***[Trace ID]***.", the participant should capture the Trace ID shown in the error and contact Synapse Support. Further details can be referred in the table below.

Error ID	Categories	Error Message	Use Case	Business rules
1	Unexpected status upon checker approval/rejection	No action required by your end **[Category 1]**	**1.1**	**This error id is encountered due to:** - Unexpected status Account Profile Proposal upon checker approval/rejection
			1.2	**This error id is encountered due to:** - Unexpected status Fund Proposal upon checker approval/rejection
			1.3	**This error id is encountered due to:** - Unexpected status Fund Data Proposal upon checker approval/rejection
			1.4	**This error id is encountered due to:** - Unexpected status Fund Profile Proposal upon LC Checker approval/rejection
			1.5	**This error id is encountered due to:** - Unexpected status Fund Profile Proposal upon GC Checker approval/rejection
			1.6	**This error id is encountered due to:** - Unexpected status Fund Profile Proposal upon GC Reappointment approval/rejection
			1.7	**This error id is encountered due to:** - Unexpected status Fund Profile Proposal upon checker approval/rejection
			1.8	**This error id is encountered due to:** - Unexpected status Fund Profile Proposal upon inactivation approval/rejection
			1.9	**This error id is encountered due to:** - Rejecting Fund Profile Proposal not in pending approval while status is GC Maker Approved or GC Rejected
			1.10	**This error id is encountered due to:**

Classification – Internal

Error ID	Categories	Error Message	Use Case	Business rules
				- Rejecting Fund Profile Proposal not in pending approval while status is LC Maker Approved or LC Rejected
			1.11	**This error id is encountered due to:** - Rejecting Fund Profile Proposal not in pending approval or GC Rejected
			1.12	**This error id is encountered due to:** - Unexpected status Variable Fee Proposal upon checker approval/rejection
			1.13	**This error id is encountered due to:** - Unexpected status SOH Subscription Proposal upon checker approval/rejection
			1.14	**This error id is encountered due to:** - Unexpected status Broadcast Message Proposal upon checker approval/rejection
2	Unexpected status upon checker amendment	No action required by your end **[Category 2]**	**2.1**	**This error id is encountered due to:** - Unexpected status Fund Profile Proposal upon checker amendment
			2.2	**This error id is encountered due to:** - Unexpected status Fund Proposal upon checker amendment
			2.3	**This error id is encountered due to:** - Unexpected status Standard Fee Proposal upon checker amendment
3	Not Active	No action required by your end **[Category 3]**	**3.1**	**This error id is encountered due to:** - Billing Fee is not Active during amendment
			3.2	**This error id is encountered due to:** - Fund Data is not Active during inactivation
			3.3	**This error id is encountered due to:** - Fund Data is not Active during amendment
4	System busy	System busy. Please try again later.	**4.1**	**This error id is encountered due to:** - System busy. Participant should wait and resubmit the request later.
5	Unexpected error encountered	Unexpected error encountered. Please contact support. Error reference: **[Trace ID].**	**5.1**	**This error id is encountered due to:** - Unexpected backend error. Participant should capture the Trace ID and contact the Synapse Support Team Note: The participant must provide the Trace ID from the error message when requesting Synapse Support.

Classification – Internal

12. API Connectivity

12.1 API Specification Documentation

Synapse applicants / Existing Synapse users who will access Synapse via API are required to develop their system according to the following documentation.

Document	Description
API Specification and Programming Guide – Functional Drop 6 (Jan 2024)	Functionality of the API and the recommended programming guidelines for participants.
API Specification - Java and JavaScript sample codes	Sample program to illustrate how to execute different Synapse API functionalities.
OpenAPI and AsyncAPI Specification	OpenAPI and AsyncAPI Specifications that cover features described in the API Specification and Programming Guide.
Sample Requests and Responses for Core Functionality	Sample requests and responses to the core functionalities described in the API Specification and Programming Guide.
Single Combined View (SCV) Business Description – Functional Drop 6 (Jan 2024)	Detail description of each SCV field and corresponding visibility matrix.

Synapse applicants / Existing Synapse users can reach out to HKEX Synapse Operations Team at synapse_support@hkex.com.hk for accessing the above API documentation.

Classification – Internal

13. ISO Connectivity

13.1 How to submit CUG request in MySwift

Please refer to “SWIFT Connectivity Setup Guide” available on HKEX Synapse website.

13.2 How to access ISO Specification via Swift’s MyStandards

Please refer to “SWIFT Connectivity Setup Guide” available on HKEX Synapse website.

Classification – Internal

14. Billing of Synapse Fees

Synapse Fees are waived until further notice. Upon Hong Kong Securities Clearing Company Limited (“HKSCC”) decides to end that fee waiver, this section will describe the billing process for Synapse related fees.

Classification – Internal