

# CIIS 2023 Webinar: Market Data Updates

**YOUR DATA INSIGHT**

*A wholly owned subsidiary of Shanghai Stock Exchange*



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## CIIS BUSINESS UPDATES

**16 February 2023**

**Presented by Fanny Chu**

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# Agenda

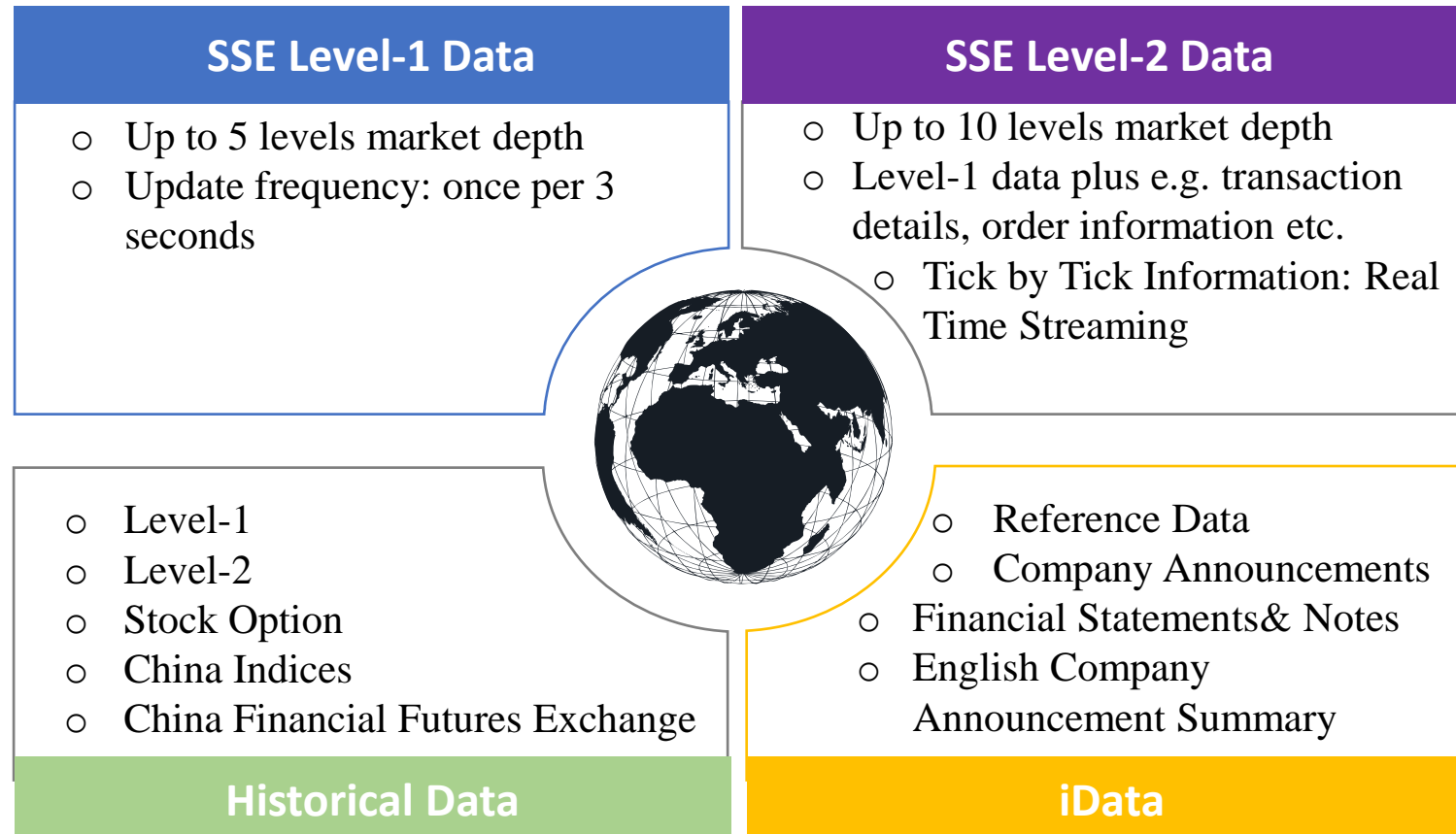
- ✓ **About CIIS**
  - 2022 Business Review**
  - CIIP**
  - Historical Data**
  - Fundamental Data**
  - 2023 Planning**

# About CIIS

- **Established in Hong Kong in 1994**
- **Wholly owned subsidiary of Shanghai Stock Exchange (SSE)**
- **The overseas sole agent of SSE market data**
- **A SPV of Shanghai – Hong Kong Stock Connect**
  - **Serves as an order routing facilitator to place southbound orders**

# About CIIS

## ■ SSE Data Content



# About CIIS

- **Cloud+ Data Service**
- **Launched in October 2020**
- **The 1<sup>st</sup> overseas site of SSE Cloud Platform**
- **Aims:**
  - ✓ **To create professional industry cloud platform**
  - ✓ **To provide outstanding services to market participants**
  - ✓ **To provide additional channel for redistribution**
- **Virtual Machine rental service**
- **Clients can rent virtual machines in Mainland China sites via CIIS**



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## Agenda

- ✓ **About CIIS**
- ✓ **2022 Business Review**
- ✓ **CIIP**
- ✓ **Historical Data**
- ✓ **Fundamental Data**
- ✓ **2023 Planning**

# Business Review

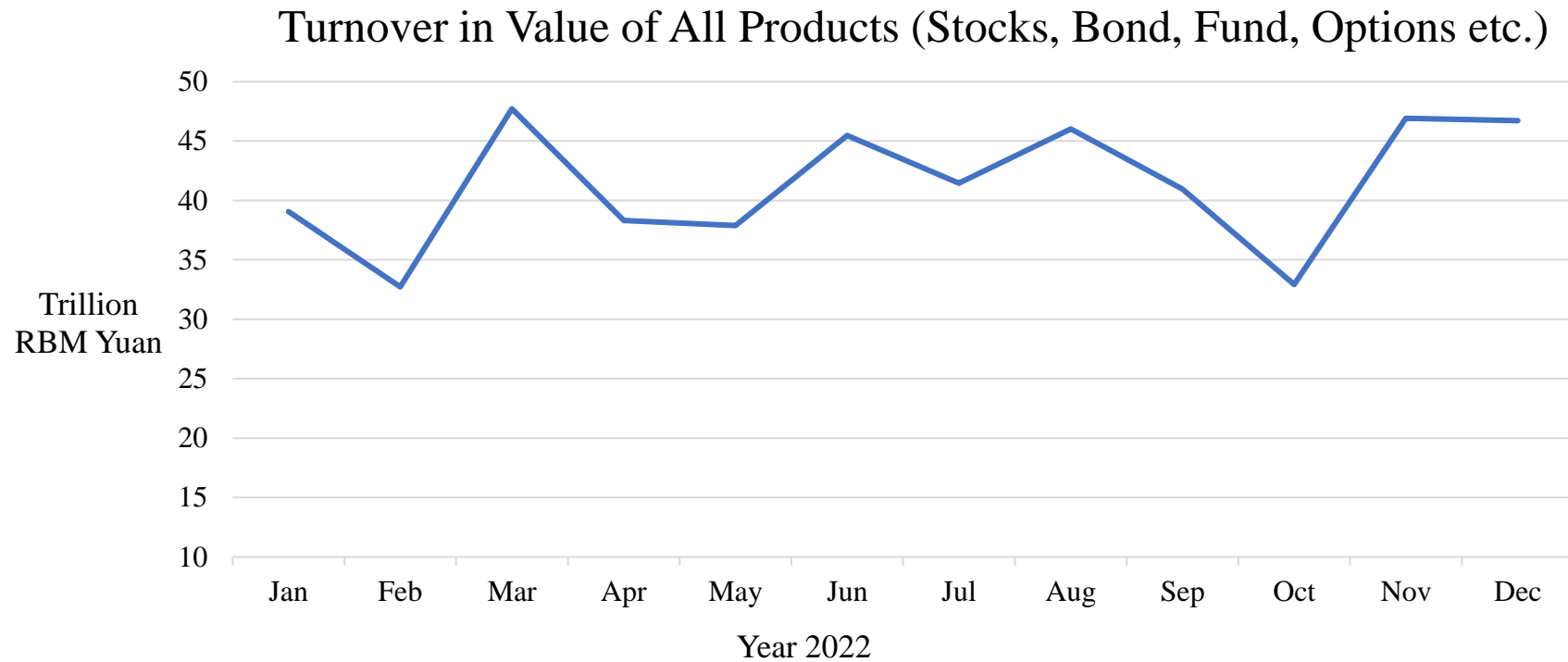
- **Shanghai Stock Exchange**





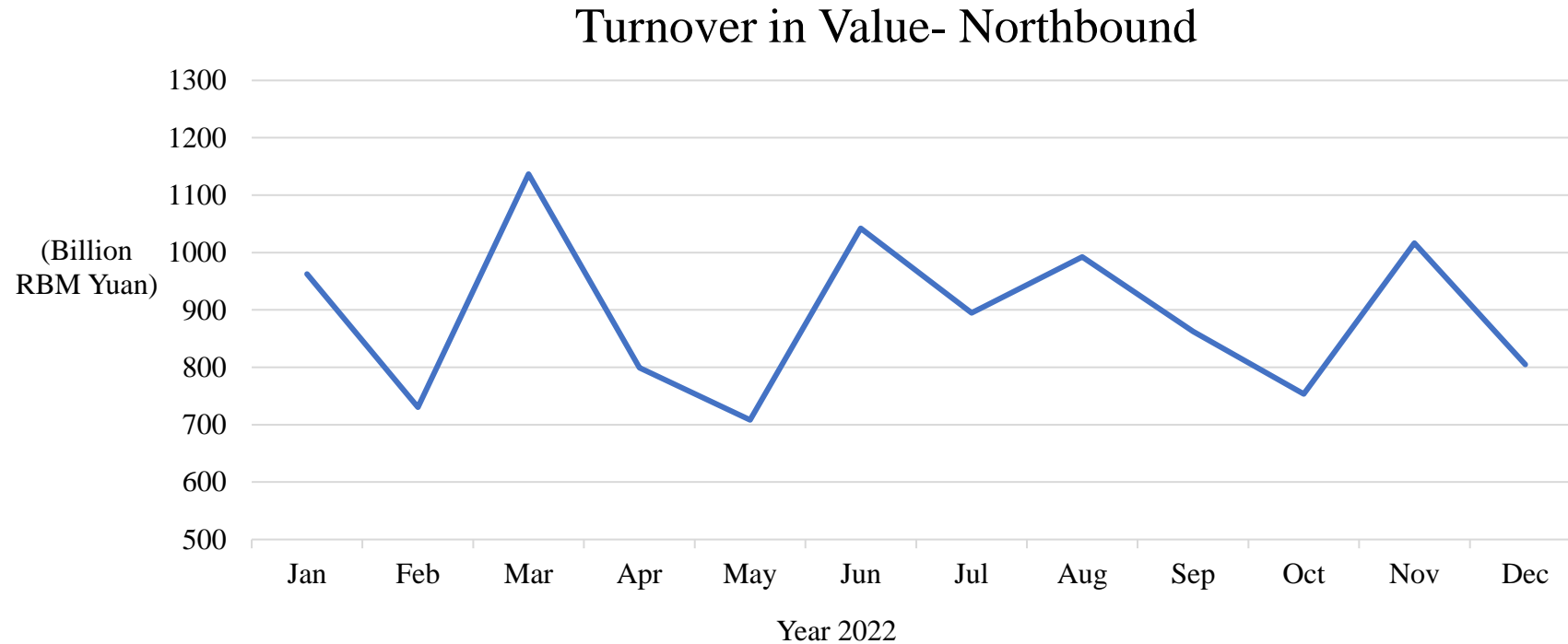
# Business Review

- **Shanghai Stock Exchange**



# Business Review

- **Shanghai Stock Exchange**



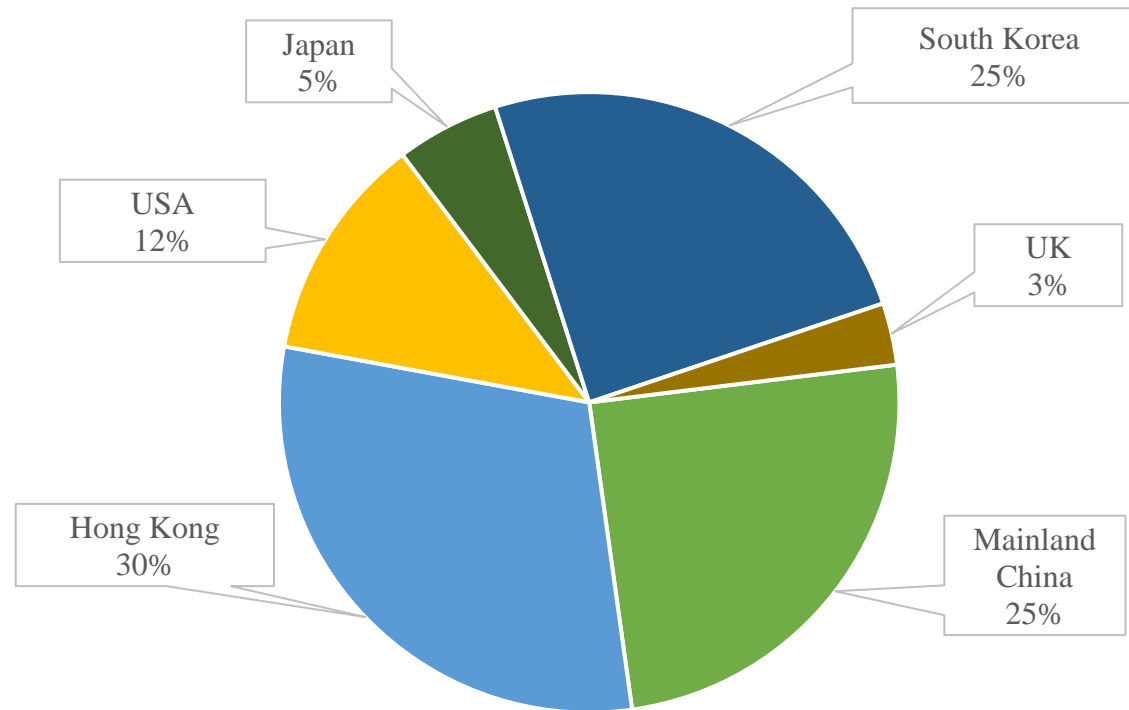
# Business Review

- **By end of January 2023, CIIS no. of clients on each category:**

Category	Number of Clients
Real Time Level-2	17
Real Time Level-1	51
Direct End Users	7
Datafeed Usage	179
Delayed	59
CSI Entitlement	31

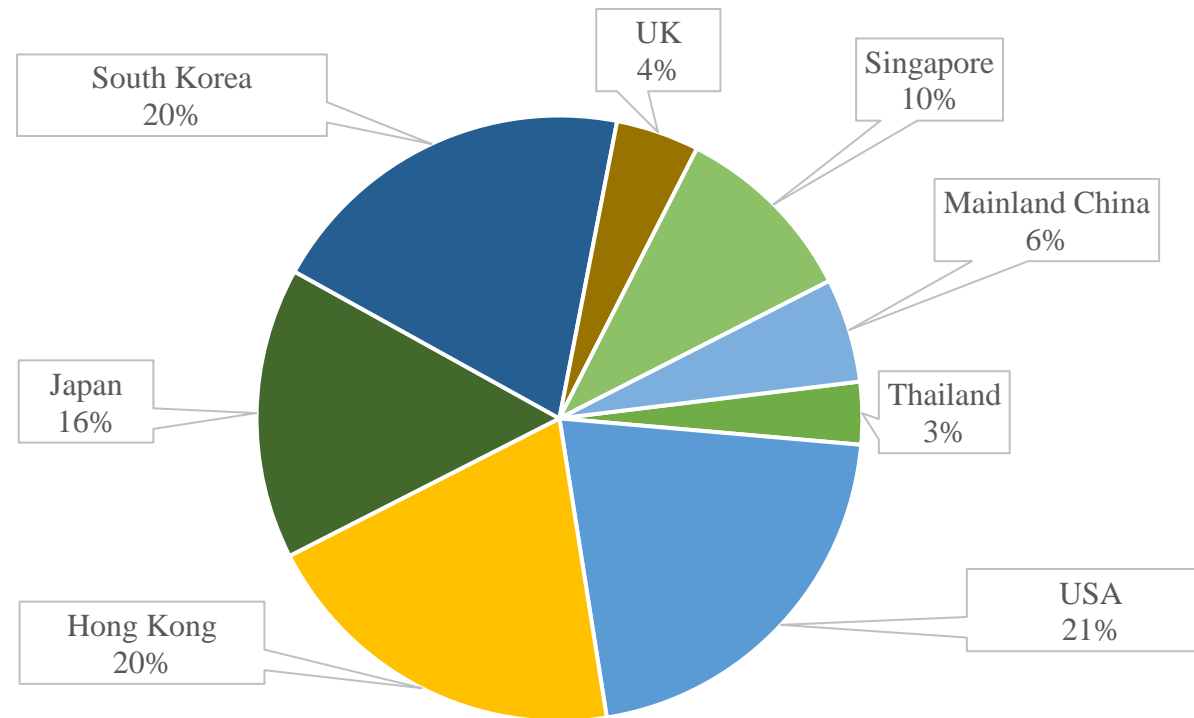
# Business Review

## • CIIS Real-Time clients' Locations



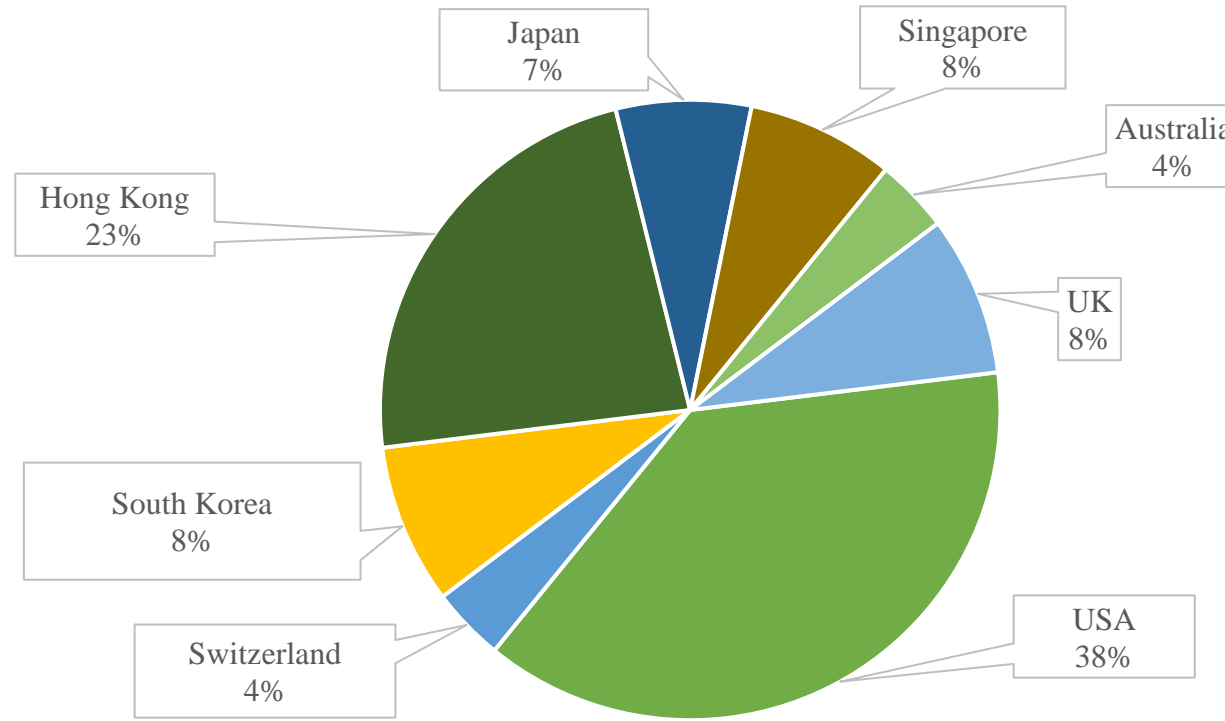
# Business Review

## • CIIS Delayed clients' Locations



# Business Review

## • CIIS Datafeed clients' Locations



# Business Review

## Business highlights:

- **Introduced cloud testing platform**
- **Introduced China Financial Futures Exchange historical data**
- **Launched non-display usage licensing for Zhengzhou Commodity Exchange real time data**
- **Technically cooperated with Beijing Stock Exchange**
- **Explored on new technologies- 'Cloud+ Data'**



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# Agenda

**About CIIS**  
**2022 Business Review**

✓ **CIIP**

**Historical Data**  
**Fundamental Data**  
**2023 Planning**



# About CIIS

- **CIIP (China Investment Information Platform)**

**An aggregate business and technical platform (inbound and outbound services)**



**'Bring In' & 'Go Global' Strategy**

# CIIP Mainland China Partners

	<b>Year Joined CIIP</b>
<b>China Securities Index Company Ltd. (CSI)</b>	<b>2010</b>
<b>Shenzhen Stock Exchange (SZSE)</b>	<b>2010</b>
<b>Dalian Commodity Exchange (DCE)</b>	<b>2011</b>
<b>Zhengzhou Commodity Exchange (ZCE)</b>	<b>2011</b>
<b>China Financial Futures Exchange (CFFEX)</b>	<b>2013</b>
<b>Shanghai Futures Exchange and Shanghai International Energy Exchange (SHFE/ INE)</b>	<b>2018</b>
<b>Beijing Stock Exchange (New Joiner)</b>	<b>2022</b>

# CIIP Mainland China Partners

Exchanges/Index Company	Licensing	Technical Connection
Shanghai Stock Exchange (SSE)	✓	✓
China Securities Index Co., Ltd. (CSI)	✓	✓
China Financial Futures Exchange (CFFEX)	✓	✓
Dalian Commodity Exchange (DCE)	✓	✓
Zhengzhou Commodity Exchange (ZCE)	✓	✓
Shanghai Futures Exchange (SHFE) & Shanghai International Energy Exchange (INE)		✓
Shenzhen Stock Exchange (SZSE)		✓
Beijing Stock Exchange (BSE)		✓

# CIIP Overseas Partners

	<b>Year Joined CIIP</b>
<b>Deutsche Börse</b>	<b>2014</b>
<b>Euronext</b>	<b>2015</b>
<b>Kazakhstan Stock Exchange</b>	<b>2016</b>
<b>Moscow Exchange</b>	<b>2016</b>
<b>B3 S.A. (Brasil, Bolsa, Balcão)</b>	<b>2018</b>
<b>Johannesburg Stock Exchange</b>	<b>2020</b>
<b>Singapore Exchange</b>	<b>2020</b>



## Agenda

**About CIIS**  
**2022 Business Review**  
**CIIP**

✓ **Historical Data**

**Fundamental Data**  
**2023 Planning**

# Historical Data

## ■ Overview

- **Purposes**
  - ✓ **Better understand China financial market**
  - ✓ **Build and test financial models**
- **SSE market data and China indices**
  - ✓ **Including snapshot data, tick data and K-line**
- **Historical data is cleaned, published by SSE**
- **CFFEX (China Financial Futures Exchange) historical data available since 2022**
- **Other mainland China exchanges historical data will be available in the future**
- **Only for internal use, redistribution or resale is not allowed (external redistribution policy is under review)**

# Historical Data

## ■ Content

Product	Content	First Issue Date	Unit Price (US\$)
SSE Level-1 Historical Data (excluding Stock Options)	Snapshot and K line	2 January 2014	\$1,250 per 3 months
SSE Level-2 Intra-Day Snapshot Historical Data (excluding Stock Options)	Snapshot and K line	2 January 2014	\$3,000 per 3 months
<b>SSE Level-2 Historical Tick Data (excluding Stock Options)</b>	<b>Opening Call Auction and Tick Data</b>	2 January 2014	\$3,000 per 3 months
<b>SSE Level-2 Historical Order Book Data (excluding Stock Options)</b>	<b>Tick Data</b>	2 January 2015	\$3,000 per 3 months
SSE Stock Options Intra-Day Snapshot Historical Data	Snapshot and K line	9 February 2015	\$1,250 per 3 months
China Indices* Intra-Day Snapshot Historical Data	Snapshot and K line	3 January 2017	\$500 per 3 months
<b>China Financial Futures Exchange Level-2 Intra-Day Snapshot Historical Data</b>	<b>Snapshot</b>	1 August 2017	\$1,200 per 3 months
SSE and China Indices End of Day Historical Data (excluding Stock Options)	Security Code, Security Name, Open Price, Close Price, High Price, Low Price, Trade Volume and Trade Amount	19 December 1990	\$1,000 per year



# Historical Data

## ■ Delivery Methods

### Ongoing Subscription

Delivery Methods		Delivery Schedule
Cloud Platform	Last 2 Weeks Trading Days Market Data	<ul style="list-style-type: none"> <li>• End of Day Historical Data: Every month</li> <li>• Others: Every Week (6 am, Every Saturday or the Day after Last Trading Day of the Week)</li> </ul>

### One Time Subscription

Delivery Methods	Suggested File Size	Delivery Schedule
FTP	Less than 5GB	<b>One Time Subscription: about one week</b>
USB Flash Drive	Less than 256GB	
External Hard Disk	Larger than 256GB	



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# Agenda

**About CIIS**  
**2022 Business Review**  
**CIIP**  
**Historical Data**  
✓ **Fundamental**  
**Data**  
**2023 Planning**

# Fundamental Data

- **iData**
  - **Purposes**
    - ✓ **Provide SSE listed securities fundamental data and trading reference data.**
    - ✓ **Help enhancing the transparency of mainland China market.**
    - ✓ **Provide comprehensive information for back-testing, analysis and decision-making purposes.**

# Fundamental Data

- **iData**
  - **Company Announcements**
    - ✓ Provide unified and standardized company announcement, the announcement covers Main Board, STAR Market, Bond, Fund etc.
  - **Structured financial statements and notes of all SSE listed companies**
  - **Reference data**
    - ✓ provide unified and standardized static data.

Category	Annual Fee (US\$)
Company Announcements	\$10,000
Financial Statements and Notes	\$18,000
Reference Data	\$15,000

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# Agenda

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✓ **2023 Planning**

# 2023 Planning

- **Licensing**
  - **Reviewing the application forms and agreement structure and terms**
  - **Aim to simplify service application and agreement signing process**
  - **Reviewing the products and fee schedule**
  - **Try our best to minimize the impacts to existing clients**
  - **Target to announce in Q3**
  - **Welcome suggestions**

# 2023 Planning

- **Events**
  - **Webinars, industry meetings as usual...**
  - **Global Information Vendor Conference coming back!**
    - ✓ **Tentatively in Q4**
    - ✓ **Location TBC (welcome suggestions)**



2018 Global Information Vendor Conference (Xian)



2016 Global Information Vendor Conference (Wuxi)



2014 Global Information Vendor Conference (Suzhou)

# 2023 Planning

## ▪ New Project

### **I-Data Enhancement**

- **Translate Chinese into other languages such as English through AI technology**
- **Timely update by capture the latest company announcements through AI technology**
- **Stable, reliable and standardized data - Directly from company announcements**
- **Peer Comparison - Can be customized by industry, company, and indicator etc.**
- **Readable, visualized digitalized information**

# 2023 Planning

## ■ ‘Super-Connector’

- **Perform as the ‘Super-connector’ and ‘Interpreter’ between Chinese market and overseas clients**
- **Support mainland regulatory authorities in rolling out policies for securities market**
- **Support SSE in digital transformation**
- **Help overseas market participants better understand Chinese market data policies and rules etc.**





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## Technical Review 2022-2023

**16 February 2023**

**Presented by Joe Lam**

# Agenda

## Review System Change or Upgrade in 2022

- SDS Server Deployment (Transparent to all clients)
- CIIS Cloud Test Platform (Level-2 Direct Connection Clients)
- Market Data Minimum Bandwidth Requirement Updates (SSE Level-2 & other third parties' data)

## Change Response To Our Client Feedback

- Delivery Time Adjustment On VDE Static Files

## Follow-up Change

- Tick by Tick Combined data (Order Queues & Transaction)
- Adjustments on SSE Level-2 full snapshot data: Refresh every 3 seconds
- VDE 4.0 Upgrade (Roll-out to Production)

## Upcoming Change

- Prepare for the Full Implementation of the Stock Issuance Registration System
- SSE's trading system upgrade to Generation 4



# Review: SDS Server Deployment

- DRS which is the service provided for client to authenticate and rebuild market data has been offline
- SDS Server has replaced the functions of DRS
- SDS Server has the following functions:
  - Static files dissemination
  - Clients' Authentication
  - Handling clients' market data rebuild requests

## Review: CIIS Cloud Test Platform

- Metro service connecting to CIIS test platform was terminated on 31 Dec 2022
- All clients are required to access testing data by using CIIS Test Cloud Platform
- Services provided by CIIS on Test Cloud Platform:
  - Rental of virtual machine
  - Real-time testing data services (including Shanghai Stock Exchange (SSE) Level-1, Level-2)
  - Access between “All Weather Platform” and “Test Platform”



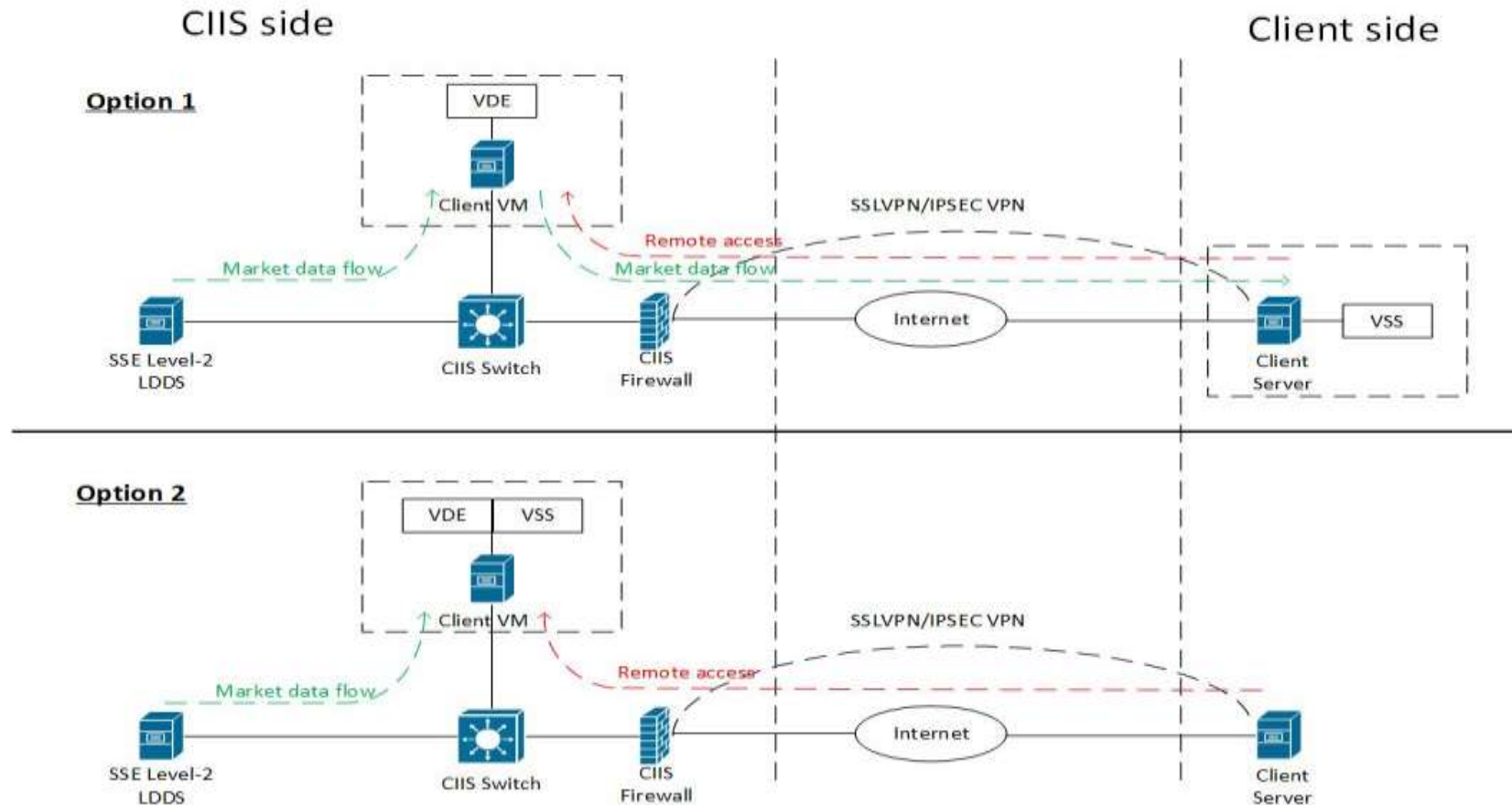
# Rental of VM Specification

- Standard (1 Unit) VM Configuration:
- \*Clients are responsible for providing the windows server license.
- #Clients need to develop and install their own VSS connecting to the VDE on the VM

<b>CPU</b>	<b>2 Cores</b>
<b>RAM</b>	16GB
<b>Hard disk capacity</b>	300GB
<b>OS</b>	*Windows Server 2012/2016 CentOS 7.6
<b>Software Installed</b>	#VDE

# CIIS Test Cloud Platform Connection Diagram

## CIIS Cloud Test Platform



# Minimum bandwidth requirement from as of Feb 2023

<b>Market Data</b>	<b>Bandwidth</b>	<b>Market Data</b>	<b>Bandwidth</b>
<b>SSE Level-1</b>	6Mbps	<b>SSE Level-2</b>	20Mbps
<b>CFFEX Level-1</b>	6Mbps	<b>CFFEX Level-2</b>	10Mbps
<b>DCE Level-1</b>	20Mbps	<b>DCE Level-2</b>	20Mbps
<b>ZCE Level-1</b>	10Mbps	<b>ZCE Level-2</b>	10Mbps
<b>SZSE Level-1</b>	10Mbps		
<b>SHFE/ INE Level-1</b>	6Mbps		



# CIIS Internal Bandwidth Upgrade (HK to SH)

As the bandwidth demand from Level-2 technical upgrade and third-party exchanges data increases, CIIS's lease-line connection between HK to Shanghai has been upgraded from 50Mbps to 100Mbps.

## 1. Production Platform

- TKO(HKEX Colo): 50Mbps -> 100Mbps
- ALC: 50Mbps -> 100Mbps

## 2. Test Platform

- WC: 50Mbps -> 100Mbps

## 3. Cloud Platform

- Cloud: 50Mbps -> 100Mbps





# Delivery Time Adjustment On VDE Static Files

- VDE Static Files delivery time had been adjusted from 8:30AM to 8:00AM
- Clients can receive pre-open market static files much earlier

## Tick by Tick Combined data

- Tick-by-Tick Combined data will be introduced. Tick-by-Tick Combined data includes auction tick-by-tick combined data (UA5803) and tick-by-tick channel number data (UA5815)
- Schedule: Tentative

# Adjustments on SSE Level-2 snapshot disseminating mechanism

- Snapshot data are all full snapshot data. Its updating frequency can be classified into change full snapshot and periodic full snapshot
- Change full snapshot data: Refresh every 3 seconds. If there is no change on the data, the dissemination of the data will be postponed to the next cycle and so on to the periodic full snapshot cycle
- Periodic full snapshot data: Refresh every 30 seconds(Refresh every 60 seconds for after-market fixed price trading session).
- Schedule: Tentative

# Source Synchronization for SSE Level-1 and Level-2 Data Timestamp

- SSE Level-1 and Level-2 Data timestamp will be synchronized
- Schedule: Tentative (March, 2023)

# SSE Market Data Switchover Test

- Switchover test with different scenarios will be carried out in 2023 to guarantee the stability of the market data dissemination to our clients
- Schedule: Start from April to October 2023 (on Saturdays)

## Upcoming Change

- Prepare for the Full Implementation of the Stock Issuance Registration System
- SSE's trading system upgrade to Generation 4

# Q&A

*Business: [marketing@ciis.com.hk](mailto:marketing@ciis.com.hk)  
Technical: [technical@ciis.com.hk](mailto:technical@ciis.com.hk)*



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