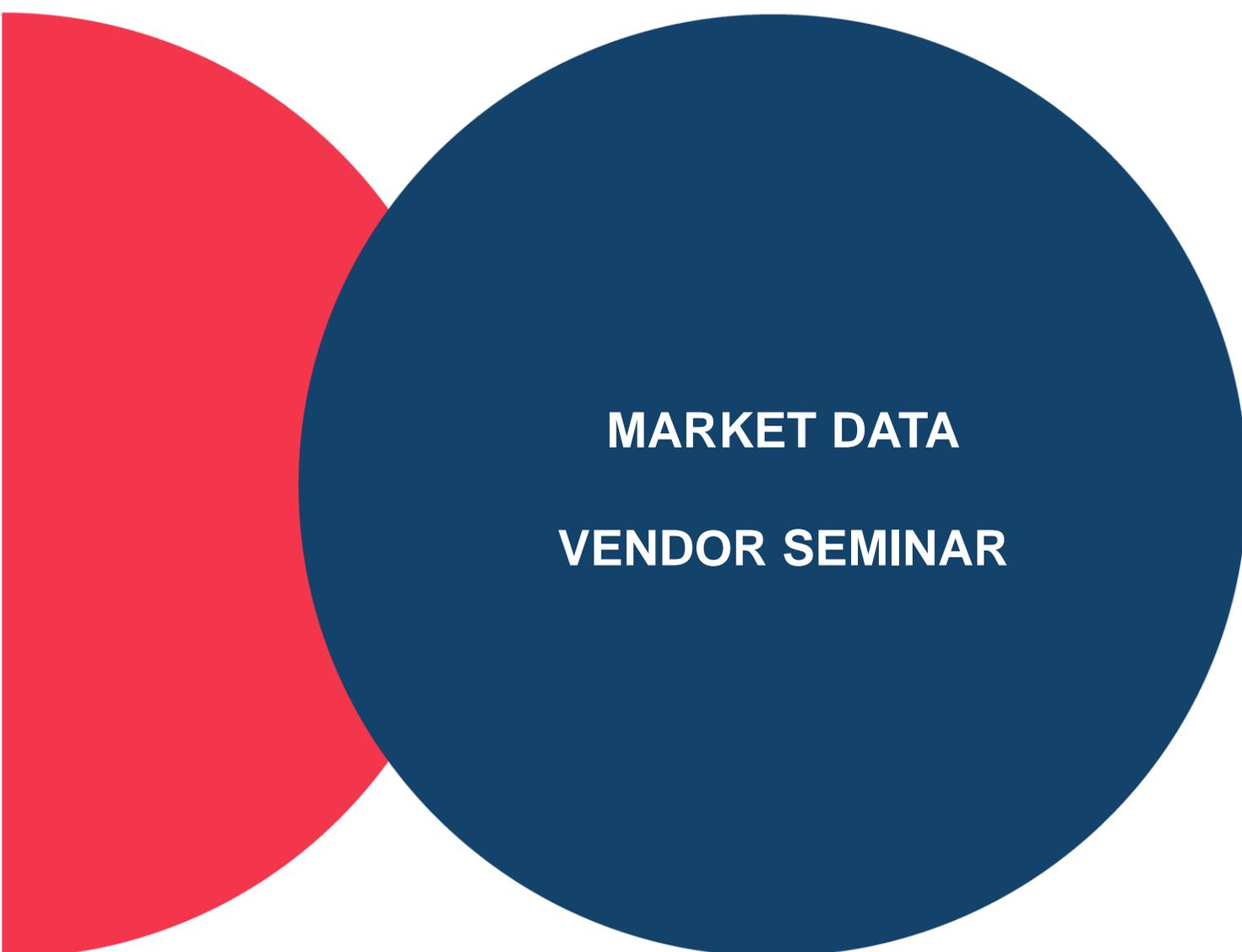


September 2018



**MARKET DATA
VENDOR SEMINAR**

HKEX
香港交易所

HKEX-IS

DISCLAIMER

The information contained in this presentation is for general informational purposes only and does not constitute an offer, solicitation, invitation or recommendation to subscribe for or purchase any securities or other products or to provide any investment advice of any kind. This presentation is not directed at, and is not intended for distribution to or use by, any person or entity in any jurisdiction or country where such distribution or use would be contrary to law or regulation or which would subject Hong Kong Exchanges and Clearing Limited (“HKEX”) to any registration requirement within such jurisdiction or country.

This presentation contains forward-looking statements which are based on the current expectations, estimates, projections, beliefs and assumptions of HKEX about the businesses and the markets in which it and its subsidiaries operate or aspires to operate in. These forward-looking statements are not guarantees of future performance and are subject to market risk, uncertainties and factors beyond the control of HKEX. Therefore, actual outcomes and returns may differ materially from the assumptions made and the statements contained in this presentation. The implementation of these initiatives is subject to a number of external factors, including government policy, regulatory approval, the behaviour of market participants, competitive developments and, where relevant, the identification of and successful entry into agreements with potential business partners. As such, there is no guarantee that the initiatives described herein will be implemented, or that they will be implemented in the form and timeframe described herein.

Although the information contained in this presentation is obtained or compiled from sources believed to be reliable, HKEX does not guarantee the accuracy, validity, timeliness or completeness of the information or data for any particular purpose, and shall not accept any responsibility for, or be liable for, errors, omissions or other inaccuracies in the information or for the consequences thereof. The information set out in this presentation is provided on an “as is” and “as available” basis and may be amended or changed. It is not a substitute for professional advice which takes account of your specific circumstances and nothing in this document constitutes legal advice. HKEX shall not be responsible or liable for any loss or damage, directly or indirectly, arising from the use of or reliance upon any information provided in this presentation.



AGENDA

1

Market Overview and Updates – Winnie Poon, Head of Market Data

2

Business Initiatives – Jin Qian, Data Licensing and Marketing

3

Upcoming Client Activities – Arthur Yung, Data Connectivity and Support

4

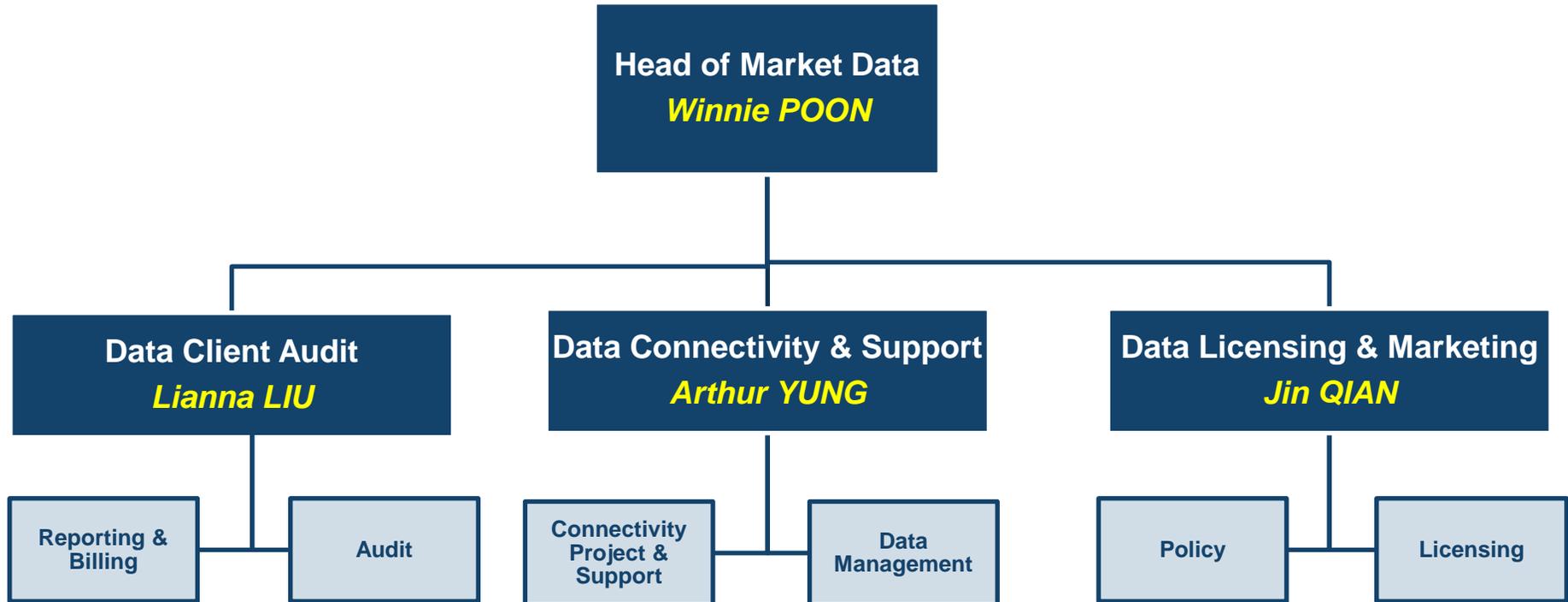
Payment Initiative and Audit Programme – Lianna Liu, Data Client Audit

5

Q&A



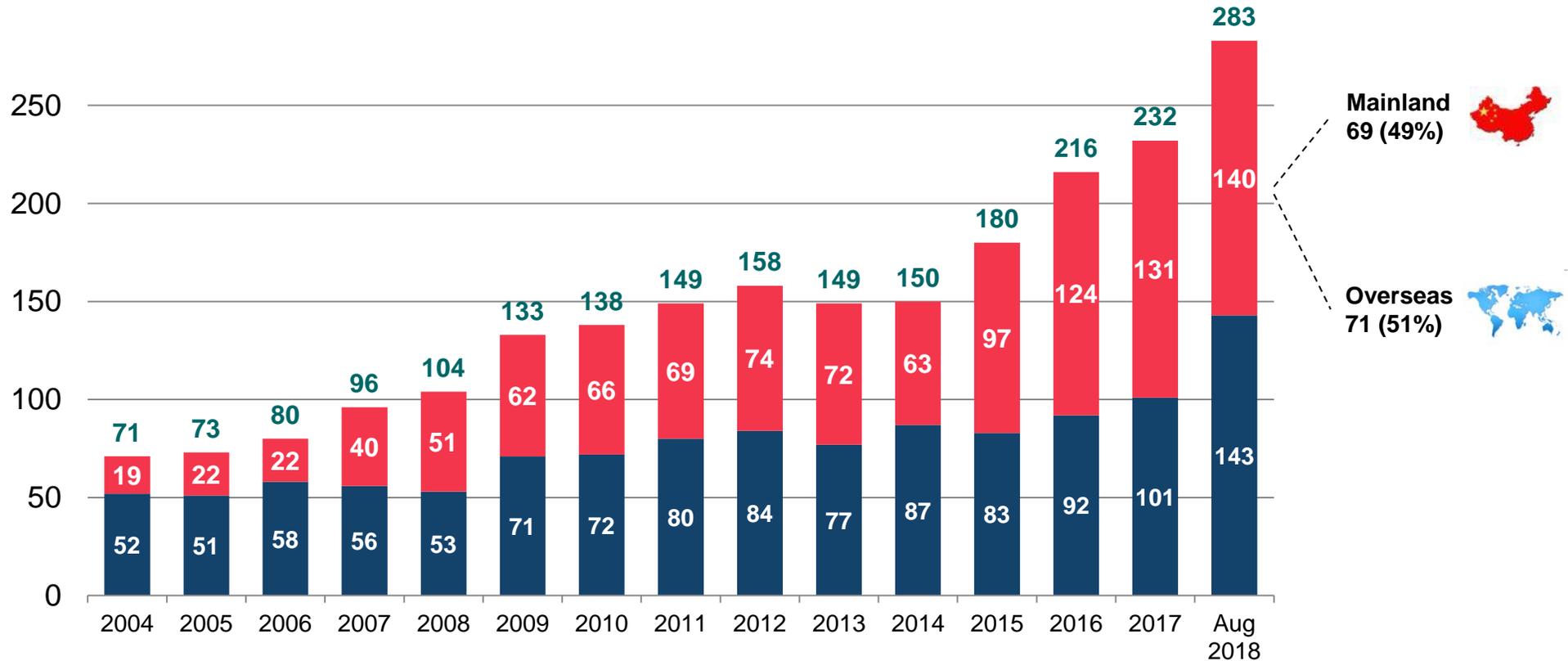
Structure Update



2018 Updates

Market Overview – Real-time Data Vendors

■ Mainland + Overseas ■ Hong Kong



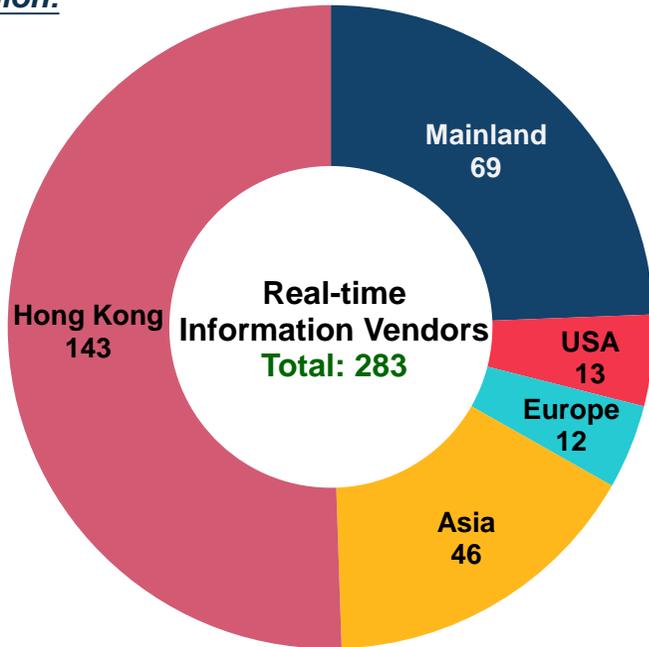
Number of Real-time Data Vendors almost doubled in the past 5 years



Client Overview – Real Time Data Clients

Market Data Vendor

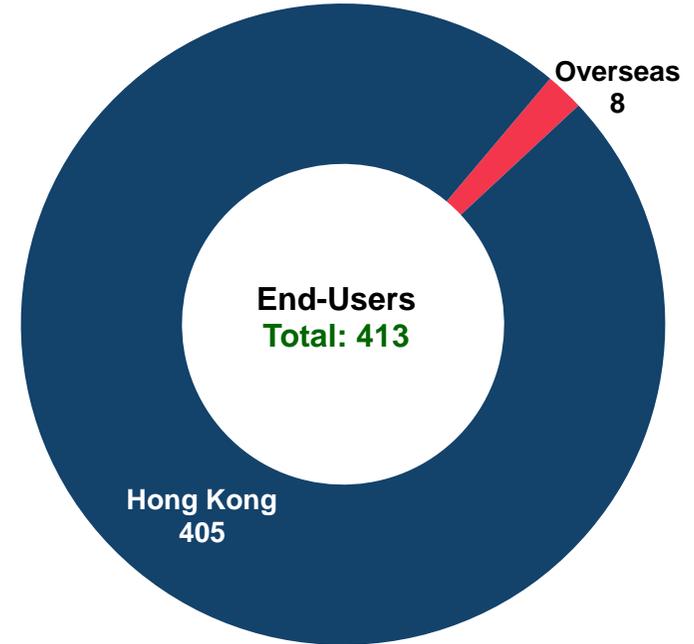
By Region:



By Industry:

Information business	72	Media	10
Exchange Participants & affiliates	99	Telecommunications service providers	3
Banks, buy-sides & other financial institutions	56	System vendors	15
Mainland Brokers	25	Niche players	3

Market Data End-User



Exchange Participants	402
Non-Exchange Participants	11

As of Aug 2018

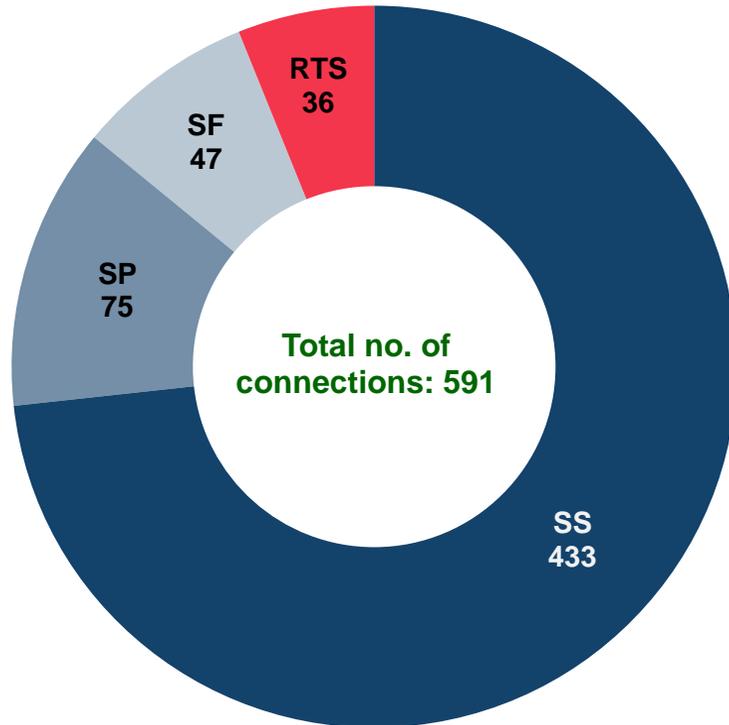
Vendors come from different industry segments and majority of End-Users are EPs



Market Data Business Updates

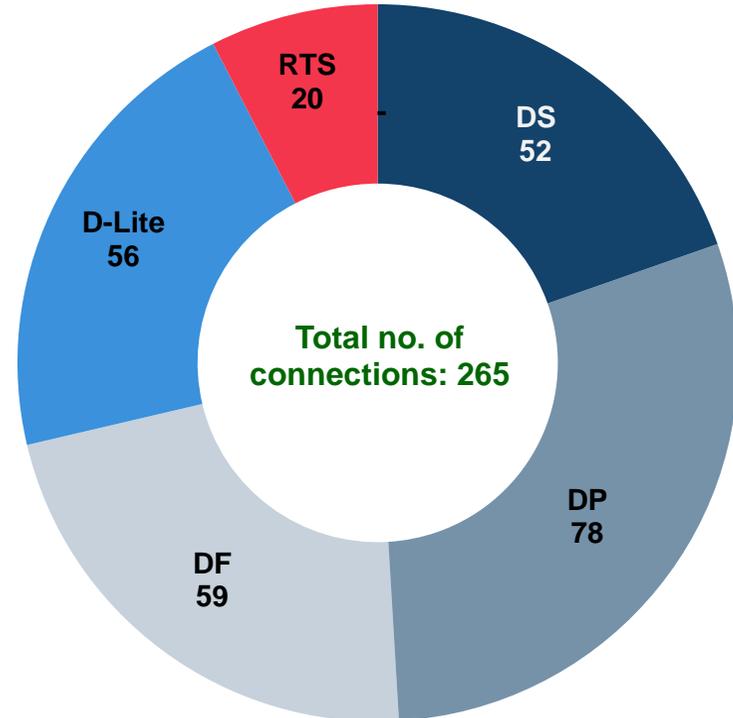
OMD Subscription Status of Direct Connection Clients

OMD-Cash



Securities Standard : SS (12 connections from MMDH)
 Securities Premium : SP
 Securities FullTick : SF
 OMD-C Additional RTS : RTS

OMD-Derivatives



Derivatives Standard : DS
 Derivatives Premium : DP
 Derivatives FullTick : DF
 Derivatives Lite : D-Lite (for EPs)
 OMD-D Additional RTS : RTS

As of Aug 2018

More than 800 OMD connections serving the market



Way Forward

Mainland Market Data Hub (“MMDH”)

- To consider enrich the content of MMDH and support market participants have direct access to our premium datafeeds via MMDH

Historical Data Products

- To promote HKEX historical data products through marketing programs and commercial packages

Reference Data Solution

- To introduce new reference data products to support development of structured products and meet market demand

AGENDA

1 Market Overview and Updates – Winnie Poon, Head of Market Data

2 **Business Initiatives – Jin Qian, Data Licensing and Marketing**

3 Upcoming Client Activities – Arthur Yung, Data Connectivity and Support

4 Payment Initiative and Audit Programme – Lianna Liu, Data Client Audit

5 Q&A



1.a Marketing Programmes for End Users & EPs

OMD Free Trial Programme

- To experience faster and deeper depth market data from OMD via direct connection with HKEX for market transparency
- To promote the subscription of OMD Premium and FullTick datafeeds and historical full book products

	No. of Application in 2018	No. of Application since programme launch
Real-time datafeeds	6	51
Historical data products	10	42

- Historical full book data are offered directly via HKEX website while real-time datafeeds may be obtained via licensed IVs or direct subscription
- Previous clients come from various backgrounds including brokers, hedge funds, proprietary traders etc.

Free Units for SEHK and HKFE EPs

- SEHK and HKFE EPs may enjoy the Usage Fee waiver for 20 terminals that display Level-2 market data (i.e. 10 price depths) respectively for internal use
- Display units subscribed via IV's services are also eligible for the waiver

1.b Marketing Programmes for Information Vendors

Cash

Marketing Programme for Mobile Application Service

One-year Fixed Fee Programme

Fixed Fee Programme on 5 Depths Southbound Eligible Stocks

Promotion Programme on Issuer Information Feed Service

Enhanced Volume Discount Scheme

Mainland China Discount Programme

Daily Charge Service Programme

Derivatives

Derivatives Market Data Distribution Partnership Programme

Marketing Programme for New Derivatives Products

1.c Marketing Programmes – To be Expired

Mainland Market Data Collaboration Programme

- Collaboration among HKEX Information Services Ltd (HKEX-IS) and SSE Infonet Ltd (wholly-owned Shanghai Stock Exchange) and Shenzhen Securities Information Co., Ltd. (wholly-owned Shenzhen Stock Exchange)
- Commenced in January 2009 (for SH) and May 2010 (for SZ) with an aim to benefit investors who have interest in shares of issuers that have listed in HK-SH and HK-SZ by increasing the transparency of the securities trading in the markets.
- Under the Programme, HKEX-IS's licensed vendors may disseminate the dual-listed A shares to their subscribers without paying the exchange fees for SH and SZ.
- 12 IVs are joining the Programme as of August 2018.
- **Programme ends on 31 December 2018.**

2. OMD D-LITE – Arrangement Update

D-Lite	Details
Purpose	EPs' internal data usage and redistribution, after NG decommissioning
Allowed Data Sources	Maximum 4 (direct & indirect combined)
Fees	One-off Connect Fee: HK\$10,000 (waived) Monthly License Fee: HKD2,000 per applicable connection (waived until the rollout of HKATS/DCASS Upgrade*)
Content	5 price depth, order feed, trade feed

Scenario 1	Scenario 2	Scenario 3	Scenario 4
1 st set D.C. via SDNet/2 2 nd set D.C. via HSN 3 rd set D.C. via SDNet/2 4 th set D.C. via HSN	1 st set D.C. via SDNet/2 2 nd set D.C. via HSN 3 rd set via ASP (N/A)	1 st set D.C. via SDNet/2 2 nd set via ASP in hosting site 3 rd set via ASP (N/A)	1 st set via ASP 2 nd set via ASP (N/A)
Applicable sets : 4 Monthly fee: HKD8,000	Applicable sets : 2 Monthly fee: HKD4,000	Applicable sets : 2 Monthly fee: HKD4,000	Applicable sets : 1 Monthly fee: HKD2,000

* EPs which submitted D-Lite Feed Enrolment Form AND placed network installation/reconfiguration orders before Dec 2018



3. Upcoming Events

Details	Information Day	Annual Mainland Conference
Date & Time	Late October	Late November
Venue	Connect Hall, Hong Kong	Shanghai – venue TBC
Topic	Overview of market data business initiatives and latest development in the market	Latest development in the mainland market and new business strategies
Key Participants	Licensed information vendors, end-users, exchange participant, independent software vendors as well as other service providers in the financial sector	Licensed information vendors, Mainland brokers, fund manager as well as other service providers in the financial sector
Exhibit Booth	Free to IVs on a first come first serve basis	Free to IVs on a first come first serve basis



AGENDA

1 Market Overview and Updates – Winnie Poon, Head of Market Data

2 Business Initiatives – Jin Qian, Data Licensing and Marketing

3 Upcoming Client Activities – Arthur Yung, Data Connectivity and Support

4 Payment Initiative and Audit Programme – Lianna Liu, Data Client Audit

5 Q&A



Upcoming System Activities



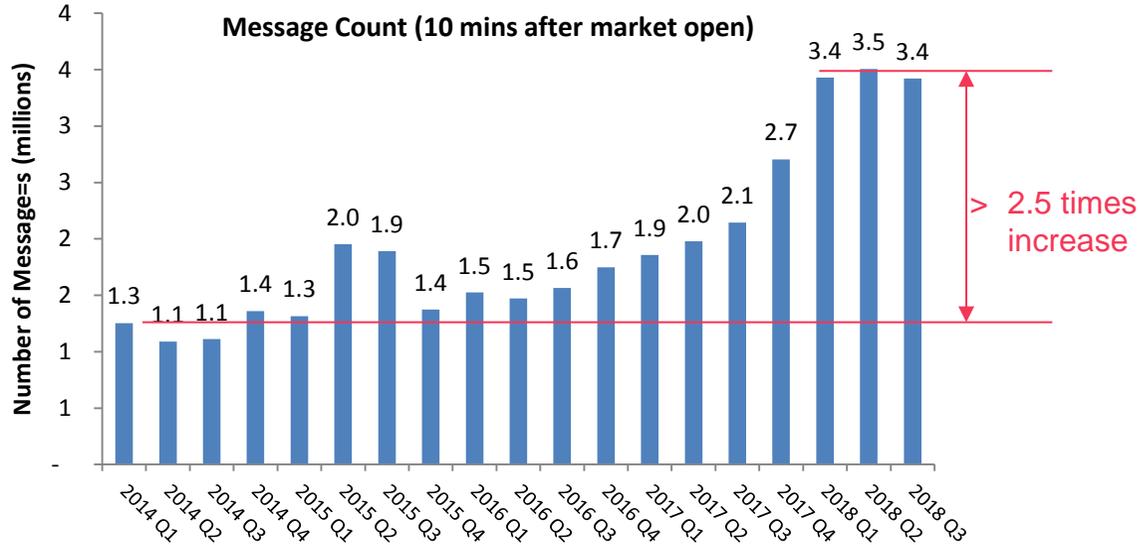
<p>New indices inclusion (planning on commodity, sector and new economy indices)</p>	<p>▲ Late-Oct <i>(timeline in 2019 subject to indices availability)</i></p>
<p>OMD-C</p> <ul style="list-style-type: none"> • Bandwidth Increase • Technical Refresh 	<p>▲ Mid-Oct: Post Release Test</p> <p>● Nov/Dec: E2E upgrade ● Mar/Apr: MR ▲ May: PRT</p>
<p>OMD-D</p> <ul style="list-style-type: none"> • Changes for HKATS/DCASS Upgrade • Technical Refresh 	<p>● Mid-Oct: Readiness Test ● Jan: Declare Readiness ● Mar – Apr: MR ▲ May: PRT</p> <p>● Q4 2019: E2E Upgrade</p>

Note: Timelines above are based on planning; actual dates may vary. Client notices will be issued on confirmed dates.



OMD-C (Bandwidth Upgrade)

➤ Market data traffic is continuously increasing since OMD-C launches:



➤ Bandwidth increase (Mbps):

OMD-C Data Feed	Min Bandwidth (Mbps)
Securities Standard (SS)	10 → 16
Securities Premium (SP)	30 (no change)
Securities Full tick (SF)	30 → 60



Timeline:

Activity	Timeline
Client bandwidth reconfiguration	May – September 2018
Market Rehearsals	22, 29 September 2018
Rollout	Mid-October 2018



OMD-C (Technical Refresh)



Scope:

- 1. Hardware refreshment
- 2. OS upgrade
- 3. Software architecture revamp



Impact:

- 1. Pure technology refreshment
- 2. No OMD-C interface change



Timeline:

Activity	Timeline
E2E environment upgrade	November / December 2018
Market Rehearsals	March – April 2019
Post Release Test	May 2019

Note: Timelines above are based on planning; actual dates may vary. Client notices will be issued on confirmed dates.



OMD-D (Changes for HKATS/DCASS Upgrade)



Interface Changes:

1. Introduce new status in commodity and series: “Locked”
2. Introduce news fields for future usage (e.g., “DateTimeFirstTrading” in Series Definition)
3. Series Definition will be sent for all series (including suspended series) at the start of day

Points to Note:

- HKATS root symbol will be increased from 3 to 5 alpha-numeric characters
- Future new business initiatives:
 - contracts with flexible expiry dates (namely weekly / daily expiry contracts)
 - holiday trading of HKFE products (different trading calendars)



Timeline:

Activity	Timeline
Provision of Canned Data	October 2018
Ready of Readiness Test Environment	October 2018
OMD-D clients declare readiness	Early January 2019
Market Rehearsals	March – April 2019
Launch	May 2019

Note: Timelines above are based on planning; actual dates may vary. Client notices will be issued on confirmed dates.



OMD-D (Technical Refresh)



Scope:

- 1. OS upgrade
- 2. Software architecture revamp



Impact:

- 1. Pure technology refreshment
- 2. No OMD-D interface change



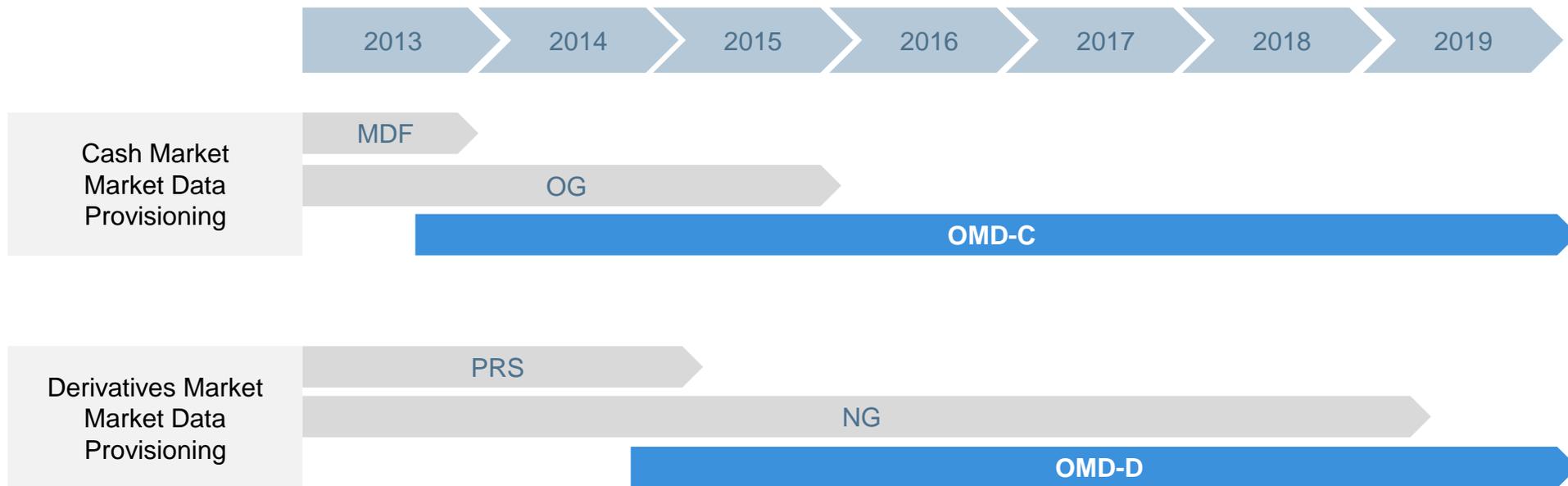
Timeline:

Activity	Timeline
E2E environment upgrade	Q4 2019
Market Rehearsals	Q4 / Q1 2020
Post Release Test	Q1 2020

Note: Timelines above are based on planning; actual dates may vary. Client notices will be issued on confirmed dates.



Market Continuity



**OMD is the only market data provisioning system in Cash Market.
It will be the same in Derivatives Market after HKATS/DCASS Upgrade.**



To ensure market continuity, it is important to:

- Provide us up-to-date technical and emergency contact (HKEX-IS@hkex.com.hk)
- Participate HKEX regular annual drill for site failure to get familiar with the contingency procedures

AGENDA

1 Market Overview and Updates – Winnie Poon, Head of Market Data

2 Business Initiatives – Jin Qian, Data Licensing and Marketing

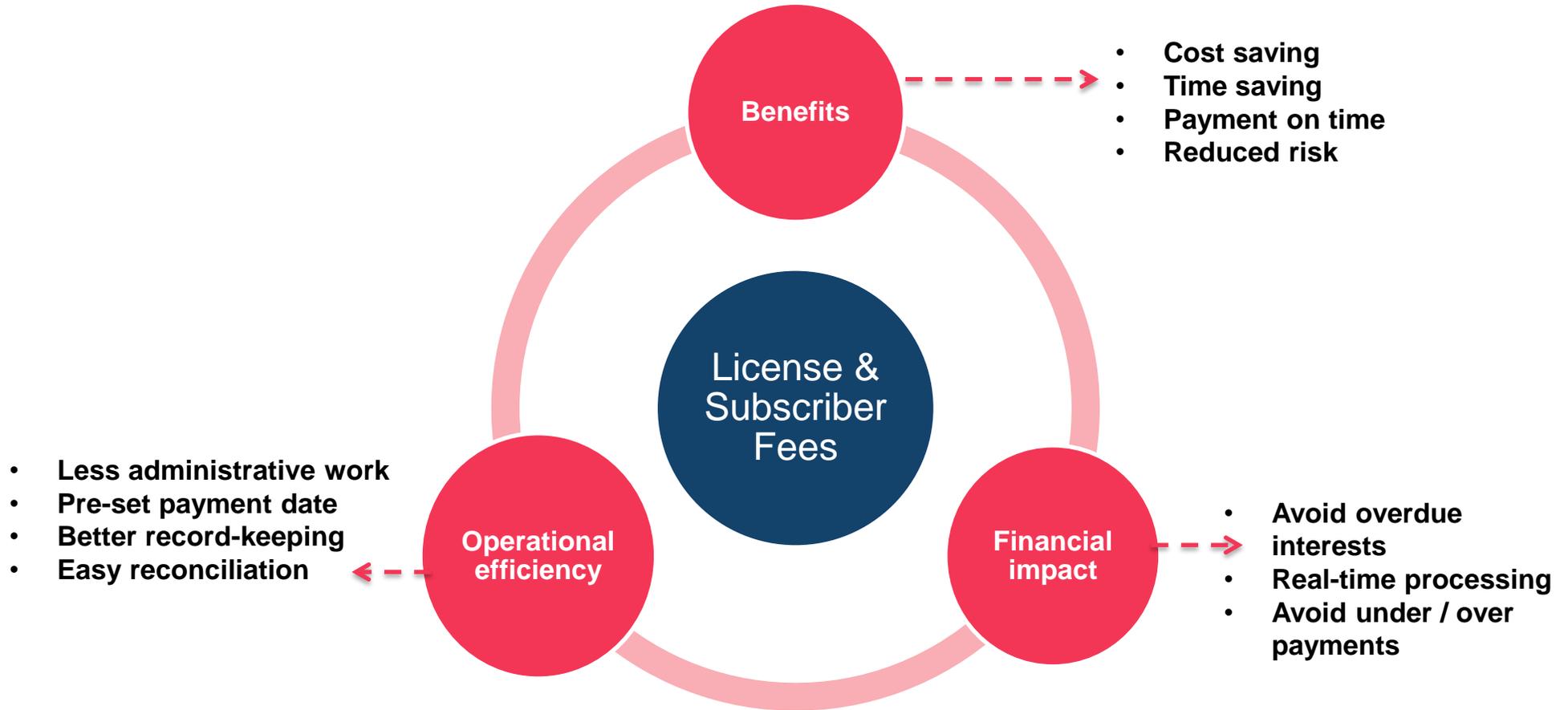
3 Upcoming Client Activities – Arthur Yung, Data Connectivity and Support

4 Payment Initiative and Audit Programme – Lianna Liu, Data Client Audit

5 Q&A



2018 Initiative – Autopay Arrangement



2018 Initiative – Autopay Arrangement

Target Licensees

End-Users and Information Vendors

- Local Information Vendors
- Local End-Users
- Overseas licensees+ with bank account in Hong Kong

Fees

Market Data Fees:

- Redistribution Fees
- Connection Fees
- Subscriber / Individual user Fees (*Note: Debit Notes will be issued*)

Timeline

Autopay commencement



+ For overseas licensees, autopay can also be arranged via a group company having a local bank account

2018 Initiative – Autopay Arrangement

DIRECT DEBIT AUTHORISATION (Generic Set-up) 直接付款授權書

Date 日期

- Note 注意:**
- Please tick where applicable. 請在適當的地方加上標籤。
 - For HSBC Customers, please return the completed form to the Bank or mail to Automatic Payments Centre, Payment Services at PO Box 72677, Kowloon Central Post Office, Kowloon, Hong Kong. You may also set up the direct debit authorisation through HSBC Internet Banking. For non-HSBC customers, please complete and return this form to your banker. 如屬惠理客戶，請將已填妥的表格交回本行或寄回本行或寄回中央郵政局郵政信箱 72677 號匯豐銀行總辦事處。如非惠理客戶，請將表格填妥後交回本行或寄回本行或寄回中央郵政局郵政信箱 72677 號匯豐銀行總辦事處。
 - Your Direct Debit Authorisation set up request will normally be processed within 4 working days (excluding Saturday, Sunday and public holiday) upon receipt of your form. 在一般情況下，本行將在收到您的直接付款授權書的設立申請後於四個工作日內（不包括星期六、日及公眾假期）處理您的申請。

Name of Party to be Credited (The Beneficiary) 收款的一方 (收款人)		Bank No. 銀行號碼	Branch No. 分行號碼	Account No. 戶行號碼
HKEX INFORMATION SERVICES LTD		0 0 4	7 4 1	0 5 7 5 6 8 0 0 1
My/Our Bank Name and Branch 本人(等)的銀行及分行的名稱		Bank No. 銀行號碼	Branch No. 分行號碼	My/Our Account No. 本人(等)的戶行號碼
My/Our Name(s) as recorded on Statement/Pasbook (in Block Letters) 本人(等)在賬單/存摺上所記錄的名稱 (請以英文正體填寫)				
Contact Telephone No. 聯絡電話號碼	Maximum Limit for 最高付款限額 Note: If Bank, the debtor's bank will act as "undrafted". 如屬惠理客戶，本行將作為「未開票」處理。	Expiry Date (day/month/year) 有效期 (日/月/年) Note: If Bank, this authorisation shall have effect until further notice and Expiry Date should be greater than 3 months. 如屬惠理客戶，此項直接付款授權書將繼續有效，直至另行通知為止，有效期應超過 3 個月。		
	<input type="checkbox"/> Each Payment 每次	<input type="checkbox"/> Each Month 每月		
My/Our Address as recorded on Statement/Pasbook 本人(等)在賬單/存摺上所記錄的地址				
Debtor Name (in Block Letters) 付款人名稱 (請以英文正體填寫) Note: Please specify if other than account Holder. 若非戶行持有人，請填寫。		Debtor Reference (Compulsory Field) 付款人編號 (必填之項) (Reference between years of and the party to be credited. 賬戶所有權者一方的編號)		
Declaration (For HSBC Customer Only) 聲明 (只適用於惠理客戶)				
<p>1. I/we hereby authorise my/our above named Bank to effect transfer from my/our account to that of the above named beneficiary in accordance with such instructions as my/our Bank may receive from the beneficiary and/or its banker and/or its banker's correspondent from time to time provided always that the amount of any one such transfer shall not exceed the limit indicated above. 本人(等)授權本人(等)的戶行向賬戶上收款人，按每次轉帳金額不得超過上述所指示的限額。</p> <p>2. I/we agree that my/our Bank shall not be obliged to ascertain whether or not notice of any such transfer or reversal notice has been given to me/us. 本人(等)同意本人(等)的銀行毋須查閱或毋須通知是否已交收本人(等)。</p> <p>3. I/we jointly and severally accept full responsibility for any overdraft (or increase in existing overdraft) on my/our account which may arise as a result of any such transfer(s). 我們共同及個別承擔全部責任。</p> <p>4. I/we understand that I/we must maintain sufficient funds in the account one business day (before the close of branch banking hours) before the transfer date (as specified in the instructions received by my/our Bank from the beneficiary and/or its banker and/or its banker's correspondent from time to time) for the transfer authorised herein. I/we agree that should there be insufficient funds in my/our account to meet any transfer authorised herein, my/our Bank will be entitled, at its absolute discretion, not to effect such a transfer in which event the Bank may levy its usual charges and may cancel this authorisation at any time without notification to me/us. For the avoidance of doubt, the Bank may cancel this authorisation at its sole discretion at any time without prior notice. 本人(等)明白本人(等)在指定的轉帳日期(即根據本人(等)的銀行從收款人或其在銀行及/或代辦行不時收到的指示)前，在戶行戶口內應有足夠款項以支付該等授權轉帳。本人(等)明白本人(等)的戶行應在指定的日期前維持足夠款項以支付該等授權轉帳。本人(等)同意本人(等)的銀行有絕對酌情權不予轉帳，且本人(等)的銀行可徵收常規的收費，並可隨時取消該等授權轉帳且毋須通知本人(等)。為免疑義，本人(等)的銀行可隨時在決此授權或取消授權時毋須通知本人(等)。</p> <p>5. This direct debit authorisation shall have effect until further notice or until the expiry date written above (whichever shall first occur). I/we agree that if no transaction is performed on my/our account under such authorisation for a continuous period of 30 months, my/our Bank reserves the right to cancel the direct debit arrangement without prior notice to me/us, even though the authorisation has not expired or there is no expiry date for the authorisation. 本直接付款授權書將繼續有效，直至另行通知為止，或上述所寫的有效期為止，以兩者中較早的日期為準。本人(等)同意本人(等)已成立的直接付款授權書將繼續有效，直至另行通知為止，或上述所寫的有效期為止，以兩者中較早的日期為準。本人(等)同意本人(等)的銀行有絕對酌情權取消本直接付款授權書且毋須通知本人(等)，即使本授權書並無到期或未有註明授權期限。</p> <p>6. I/we agree that any notice of cancellation or variation of this authorisation which I/we may give to my/our Bank shall be given at least two working days prior to the date on which such cancellation/variation is to take effect. 本人(等)同意本人(等)取消或更改本授權書的任何通知，必須於取消/更改生效日期前最少兩個工作日之前交予本人(等)的銀行。</p>				
My/Our Bank Account Signature(s) 本人(等)銀行戶口的簽署				
X				
For Bank Use Only 銀行專用	Remarks			Branch Chop

>> APC-NSC

Staff ID

COMPLETE & SUBMIT

Direct Debit Authorisation Form (Download [Link](#))

To: **HKEX Finance Division
23/F, One Exchange Square
8 Connaught Place
Central, Hong Kong**



New Bank Account for payments



- Current Hang Seng Bank as receiving bank will remain active until **31 Dec 2018**
- Payments shall be **deposited, transfer or wire** to **HSBC bank account**

New

Beneficiary : HKEX-IS
Name of Bank : HSBC
Account No. : 004-741-057566001
SWIFT Code : HSBCHKHH

20 Free Display Terminal Units to EPs

Exchange Participants (EPs) can claim up to **20 free Cash & Derivatives market data display units**

Securities market data



SEHK EPs

Derivatives market data



HKFE EPs



SEHK Stock Options Participant



Effective **Mar 2015**

- ❖ Increased from 10 free display units granted to SEHK EPs from Jan 2014
- ❖ Entitled under **EP's own capacity**
- ❖ Units claimed for any group company and/or trading clients are **not** allowed
- ❖ For **internal usage** only
- ❖ No retrospective claim

- Claim **20 L1/L2** display units, via HKEX-IS direct connection and/or units *subscribed from licensed vendors*

via

- Monthly Subscriber / Individual User Report OR
- Declaration Claim Form ([Link](#)) with supporting invoices

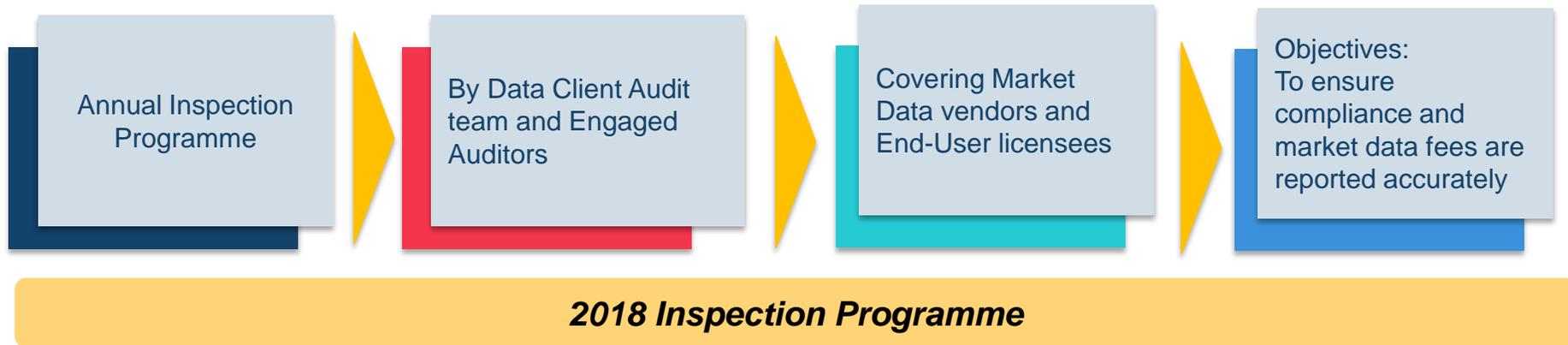
Effective **Apr 2018**

NEW

- ❖ Upon **full** migration from Network Gateway to Central Gateway
- ❖ Entitled under **EP's own capacity**
- ❖ Units claimed for any group company and/or trading clients are **not** allowed
- ❖ For **internal usage** only
- ❖ No retrospective claim



Data Audit and Compliance



- **Take a chance to review** your usage and reporting of Securities and Derivatives market data usages services
- For any Non-Compliance Incidents or Violations:
 - ❑ HKEX-IS reserves the right to **seek compensation and damages**
 - ❑ Including **40% penalty interest** on the underpaid sum
 - ❑ Charge **inspection cost** if underpaid sum is 5% or more of the Licence Fees actually paid



Data Audit and Compliance

Key Reminders

Mainland Discount Programme / Mobile Application Service

- Technical control for blocking access outside Mainland China (e.g. IP)

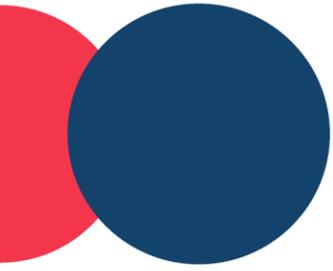
New Derivatives Products

- Restricted access to 11 regions for waived fees
- Regions include: Mainland China, Japan, Korea, Singapore, Taiwan, Australia, New Zealand, Malaysia, India, Thailand and Vietnam

Basic Market Prices (BMP) Service

- Display of BMP data content on streaming basis
- Provision of more than 20 securities under top 20 lists / portfolio valuation etc.
- Lack of advisory messages and standard disclaimer to indemnify HKEX-IS and HKEX group





Questions and Answers