

# Software Upgrade for HKATS Participant Briefing Session

Sept 2012



# Agenda

- 1 Overview of Software Upgrade
- 2 Dynamic Price Banding
- 3 Data Compression in Central Gateway
- 4 CLICK Trade Software
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# Overview of HKATS Software Upgrade



## HKATS Software Upgrade

### Scopes:

- *Dynamic Price Banding*
- *Data Compression in Central Gateway*
- *Enhanced CLICK Trade software version*

# Overview of HKATS Software Upgrade



## “WHY” Software upgrade?

### HKEx New Product:

#### New Products in the pipeline

- RMB currency futures
- After-Hours Futures Trading
- Stock Options Revamp (Primary Market Maker Quote services)
- RMB Stock Options

### Benefits associated to upgrades

#### Mitigate Operational Risk

- Fat Finger
- Strengthen market integrity

#### System Capacity Enhancement

- Data Transmission Bandwidth



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# Dynamic Price Banding

## The Reasons for Dynamic Price Banding:

- Prevent order entries at a price that is clearly erroneous for selected futures series.
- Avoid abnormal price fluctuation due to the order entries at erroneous prices.
- In addition to the current user-level due diligence (not a replacement to existing process), allowing HKEx to proactively manage the process helps strengthen the error-trade prevention measures.

# Dynamic Price Banding

## Mechanism

- No Dynamic Price Banding (DPB) during Auction Order period.
- Calculated Opening Price (COP) will be used as the first reference price for the calculation of the first price band.
- First Traded Price will be used as the reference price if “NO” COP has been established.



# Dynamic Price Banding

## Mechanism

- Reference price will be adjusted to Last Traded Price (LTP) if the LTP deviates more than a pre-determined % (update parameter) from the last reference price.
- Applies to spot Mini-HSI futures at initial stage.

# Dynamic Price Banding

## Mechanism

- Upper Price Banding Limit (UP) = Reference Price (RP) + preset Deviation Parameter
- Lower Price Banding Limit (LP) = Reference Price (RP) - preset Deviation Parameter
- The deviation and update parameter will be set at “4%” and “1%” respectively initially but it is subject to future changes based on business decision.

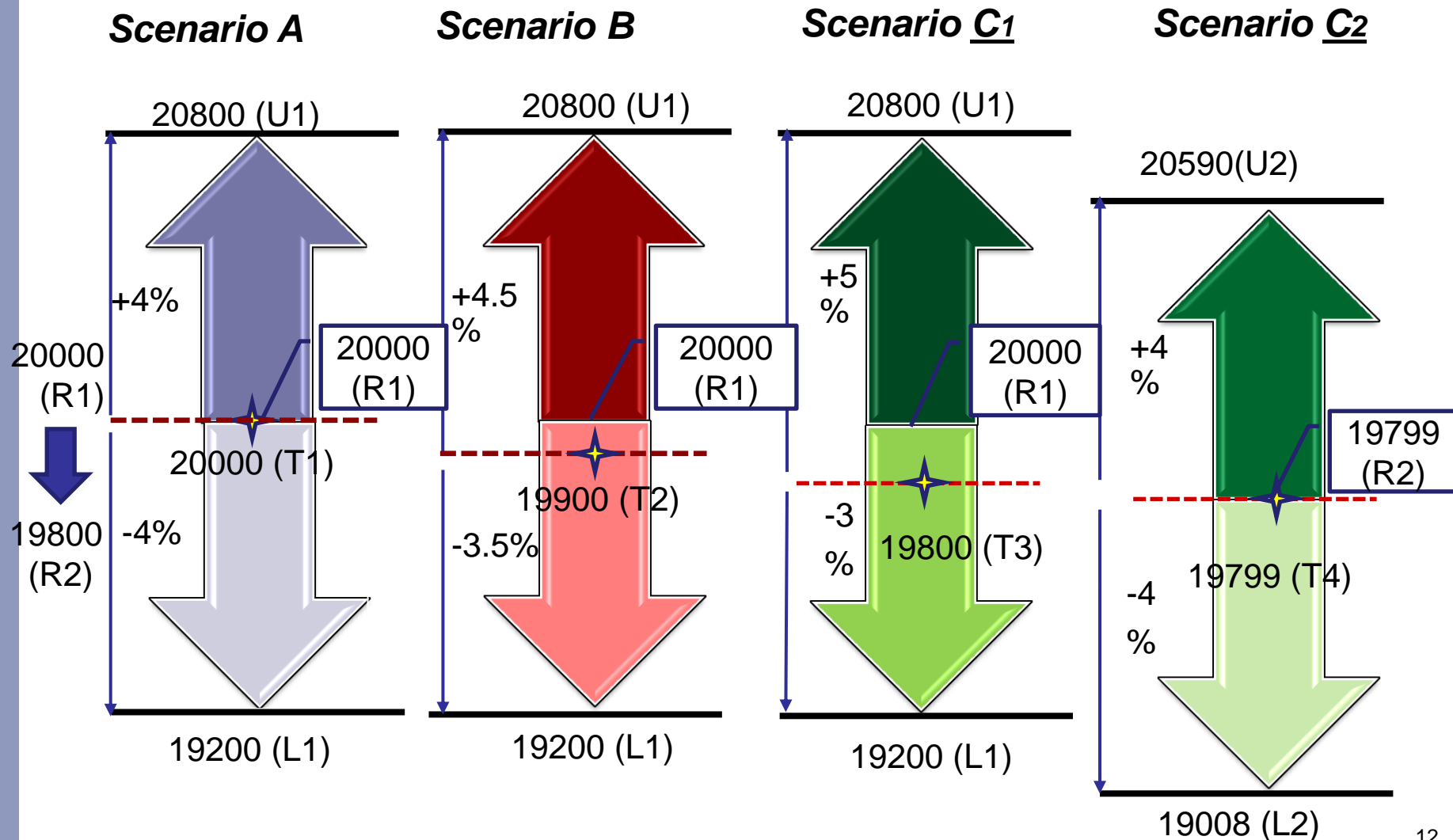
# Dynamic Price Banding

## Example:

Update Parameter level: 1% Deviation Parameter level: 4%

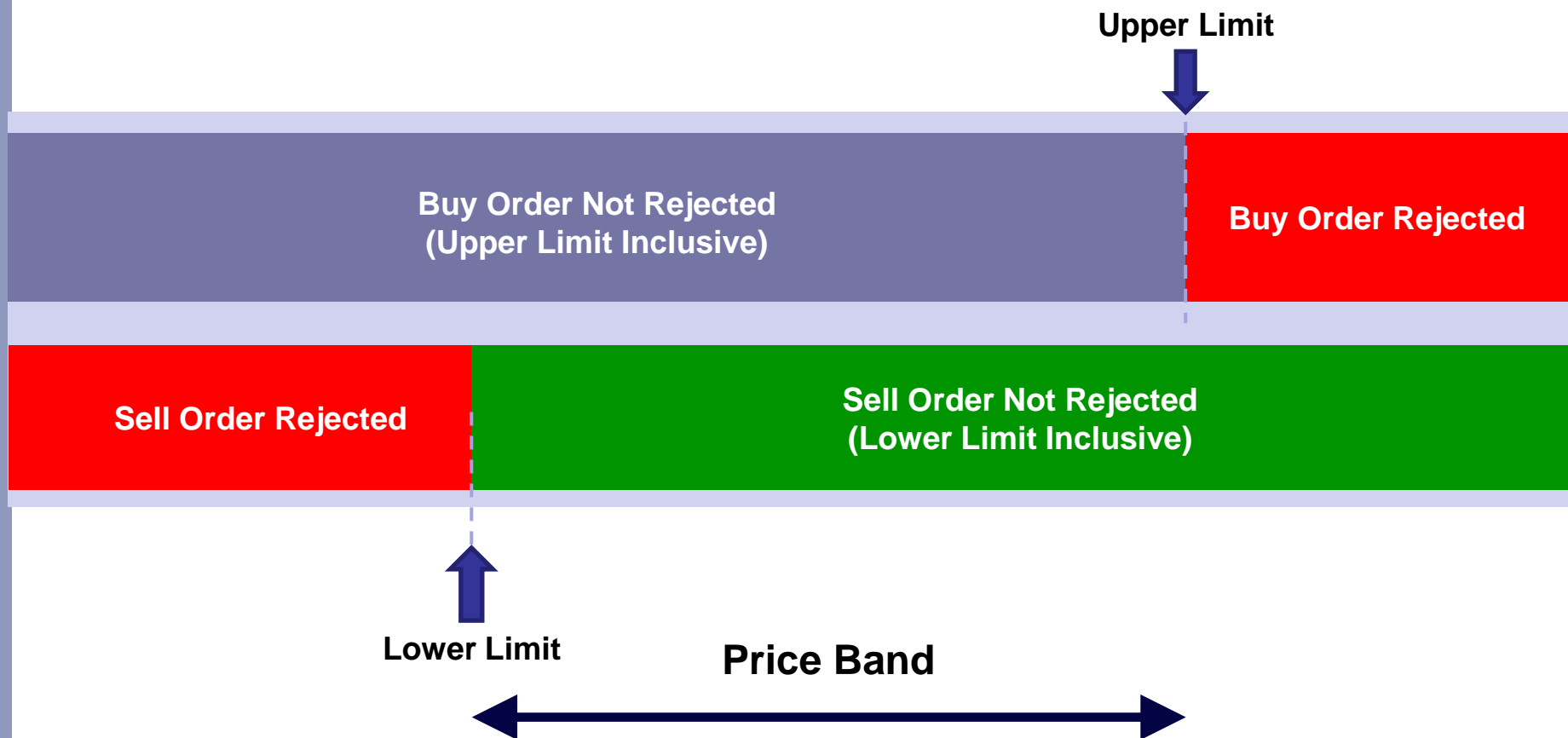
Scenario	COP or First Traded Price	Last Traded Price	Reference Price	Upper Price Limit	% difference (U-T)/T	Lower Price Limit	% difference (T-L)/T
A 9:15am	20000 (T1)		20000 (R1)	20800 (U1)	4%	19200 (L1)	4%
B		19900 (T2)	20000 (R1)	20800 (U1)	4.5%	19200 (L1)	3.5%
C1		19800 (T3)	20000 (R1)	20800 (U1)	5%	19200 (L1)	3%
C2		19799 (T4)	19799 (R2)	20590 (U2)	4%	19008 (L2)	4%

# Dynamic Price Banding



# Dynamic Price Banding

## Rules of Thumb:



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# Data Compression in Central Gateway



## The reason for Automatic Data Compression :

- Future increase in market volume may demand data compression over SDNet between OAPI programs and the Central Gateways\*.
- Relevant adaptation to the OAPI programs for automatic detection of data compression mode allows HKEx to turn on data compression at the Central Gateways during Software Upgrade.

\* Data compression mode is turned off for connection made to the local Network Gateways

# Data Compression in Central Gateway



## Preparation for OAPI Program changes:

- Compression option → specify as “OMNIAPI\_OPVAL\_ANY”.
  - Failure to do so will result in error when login to CGs after the official launch of software upgrade.
- All EPs must recompile HKATS OAPI program with new header file and supported OAPI libraries (please see Appendix A for the version details) **before 12 Oct.**
  - EPs **without** modification of OAPI programs → must verify program end-to-end connectivity by logging in to HKEx testing environment and → submit declaration form.
  - EPs **without testing line** → **must** join the Production Readiness (PR) which schedule on **29 Sept**



# Data Compression in Central Gateway



## Preparation for OAPI Program changes:

- EPs with modification of OAPI programs → Participate in the certification test (before 12Oct) and submit the signed application form.
- ALL OAPI EPs must prepare for Market Rehearsal (MR) schedule on 20 Oct.

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# CLICK Trade Software

## The reason for new CLICK Trade Software:

- Version upgrade has been performed, mainly to rectify previously known software issues (such as Trade Statistic Window and multiple workspaces problems) and improve stability in general
- New functionalities to cope with New Business Initiatives (Details please see Appendix B).
- PR (29Sept) and MR (20 Oct) is optional to CLICK User.
- “After completing the installation, EPs should not use the new CLICK Trade XT software (v.1.9.2.27) to login HKATS other than the above four login test sessions. Otherwise the software may not function as expected.”

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Key Stages

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# Key Stages: OAPI Program

Data Compression/Recompile Header file and upgrade Library

• Deadline before 12 Oct

Test the program in testing environment

Deadline before 12 Oct

No  
testing  
line

Join PR  
Date:  
29 Sept

Yes

OAPI Program Changes?

No

Submit  
declaration  
form

Yes

Complete OAPI certification before 12 Oct

Market Rehearsal (Mandatory)

Date: 20 Oct

Go-live (to be announced after the Market Rehearsal)

# Key Stages- CLICK software

Download the new CLICK installation file (v1.9.2.27)

Ensure the CLICK workstation is Window7

Install the new CLICK before 5 Sept

\*User should not use the new version until after HKEx announces the official launch date

Perform Login Test:

Date: 7, 14, 21, 28 Sept

Production Readiness (Optional)

Date: 29 Sept

Market Rehearsal (Optional)

Date: 20 Oct

Go-Live (to be announced after the Market Rehearsal)

# Key Stages

## Logistic arrangement for Market Rehearsal

**Date: 20 Oct 2012 (Saturday)**

Test	Time	Task
Connect to HKATS Login	10:00am- 10:45am	Login HKATS
1 <sup>st</sup> Normal Session- Pre-market	10:45am- 11:00am	This section applies to EPs who have trading right in HSI, MHI & HHI Futures markets only
1 <sup>st</sup> Normal Session- Opening Trading Session	11:00am- 11:30am	Execute trade transactions
System Fallback session (Optional)	Late Afternoon	<ul style="list-style-type: none"> <li>● pre-market activities</li> <li>● normal trading session</li> </ul>

# Key Stages

## Summary:

- Production Readiness Test (PR) for the OAPI EPs without testing line is mandatory, scheduled date: 29 Sept
- Production Readiness Test (PR) for the CLICK user is optional, scheduled date: 29 Sept
- Market Rehearsal: scheduled date 20 Oct
- Market Rehearsal is compulsory to all OAPI users
- Market Rehearsal is optional to CLICK users
- Any questions regarding the schedule of Production Readiness or Market Rehearsal test, please call the hotline : 2211 6337



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Questions & Answers

# - Questions & Answers -

# Appendix A: New OAPI Header File and Libraries version

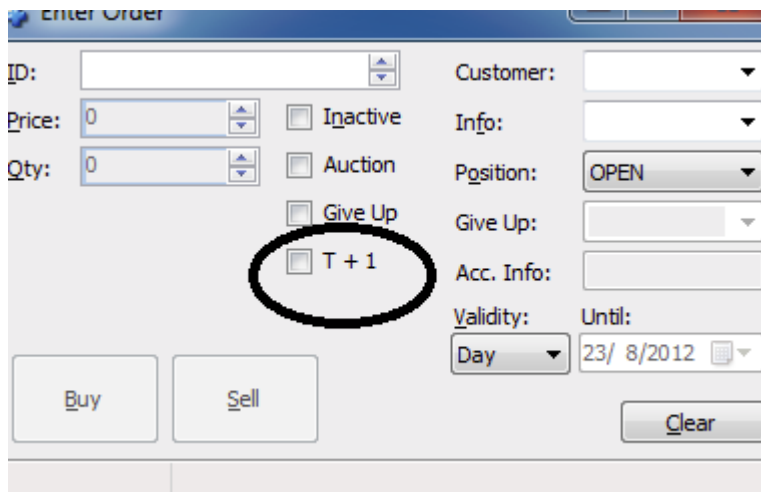


Types	Version
OAPI Header file	19.1-0120
OAPI Library	Windows Server 2008, Service Pack 2, x86-64 architecture
	Windows Server 2008, Service Pack 2, x86-32 architecture
	Red Hat Enterprise Linux 5.2, x86-64 architecture
	Red Hat Enterprise Linux 5.2, x86-32 architecture
	SunOS 5.10, SPARC32 architecture

# Appendix B: CLICK Trade Software

## New System Feature

- New Order Entry Function (with “T+1” Display for After-Hour Futures Trading to be launched after 2012).



The screenshot shows the 'Enter Order' window with the following fields and options:

- ID: [Text Field]
- Price: [Spin Box, value 0]
- Qty: [Spin Box, value 0]
- Customer: [Dropdown Menu]
- Info: [Dropdown Menu]
- Position: [Dropdown Menu, value OPEN]
- Give Up: [Dropdown Menu]
- Acc. Info: [Text Field]
- Validity: [Dropdown Menu, value Day]
- Until: [Text Field, value 23/ 8/2012]
- Buttons: Buy, Sell, Clear
- Options: ☐ Inactive, ☐ Auction, ☐ Give Up, ☒ T + 1

# Appendix B: CLICK Trade Software

## New System Feature

- Enhanced system functions (eg. Trade and Clearing statistics window with “T+1” Display for After-Hour Future Trading to be launched after 2012).



Filter Inspector [Trade Statistics [\*]]

Trader:

Customer:

Info:

Created from:

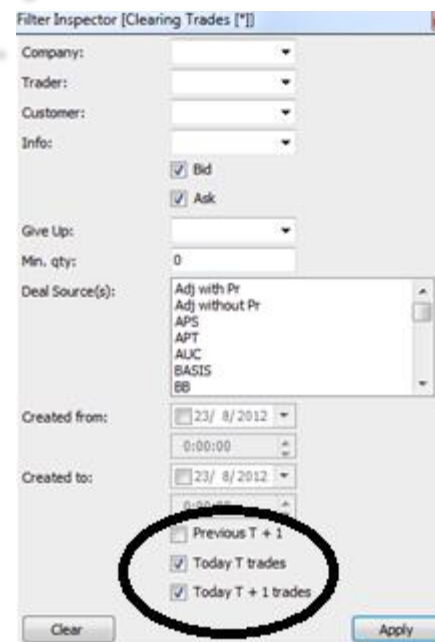
Created to:

☐ Previous T + 1

☒ Today T trades

☒ Today T + 1 trades

Clear Apply



Filter Inspector [Clearing Trades [\*]]

Company:

Trader:

Customer:

Info:

☒ Bid

☒ Ask

Give Up:

Min. qty:

Deal Source(s):  
Adj with Pr  
Adj without Pr  
APS  
APT  
AUC  
BASIS  
BB

Created from:

Created to:

☐ Previous T + 1

☒ Today T trades

☒ Today T + 1 trades

Clear Apply