Setup Korea FIX Community for Advancement of Korea Finance IT

Kyung Yoon, Head of Finance Division

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A Changing Finance Market Environment in Global and Korea
Global Capital Market Trend

• **Relaxation of Regulations**
  – Undermined Regular exchange’s monopoly position
  – Multiplication of c Trading Exchange
  – Alternative trading system to compete with floor-based exchanges
  – Competition among exchange at lower costs

• **Liquidity Competition**
  – Exchange merger, alliance and coalition between exchanges
  – Enhance the market dominating power in Global market

• **Innovation of Finance Information Technology**
  – Algorithmic Trading, HFT, DMA, SOR
  – Low latency competition, Fast exchange trading system
  – Advance the Electronic Trading Technologies
Low latency in Korea Market

An active discussion about low latency is in progress, developing the exchange and broker trading system for latency improvement

• **ELW latency Issue on the broker side**
  – Some brokers provides Leased line and special service to VIP ELW Scalper.

• **Need high performance (High volume, Low latency)**
  – KRX Market System: start “KRX Exture plus”
  – Broker Front Trading System (+ Algo, + High speed Market Data Managing): “Koscom K-Front”

• **Co-location service**
  – Broker’s Derivatives FEP moves into Busan
  – Increase Broker’s co-location and trading center into Busan

• **Electronic Trader have largely displaced traditional trader**
KRX and KOSCOM announced the “Exture+” development of plan

- **Exture+ purpose:** World-class premier exchange
  - Goal open date: 2013.09
  - Provide World-class Low latency: Low latency Trading System
  - Efficient IT service and Infrastructure for market participant
  - Regulation improvement

- **Exture+ Throughput and performance**

<table>
<thead>
<tr>
<th></th>
<th>Exture</th>
<th>Exture+</th>
<th>Comments</th>
</tr>
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<tbody>
<tr>
<td>Throughput</td>
<td>250 TPS</td>
<td>20,000 TPS</td>
<td>Improve 80 times</td>
</tr>
<tr>
<td>Latency Time</td>
<td>20,000 Microsecond</td>
<td>70 Microsecond</td>
<td>Improve 285 times</td>
</tr>
<tr>
<td>Total Volume</td>
<td>400,000,000</td>
<td>2,000,000,000</td>
<td>Improve 5 times</td>
</tr>
</tbody>
</table>

Source: Korea Capital Market Institute (2011)
KRX Exture+ (2/2)

Source: The briefing session to local brokers from KRX and KOSCOM (2011.07)

- Expected functions (need a more discussion with local brokers)

<table>
<thead>
<tr>
<th></th>
<th>Exture</th>
<th>Exture plus</th>
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<tbody>
<tr>
<td>FIX Protocol</td>
<td>Only legacy API between broker and KRX</td>
<td>Adopt FIX and FIX/FAST Protocol</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Trading/Market Data</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Equity, Derivatives, Fixed income</td>
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<tr>
<td>Asynchronous way</td>
<td>Synchronous way for accepting the order</td>
<td>Asynchronous way without order ack</td>
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<tr>
<td>DR(Disaster Recovery) center</td>
<td>Order Data Sync between Main and DR center</td>
<td>Changing Asynchronous way for order data</td>
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- IT System Competitiveness is Business competitiveness, create the IT innovation and powerful system
- Low latency competitiveness
• **Introduction of an Alternative trading system (ATS), the second half of 2012 or later**
  – Effect on Competition
    • Compete with the system run by KRX
    • Lower transaction costs
    • Provide better services at lower costs for market participant
    • Low latency trading environment to process more orders and execution
  – Local securities industry will adopt to FIX, Best Execution, SOR, Algo and etc for multi-exchange
  – Market surveillance
    • Keep an eye on unfair trade

• **Changing IT Infra and Technology**
  – FIX
  – Smart Order Routing (SOR)
  – Best Execution
  – Integration Market Data service
  – Integration Network
Buysides E-Trading (1/2)

- Buyside electronic trading levels and FIX adoption has steadily grown up from 2003
  - Firstly Samsung Asset Management adopted FIX OMS in 2003 with KOSCOM STPHUB and Samsung Securities
  - Now 70 buysides use FIX OMS or EMS for their order execution
  - Most of Korea Sellsides have FIX OMS function on their trading system

Evolving Buyside E-Trading Levels

<table>
<thead>
<tr>
<th>Region</th>
<th>2007</th>
<th>2009</th>
<th>2012</th>
</tr>
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<tbody>
<tr>
<td>Australia</td>
<td>26%</td>
<td>40%</td>
<td>40%</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>20%</td>
<td>35%</td>
<td>35%</td>
</tr>
<tr>
<td>Japan</td>
<td>30%</td>
<td>55%</td>
<td>45%</td>
</tr>
<tr>
<td>Singapore</td>
<td>22%</td>
<td>45%</td>
<td>40%</td>
</tr>
</tbody>
</table>

Source: Global Trends of Trading, Celent

Korea Buysides E-Trading Level & FIX Adoption

- Source: Koscom, 2011.11
**Buysides E-Trading (2/2)**

- **Domestic Buysides Order execution Flow**
  - Specialization and vendor list
    - Buyside OMS/EMS: AITAS, KSD, KEB Fund Service, HSBC Fund Service, SC Fund Service and In-house system
    - FIX Order Net: KOSOM STPHUB
    - Sellside OMS/Trading System: KOSCOM MTS & KOSMOS and In-house system

- **Buysides Algorithmic trading level: initial stage**
  - Most of order type: CD (95%), DMA(5%)
  - By and by Buy-Algo demand will be increased
Proposal: Setup Korea FIX Community
FIX status report in Korea

FIX had been introduced in the first 2000s and has steadily increased until now

- Introduction, Present and future

Source: Koscom, 2011
Necessity and Todo

• FIX protocol isn’t the option but mandatory in Korea

- Need the industry community as not a individual firm to reflect the domestic regulation and request to global FIX
- Need the private consultative group composed of industry participants to discuss the Korea Finance IT globalization
- KRX Exture+ System adopt FIX Protocol for order and market data, ATS’s basic providing interface is FIX
- Need the joint survey of Issue technology and training technical professionals
- Define the Korea industry standard FIX specification for reducing IT cost and supporting co-trading between exchanges
- Finance Market Globalization
- Reflect the local regulation to Global FIX
- Exture+, ATS
- Survey Finance IT & Training
Community Member and Benefit

- **Community member**
  - Buyside: Pension, Asset Management, Investment advisory, Bank, Hedge fund
  - Sellsie: All of Korea brokers
  - Exchange, ATS, Finance IT Vendor and company concerning FIX

- **Benefit**

  - **Buyside**
    - Drive down the IT Cost
    - High quality E-trading platform, training
  - **Sellsie**
    - Drive down the IT Cost
    - Keep the new issued key component and increase sales, training
  - **Exchange**
    - Exture + FIX adoption, ATS
    - Overseas sales
  - **Vendor**
    - Continue to innovate and keep products update
    - Chance to publicize their product

Proposal: Setup Korea FIX Community
Roadmap

Setup Korea FIX community make steady “Korea FIX community” & activity,
Continue as “Korea Working Group” in the Asia/Pacific Regional Committee’s subcommittee
Promise for Korea Finance IT advance

- **Continuous support Korea Finance IT through FIX**
  - **Korea One Gateway** - STPHUB: provide the safe infrastructure through continuous improvement
  - Support buysides/sellsides E-trading

- **New attempt to upgrade the Korea FIX industry**
  - KOREA FIX Community

- **Upgrade solutions**
  - **Low-latency Aspect..** : Low-latency Based Feed handler, FIX-OMS & FIX-DMA
  - **ATS ISSUE ..** : SOR & Algo.Trading for sellsides on Korea market
Thank you