Client Communication Session – 6 March 2013
Leanne Parsons & Sandra Borrageiro
Agenda

- Equity Market Business Model update
- JSE London PoP update
- JSE Co-Location update
- Derivatives Technology update
- 2013 Equity Product Upgrade Release update
1. Pro growth, cost efficient structure whilst striving to reduce cost of operating in the equity market
2. Settlement certainty through maintaining guaranteed settlement philosophy
3. Capital efficiency benefits (to both the JSE and members) as cost of capital is increasing
4. Retain settlement netting efficiencies where possible
5. Investor protection excellence standard to be retained
6. Strong regulatory standard maintained
7. Risk management framework aligned to internationally accepted principles
8. Where possible, leverage existing structures in other JSE markets, to achieve economies of scale
9. Enable integrated clearing vision
10. Where practical, JSE clients should have more flexibility in how they interface with the JSE
Workstreams

- Costs/Billing Models
- Clearing Model
- Regulatory Model
- Membership Model
- JSE Requirements and system functionality
- Overall implications of choices on JSE and market including costs and systems
- Stakeholder Engagement
Trading Cost Elements

Input

Equity Trading Gateways

Trading Gateway (Native)  Trading Gateway (FIX)  Drop Copy Gateway (FIX)

Execution/Matching

Trading System  Post Trade  Information System

Equity Trading System (Matching Engine)

Output

Post Trade

Post Trade Gateway (FIX)  Reference Data (FTP)

Market Data Gateways

MDG (LvL1 FIX)  MDG (ITCH)  News (FIX)  Indices (FIX)
Draft Proposals for Dealing with Trading Cost Elements

Input

• Interface User (Comp ID) charges recognising different order rates from members and set up (e.g. Multiple Trading and Drop Copy interfaces)

Execution/Matching

• Revised transaction billing model

Output

• Market Data Fees cover these costs
Four trading models identified by the working group and currently being modelled by market participants:

1. Value based, with cap and low monthly membership fee
   - Percentage charge: 0.0049%
   - Cap: R 500
   - Assume membership fee model remains as-is

2. Value based, with low charge per trade, with a vanilla “Maker/Taker”/“Aggressor Pays” concept
   - Maker/Passive: 0.0033%
   - Taker/Aggressor: 0.0038%
   - Floor: R1
3. Pure value based, with tiered discounts in the percentage charge
   » Percentage charge: 0.0044%
   » Value Threshold & Discount
     » R 10bn – 10%
     » R 15bn – 15%
     » R 20bn – 20%

4. Pure value based, no discounts
   » Percentage charge: 0.004%
 Trading Fee Models

- JSE built new internal trading fee modelling tool - currently testing modelling results:
  - Per client & overall market impact modelling planned for client 1-on-1 meetings
    » These meetings will only be with Billing Working Group members for the moment.
  - Meetings concluded by end Feb 2013
    » Appointments booked through relevant account manager

- Next steps regarding post trading fee discussion:
  - Kick off C&S fee discussion; and
  - Continue with BDA fee discussion
    » Only discussion that took place so far was around the regulation matrix
Cost impact of each identified methodology modelled against current cost on a per member basis

To date:

- 13 working group members consulted
- 1 confirmed consultation yet to take place

Variety of impacts noted, based on type of trading activity and level of activity
Members who are not part of the Billing Working Group are invited to request a one-on-one session through their account manager to discuss the impact analysis of the potential different model options

- All sessions need to be completed before 22 March 2013
Still waiting on international cost comparison information from working group participants

JSE appointed Market Structure Partners to perform international end-to-end trading cost comparison:

• The study will compare JSE Equity Market fees to corresponding fees levied by a predetermined list of 18 stock exchanges.

• The study will cover the following fees:
  » Trading fees for:
    » central order book trades;
    » reported trades; and
    » order charges or excessive order usage charges, if applicable;
  » Clearing and settlement fees;
  » Tax related fees, if applicable;
  » Membership related fees, if applicable.
» Regulatory fees which would include;

» Risk management fees;
» Margining fees;
» Capital adequacy monitoring fees;
» Surveillance fees;
» Back-office administrative/accounting fees, if applicable;

» The study will also indicate costs typically incurred by various brokerages of various sizes in order to reveal how smaller, medium and large brokers’ costs differ under each stock exchange’s billing methodology.

» The study will also indicate fees typically incurred by transactions of various sizes.
JSE acquired ITG’s TCA report (end to end cost based on end to end implementation shortfall calculation)

JSE will also acquire Elkins/McSherry TCA report 2012 (end to end cost only based on market impact cost calculation)

Note

Implementation Shortfall - the difference between the prevailing price or value when a buy or sell decision is made with regard to a security and the final execution price or value after taking into consideration all commissions, fees and taxes.

As such, implementation shortfall is the sum of execution costs and the opportunity cost incurred in case of adverse market movement between the time of the trading decision and order execution.
Equity Market Clearing Model Dimensions
## Benchmarking Dimensions

Analysis for the equity cash clearing and settlement is based on the following benchmarking dimensions:

<table>
<thead>
<tr>
<th>Area</th>
<th>Dimension</th>
<th>Description</th>
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</thead>
</table>
| Trading, clearing and settlement process | 1  Trading model & evolution | – SA specific practices  
 – Key features of trading and netting |
| | 2  Clearing and settlement model & evolution | – Clearing and Settlement Model (e.g. CCP, DVP)  
 – Emerging changes in clearing and settlement procedures |
| | 3  Settlement cycle duration and treatment of risk areas | – Cycle length  
 – Risk management approach through the cycle |
| Risk management | 4  Lines of defence | – Structure  
 – Relative quantification of each line of defense |
| | 5  Approach to margining | – Margining methodology  
 – Differentiation of risk by client type and product |
| | 6  Collateral management | – Eligible instruments and restrictions |
| | 7  Membership types & requirements | – Membership categories  
 – Requirements by member type (e.g. Capital adequacy) |
| Rules and regulations | 8  Data reporting/transparency | – Reporting requirements  
 – Initiatives for centralisation of data (e.g. BDA like system) |
| | 9  Default procedures | – Key procedures and triggers  
 – Testing methodology (e.g. Fire drills) |
<table>
<thead>
<tr>
<th>No.</th>
<th>Topic</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Trading model &amp; evolution</td>
<td>• Peers typically do not require brokers to be separate legal entities and the split between retail, institutional and prop trade values varies significantly across different exchanges</td>
</tr>
<tr>
<td>2</td>
<td>Clearing and settlement model &amp; evolution</td>
<td>• CCP structure is prevalent and adopted by most developed and emerging markets; although a handful of regional non-CCP clearing houses exist</td>
</tr>
<tr>
<td>3</td>
<td>Settlement cycle duration and treatment of risk areas</td>
<td>• The JSE has a much longer pre-margining phase than its peers, largely because of established market practices</td>
</tr>
<tr>
<td>4</td>
<td>Lines of defence</td>
<td>• Most peers have 5-6 lines of defence including a mutualised default fund and their proportion of margin over total Lines of Defence is typically higher</td>
</tr>
<tr>
<td>5</td>
<td>Approach to margining</td>
<td>• The findings suggest that the JSE is currently behind peers in the timing and frequency of margin calls, since it only collects margin on T+4 and does not make any (daily or intraday) variation margin calls</td>
</tr>
<tr>
<td>6</td>
<td>Collateral management</td>
<td>• JSE is also lagging other exchanges in the range of different types of collateral accepted</td>
</tr>
<tr>
<td>7</td>
<td>Clearing membership types &amp; requirements</td>
<td>• Most CCP clearing houses have a simple vertical silo structure for clearing members, with more stringent capital requirements on general clearing participants</td>
</tr>
<tr>
<td>8</td>
<td>Data reporting/transparency</td>
<td>• BDA has best-in-class data transparency; other peers are increasing transparency mostly as a result of regulation</td>
</tr>
<tr>
<td>9</td>
<td>Default procedures</td>
<td>• JSE has well defined high-level default procedures but lacks the necessary depth of documentation that leading peers prepare</td>
</tr>
</tbody>
</table>
### Summary Findings from peer alignment review

Findings suggest that the JSE is one of the few remaining exchanges with T+5 settlement and there are a couple of risk management gaps

<table>
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<tr>
<th>Area</th>
<th>Dimension</th>
<th>JSE positioning</th>
<th>Peers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trading, clearing and settlement process</td>
<td>1 Trading model &amp; evolution</td>
<td>The business practices have influenced the model.</td>
<td>In most examples, the split between retail, institutional and prop trade values varies significantly across different exchanges</td>
</tr>
<tr>
<td></td>
<td>2 Clearing and settlement model &amp; evolution</td>
<td>JSE does not novate trades but plays a similar role by guaranteeing settlement of COB trades</td>
<td>The global trend for exchanges is to move to a full CCP (especially under Basel III) as many of the members are banks</td>
</tr>
<tr>
<td></td>
<td>3 Settlement cycle duration and treatment of risk areas</td>
<td>JSE operates a T+5 cycle with two distinct settlement risk management phases (CapAd and margining) and currently only settles in Rand (exchange controls also act as a barrier to non-Rand settlement)</td>
<td>Nearly all global exchanges operate on T+2/3 underpinned by a more efficient and robust risk management approach</td>
</tr>
<tr>
<td>Risk management</td>
<td>4 Lines of defence</td>
<td>JSE only has 3 post-default lines of defence and lacks a mutualised default fund</td>
<td>Most CCP peers have 5-6 lines of defence including a default fund with member contributions, providing a more transparent and systemically robust system</td>
</tr>
<tr>
<td></td>
<td>5 Approach to margining</td>
<td>JSE margins on T+3 and applies a very conservative coverage ratio</td>
<td>Other exchanges margin on T or T+1 and release liquidity by having lower coverage ratios and margining daily or intra-day</td>
</tr>
<tr>
<td></td>
<td>6 Collateral management</td>
<td>JSE only accepts cash and bank guarantees as collateral</td>
<td>Most exchanges accept near-cash (e.g. govvies) or hair-cutted securities, releasing liquidity but potentially increasing risk</td>
</tr>
<tr>
<td></td>
<td>7 Membership types &amp; requirements</td>
<td>JSE has a two-dimensional membership structure with different requirements according to type of services provided and client type serviced. It does not have clearing members and brokers are required to be separately capitalised legal entities</td>
<td>In most examples, brokers are not separate legal entities. Leading peers typically have 2-4 clearing membership types; generally distinguish between general and direct clearing members</td>
</tr>
<tr>
<td>Rules and regulations</td>
<td>8 Data reporting/transparency</td>
<td>JSE has stringent requirements on centralised data consolidation on members’ and clients’ positions daily</td>
<td>Most exchanges capture less data; but regulation is driving a shift towards more transparent and centralised systems</td>
</tr>
<tr>
<td></td>
<td>9 Default procedures</td>
<td>JSE has default procedures broadly consistent with peers but lacks detailed documentation</td>
<td>Peers typically have similar default procedures but backed up with clear procedures for handling internally and externally</td>
</tr>
</tbody>
</table>
Legal Structure

Capital Adequacy

Member business activity
  • Controlled Clients
  • Non-controlled Clients
  • Prop trading

Key Regulatory Functions
  • Market abuse, compliance with trading rules, general admission requirements (fit and proper, management and control); settlement obligations, client protection, Investment Services, Custody Services, capital adequacy (settlement assurance and solvency), Anti Money Laundering
JSE London Point of Presence (PoP)
Update on Service Issues experienced on the JSE London PoP

With reference to the Service Hotline disseminated on 9 October 2013, the JSE has together with its Service Provider completed the investigation into the cause of the connectivity issues experienced by the JSE’s London Point of Presence, (PoP) customers.

The JSE can confirm that our international connectivity Service Provider has confirmed that the cause of this issue was as a result of an “Administrative issue”, between themselves and their European upstream connectivity provider.

The JSE has been assured by our Service Provider that the necessary preventative measures have been implemented to ensure that this issue does not reoccur. The JSE has also requested the Service Provider to explore additional upstream providers in addition to their current solution.
Update on Service Issues experienced on the JSE London PoP

Given the outage experienced in October 2012 and the more recent issue on 2013, the JSE is in the process of:

• Reviewing the services provided by its existing Service Providers
• Expanding our monitoring capabilities within the JSE London PoP to facilitate faster identification and resolution of any problems that may occur
• Reviewing the options regarding international connectivity for the JSE London PoP and should conclude on a way forward during March 2013
• Installing a probe at the JSE London PoP
JSE aims to implement a co-location facility in the JSE’s existing Primary Data Centre in the first quarter of 2014, subject to sufficient contracted demand from clients, conclusion of a detailed design that confirms estimated costs and final go/no decision from the JSE Board.

This will provide clients with the opportunity to connect to the JSE at an unprecedented speed.

Benefits include:

- Latency advantage
- New trading strategies enablement
- Cost Savings on bandwidth
- Risk Mitigation (in JSE’s data centre)

Only 140 racks available, Phase I is for 70 racks and will only be commissioned if contracted commitment for the 70 racks is received.
**Markets** – JSE Co-Location will provide clients access to all JSE markets, although the implementations will be phased

**Transparency** - JSE will measure, monitor and publish JSE Co-Location service quality parameters on a central portal

**Service equality** - JSE Co-Location environment will be designed to provide equal performance to all racks regardless of their location in the facility

**Clients** - All JSE client types will be permitted to co-locate: JSE members and their clients, JSE information subscribers and their clients, JSE Shared Infrastructure Providers (SIPs) and their Clients, Managed Service Providers (MSPs) and Network Service Providers (NSPs)

**Pricing** - pricing of all Co-Location offerings will be the same for all client types

**Bulk take-up** - Bulk take-up of space within the JSE Co-Location environment will be permitted, although subject to terms and conditions. Our focus will be on best utilization and fair opportunity for all
Primary product: full rack

Trading engine connectivity: 10 Gbps fiber x 4
- 4 x fibre links to JSE infrastructure:
  » 2 x trading connections to one market (Primary and backup)
  » 2x market data connections to one market (Primary and backup)

Client connectivity: 1 Gbps fiber x 2
- 2 x fibre links to JSE devices in access network:
  » 2 x client connectivity to their infrastructure (Primary and backup)
  » Additional ports can be rented

Power per rack: 3.3 kVA
- Power allocation:
  » Standard maximum 3.3 kVA per rack
  » No additional charge till 1344 kWh, charged thereafter
  » Electricity price hikes pass through to clients

Access: JSE market(s)
- Standard access – 4ports:
  » 2 x trading ports per market
  » 2 x market data ports per market
  » Access to additional markets or all markets can be achieved at a fee
  » Choice: Equity, Equity Derivatives, Currency, Commodity or Interest Rate

Pricing of primary product
- Full rack is R51 000 per month (ex VAT)
Secondary product:

- **Cross connect: JSE enabled**
  The following types will be allowed:
  - Member rack / client rack
  - Member rack / SIP rack
  - Client rack / MSP rack
  - Information Provider / client (member / SIP / MSP / Client)
  - Once-off installation fee will be charged
  - Monthly maintenance fee will be charged

- **Sub-letting: JSE enabled**
  Subletting of some form will be permitted:
  - Client subletting from member or MSP
  - Member subletting from SIP
  - Each has to be registered with the JSE
  - No additional charges other than cross-connect fee

- **Time sync service: Subscription based**
  Available for a monthly subscription fee
Monitoring: Latency - Latency monitoring will be performed:

- During trading hours
- Published on a central portal
- No additional fee
- 24/7 environment monitoring will also be performed

Support: Smart hands - Smart hands support will be:

- Available to all participants 24/7
- No additional fee up to a specified limit
- Further support through MSPs/NSPs
Once-off: On-boarding - On-boarding will comprise of:

• Requirement gathering and design
• Testing
• Rack and Stack
• Once-off fixed fee will be charged
• Future change will follow a change request process and charged on a time & material basis

Pricing of secondary products and associated services - will be confirmed after completion of detailed design

Contact Details

• Equity Market Development – EMBD@jse.co.za or +27 11 520 7228 / 7934
Background

- Latency issues within the Equity Derivative Market (EDM)
- Speed differences between Equity Cash and EDM

- At a high-level, EDM consist of 3 components
  - Trading
  - Post Trading Activity
  - Clearing and Settlement

- Only the Trading component to be replaced by this project
Background

- 2 week workshop held with MillenniumiT during February 2013
- Gap Analysis currently underway
- Market consultation sessions will be held
- First Market consultation session being held in Johannesburg on 8 March 2013
Derivatives Replacement Project – Market Impact

Front End

- **Current**: JSE supplies vanilla Front End for both Trading and Post Trade
- **Proposed**: No more vanilla Trading Front End supplied by exchange
- Front end for Post Trading Activity

Bandwidth

- **Current**: 0.256 Mbps per user connection
- **Proposed**: Two multicast public market data feeds (A and B Feed) at 0.45 Mbps each. One TCP/IP private feed at 0.04 Mbps. In total the new requirement for would be: (2 X 0.45) + 0.04 = 0.94 Mbps (Only impacts users with 3 or less front end connections)
- JSE London POP will facilitate trading access and market data distribution for derivatives
Position Management

• **Current**: Nutron trading engine calculates member’s positions by combining transactions from both trading and post trading activities

• **Proposed**: Position Management would be managed on the Post Trade and Clearing components which will be fed from both trading and post trading activities
**Date and Time**

- Date: Friday 8 March 2013
- SA Time: 11:30 – 13:00 (GMT Time: 9:30 – 11:00)
- Venue: JSE Atrium
- RSVP: DerivativesTrading@jse.co.za

**Dial-in Details**

- Phone Number: +27 87 350 0288
- Conference ID: 677002
Currently the project is still in the Business Case Phase

Anticipated implementation Timeline: Second half 2014
Technical contact:

- Matthias Kempgen
- matthiask@jse.co.za
- +27 11 520 7069

Business contact:

- Magnus de Wet
- magnusd@jse.co.za
- +27 11 520 7320

General

- Derivativestrading@jse.co.za
- +27 11 520 7000
### 2013 Product Upgrade – Release Scope

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<tr>
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<th>Description of Change</th>
<th>Impact to Clients</th>
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<tbody>
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<td>1.</td>
<td>Two new sessions are being introduced:</td>
<td>The JSE will not use this functionality immediately but will switch it on later.</td>
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<tr>
<td></td>
<td>- Closing Price Publication (CPP)</td>
<td>The CPX session is introduced to allow trading only at the Closing Price</td>
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<tr>
<td></td>
<td>- Closing Price Cross (CPX)</td>
<td>The CPP session is introduced to publish Closing Prices to the market as per the closing price conventions. <strong>NO</strong> trading takes place for an instrument while it is in the CPP session. If the session after the CPP session is the CPX session, orders parked during the CPP session will be injected at the start of the CPX session. All orders participating in the CPX session are processed one by one in time priority. They are executed ONLY at the published closing price with CPX eligible contra orders. All CPX orders, including the CPX market orders, get lower priority than the existing orders sitting in the main container that are eligible to take part in the Closing Price Cross session.</td>
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<td>2.</td>
<td>Market Making and Quotes</td>
<td></td>
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<tr>
<td></td>
<td>- Designated Market Makers who can Quote: i.e. Submit one message for a buy and sell</td>
<td>The JSE will not use this functionality immediately but may switch it on later. Quotes allow market makers to use a single message to submit and manage interest for both sides of the order book.</td>
</tr>
<tr>
<td></td>
<td>order</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Increase Maximum Value for Off Book Max Quantity</td>
<td>This is a Mandatory change. Currently, the maximum value supported for the Post Trade Parameter Off-Book Max Quantity is 10 digits. This change allows for the support of a maximum value of 999,999,999,999. The Gateways are NOT impacted as the current data types and lengths support the increased system value.</td>
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<td>4.</td>
<td>Change Reject Reason if an Off-Book trade is submitted when No Trade Reporting Session is Active for the instrument</td>
<td>This is a Mandatory change. Currently, if an Off-Book trade is submitted when the instrument is not in any trade reporting session, the Off-book trade is rejected with the reason “Instrument halted (session not started)”. The reject reason stating ‘Off-book trade reporting prohibited (not in session)” will be introduced for this error. Clients will receive a <strong>different reject reason</strong> on the (58) Text field.</td>
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| 5. | Maximum of 999,999,999,999 for input fields and 9,000,000,000,000 for output fields on Orders | This is a Mandatory change.  
Internal system support for values of up to Nine Trillion for internal fields e.g. turnover, volume.  
Currently, the maximum value supported for On Book orders is 10 digits. This change allows for the support of a maximum value of 999,999,999,999.  
The Gateways are **NOT** impacted as the current data types and lengths support the increased system value. |
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<td>6.</td>
<td>Two new Post Trade Parameters:</td>
<td>This is a Mandatory change, if configured.</td>
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<tr>
<td></td>
<td>- Minimum off-book trade size and</td>
<td>The System will allow Market Operations to configure the minimum Off Book trade size and minimum Off Book trade value that can be reported for the given instruments. OFF BOOK MIN QTY and OFF BOOK MIN VALUE parameters are independent of each other. The System will reject an Off Book trade if it violates at least one of the above validations. (I.e. a trade will be rejected if it violates the minimum value validation even if it does not violate the minimum size validation).</td>
</tr>
<tr>
<td></td>
<td>- Minimum off-book trade value</td>
<td>The Gateways are <strong>NOT</strong> impacted as there is no change to current message layouts, however clients will have to submit Off Book trades to relate to the new parameters (if populated by the JSE). The new parameters will be included in the Client CSV files.</td>
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<td>7.</td>
<td>Adding Trading ‘Currency’ field on the Trade Capture Reports to clients</td>
<td>This is a Mandatory change.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A new field (15) Currency which will be populated with the trading currency attached to the instrument on TCR message to clients.</td>
</tr>
<tr>
<td>8.</td>
<td>Transact Time no longer required on a Trade Cancellation</td>
<td>This is a Mandatory change.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Currently, for On Book Cancellations via the Post Trade Gateway, the TransactTime is a mandatory field. With this change, the TransactTime field on the submitted TCR <strong>will not</strong> be mandatory for On Book Trade Cancellations as the field is not required by the System for processing.</td>
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<td>9.</td>
<td>Logic for TransactTime on TCRs on the Post Trade GW changing</td>
<td>This is a Mandatory change. Currently for Same Day Off Book Trade Cancellations on the Post Trade Gateway, TransactTime (60) field of the Confirmed Cancellation TCRs is set to the time the TCR was generated by the System, whereas the time sent on the Trade Confirmation TCR is the time sent by the client on the Trade Report Submission Request. This change is to maintain consistency across the system, clients will receive the time sent by the client on the Trade Report Submission Request and not the time the TCR was generated for the cancellation. As a result, the TransactTime sent to the client on both the confirmed Trade TCR and confirmed Trade Cancellation TCR will be the same. <strong>No</strong> message structure change, rather a processing change for clients.</td>
</tr>
</tbody>
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| 10.| Reject Trade Capture Report Requests with Invalid TradeRequestType | This is a Mandatory change. Improved handling of invalid message requests for Own Trade Book Download.  
- If a user submits a TradeRequestType (569) outside the JSE supported range (i.e. values 0 and 1) but which is a valid FIX supported value, the system will reject the request with a TradeReportRequestAck with TradeRequestResult (749) set to 8 (TradeRequestType not supported).  
- If a user submits a TradeRequestType (569) outside the FIX supported range (i.e. outside 0,1,2,3,4), the system will send a Reject (session-level) with a SessionRejectReason (373) of 5 (Value out of range for this tag). |
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<td>11.</td>
<td>Ability to Perform Mass Order Status Request By Instrument and/or Segment</td>
<td>This is an Optional change. Currently OOBD Mass Order Status Request can be requested by Firm or TraderGroup_Trader combination. Two <strong>new values</strong> will be added to the MassStatusRequestType (585) of the Mass Order Status Request message to allow for the request of all open orders for a Firm or TraderGroup_Trader in a specific Instrument and/or Segment.</td>
</tr>
<tr>
<td>12.</td>
<td>Allow Mass Order Status Limit to be set at an Interface User ID (CompID)</td>
<td>This is an Optional change. Currently the number of OOBD Mass Order Status Request is controlled at the Gateway level MAX_OOBD_REQUEST_PER_USER which applies to all COMP-IDs. A <strong>new parameter</strong> will be added to allow the JSE to specify different values for the maximum number of OOBD requests for certain Interface User ID’s (CompIDs).</td>
</tr>
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<tr>
<td>13.</td>
<td>Change Reject Reason for Duplicate Client Order ID</td>
<td>This is a Mandatory change. Improve error handling if a duplicate Client Order ID is submitted by the Interface User. Currently order is rejected with the Reject Code ‘8001’ with the reason as ‘Invalid Client Order ID’. The <strong>new reason</strong> code will be changed to state ‘Duplicate Client Order ID’</td>
</tr>
<tr>
<td>14.</td>
<td>Transact Time no longer populated on OER when duplicate Client Order ID submitted</td>
<td>This is a Mandatory change. Currently, on the FIX Trading GW if an Execution Report is generated by the System due to a duplicate Client Order ID, all fields are not populated on the Execution Report, however the Transact Time field is populated with the time of the submitted New Order - Single Message which contained the duplicate Client Order ID. This is incorrect, as the TransactTime defines the time at which the Matching Engine generated the message. The Execution Report is generated due to the duplication Client Order ID validation performed at the Gateway level and hence the field 'Transact Time' will not be populated.</td>
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<td>15</td>
<td>Orders received by the FIX GW with both the ExpiryTime and ExpiryDate populated will now be rejected</td>
<td>This is a Mandatory change. If an order submitted to the FIX GW contains both an ExpiryTime and an ExpiryDate, the Gateway ignores the ExpiryDate and treats it as a GTT order even though the client will not send both these fields. With the implementation of this change, orders received by the Fix GW with both the ExpiryTime and ExpiryDate will be rejected via a Business Message Reject.</td>
</tr>
<tr>
<td>16</td>
<td>Sequence number added to the heartbeat messages on FAST Market Data Gateways</td>
<td>This is a Mandatory change. This change introduces a new field ‘ApplNewSeqNum (1399)’ on the FAST Market Data Gateways Heartbeat message that will contain the next application sequence number (i.e. ApplSeqNum (1181) of the next application message), to enable clients to identify whether they have missed Market Data messages.</td>
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<td>17.</td>
<td>Include Halt Reason when Halting an Instrument</td>
<td>This is a Mandatory change. When an Instrument is Halted, clients are notified that the associated Order Book has been removed with no reason code populated. This change enforces that a Halt Reason is populated with the value “102” in such scenarios on the message to the ITCH and FAST Gateways.</td>
</tr>
<tr>
<td>18.</td>
<td>Publication of Market Operations Announcements on ITCH MDG</td>
<td>This is a Mandatory change. Market Operations Announcements will be published via the ITCH Market Data Gateway via a new message.</td>
</tr>
<tr>
<td>19.</td>
<td>Recover Market Operations Announcements on ITCH MDG</td>
<td>This is a Mandatory change. Market Operations Announcements will now be recoverable via the Recovery Channel on the ITCH Market Data Gateway.</td>
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<td>20</td>
<td>Inclusion of statistics on ITCH MDGs</td>
<td>This is an Optional Change which the JSE is considering whether to configure or not. The following new statistics messages will be published via the ITCH Market Data Gateway with the exception of the Bid and Offer stats which will not be available. Stats details will be in specs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• High/Low Price</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• VWAP, Volume</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Number of Trades</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Turnover</td>
</tr>
<tr>
<td>21</td>
<td>Update all statistics when Trade Cancellations/Corrections are done</td>
<td>This is a Mandatory Change. Currently, Statistic updates related to Same Day trade cancellations and corrections (both On Book and Off Book) are limited to Volume, Number of Trades, Turnover and VWAP. This change will enable the update of other existing stats for Trade Cancellations and Corrections (both On Book and Off Book), such as High/Low Price, Last Traded Price, Opening Price, Closing Price, Last Trade Type, etc.</td>
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<td></td>
<td></td>
<td>This feature will be enabled for the JSE.</td>
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<td>22.</td>
<td>Configurable statistics parameters on FIX and ITCH MDGs</td>
<td>This is an Optional Change. JSE will not configure this. Currently, all order books of the instruments assigned to a Gateway will be published based on the configuration of the Gateway. This change enhances the functionality of ITCH and FAST Market Data Gateways so that a given Gateway can be assigned with a set of order books which will be published as MBO and MBP.</td>
</tr>
<tr>
<td>23.</td>
<td>Additional Market Data Gateways with no bandwidth limitation</td>
<td>This is an Optional Change. The JSE will be introducing an a full-depth market data gateway to publish market data without any throttling. This will be a choice for clients.</td>
</tr>
<tr>
<td>24.</td>
<td>New order type that does not interact with hidden orders</td>
<td>This is an Optional Change. The JSE is discussion with MillenniumIT, for the introduction of a new flag on a new order that ensures the order does not interact with hidden orders to only facilitate a book over as requested by clients. Further details will be published as and when available.</td>
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<td>25.</td>
<td>Length of all ITCH messages</td>
<td>This is a Mandatory Change. As a result of the introduction of market operation announcement messages to the ITCH feed, the field length of the ITCH messages needs to increase. Therefore “LENGTH” changes from a length of 1 to 2 in all ITCH messages</td>
</tr>
<tr>
<td>26.</td>
<td>Auction Trade messages being disseminated via ITCH</td>
<td>This is a Mandatory Change. Currently its possible for the Auction info message to be sent before the auction trade. This current behaviour is being corrected to ensure that the Auction info message will always be sent before an auction Trade</td>
</tr>
<tr>
<td>27.</td>
<td>Index Gateway NetChgPrevDay</td>
<td>This is a Mandatory Change. The field NetChgPrevDay is published to the market as “Null” when the value is “0” – this is being corrected</td>
</tr>
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<td>28.</td>
<td>Change to the FAST encoding message</td>
<td>This is an Mandatory Change. Current FAST encoding and decoding expects to have a PMAP in all sub-messages even if all field operators are NONE for those sub-messages. This is made optional with this change and is configurable. If configured, the incoming and outgoing FAST sub-messages will not carry the PMAP or will be mandatory.</td>
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<td>29.</td>
<td>Change to message throttling</td>
<td>Introducing intelligent message throttling during peak message periods. The JSE would like to consider this and would like client feedback on this.</td>
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<td></td>
<td></td>
<td><strong>Intelligent handling of known message peaks (configurable)</strong> System mechanism to identify events where a bulk publication of market data occurs (e.g. Market Manager events). During such events, the gateways will switch to the Bandwidth Optimization mode. Gateway will switch back to normal mode after the event.</td>
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<td><strong>Bandwidth aware throttling (not configurable)</strong> Market Data Gateway’s configured with a throttle limit that is configurable number of bytes transmitted within a configurable period, as opposed to the number of messages per second which is the current implementation. If total bytes received during any period exceeds the limit, the gateways will buffer the messages and publish them in subsequent time intervals, subject to the set limit.</td>
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2013 Product Upgrade

- JSE busy finalising functionality and specifications for issue to clients
- User Specifications aimed for publication during March 2013
- Key dates and project timeline to be finalised and published to clients in due course
  Impact to conformance testing etc also being finalised
Questions?

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