Operating environment

GLOBAL

- Ongoing geopolitical tension and rising oil prices weigh on growth outlook
- Disappointing economic data lowers expectations for emerging market growth
- Weak investor appetite
- Growth halted by increased uncertainty caused by Brexit delays

IN SA

- Contraction in GDP, impacted by load shedding
- JSE’s benchmark indices report gains despite the worst economic contraction in a decade
- Low business confidence
- Uncertainty on government reform implementation and policy
H1 2019 highlights

- Integrated trading and clearing (ITaC) went live in April
- Launched monthly expiries in June
- Implemented tick data in the cloud
- Achieved the R170 million in cost savings (2016 base year)
H1 market activity drivers

- **2 Number of IPOs** (2018: 10)
- **11% Billable equity value traded** (2018: 11%)
- **5% Equity transactions** (2018: -5%)
- **5% Equity derivatives value traded** (2018: 4%)
- **21% Bond nominal value** (2018: 13%)
- **19% Interest rate derivatives contracts** (2018: 26%)
- **18% Currency derivatives contracts** (2018: 7%)
- **7% Commodity derivatives contracts** (2018: 11%)

*Central order book: published statistics ↓ 15%, ADV ↓ 13% to R19bn per day (2018: R22bn per day)*
How this translated in our business

- **7%**
  - R1.07bn Operating revenue
  - (2018: R1.14bn)

- **11%**
  - R670m Operating expenses
  - (2018: R601m)

- **28%**
  - R414m EBIT
  - (2018: R582m)

- **29%**
  - R398m NPAT
  - (2018: R561m)

- **15%**
  - R444m Net cash flow from operations
  - (2018: R522m)

- **29%**
  - 467.0c EPS
  - (2018: 654.5c)

- **29%**
  - 466.1c HEPS
  - (2018: 654.6c)

- **R33m**
  - Total capital investment
  - (H1 2018: R42m)

Comparative figures have been restated owing to the discontinued operations
## Financial Performance

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2018*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>1 065</td>
<td>1 141</td>
</tr>
<tr>
<td>Other income</td>
<td>19</td>
<td>42</td>
</tr>
<tr>
<td>Total revenue</td>
<td>1 084</td>
<td>1 183</td>
</tr>
<tr>
<td>Personnel expenses</td>
<td>(238)</td>
<td>(200)</td>
</tr>
<tr>
<td>Other expenses</td>
<td>(432)</td>
<td>(401)</td>
</tr>
<tr>
<td>Total expenses</td>
<td>(670)</td>
<td>(601)</td>
</tr>
<tr>
<td>EBIT</td>
<td>414</td>
<td>582</td>
</tr>
<tr>
<td>EBIT %</td>
<td>38%</td>
<td>49%</td>
</tr>
<tr>
<td>Net finance income</td>
<td>108</td>
<td>122</td>
</tr>
<tr>
<td>Share of profit from associate</td>
<td>28</td>
<td>29</td>
</tr>
<tr>
<td>Profit before income tax</td>
<td>550</td>
<td>732</td>
</tr>
<tr>
<td>Income tax expense</td>
<td>(152)</td>
<td>(171)</td>
</tr>
<tr>
<td>Profit from continuing operations</td>
<td>398</td>
<td>561</td>
</tr>
<tr>
<td>Discontinued operations</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>NPAT</strong></td>
<td><strong>398</strong></td>
<td><strong>561</strong></td>
</tr>
<tr>
<td>NPAT %</td>
<td>37%</td>
<td>47%</td>
</tr>
<tr>
<td>EPS (cents)</td>
<td>467.0</td>
<td>654.5</td>
</tr>
<tr>
<td>HEPS (cents)</td>
<td>466.1</td>
<td>654.6</td>
</tr>
</tbody>
</table>

*Comparative figures have been restated owing to the discontinued operations*

Contains rounding differences
Trends

H1 total revenue

-8%

2015  2016  2017  2018  2019

Total revenue  EPS  HEPS

H1 expenses

11%

2015  2016  2017  2018  2019

Personnel expenses  Other expenses

Revenue composition*

- Primary Markets: 7% (2018: 8%)
- Equity Market: 21% (2018: 26%)
- Back-Office Services (BDA): 15% (2018: 14%)
- Equity Clearing and Settlement: 18% (2018: 19%)
- Bond and Financial Derivatives: 13% (2018: 12%)
- Commodity Derivatives: 4% (2018: 3%)
- Information Services: 16% (2018: 13%)
- Colocation Services: 1% (2018: 1%)
- Company Services: 1% (2018: 0%)
- Funds Under Management: 4% (2018: 4%)

*Excluding Strate

June exit headcount

2015  2016  2017  2018  2019

Exit headcount  18 contractors converted
481  482  454  362  401
External and internal capital expenditure

- **Grow the business**
  - Integrated Trading and Clearing - 2017, 2018, 2019
  - ETP for government bonds - 2017, 2018
  - Colocation - 2018
  - Tick data in the cloud - 2019

- **Maintain and transform the business**
  - Business as usual (BAU) largely infrastructure (including revenue generating kit) – 2017, 2018, 2019
  - New master reference data system - 2019
  - Clearing system enhancements - 2019
  - Nimble client-led transformation - 2019
Total operating expenses up 11% to R670m (2018: R601m)

Personnel costs ↑ 19% or R38m (2018: ↓ R43m or 17%) to R238m (2018: R200m)
- Gross remuneration ↑ 15% or R29m as a result of management actions to fill vacancies. Average headcount* ↑ 11% to 397 (2018: 358). Exit headcount: 401 (2018: 362). This contributes 14 percentage points
- The long-term incentive schemes ↑ R8m to R18m (2018: R10m) owing to timing differences in vesting (incurred in Q4 in the prior year). This contributes 4 percentage points

Technology costs ↑ 19% or R22m (2018: ↓ R13m or 10%) to R138m (2018: R116m)
This was primarily owing to ITaC implementation, accelerated BAU capex and the evolving cybersecurity framework:
- Post ITaC go-live costs of R14m include resources expensed and software maintenance and support. This contributes 12 percentage points
- R5m in licenses and support for the new master reference data system. This contributes 4 percentage points
- R4m related to incremental hardware infrastructure support and cybersecurity spend. This contributes 4 percentage points

*Excludes learners

Contains rounding differences
## Operating expenditure (continued)

<table>
<thead>
<tr>
<th></th>
<th>H1 2018</th>
<th>H1 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>General expenses</td>
<td>200</td>
<td>204</td>
</tr>
<tr>
<td>Technology costs</td>
<td>116</td>
<td>138</td>
</tr>
<tr>
<td>Depreciation</td>
<td>53</td>
<td>90</td>
</tr>
<tr>
<td>Personnel costs</td>
<td>232</td>
<td>238</td>
</tr>
<tr>
<td>Total operating expenses</td>
<td>601</td>
<td>670</td>
</tr>
</tbody>
</table>

### Total operating expenses up 11% to R670m (2018: R601m)

- **Depreciation ↑ 69% or R37m to R90m (2018: R53m)** largely owing to:
  - The application of IFRS 16 on leases. This contributes 33 percentage points or R18m. In prior years, the operating lease was accounted for in general expenses.
  - The implementation of ITaC, along with infrastructure and cybersecurity investments. These contribute 40 percentage points or R22m. This is offset by fully depreciated assets of R5m.

- **General expenses ↓ 12% or R28m to R204m (2018: R232m)**
  - Lower operating lease charges as a result of the application of IFRS 16 (R23m) is partially offset by compliance and non-discretionary spend of R7m. A further 9m is related to growth initiatives, people-related costs and timing differences.
Technology cost composition

Technology costs ↑ 19% or R22m to R138m (2018: ↓ 10% or R13m)

2018

- Software maintenance and licences: 53%
- External services: 15%
- Contractors: 35%
- Hardware maintenance and support: 7%
- Connectivity and other: 6%

R116m

2019

- Software maintenance and licences: 62%
- External services: 26%
- Contractors: 36%
- Hardware maintenance and support: 10%
- Connectivity and other: 5%

R138m*

*Numbers contain rounding differences
Cashflow view

Strong cashflow and no debt

<table>
<thead>
<tr>
<th>Cash (Rm)</th>
<th>Cash December 2018</th>
<th>Cash generated from operations</th>
<th>Investing activities</th>
<th>Financing activities</th>
<th>Dividends paid</th>
<th>Cash June 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash December 2018</td>
<td>2 574</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash generated from operations</td>
<td>444</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investing activities</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financing activities</td>
<td>73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dividends paid</td>
<td>728</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash June 2019</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 199</td>
<td></td>
</tr>
</tbody>
</table>

Contains rounding differences
Quality of earnings for H1

Business remains highly cash generative

- Earnings have been adjusted for non cash items (depreciation*, amortisation, forex profit/loss, goodwill write-down)

<table>
<thead>
<tr>
<th>Year</th>
<th>Adjusted Earnings</th>
<th>Cash Generated from Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>547 Rm</td>
<td>397 Rm</td>
</tr>
<tr>
<td>2016</td>
<td>620 Rm</td>
<td>522 Rm</td>
</tr>
<tr>
<td>2017</td>
<td>518 Rm</td>
<td>488 Rm</td>
</tr>
<tr>
<td>2018</td>
<td>620 Rm</td>
<td>522 Rm</td>
</tr>
<tr>
<td>2019</td>
<td>507 Rm</td>
<td>444 Rm</td>
</tr>
</tbody>
</table>

*Including IFRS 16 impact
## Capex external spend

<table>
<thead>
<tr>
<th>INITIATIVE</th>
<th>H1 2019</th>
<th>H2 2019</th>
<th>FY 2019</th>
<th>FY 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated Trading and Clearing (ITaC)</td>
<td>17</td>
<td>-</td>
<td>17</td>
<td>61</td>
</tr>
<tr>
<td>Transfomation of ways of work</td>
<td>1</td>
<td>18</td>
<td>19</td>
<td>-</td>
</tr>
<tr>
<td>Other initiatives*</td>
<td>5</td>
<td>7</td>
<td>30</td>
<td>5</td>
</tr>
<tr>
<td><strong>Capex</strong></td>
<td>23</td>
<td>25</td>
<td>47</td>
<td>67</td>
</tr>
<tr>
<td>Business as usual</td>
<td>5</td>
<td>16</td>
<td>21</td>
<td>89</td>
</tr>
<tr>
<td>New initiatives</td>
<td>-</td>
<td>54</td>
<td>54</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total external capex spend</strong></td>
<td>28</td>
<td>94</td>
<td>123</td>
<td>163</td>
</tr>
</tbody>
</table>

**New initiatives:**
- Cash equities trading system: new functionality and product upgrade
- New electronic platform for Bond repos
- New master reference data system
- Non-cash collateral
- Valuations as a service
- Equity central counterparty
- Smart Regulation

*Initiatives under R3m

Contains rounding differences
Multi-year depreciation profile of known capex

- **2018**:
  - Existing assets: 84
  - ITaC: 25
  - Application of IFRS 16 on lease: 7
  - 2019 capex spend: 2

- **2019**:
  - Existing assets: 90
  - ITaC: 71
  - Application of IFRS 16 on lease: 7
  - 2019 capex spend: 3

- **2020**:
  - Existing assets: 74
  - ITaC: 90
  - Application of IFRS 16 on lease: 7
  - 2019 capex spend: 3

- **2021**:
  - Existing assets: 56
  - ITaC: 83
  - Application of IFRS 16 on lease: 7
  - 2019 capex spend: 3

- **2022**:
  - Existing assets: 29
  - ITaC: 74
  - Application of IFRS 16 on lease: 7
  - 2019 capex spend: 3
Technology costs: 4 year growth trend

As previously guided:
- Base 2016: R283m
- 3 years of inflation: R46m
- Post-ITaC maintenance and support: R14m
- Cost reduction commitment: R70m
- Total planned exit 2019: R273m

2019 forecast:
- R280m
- Forecast variance to commitment: R7m

New spend:
- New master reference data system
- Infrastructure support
- Cybersecurity
- Equity clearing system maintenance
- Contractor conversion (previously guided)

Guidance post 2019:
- ITaC - maintenance and support reflects 8 months in 2019. The annualised impact is ~ R22m and is recurring
- Inflationary increases on rest of base
- Increased spend on cybersecurity

*Contains rounding differences
2016 2017 2018 2019
Revenue

2016 2017 2018 2019
Bonds additional capital raised Equity Market additional capital raised

Capital Markets: Primary Markets

7% of total revenue in H1 2019

Revenue ↓ 11% at R73m (2018: R82m)

2 new company listings on Main Board (H1 2018: 10): MultiChoice and Tsogo Sun Hotels
1 new green bond
Other Main Board listings: 4 new ETFs, 117 warrants and structured products (2018: 11 ETFs; 116 warrants and structured products). There were 13 delistings (2018: 12)
337 new bonds listed (2018: 243). Total nominal value of listed bonds was R2.9tn (2018: R2.7tn)

Contains rounding differences
Capital Markets: Equity Market

Billable value traded

- Revenue
- Billable value traded

2016 2017 2018 2019

R3.2tr

21% of total revenue H1 2019

Revenue ↓ 26% to R206m (2018: R277m)

Billable value traded ↓ 11%

Transactions ↑ 5%

Colocation racks: ↑ 32 (2018: 28)

Tiered billing model: aggregate discount to clients of approximately R29 million or 12% for the half year

Contains rounding differences
### Capital Markets: Bonds and Financial Derivatives

#### Revenue

**Currency derivatives contracts traded**
- Revenue: $5\%$ to R26m (2018: R23m)
  - Contracts traded: $18\%$ to 40m (2018: 34m)

**Equity derivatives revenue**
- Revenue: $6\%$ to R70m (2018: R75m)
  - Contracts traded: $34\%$ to 47m (2018: 71m)
  - Value traded: $5\%$ to R2.9tn (2018: R3.1tn)

**Currency derivatives revenue**
- Revenue: $13\%$ to R26m (2018: R23m)
  - Contracts traded: $18\%$ to 40m (2018: 34m)

**Bonds and Interest Rate Market revenue**
- Revenue: $25\%$ to R33m (2018: R27m)
  - Bond Market nominal value traded up: $21\%$ to R18tn (2018: R15tn)
  - Interest rate derivatives contracts traded: $19\%$ to 5.4m (2018: 6.7m)
  - Bond ETP nominal value at R182tn

#### Growth

- **Revenue** up 5% to R130m (2018: R125m)
- **Currency derivatives contracts traded**
- **Equity derivatives contracts traded**
- **Value traded**

Contains rounding differences
Capital Markets: Commodity Derivatives

4% of total revenue H1 2019

- Revenue ↑ 7% to R40m (2018: R37m)
- Value traded ↑ 28% to R396bn (2018: R309bn)
- Contracts traded ↑ 7% to 1.8m (2018: 1.6m)
- Open interest ↓ 8%

Contains rounding differences
Post-Trade Services: Back-Office Services (BDA)

15% of total revenue H1 2019

Revenue ↑ 7% to R158m (2018: R147m)

Follows Equity Market transaction volumes

Trades ↑ 5% to 35m (H1 2018: 34m)

Contains rounding differences
Post-Trade Services: Equity Clearing and Settlement

18% of total revenue H1 2018

Revenue ↓ 13% to R183m (2018: R211m)

Follows Equity Market value traded

Reflects only Equity Market clearing and settlement fees

Contains rounding differences
Information Services: Market Data and Indices

16% of total revenue H1 2019

Revenue ↑ 17% to R156m (2018: R134m)

Lower driver activity is reflective of weak market conditions which have resulted in certain client cancellations and 2% lower reported passive assets under management to R532bn (2018: R559bn)

### Revenue growth

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Market data</th>
<th>Indices</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>↑ 17% to R156m (2018: R134m)</td>
<td>↑ R12m or 9 points</td>
<td>↑ R10m or 7 points</td>
</tr>
<tr>
<td>Pricing and product mix</td>
<td>↑ R10m or 7%</td>
<td>↑ R9m or 7 points</td>
<td>↑ R1m or 1 point</td>
</tr>
<tr>
<td>Forex gains</td>
<td>↑ R10m or 8%</td>
<td>↑ R9m or 7 points</td>
<td>↑ R1m or 1 point</td>
</tr>
<tr>
<td>Absence of prior year revenue understatement</td>
<td>↑ R10m or 7%</td>
<td>-</td>
<td>↑ R10m or 7 points</td>
</tr>
<tr>
<td>Driver growth</td>
<td>↓ R8m or 6%</td>
<td>↓ R6m or -4 points</td>
<td>↓ R2m or -1 point</td>
</tr>
</tbody>
</table>

Contains rounding differences
H2 2019 strategic priorities

Deliver meaningful new operating revenue through business lines not currently a substantial part of the JSE income

Achieved all of the R170 million in cost savings (base year 2016)

Embed a more nimble, client-led culture embodied in the JSE Way

Protect and transform the JSE franchise while upgrading and refreshing our base technology

Lead by example on the national agenda and pursue the visible transformation of the business
## Financial metrics

<table>
<thead>
<tr>
<th>Ratios</th>
<th>H1 2019</th>
<th>H1 2018</th>
<th>H1 2017</th>
<th>H1 2016</th>
<th>H1 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating margin</td>
<td>38%</td>
<td>49%</td>
<td>41%</td>
<td>47%</td>
<td>46%</td>
</tr>
<tr>
<td>EPS (continuing)</td>
<td>467.0</td>
<td>654.5</td>
<td>490.9</td>
<td>599.7</td>
<td>503.9</td>
</tr>
<tr>
<td>HEPS (total)</td>
<td>466.1</td>
<td>654.6</td>
<td>488.9</td>
<td>585.1</td>
<td>490.3</td>
</tr>
<tr>
<td>EBITDA (Rm)</td>
<td>504</td>
<td>637</td>
<td>511</td>
<td>614</td>
<td>535</td>
</tr>
</tbody>
</table>
Thank You