

# Operations

The JSE's drive to build a resilient and sustainable business has many elements. This section focuses on the revenue elements in the business. This is therefore not a complete operating view; more detail on JSE initiatives can be found throughout the integrated report and in the CEO review. 2017 products, services and new initiatives are also detailed in the CEO review.

## Capital Markets

### Division responsibilities

The Primary Market:

- Sources issuers to list on the JSE's Equity and Interest Rate markets.
- Also supports potential and existing issuers.

The Secondary Market:

- Provides trading and ancillary trading and customer support services in the Equities, Bonds and Financial Derivatives, and Commodity Derivatives markets.

The Equity Market provides trading in equities. Products include:

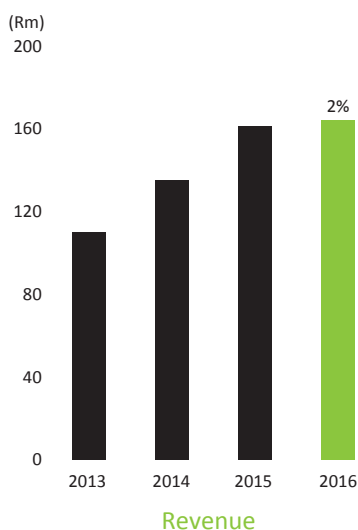
- Primary and dual-listed ordinary shares, preference shares, depository receipts, property entities like real estate investment trusts (REITs), special purpose acquisition companies (SPACs), warrants, structured products and exchange-traded products (ETFs and ETNs).

The Financial Derivatives Market and the Bond Market provide secondary market access to financial derivatives and to debt instruments.

- The Financial Derivatives Market's products include:
  - Index and single-stock futures and options, can-do futures and options, exchange-traded contracts for difference (CFDs) and other sophisticated derivative instruments in equities, currencies and interest rate asset classes.

- The Interest Rate Market's products include:
  - Bonds, floating rate notes, commercial paper and hybrid instruments and interest rate derivatives.
- The Commodity Derivatives Market's products include:
  - A range of cash-settled rand-denominated derivatives on various local and international benchmark commodities, including softs, energy and various metals, under license from the CME Group, as well as a beef carcass contract.

### Primary Market



### How money is made

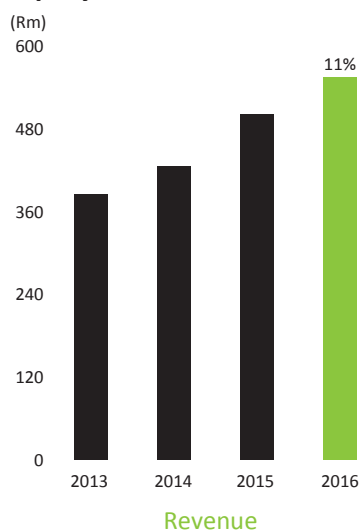
Fees for new issuances, annual listing fees for existing issuers, as well as documentation fees for dealing with specific corporate actions that companies undertake during the year generate revenue.

In 2016, the JSE aligned its empowerment segment listing fees to those of AltX and agreed to waive the documentation fees in respect of its debt instruments.

### 2016 in review

- Revenue increased by 2% to R164 million (2015: R161 million).
- Percentage of total operating revenue (excluding *Strate ad valorem* fees): 7%.
- 18 new company listings, two new ETFs, 1 ETN, 203 warrants and 77 structured products (2015: 23 listings; 2 ETFs; 1 ETN; 264 warrants; 49 structured products).
- New: 5 REITs, 1 SPAC and two fast-track listings.
- Seven new listings on AltX.
- Delistings: 25 (2015: 19).
- 858 new bonds issued (2015: 942). Total nominal value of listed bonds was R27 trillion (2015: R23 trillion).

## Secondary Market Equity Market



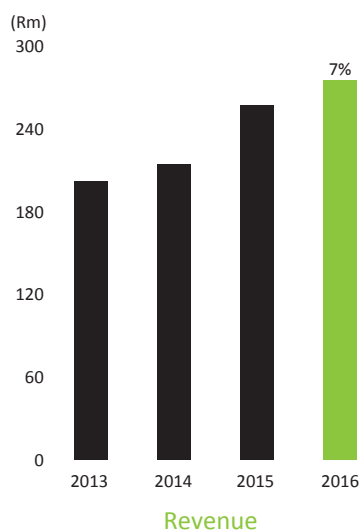
### How money is made

- Charges on equity transactions, based on the value of each transaction leg with a 0.0053% value-based charge and a maximum fee per transaction of R335 in 2016, are the main revenue earners. The new Equity Market enhancement (EME) functionality charges a 0.0053% value-based charge with no cap.
- Zeroed the fees for certain report-only option trades.

### 2016 in review

- Revenue rose by 11% to R555 million (2015: R501 million).
- Percentage of total revenue (excluding Strate *ad valorem* fees): 26%.
- Billable value traded increased by 18%.
- The number of transactions year-on-year rose by 15% to 71 million (2015: 62 million).
- Colocation – 31% of overall value traded.
- Implemented Integrated Trading and Clearing Project Equity Market enhancements. Enhanced trade functionality on the new trading platform includes central order book cross, pegged orders and end-of-day (EOD) volume auctions.

## Bonds and Financial Derivatives Markets



### How money is made

- The use of a range of fee models, either based on the contracts traded or on the market value of transactions, generates revenue.
- In order to promote on-screen trading, the fee associated with on-screen trading is normally lower than that for reported trades.
  - Certain markets provide value-based incentives in their fees model.
  - For markets that require the support of market makers, the fee model may also include specific incentives for this activity.
- Certain fee models were reviewed during 2016.
  - Fee models on bond future and option products were changed.
  - Aligned market principles with the implementation of the new Equity Derivative Market fee model in August 2016.
  - Warrants and special products.

### 2016 review

- Total divisional revenue rose by 7% to R275 million (2015: R257 million).
- Percentage of total revenue (excluding Strate *ad valorem* fees): 13%.

### Equity Derivatives Market

- Equity derivatives revenue rose by 2% to R177 million (2015: R173 million).
- Value traded rose to R6.9 trillion (2015: R6.6 trillion), a 4% increase.
- The number of contracts traded was down by 5% to 427 million (2015: 448 million).

### Currency Derivatives Market

- Currency derivatives revenue rose by 12% to R38 million (2015: R34 million).
- The number of contracts traded increased by 7% year-on-year to 48.3 million (2015: 45.16 million).
- Open interest as at 31 December 2016 also decreased by 30% to 2.33 million contracts (2015: 3.33 million contracts).

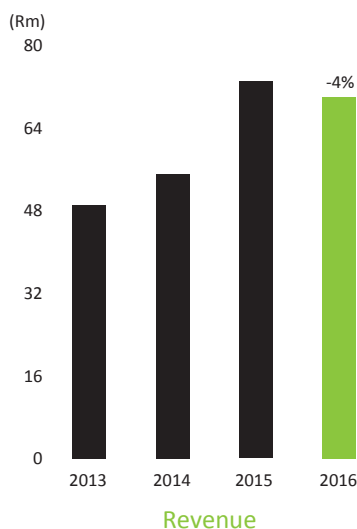
### Interest Rate Market

- Interest Rate Cash Market revenue rose by 20% to R60 million (2015: R50 million).
- Bond Market volumes rose by 22% to a nominal value of R27 trillion in 2016 (2015: R23 trillion).
- The number of interest rate derivatives contracts traded rose by 66% to 9.4 million (2015: 5.7 million).
- Open interest in the Interest Rate Derivatives Market as at 31 December 2016 rose by 20% to 838 985 contracts from 696 991 contracts in 2015.
- Started developing the ETP for government bonds.
- Robust growth of the Interest Rate Futures Market in 2016, and in particular, the Bond Futures Market.
- First trade of the ERIS interest rate swap futures contract recorded in September 2016.

# Operations

(continued)

## Commodity Derivatives Market



### How money is made

- A fee per contract traded, based on the underlying instrument, generates revenue.
- A fee collected per ton of grain physically delivered also contributes to revenue.

### 2016 in review

- Revenue decreased by 4% to R70 million (2015: R73 million).
- Percentage of total revenue (excluding Strate *ad valorem* fees): 3%.
- This was a tough year for the grains sector, as the drought significantly reduced the available deliverable supply of this commodity, which impacted trading volumes.
- The uncertainty regarding the wheat import tariff published by the National Treasury also negatively impacted trading volumes for the third most liquid grain contract, with the result that volume traded was down by 2%.

## Trading and Market Services (TMS)

### Division responsibilities

- TMS includes Trading Services, the Client Service Centre and Business Continuity.

### How money is made

- The trading application programme interface (API) service.
- The customer test service.
- The London point of presence (PoP).

### 2016 in review

- The equities trading engine upgrade was completed.
- New Equity Market enhancements were implemented.
- The upgrade to the commodities derivatives platform was implemented in November.
- TMS conducted a successful client-facing resilience test as part of the business continuity plan.
- TMS has initiated a process to review its business continuity approach.

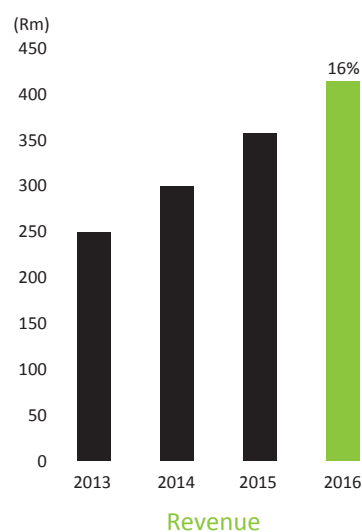
## Post-Trade Services (PTS)

### Division responsibilities

- PTS is responsible for risk management, clearing and settlement assurance of the markets operated by the JSE. The JSE acts as the settlement authority for the South African Exchange-Traded Equities Market and as the clearing house for the Exchange-Traded Derivatives Market (via the central counterparty (CCP), JSE Clear).
- PTS is responsible for managing key risks—particularly counterparty credit risk, credit contingent market risk and liquidity risk. It does so through a comprehensive risk management framework, and by providing accurate measurement, control, and appropriate protection from all identifiable risks arising in the markets cleared.
- PTS is also responsible for the management of the Broker Deal Accounting (BDA) back-office services for the Equities Market. BDA provides the JSE with world-class surveillance capabilities, allowing the JSE to see

certain transactions to client level in real time. Equity members are mandated to use the system. The system keeps the securities records and books of individual broking firms and of their clients. It also enables the Exchange to provide settlement assurance for central order book equity transactions.

## Equity Clearing and Settlement



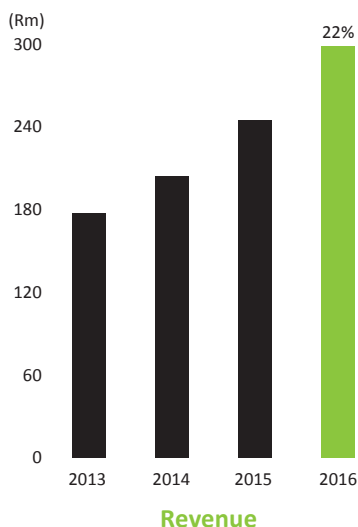
### How money is made

- Risk management revenue reflects only the value-based Equity Market clearing and settlement fees, which were set at 0.0036, with a maximum fee per transaction leg of R145, for 2016.
- Although the division risk manages the clearing of derivative transactions, the JSE does not bill separately for this service. Derivative transactions are billed using a per contract fee, which is accounted for in the Capital Markets division.
- Revenues for back-office services are somewhat linked to the number of equity transactions that take place on the cash Equity Market. BDA fees are mostly charged on a per BDA transaction basis, with connectivity, subscription and dissemination fees being charged differently. The JSE gave a 20% reduction in BDA fees in September and a further 7.8% reduction in January 2017.

**2016 in review**

- Revenue rose by 16% to R413 million (2015: R357 million).
- Percentage of total revenue (excluding *Strate ad valorem* fees): 19%.
- A significant milestone was achieved with the successful finalisation of a three-year project to reduce the equities market settlement cycle from a T+5 cycle to a T+3 cycle. The JSE has maintained a zero failed trade record.
- JSE Clear achieved recognition of its equivalency to CCPs in the European Union from the European Securities and Markets Authority (ESMA). ESMA recognition strengthens the JSE's global credibility and fulfils a key requirement for multinational clearing members operating in the local market.

**Information Services (includes Market Data)**



**2016 in review**

- Revenue rose by 22% to R298 million (2015: R245 million).
- Percentage of total revenue (excluding *Strate ad valorem* fees): 14%.
- 44 new clients have signed up for Market Data products: (29 local clients and 15 international clients).
- The number of passive tracking products linked to JSE indices increased by 10 in 2016.
- The number of terminals accessing JSE data increased by 6.59%.
- Launched indices and indices data products in 2016.
- Real-time equity and commodity derivatives data has been made available through JSE London PoP from February 2016.

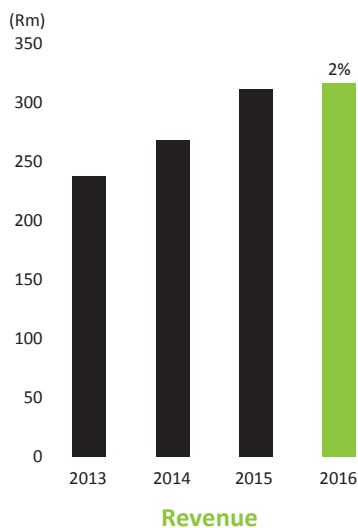
**Division responsibilities**

The JSE formed the Information Services (IS) division in 2016. This comprises market data, colocation, reference data, corporate actions, client data, indices, valuations, business intelligence and statistics.

**How money is made**

- IS is responsible for the promotion, licencing and sale of all JSE information products and services across all JSE markets.
- Revenue is generated by selling data products across all of the JSE's markets and licencing the distribution and usage of the data products. Licencing fees include end user terminal fees, non-display usage fees and passively tracking products on indices.
- Rental is charged for racks in the colocation facility.

**Back-Office Services (BDA)**



**2016 in review**

- Revenue rose by 2% to R316 million (2015: R311 million).
- Percentage of total revenue (excluding *Strate ad valorem* fees): 14%.
- Net R34 million impact owing to a 20% fee reduction.