


JSE Limited
Integrated Annual Report
for the year ended 31 December 2020






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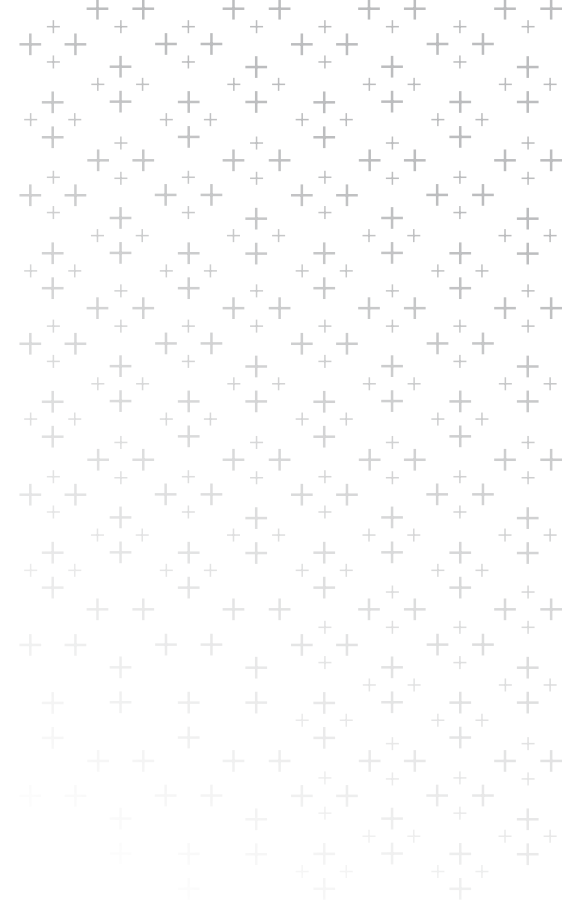
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 Page reference for additional reading in this report.

 Reference to online data at <https://www.jse.co.za/investor-relations/results>.

 Indicates the relevant King IV principle, which is summarised on  **page 116**.



REFLECTIONS FROM OUR CHAIRMAN

Reflections from our Chairman

We seek to deliver financial performance that generates competitive returns and creates long-term value for shareholders.



At the outset of 2020, like many other organisations, we looked forward with a degree of optimism to a year that held the promise of renewed growth and exciting strategic initiatives. Within weeks, however, it was clear that the novel coronavirus (COVID-19) would upend those predictions and cast a long shadow over the global economy, the financial markets and civil society. The devastating health and economic crisis triggered by COVID-19 has presented policymakers in South Africa and across the world with formidable challenges – in public health, debt management, budget policies, central banking and structural reforms – as they try to ensure that a fragile global recovery gains traction and sets a foundation for robust growth and development in 2021 and beyond.

The national economic environment has remained challenging, with the country dealing with a severe economic contraction, reduced national tax receipts and soaring unemployment. Negative economic growth and prolonged unfavourable economic and political conditions have resulted in increasing cost pressures and inflation. The high level of inequality has increased the potential for social unrest and frustration and translated into an increasing dependence on social welfare payments for a significant proportion of our society. COVID-19 and the extended economic lockdown imposed in response has exacerbated the extreme levels of poverty and inequality in our society and has made these seemingly intractable challenges even more visible.

Financial markets have been turbulent and volatile, with record trading volumes amplified by South Africa's sovereign credit rating downgrade, our subsequent exit from the World Government Bond Index, and significant volatility in the rand. South African markets have faced an uphill battle as deteriorating local fundamentals have been exacerbated by increased global risk-off sentiment and the declining relevance of South Africa in an emerging market context.

Reflections from our Chairman continued

Supporting South Africa through tough times

The impact of the pandemic on our clients, the financial services sector, our communities and society has been substantial. The tragedy wrought by the pandemic continues to have a profound effect on the lives of millions of people around the world.

During this challenging period the JSE:

- » Focused on employee safety and wellness while remaining open for business, with a smooth transition to remote working practices;
- » Maintained operational resilience and provided uninterrupted trading, clearing and settlement services for all the markets that we operate, supported by effective management of short positions and appropriate and responsive margin adjustments;
- » Demonstrated commercial agility in responding to client needs and addressing concerns through financial support and new products and services; and
- » Responded to the social crisis through our support for social outreach projects to assist those most impacted by the pandemic.

As a financial market infrastructure provider, it has been imperative that the JSE remains open, operational, and responsive to fluctuations and risks in the market. Employee safety was a key priority and we saw a smooth transition to remote working. We also aligned our business practices with market participants to ensure stable operations. In the weeks leading up to the national lockdown in March, we systematically tested our ability to remotely clear and settle each of the markets we operate. This ensured business continuity and robust trading, clearing and settlement environments for all asset classes throughout the crisis. The COVID-19 pandemic emphasised the importance of business continuity and represented a practical stress test on our systems, processes and controls. During this volatile period, with record trade volumes and most of our resources off-site, the Exchange continued to operate and experienced zero downtime. Elsewhere in this report we detail our operating effectiveness throughout the pandemic and our COVID-19 response.


Technology as an enabler and source of disruption

Digital disruption is the new normal. The information technology (IT) landscape remains a fast changing one with technology both an enabler and source of disruption. Globally we are seeing rapid technological innovation, particularly in digitisation, artificial intelligence (AI) and automation. Migration to the cloud, AI and machine learning are facilitated through opportunities presented by core software providers that take into consideration the impacts on trading performance and latency constraints. Cybersecurity, particularly in the remote working environment, has faced increased vulnerability given the geographic dispersion of employees, clients and suppliers working remotely since the onset of COVID-19.

During this period the JSE leveraged technology to facilitate secure and reliable new remote working models, which became the norm in 2020. As a licensed financial market infrastructure provider, we operate in a high-availability environment, so the choices we make regarding our technology architecture; the reliability of our technology platforms, on which market participants depend; and the efficiency of our operating processes all have a direct impact on our earnings, reputation and ongoing sustainability.

The significant investment into our technology platforms prepared us well to withstand the crisis, ensuring operational resilience and available systems throughout several highly volatile periods. Maintaining our readiness and continuing to invest in our infrastructure will place the JSE in a strong position to thrive in the period ahead. We continue to focus on information security, access control and cybersecurity readiness. Providing a safe, secure and trusted marketplace is a fundamental feature of our business.

A strategic investment in Globacap during 2020 has made it possible to leverage Globacap's platform for private markets, which is underpinned by blockchain technology. Not only does this transaction provide access to a new market segment for the JSE, it also provides the opportunity to explore and experiment with distributed ledger technology (DLT) in close collaboration with a leading capital markets fintech.

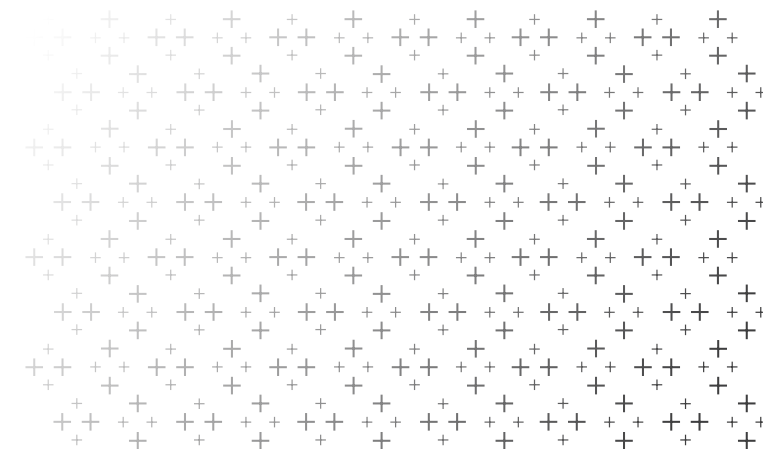
More detail is available under technology and information on  pages 59 to 62.

South Africa as an investment destination

South Africa has embarked on a process of modernising its exchange control standards in line with international best practice, as announced in the medium-term budget statement on 28 October 2020.

We are particularly pleased that the position paper on these reforms, produced by the JSE in partnership with Intellidex, has been a catalyst for change, for example in standardising the treatment of inward-listed instruments, allowing multi-currency listings and permitting non-ZAR collateral for derivatives exposures.

The announcement of these reforms positions South Africa as a competitive investment destination, opening the door for increased international investment and laying the foundation for securing Organisation for Economic Co-operation and Development (OECD) membership. We believe these reforms will be positive for inward investment to South Africa.



Reflections from our Chairman continued

Responsible environmental, social and governance (ESG) investments

Around the world, investors, regulators and standard-setting bodies are demanding greater transparency about how businesses are managing non-financial risks, particularly those created by climate change. Social expectations about the role and responsibilities of business in general also continue to change.

Our role is to provide and oversee an effective regulatory environment with disclosure that assists investors in making decisions, and to leverage our sphere of influence to raise the profile of ESG matters and ensure the long-term quality of the markets. Although the JSE cannot itself address these structural economic challenges, we can pre-empt the possible impact on our business by developing products that are tailored to the direction the world and the markets are taking. In line with our commitment to sustainable and responsible ESG practices, we are expanding our offering for the listing and trading of sustainability-focused products, such as our green bonds and social impact products.

A summary of salient developments in this area is set out on [pages 10 to 12](#) of our [online social value report](#).

Responsive governance

The Board's primary responsibility is to ensure the long-term, sustainable success of our business. In doing so, it is essential for us to be deeply engaged in the business, and to support and challenge senior management in the articulation and execution of strategy. We continue to fulfil our other core duties to oversee the JSE's culture, governance, financial controls, risk and change management.

While the Board's key focus during the year has been to accelerate its growth strategy, focus had to be shifted towards addressing the challenges posed by the COVID-19 crisis. Since the World Health Organization (WHO) declared the COVID-19 virus a pandemic, the Board's activities and meetings increased in frequency to address the constantly changing situation and ensure the JSE is well positioned to respond to government's plan of action. The Board worked with leadership to review in-depth scenario planning and engaged teams throughout the business, while setting its expectations for the JSE's approach to each of its stakeholder groups, mindful of their respective needs.

The JSE continues to uphold high standards of governance. During the reporting period there have been various changes to the Board and I am satisfied that the current membership brings the right balance of experience, skills and diversity of perspective to ensure the JSE's continued resilience through a strong governance, oversight and strategic direction. In February 2020, we welcomed Siobhan Cleary and we believe her experience in strategy development, public policy and sustainability within capital markets will further strengthen the Board. In October 2020 we welcomed Ian Kirk, who has extensive strategic and operational experience in insurance and financial services. We believe that his appointment will support the continuous drive to augment Board acumen and diversity in skill. Michael Jordaan, David Lawrence and Fatima Daniels stepped down from their roles as non-executive directors and we thank them for their service.


“ While the Board's key focus during the year has been to accelerate its growth strategy, focus had to be shifted towards addressing the challenges posed by COVID-19 crisis. ”

Reflections from our Chairman continued

Our commitment to transformation

During the year we focused on social and transformational issues by undertaking initiatives that facilitate Broad-based Black Economic Empowerment (BBBEE) through focused strategies to promote affirmative and preferential procurement and local and inclusive enterprise development. Internally, the JSE continues to make great progress in transforming the senior and top management levels and overall representation of Black people at the JSE.

We are pleased to report that we have improved our BBBEE status from level 3 in 2019 to level 2 in 2020.

More detail is available under transformation and socio-economic advancement on  pages 63 to 65.

Outlook and future focus

2020 was a year of unprecedented challenges. During this time the JSE made significant strides in its inorganic growth strategy and successful upgrades to the core trading platform (MillenniumIT (MIT) technology) and information security readiness. Client and staff engagement is a key focus of the Exchange and there was a notable improvement in both of these areas. As we adapt to our evolving new normal, I believe that the JSE is well positioned to face the challenges of the future. Our inorganic growth strategy to ensure resilience within a volatile market environment remains relevant and I am confident that it will safeguard our interests in an operating environment that will remain volatile both globally and locally.

With economic growth set to continue underperforming, there appears to be pessimism regarding the government's ability to generate sufficient growth in tax revenues to reduce the budget deficits. Fiscal constraints facing the South African government have also led to concerns regarding its ability to replace relief programmes introduced during the strict lockdown last year with new programmes when those relief measures fall out of the system. The government's objective is to embark upon the roll-out of vaccines in three phases. If such a goal is achieved, the hope is that herd immunity will kick in to remove the need for any further vaccinations to be distributed. Fortunately, there are areas of optimism. The spread of infections under the second wave seems to be gradually dissipating, and President Ramaphosa has pledged to move to improve the capacity of officials in the state machinery, especially at municipal level. However, considerable scepticism continues to prevail regarding government's ability to see such structural reform programmes through to their fruition.

The challenges experienced during 2020 and the hardships posed by the impact of the COVID-19 pandemic in 2021 require us to achieve greater cooperation between social partners, because the challenges before us are too great for business, government or labour to deal with alone. It is with this in mind that we, at the JSE, will execute our strategy with speed and discipline and continue to rapidly improve our service offerings and technology to serve our clients with consistent excellence.

Looking ahead, I am confident that the JSE is well positioned to continue preserving and delivering value for its stakeholders, as it continues its journey **to be the best globally connected platform for inclusive and sustainable value creation that enriches lives and enables a positive future.**

Appreciation

To my fellow Board members, I wish to express my deep gratitude for your support and wise counsel. In particular I want to thank David Lawrence, a non-executive director since 2008, for his commitment and contribution to the Board over many years. Similarly I offer my thanks to Michael Jordaan for his insights and support as a non-executive director since 2014 as well as Fatima Daniels for her input and advice as a non-executive director since 2018. Siobhan Cleary has been appointed as an independent non-executive director effective 1 February 2020, and Ian Kirk joined the Board as a non-executive director on 1 October 2020 and we look forward to their contribution in the years ahead.

I wish to thank our Group chief executive officer, Dr Leila Fourie, for her outstanding and steady leadership during a year of unprecedented challenges and to her and the executive team for delivering not only robust results but also significant progress in our growth strategy and in new, transformational initiatives. Our staff have demonstrated resilience and commitment to our business, and the Board and I thank them for their unstinting efforts.

I wish to convey my heartfelt appreciation at how our market participants rallied together to join forces, as the capital market ecosystem, and contributed to the Solidarity Fund.

As we reflect on 2020 and look forward to 2021, I would like to thank all of my colleagues at the JSE for their energy, resilience and dedication. I am confident that the JSE is well positioned to continue delivering value to all its stakeholders and contributing to our vision of growing shared prosperity.



Nonkululeko Nyembezi

Chairman

Board approval 05 15

The directors of the JSE Limited (the Group or the JSE) acknowledge responsibility for the integrity of this integrated annual report (report). The Board of Directors (Board), supported by the Group Audit Committee (GAC) endorsed the reporting frameworks utilised in this report and approved the material matters determined by management.

The directors have applied their minds to the report and believe that it covers all material matters, that the information contained in this report is reliable and that it fairly presents the integrated performance of the Group.



Nonkululeko Nyembezi
Independent non-executive Chairman



Dr Suresh Kana
Lead independent non-executive director



Zarina Bassa
Independent non-executive director



Siobhan Cleary
Independent non-executive director



Nolitha Fakude
Independent non-executive director



Faith Khanyile
Independent non-executive director



Ian Kirk
Non-executive director



Ben Kruger
Non-executive director



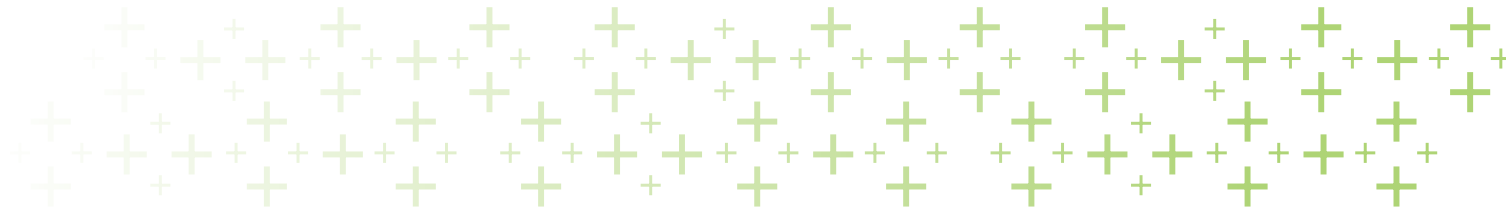
Dr Mantsika Matookane
Independent non-executive director



Dr Leila Fourie
Chief Executive Officer (CEO)



Aarti Takoordeen
Chief Financial Officer (CFO)



HOW THE JSE CREATES VALUE

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The JSE is uniquely positioned as a



The JSE is a self-regulatory² multi-asset class stock exchange that offers listings, trading, clearing and settlement (post-trade), and information services, as well as issuer services.

The JSE is based in South Africa and is the largest stock exchange by market capitalisation in Africa and the 16th largest stock exchange in the world. It has been operating as a marketplace for the trading of financial products for 134 years.

Financial supervision of the JSE is shared between two regulators, the Prudential Authority (PA) and the Financial Sector Conduct Authority (FSCA), which were established on 1 April 2018. The PA is a department of the South African Reserve Bank (SARB) and is responsible for the prudential supervision of banks, insurance companies and market infrastructures (such as exchanges and clearing houses). The FSCA is responsible for the supervision of the conduct of financial institutions, including market infrastructures, and replaced the Financial Services Board.

The JSE is a member of the World Federation of Exchanges (WFE), the Committee of SADC Stock Exchanges (CoSSE) and the African Securities Exchanges Association (ASEA). We are also a founding member of the Sustainable Stock Exchanges Initiative (SSEI).

R9.8 bn	Market capitalisation (JSE Limited) (2019: R10.4 billion)
61%	Average liquidity¹ (JSE Limited) (2019: 54%)
1 003	Securities available on the JSE (2019: 946)
300	Companies listed on the Main Board (2019: 312)
69	Foreign domiciled companies (2019: 71)

¹ Liquidity is the ratio between total value traded and market capitalisation annualised.

² The JSE is a self-regulatory organisation, licensed in terms of section 8 of the Financial Markets Act, 19 of 2012 and responsible for regulating the financial markets that it operates.

Who we are and what we do

WHO WE ARE

We are a pioneering, globally connected exchange group enabling inclusive economic growth through trusted, world-class, socially responsible products and services for the investor of the future.

Our vision

Growing shared prosperity.

Our mission

To be the best globally connected platform for inclusive and sustainable value creation that enriches lives and enables a positive future.

Our purpose

People with passion, powering a trusted marketplace for an inclusive and prosperous future.

Our values

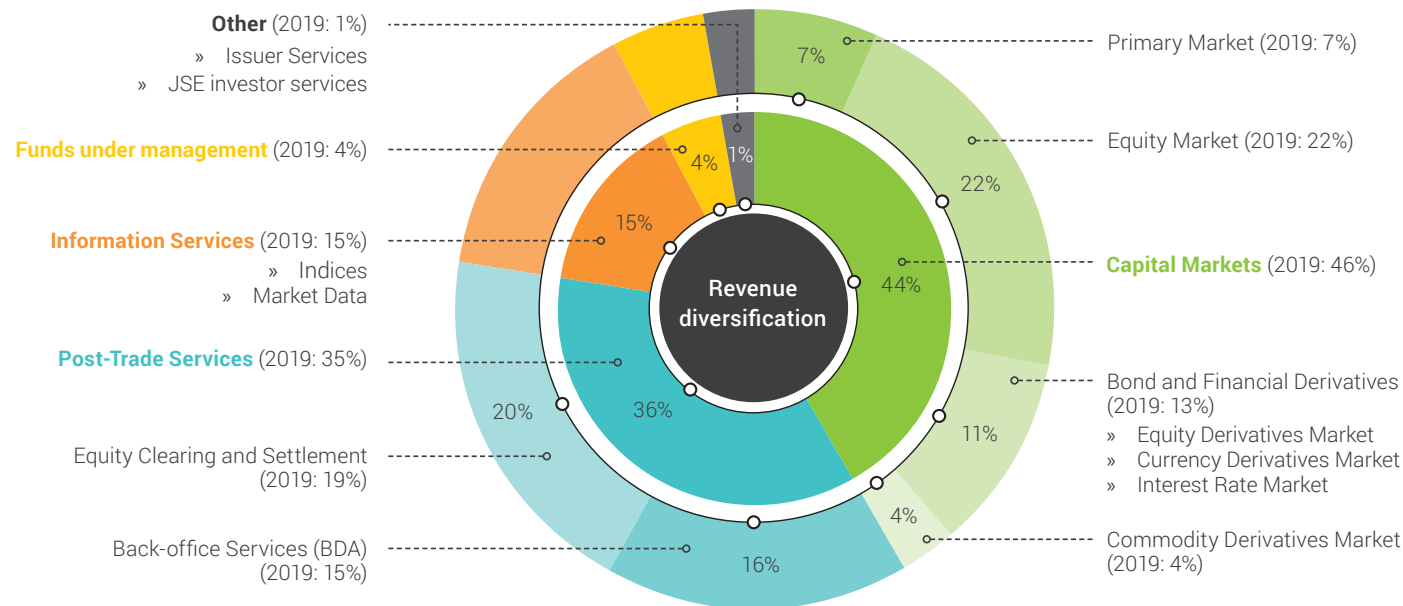
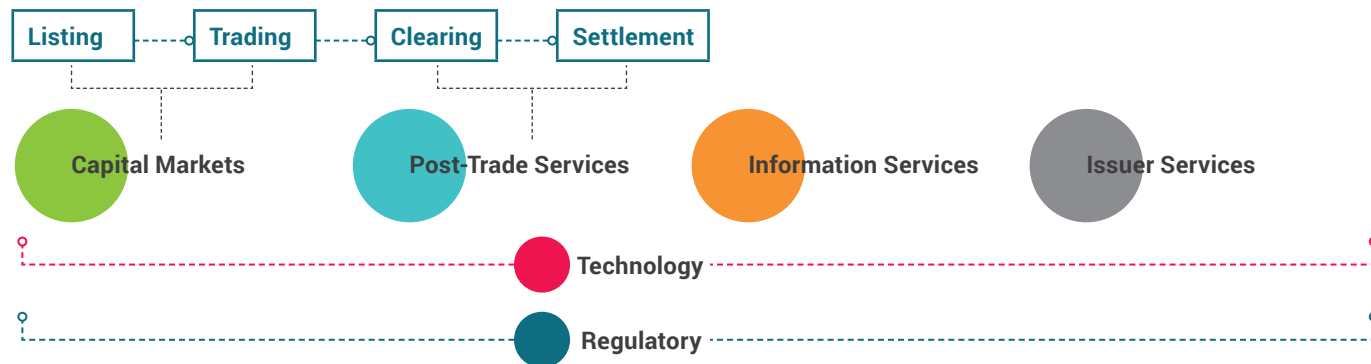
We deliver on our purpose through our core values of servant leadership, connecting for co-creation and growing together.

Our ethical culture

We remain focused on adhering to the applicable legislation and being an ethical, environmentally responsible business.

WHAT WE DO

We connect buyers and sellers through a variety of financial products, supported by world-class technology and regulatory oversight.



Who we are and what we do continued

Our products and services

Capital Markets

Capital Markets is responsible for operating the markets under the JSE's exchange licence.

Primary Market

Seeks new equity and debt listings on the JSE's Equity and Interest Rate markets.

Secondary Market

Provides trading, colocation and client support services in the Equity, Bonds, 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 (exchange-traded funds (ETFs) and exchange-traded notes (ETNs)).
- » **The Equity Derivatives Market** includes index and single-stock futures and options, can-do futures and options, exchange-traded contracts for difference (CFDs) and other sophisticated derivative instruments.
- » **The Commodity Derivatives Market** offers a range of cash-settled rand denominated derivatives on various local and international benchmark commodities, including softs, energy and various metals, as well as beef carcass, Mexican white maize, lamb carcass and wool futures contracts.
- » **The Currency Derivatives Market** offers derivative instruments on a range of currencies.
- » **The Interest Rate Market** provides cash bonds, floating rate notes, commercial paper and hybrid instruments, interest rate derivatives and a green bond segment.

Post-Trade Services

Post-Trade Services is responsible for the risk management, clearing and settlement assurance of markets operated by the JSE. The JSE acts as the settlement authority for the exchange-traded Equity Market and as the clearing house for the exchange-traded Derivatives Market (via the central counterparty (CCP), JSE Clear Proprietary Limited (JSE Clear)).

Post-Trade Services 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.

Post-Trade Services is also responsible for managing the broker dealer accounting (BDA) Back-Office Services for the Equity 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, which keeps the securities records and books of individual broking firms and their clients. The system also enables the JSE to provide settlement assurance for central order book equity transactions.

Issuer Services

Issuer Services provides the following services for our listed companies:

- » Venue hire for results presentations and investor engagements;
- » The JSE Training Academy to assist stakeholders on their JSE journey, including corporate governance training; and
- » Annual general meeting (AGM) facilitation, which includes proxy solicitation, electronic voting and minute taking services.

JSE Investor Services

- » We concluded the Link Market Services South Africa Proprietary Limited (Link SA) transition in November 2020.
- » This business primarily offers transfer secretarial and registry services, including registry maintenance (for example, maintaining companies' share registers), treasury services (for example, calculating and managing the payment of dividends and distributions for companies) and corporate actions (for example, planning and managing rights issues, elections and dividend payments on behalf of companies).

Information Services

Information Services provides market data, reference data, corporate actions, client data, indices, valuations, business intelligence and statistics. Information Services is responsible for the promotion, licensing and sale of all JSE information products and services across all JSE markets, currently weighted towards the Equity Market.

Technology

We are a fully electronic, efficient and secure market with world-class regulation, trading and clearing systems, settlement assurance and risk management. (📄 page 59).

Regulation

The JSE is a self-regulatory organisation (SRO) and acts as the frontline regulator of our issuers and of our trading and clearing members through the Issuer Regulation and Market Regulation divisions (📄 page 77).

- » The **Issuer Regulation** division is the custodian of the JSE Listings Requirements (Listings Requirements) and is responsible for their interpretation, application and enforcement.
- » The **Market Regulation** division is responsible for overseeing trading in the markets operated by the JSE, with the primary aim of identifying potential market abuse, including insider trading and market manipulation.

Our value creation business model

Our value creation process is embedded in our vision of growing shared prosperity and driven by our strategy.



The need for financial markets

Exchanges and clearing houses are critical role-players in a market economy, fostering economic growth and strengthening market integrity. As market infrastructures, they enable the efficient allocation of capital by providing the marketplaces for raising capital and to connect buyers and sellers.

The South African context

South Africa is a developing country with a number of social and economic challenges:

- » Low growth, high unemployment and high levels of inequality
- » High and increasing dependence on social welfare payments for income
- » Increasing government debt and a growing account deficit
- » Low levels of domestic savings

The solution to all of these challenges lies directly or indirectly in financing.



The JSE's role

As a critical service provider to South Africa's financial markets, the JSE provides a cost-effective, efficient, well-regulated, transparent and trusted platform for financial transactions to take place. These contributions are among the tools needed to spur growth and deal with the challenges South Africa faces as well as to enable value creation.

As a multi-asset class exchange, the JSE allows investors, companies and governments to transact in equities, bonds and derivatives.

As an interface between those who provide capital and those who need capital, the JSE actively promotes sustainable, transparent business and responsible investment, including:

- » being a global thought leader in the field of governance and sustainability and the related standards and disclosure;
- » evolving and expanding our responsible investment product offering through indices, bonds and other initiatives; and
- » our continued enhancement of regulatory regimes and disclosure to ensure that investors are equipped with transparent information to make informed investment decisions.

The JSE's key differentiating factors

- » Largest stock exchange by market capitalisation in Africa
- » Robust regulation
- » Market quality (liquidity, price, speed)
- » Highly cash generative
- » Growing diversified revenue stream
- » Thought leader in the economic, social and governance space



The JSE delivers this value through our core activities, products and services

The JSE's integral function is to:

- » provide facilities for the listing of securities (including securities and debt securities issued by domestic or foreign companies); and
- » to provide the JSE's users with an orderly marketplace for trading in such securities and to regulate the market accordingly.




Activities

- » Listing
- » Trading
- » Clearing
- » Settlement



Outputs (products and services)

- » Capital Markets
- » Post-Trade Services
- » Information Services
- » Issuer Services
- » Technology
- » Regulation

(Our products and services,  page 8)

Our value creation business model continued

Inputs

What we require to deliver our products and services

Financial resources

Financial resources to operate the business and support growth, expansion and innovation

Our financial resources are deployed in a variety of ways, including paying the required operational and capital expenses to operate the business effectively and efficiently. This includes, for example, the required investment in our technology platforms, appropriately remunerating employees and attracting and retaining the skills we need, as well as adequately capitalising our derivatives clearing house (JSE Clear) and our Equity Market.

(pages 39 to 49)

Technology

Technology that enables the delivery of products and services in a secure, stable environment

We need the necessary IT systems and infrastructure to securely process transactions between buyers and sellers, and process analytical data to support our Information Services, as well as to regulate our Primary and Secondary markets.

(pages 59 to 62)

Clients

Clients who view the JSE and South Africa as an investment destination of choice

We need foreign and local clients to raise capital through the Exchange, invest in our products and use our services.

(pages 108 to 109)

Employees

Skilled employees who can deliver on the JSE's strategy

The JSE is a specialised organisation requiring competent, motivated and diverse employees with specialist skills in financial markets technology, governance, risk and financial products trading.

(pages 66 to 69)

Outcomes

Value created for our stakeholders

Our products and services create value for...

South Africa

The JSE's role helps South Africa to do three things:

- » Raise capital: Raise finance for companies and government from both domestic and international pools of capital
- » Manage risk
- » Create wealth: Gain access to a mechanism for sustainable wealth creation

We enable engagement and create collaborative opportunities on matters of economic significance by working with Business Leadership South Africa (BLSA) and other stakeholders.

We seek to influence the sustainability practices of others and to create products, like the green bond segment, that support wider sustainability initiatives. We co-chair the United Nations Global Investors for Sustainable Development (UNGISD) alliance.

>> Business leaders, government, academic institutions, industry bodies, civil society, political organisations and ratings agencies

How we deliver our products and services for creates value for...

Regulators and policy makers

We are fully supportive of a robust regulatory environment, and we engage with international and local standard setting bodies, policy makers and regulators, providing our unique insights to policy or regulatory initiatives that may affect the efficiency and integrity of the South African financial markets.

Communities

We provide financial literacy programmes and various training initiatives in disadvantaged communities to enable upliftment and development.

Shareholders

We provide returns on investment through our dividend policy and protect shareholder interests by aligning employees' long-term incentive schemes to the long-term sustainability of the JSE.

Ordinary South Africans

Many South Africans invest directly on the JSE. Millions also invest indirectly through their pension funds, insurance policies and unit trusts.

Clients

We provide a trusted and well-regulated platform to raise finance and provide access to investment products as well as information and issuer services. We provide minimum entry and disclosure requirements for listed companies to assist investors to make informed decisions.

>> Issuers, traders and clearing members, sponsors and designated advisors, and the investor community

The JSE

We generate a sustainable revenue stream to invest in technology and innovation, deliver on the Group's strategy and provide returns to shareholders. A sustainable revenue stream is a key enabler of our value creation roles.

Value is created through our material inputs for...

Employees

We provide employment and development opportunities in a non-discriminatory environment. Our remuneration includes various benefits and incentive schemes to enhance value to employees.

Suppliers

Payment for products and services leads to business growth and wealth creation for suppliers. The JSE's supplier development (SD) initiative helps small and medium enterprises (SMEs) to expand their customer base, increase turnover and profitability, and scale their operations to be more sustainable. These SMEs should then be able to participate in the corporate supply chain.

Our value creation business model continued

“We need to remain competitive in the products and services we deliver, and how we deliver them.”

Factors impacting our value creation business model

In the execution and delivery of our business model we need to use our inputs responsibly and manage certain key dependencies and resource constraints. We also need to proactively consider and manage material trade-offs between the various resources we rely on.

How we consider material trade-offs

Our business is operated according to a philosophy that aims to balance the interests of all stakeholders, particularly in relation to the following:

- » Achieving efficiencies for clients;
- » Optimising shareholder value; and
- » Reinvesting internally in people and technology.

This means balancing prices to clients, dividends to shareholders and rewards to employees.

Examples of material trade-offs include:

- » keeping prices stable or reducing them to remain competitive and to provide clients with the benefits of scale when the JSE attracts increasing activity; and
- » optimising personnel expenditure while ensuring remuneration is kept sufficiently competitive to attract and retain appropriately qualified and experienced people.

Key dependencies and resource constraints

Economic environment

We need an economic environment that is conducive to Capital Market activity, a licence to operate a market infrastructure and the participation of a range of clients (issuers and the broader investor community).

The JSE’s operational viability depends on its ability to provide a reliable, stable and secure trading and clearing environment.

Skills

Scarce and highly sought-after skills in the financial market and technology areas include risk, post-trade services, and regulation and information services expertise.

Healthy markets

Our viability depends on a healthy primary market in which the JSE is an attractive venue for raising capital. The liquidity and quality of our Secondary Market trading directly impacts our financial performance.



The JSE brand relies on technology delivery and positive relations with our stakeholders.

(Refer to material matters,  page 36)

Sustainable value

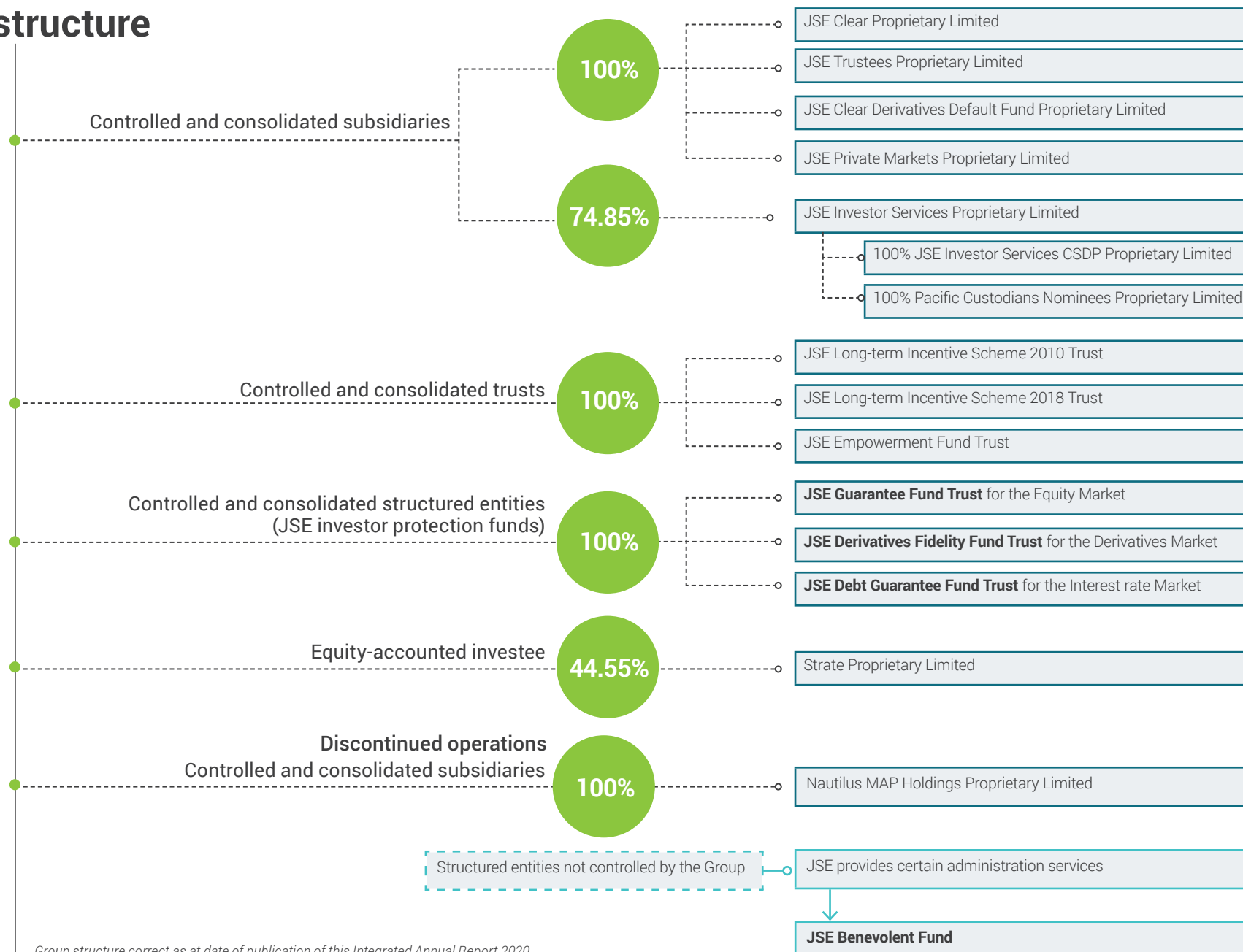
We recognise the need for business to embrace the Sustainable Development Goals (SDGs) and ensure that activities positively affect the achievement of the SDGs. In line with our strategic priorities, we have prioritised six SDGs whose objectives we are best placed to advance. By helping drive progress towards these outcomes and creating shared value, we can support more resilient communities, sustainable capital and a transformed society, enabling value creation over the long term.

			Reduced inequalities
	Responsible consumption and production		
	Climate action		
	Partnerships for the goals		

For more detail on how the JSE creates social value, refer to  page 6 in our  online *social value report*.

Group structure

JSE Limited



Group structure correct as at date of publication of this Integrated Annual Report 2020

OUR STRATEGIC POSITIONING

Group CEO's review

13

Our 2022 strategy

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Group CEO's review

The JSE demonstrated resilience and agility in the face of unprecedented challenges in 2020 while steadfastly delivering on strategic objectives.

Introduction

By all accounts 2020 was a tumultuous year, principally shaped by the outbreak of COVID-19. The pandemic destabilised economies and societies, with millions losing their lives and livelihoods. Through the turbulence, people across the globe have also borne witness to an acceleration in the pace of global innovation, permanently altering the way human beings work, learn and interact. The COVID-19 pandemic is set to be the defining moment in the societal and behavioural evolution of this generation.

The South African macro-economic environment has remained under pressure throughout 2020 as the pandemic exacerbated prevailing low economic growth, high unemployment and a high fiscal debt burden. Global financial markets took their cue from pandemic-fuelled uncertainty as well as a historic crash in oil prices. Local markets saw additional volatility with record trading volumes amplified by a sovereign credit rating downgrade, South Africa's exit from the World Government Bond Index, and rand volatility.

Resilience during a crisis is neither accidental nor coincidental. The JSE's operational dependability demonstrated throughout the crisis is a direct consequence of its multi-year focus on technology infrastructure, key skills and a focus on building lasting partnerships with clients and other stakeholders. This has resulted in significant strides during the last year in our inorganic growth strategy and successful upgrades to the core trading platform

(MIT technology) and information security readiness. Client and staff engagement is a key focus of the exchange and there was a notable improvement in both of these areas (measured independently). By placing their trust in the JSE, clients affect a responsibility on the exchange to deliver reliable infrastructure and a trusted and resilient market place.

I am therefore pleased to share a strong set of results for 2020. These results largely reflect the impact of market volatility, but also echo the enduring value created by the exchange. The JSE's focus remains guided by a resilient and stable core business alongside a promising inorganic growth strategy. Key highlights from the period include:

- » Sustained earnings quality and cash generation – a key component of the JSE's business model;
- » Uninterrupted market services in the context of unprecedented volatility;
- » Record Group revenue, including a 15% increase in Information Services;
- » Continued investment to drive growth and maintain IT robustness in our operations;
- » Positive operating leverage enhances earnings before interest and tax (EBIT) margin;
- » Capital expenditure (CAPEX) in support of operational and cyber resilience;
- » Progressed our inorganic growth strategy with the successful completion of the Link SA acquisition and the Globacap transaction; and
- » Healthy balance sheet underpins ordinary dividend growth and further inorganic growth in future.

Further detail on financial performance is outlined in the CFO's financial review on [page 39](#).

Group CEO's review continued

2020 markets review

Global markets experienced significant volatility since March 2020, with market drawdowns eclipsing the magnitude and speed of previous crises, but with recoveries coming faster and steeper too. Some industries proving more resilient than others.

The MSCI World and MSCI Emerging Markets indices were up 14% and 16% respectively in 2020 but the volatility during the year was significant, with the key S&P500 Volatility Index at one point eclipsing its high during the global financial crisis. The S&P 500 was up 16% and beat its own record highs three times last year, driven higher by rising technology counters and speculation about further stimulus in the world's largest economies.

South African markets have faced an uphill battle as deteriorating local fundamentals were exacerbated by global risk-off sentiment and the declining relevance of South Africa in an emerging market context. The rand, often seen as a barometer of risk appetite, fluctuated from a high of 19.35 ZAR/USD in April to its recent level of 14.69ZAR/USD on 30 December 2020.

Equities Market

The South African equities market has had a turbulent year, with stock trading driven by sentiment rather than fundamental analysis. News of rising COVID-19 infection rates took the market lower, while news of successful COVID-19 vaccine trials drove markets higher.

The JSE's headline All Share Index fell to a low of 34% from the start of the year in March, recovering to end the year 4.07% up. A rally in large dual-listed rand hedges saw resources and industrial stocks contributing to the recovery. The Resources 10 and Industrial 25 were up 16.9% and 12.4% respectively for the year to date on 31 December 2020. Meanwhile, financials remained the standout underperformer this year. Major banks have shed 22% of their market capitalisation since 1 January 2020.

Trade activity in the **Equity Market** has been robust:

- ↑ 7% billable value traded*
- ↑ 21% number of transactions
- ↑ 5% JSE's billable average daily value traded was R28 billion (2019: R27 billion)*

* Published trading statistics ↑ 10% (2019: -7%), published average daily value ↑ 8% to R23 billion (2019: R21 billion).

The **Equity Derivatives Market** has seen equally strong trading activity this year with higher transactions in index futures and growth in international derivatives and exotic products.

- ↑ 25% number of contracts traded
- ↑ 15% number of trades
- ↓ 7% value traded, owing to weakness in the JSE Top 40 Index, which commands the largest percentage of contracts traded

Currency Market

The Currency Market has also largely been defined by global challenges in 2020. During the height of the market impact in March, bid-offer spreads were 40% to 50% higher than their pre-COVID-19 levels. This has started to normalise, but volatility in the rand has contributed to erratic trade activity in this space, where a large portion of the trade is linked to hedging activity in the equity market.

Bond Market

Volatility also impacted the Bond Market resulting in a significant increase in standard trades, driven by large foreign outflows, COVID-19 and South Africa's exit from the World Government Bond Index. The bond market experienced record bid-offer spreads – rising from 4 to 5 basis points (bps) pre-COVID-19 to as high as 50 bps at the peak of the crisis. Nominal value traded was down 7% on the prior year. Yield spreads on the South African 10-year government bonds remain high, while in the bond repos market there has been a definitive shift away from longer-dated positions.

Commodity Derivatives Market

Value traded in the Commodity Derivatives Market was up, driven by the agricultural market, which accounted for ~98% of volume traded. South Africa's agricultural sector, which is export oriented, has seen limited disruption from COVID-19, as global agricultural and food trade has generally remained operational.

Rising export demand and higher global commodity prices have provided support for domestic prices.

Group CEO's review continued

Listing and delisting activity

Recently, several commentators have noted the extent of delisting activity and the long-term downward trend in JSE listings. Off-market capital raising activity, including private equity capital, has become more popular. This has been seen in financial markets across the world. The challenging economic climate, focus on technology companies that can access private capital relatively easily, and the perceived high cost of listing also contribute to changes in the investable universe in South Africa. Most of the 20 delistings in 2020 have resulted from corporate actions and schemes of arrangement in mostly small to mid, illiquid counters.

Despite the net negative effect of delistings, market capitalisation derived from new listings has been greater than that of delistings during the past decade. However, the high market volatility and prevailing uncertainty regarding the economy do not provide a conducive environment for initial public offerings (IPOs) and listings have largely been a result of corporate actions. The success of a listing is driven by factors such as company strategy, valuations and fund manager appetite. Certainty regarding a COVID-19 vaccine and proof of an economic recovery would be significant catalysts to unlocking new listing activity. There will also be some cyclical activity to listing activities: as fast-growing companies mature and private funders look to exit, listing activity will increase.

In the next six months, the focus will be on securing inward listings and progressing our work into private placement markets. The JSE is a catalyst for economic change and continues to explore ways to broaden and attract more issuers onto the JSE. The newly introduced Standard Listing Framework is an example of this, and we plan to target a number of foreign issuers in the months ahead.

Capital markets still offer an effective route to raise multiple tranches of new capital. The secondary markets have seen R67 billion (2019: R36 billion) raised this year.

Agile, responsive and resilient in the face of COVID-19

COVID-19 and its knock-on effects have tested our resilience and agility. We rapidly adopted new ways of work in order to deliver on our corporate objectives.

The impact of the pandemic on our clients, the financial services sector, our communities and society has been substantial. The tragedy wrought by the pandemic continues to have a profound effect on the lives of millions of people around the world. We remain focused on achieving greater cooperation between social partners to tackle this crisis.

As a financial market infrastructure provider, it has been imperative that the JSE remains open, operational, and responsive to fluctuations and risks in the market.

The enterprise risk management (ERM) team has taken overall responsibility for steering our response to the crisis and has provided exemplary leadership during this time. In this context, employee safety was a key priority and we saw a smooth transition to remote working. We also aligned our business practices with market participants to ensure stable operations. In the weeks leading up to the national lockdown in March, we systematically tested our ability to remotely clear and settle each of the markets we operate in. This ensured business continuity and robust trading, clearing and settlement environments for all asset classes throughout the crisis and particularly when volatility, volumes and value traded spiked in March and April.

The significant investment into our technology platforms prepared us well to withstand the crisis, ensuring operational resilience and available systems throughout several highly volatile periods. Maintaining our readiness and continuing to invest in our infrastructure will place the JSE in a strong position to thrive in the period ahead.

The JSE's focus remains guided by a resilient and stable core business alongside a promising inorganic growth strategy.

Group CEO's review continued

Our COVID-19 response



Resilience during a period of crisis

- » Market availability **99.95%** (2019: 99.76%).
- » **Zero** equity system downtime despite record trading days and increased volatility resulting in a significant increase in the number of circuit breakers being triggered.
- » **Uninterrupted** equity trading, clearing and settlement, with effective management of short positions and appropriate and responsive margin adjustments.
- » Responsive and timely changes to our Listings Requirements; **>25** guidance notes issued to the market.
- » Employees embraced new patterns and methods of remote work.
- » Significant investments in **IT robustness**.

Reduction by 57.14% in **IT incidents¹ that disrupted the market results**, particularly in the context of the volumes processed and the long hours staff worked through the national lockdown.



Support for clients during the COVID-19 crisis

- » **Regulatory support:** We worked with regulators to secure extensions to financial reporting requirements and a temporary amendment to our Listings Requirements for the issue of shares for cash. Our regulatory response to COVID-19 can be found on **page 78**.
- » **Support for distressed companies:** We offered extended payment terms of between three and six months, with no interest charged.
- » **Trade fee discount:** We offered a fee reduction of 50% for trading, clearing, and settlement in companies listed on the JSE Alt-X and black economic empowerment (BEE) boards for the remainder of the year.
- » **Capital raising fee discount:** We offered a 25% reduction in listing fees for small cap and Alt-X companies looking to tap the market to raise secondary capital.
- » **BEE broker support:** We increased the cash disbursements given back to small and medium stockbrokers that participate in the JSE's enterprise development programme from 33% to 50%.

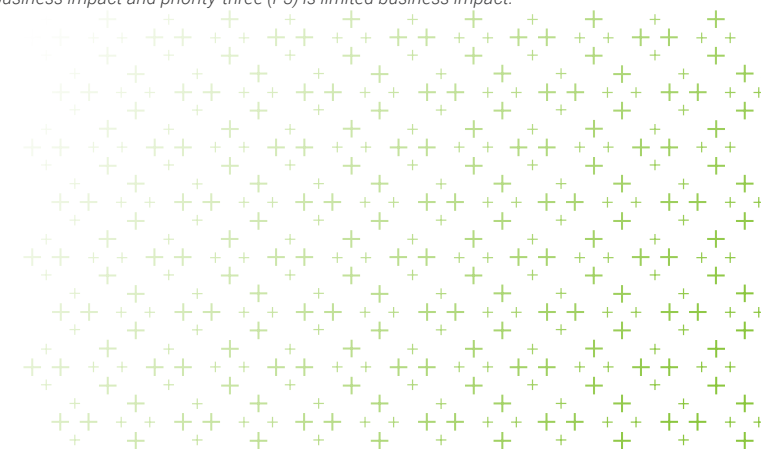


Our social response

The JSE partnered with 38 market participants to donate the trading revenues earned over two days across all asset classes to the Solidarity Fund. This initiative raised a total of R34.4 million, of which the **JSE contributed R13 million**. The Board pledged a portion of their director emoluments, and were joined by the staff, who also contributed a portion of their salaries in a united show of JSE support for the Solidarity Fund. The JSE also partnered with BLSA to support the provision of social outreach hygiene hampers and food parcels to assist disadvantaged communities in Gauteng.

Our COVID-19 response is detailed on **pages 24 to 26**.

¹ Incidents are measured and recorded according to their impact and urgency. A priority-one incident (P1) is considered critical business impact, priority-two (P2) is significant business impact and priority-three (P3) is limited business impact.



Group CEO's review continued

Focused strategy

Our strategy focuses actively on driving revenues and diversifying into new lines of business beyond equity market trading, including through inorganic opportunities, and with an emphasis on annuity revenues. Cost control remains a key focus area to maintain operating margins.

Our people, clients and stakeholders

The JSE's growth strategy is underpinned by understanding our client and stakeholder needs and delivering the highest quality service to them. This, along with our efforts to grow and diversify our business, is executed through a base of skilled, agile and future-fit employees and quality engagement with our clients and other stakeholders. We have invested in our employee culture and skills, contributing to significantly improved employee engagement scores (📄 pages 68 and 69). Similarly, we were pleased to note improving customer satisfaction with a higher Net Promoter Score (NPS) (📄 page 108), consistent with our 2020 objective of enhancing the JSE customer experience and turnaround times.

Partnering to co-create for inclusive and sustainable growth

We have made strides in progressing our inorganic growth strategy to reduce our equity market dependence, through the Link SA acquisition and dual equity stake and commercial agreement with Globacap.

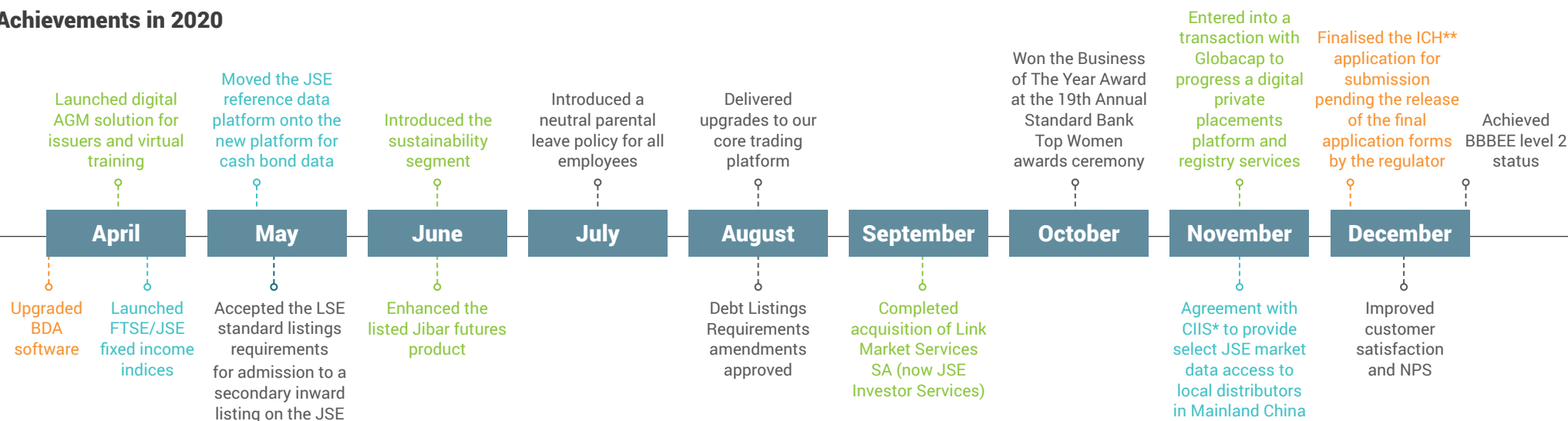
JSE Investor Services

Our undoubted corporate highlight for 2020 was the successful conclusion of the Link SA acquisition on 2 November 2020, following an extensive review by the Competition Tribunal. This enhances our product offering across the value chain, through a transaction that is profit accretive, improves the quality of our earnings through annuity revenue and offers the opportunity to exploit new revenue synergies in the medium term. Work is already well under way to onboard Link SA, now called JSE Investor Services, into the JSE Group.

Globacap

We also announced a commercial arrangement with Globacap including a £4 million equity investment – an initiative that will extend the JSE's reach into private markets and digital registry services, and in time broaden our revenue base. Not only does this transaction provide access to a new market segment for the JSE, but it also provides the opportunity to explore and experiment with DLT in close collaboration with a leading capital markets fintech.

Achievements in 2020



Capital Markets

Post-Trade Services

Information Services

Group-wide initiative

* China Investment Information Services Limited (CIIS).

** Independent Clearing House.

Group CEO's review continued

Running trusted markets, products, and services

We strive to run trusted markets, products and services by ensuring market quality, settlement assurance, governance, operational availability and resilience. We constantly improve our technology and regulatory approach to achieve this.

Core trading platform

Our standout technology achievement in 2020 was the completion of the upgrade to our core trading platform, MIT, on time and within scope. We planned extensively and engaged with the market taking a bold approach in the roll-out on a remote basis. The upgrade allows the JSE to introduce new and improved trading functionality for clients and provides system efficiencies.

Issuer Regulation agenda

Fundamental to the JSE's trusted position and governance role is our strong regulatory function. Our Issuer Regulation team proactively ensures the smooth functioning of the listed capital markets and implemented new Debt Listing Requirements. The team also dealt with the implications of the pandemic for issuers, adjusting and fine-tuning regulations in real time, while extensively coordinating with regulatory authorities. It also implemented standard listings based on the UK requirements.

We continue to progress investigations and findings related to recent corporate governance failures. We have re-examined and further strengthened our regulatory and governance role, particularly the quality and detail of our Listings Requirements, following the issues raised by recent scandals in corporate South Africa. Various changes to the Listings Requirements are now in effect, following a market consultation process. Our investigations unit has made significant progress with the release of findings (and the imposition of sanctions) on companies that have transgressed the Listings Requirements, thereby contributing to a heightened awareness of the general need for improved corporate governance in South Africa.

Leading by example on the national agenda

We seek to lead by example on the national agenda and promote #SAInc. as a global investment destination by partnering with the public and the private sector.

We have continued to engage extensively on the national agenda through BLSA, Business 4 South Africa (B4SA), SA Tomorrow, and engagements with key cabinet ministers and provincial premiers. As a result, the JSE has been a responsible corporate citizen and constructive role-player.

SA Tomorrow

This year, the 8th South Africa Tomorrow Investor Conference took South Africa to the world in a virtual format. JSE Chairman Nonkululeko Nyembezi was joined by Minister of Finance, Tito Mboweni. The virtual format of this year's conference increased its reach to more investors from across the United States, Europe and South Africa. It addressed over 300 investors and saw a significant increase in the number of institutions (87, up from 57 in 2019).

The conference focus remained on the importance of unlocking new and existing growth nodes and bringing the public and private sector together in order to solve the challenges South Africa faces.

Changes to capital flow regulations

South Africa has embarked on a process of modernising its exchange control standards in line with international best practice, as announced in the medium-term budget statement on 28 October 2020.

We are particularly pleased that the position paper on these reforms that the JSE produced in partnership with Intellidex has been one of the catalysts for changes, including the standardisation in the treatment of inward-listed instruments, allowing multi-currency listings and permitting non-ZAR collateral for derivatives exposures. We are looking forward to engaging with policymakers and regulators to help facilitate these proposed exchange control reforms in our capital markets and thus encourage inward investment into South Africa.

The announcement of these reforms positions South Africa as a competitive investment destination, opening the door for increased international investment and laying the foundation for securing OECD membership for South Africa. We believe these reforms will be positive for inward investment to South Africa.

ESG progress in 2020

- » The JSE launched its **sustainability segment** on 23 July 2020 and has attracted significant interest, with positive indications of a listings pipeline.
- » The JSE is ranked first in the **FTSE/JSE ESG Index**.
- » The JSE improved on its BBEE level status and achieved level 2 status (2019: level 3).

The JSE continues to enjoy global recognition as a thought leader in ESG matters.

- » The JSE is part of the **Financial Sector Climate Risk Forum (FSCRF)**, and chairs the **Sustainable Finance Working Group**.
- » I represent the JSE on the CEO Champion group of the **Just Transition Pathways initiative**, with the aim of expediting a green stimulus strategy.
- » I co-chair the **UNGISD** initiative.
- » I also serve as co-chair of the **Climate Disclosure Guidance project** alongside the London Stock Exchange Group, under the auspices of Mark Carney as UN special envoy on climate change.

More detail is available on  **pages 8 to 12** of our  online *social value report*.

Group CEO's review continued

Outlook and future focus areas

The JSE produced strong financial results despite a very difficult trading and economic environment. We have made significant strides in the diversification of our growth strategy as well as the resilience of our technology and systems. A relentless focus on implementation in addition to a few high-impact priorities will underpin business activities in 2021:

- » Driving the Group's inorganic growth strategy.
- » Managing the Group's cost base.
- » Integrating JSE Investor Services into the JSE.
- » Delivering new products and services in our Capital Markets and Information Services divisions.
- » Investigating a solution for clearing and surveillance of over-the-counter (OTC) derivatives.
- » Leading on the sustainability agenda.

Innovation, acquisitions and fresh approaches to capital formation will be key themes. The Board has reiterated its support for inorganic growth while maintaining a focus on the core business. We are mindful of the balance between growing the business and maintaining the business.

The years ahead require steady, disciplined work, accurately measured and properly accounted for. We require both patience and urgency, as well as idealism and pragmatism. South Africa's trade and investment links to the increasingly dynamic and sophisticated economies of the continent must continue to develop, and we must be at the forefront of regional integration. With this in mind, we will execute our strategy with speed and discipline and continue to rapidly improve our service offerings and technology to serve our clients with consistent excellence.

Appreciation

As I reflect on 2020, I am grateful to all my colleagues at the JSE for their energy, resilience and dedication. Not only have we delivered on our objectives but have done so against unprecedented challenges and our staff have remained enthused, engaged and focused on making their contributions, all while operating from home.

I wish to convey my heartfelt appreciation for the way that our market participants rallied to join forces, as the capital market ecosystem, in contributing to the Solidarity Fund. The money raised will no doubt touch many lives that have been impacted by the pandemic. We are indeed stronger together.

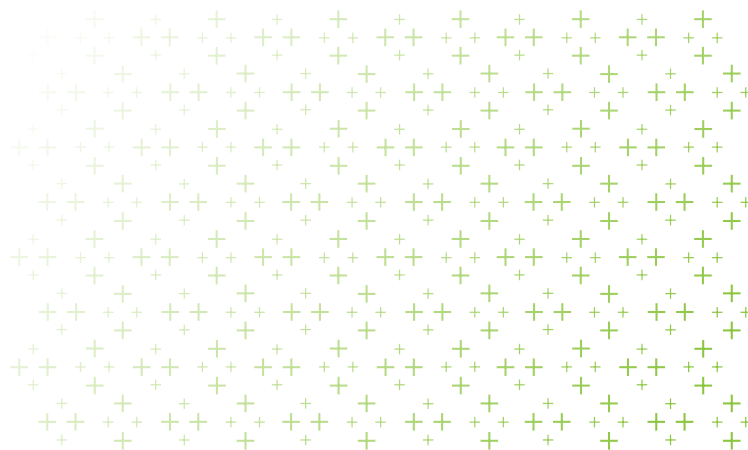
I thank our Chairman, Nonkululeko Nyembezi, the Board and my executive team for their supportive involvement and invaluable counsel during the year. I also express my appreciation to our regulators and policy makers for their collaboration, partnership and support.

My thanks also go to our clients and stakeholders for supporting the JSE. We look forward to continuing our collaboration in the year ahead.



Leila Fourie
Group CEO

The years ahead require steady, disciplined work, accurately measured and properly accounted for. We require both patience and urgency, as well as idealism and pragmatism.



Our 2022 strategy

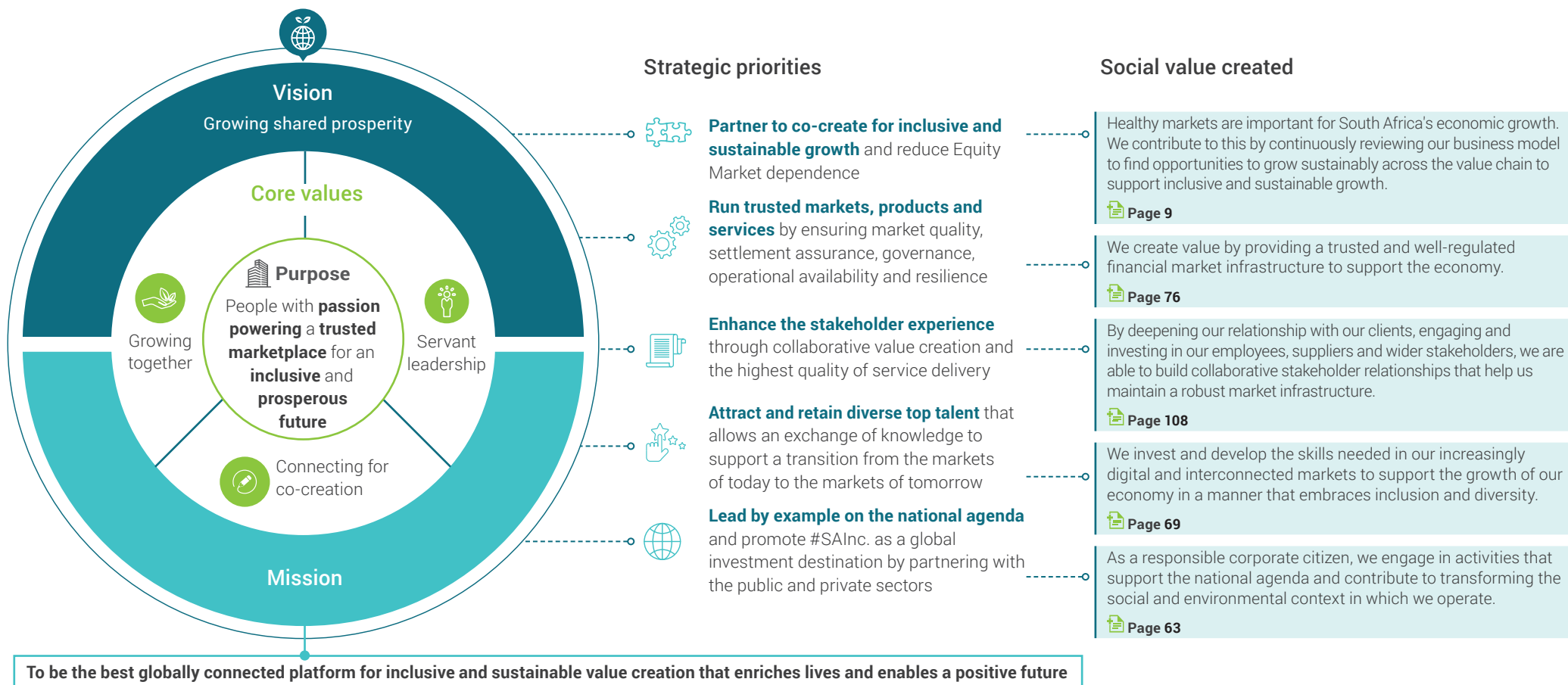
We operate in a dynamic and fast-moving industry; strategic planning is an ongoing process.

The JSE remained steadfast in our strategy, achieving notable success in our inorganic growth priorities through the successful delivery of the JSE Investor Services business and the transaction concluded with Globacap during 2020. Technology upgrades were delivered in 2020, allowing us to efficiently run trusted and resilient markets as well as expand our product and service offering.

Our strategy focuses actively on driving revenues, particularly from new lines of business beyond equity market trading, including inorganic opportunities, and with an emphasis on annuity revenues. Cost control remains a key focus area to maintain operating

margins. We recognise the limitations on pricing power and are mindful of client feedback regarding the overall cost of trading and the need for value-for-money services. Our strategy addresses our material matters (📄 pages 20 to 23).

We provide a stable, high-availability environment for trading and clearing which requires the right hardware, software and operating processes. This means the JSE needs to continuously invest in systems and capabilities.



Our 2022 strategy continued

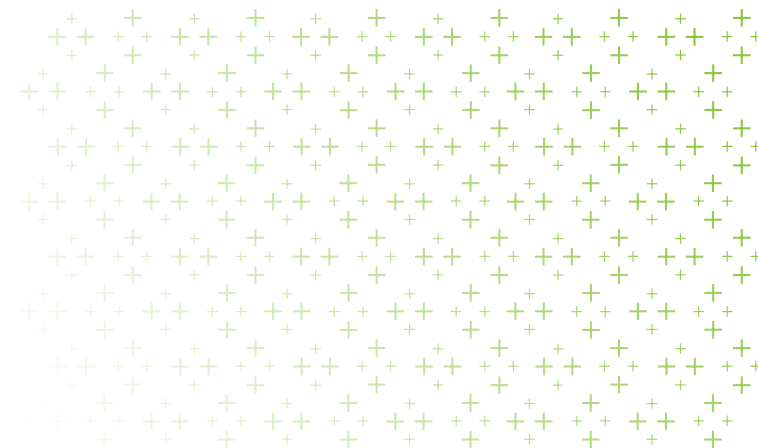
2020 strategic performance






The GRC considered the evidence supporting the Executive Committee's (Exco's) self-assessment and determined a corporate performance score for 2020.

Our scorecard for 2020 includes initiatives that address all our material matters. Our 2022 strategic priorities are firmly tied in with our corporate and Group CEO scorecards for 2020, which were approved by the Board in November 2019.

A self-assessment of our strategic delivery was undertaken by Exco and interrogated by the Group Remuneration Committee (GRC), and a summary on the status of each deliverable is included below. For 2020, each scorecard element was assessed as achieved by the Board. The GRC considered the evidence







supporting Exco's self-assessment and determined a corporate performance score for 2020, which was reviewed and ratified by the Board. Although we do not assign specific weightings to these deliverables, financial performance does contribute materially to the scorecard assessment, and the self-assessment directly informs the size of the discretionary bonus pool for 2020. For further information refer to the [online remuneration report](#).



2022 strategic priorities	Corporate and Group CEO scorecard ¹ 2020	Summary self-assessment and comment	Performance metrics
 <p>Partner to co-create for inclusive and sustainable growth and reduce equity market dependence.</p>	<ul style="list-style-type: none"> » Deliver financial performance in line with 2020 budget » Execute on inorganic growth strategy » Deliver new products and services in Capital Markets and Information Services » Integrate Link SA into the JSE <p><small>* Subject to the outcome of the Competition Tribunal decision.</small></p>	<ul style="list-style-type: none"> » Delivered financial performance in line with budget » New products delivered, including Johannesburg Interbank Average Rate (JIBAR) futures, new bond indices, the sustainability segment, virtual AGMs and electronic mailboxes » Link SA transaction successfully closed on 2 November 2020 with progress on incorporating into JSE Group as JSE Investor Services » Globacap transaction announced 	<p>Refer to the CEO's review for performance highlights and the CFO's review for performance metrics on  pages 13 to 19 and  pages 39 to 49 respectively.</p>
 <p>Run trusted markets, products and services by ensuring market quality, settlement assurance, governance, operational availability and resilience.</p>	<ul style="list-style-type: none"> » Improve our operational resilience » Improve our information security readiness in line with the plan » Complete MIT upgrade » Improve governance requirements 	<ul style="list-style-type: none"> » Operated our markets flawlessly and remotely throughout 2020 » Significant improvements delivered through improved cybersecurity upgrades » Core trading platform upgraded » Agile response to issuer regulation of Primary Market with numerous interventions including new shares for cash process, new Debt Listing Requirements, standard listings and major progress on investigations 	<p>Refer to the technology chapter on  pages 59 to 62.</p>

¹ The Group CEO is assessed by the GRC based on both the performance of the JSE against the 2020 corporate scorecard and on the impact of the Group CEO's leadership on the JSE.

Our 2022 strategy continued






2022 strategic priorities	Corporate and Group CEO scorecard ¹ 2020	Summary self-assessment and comment	Performance metrics
 <p>Enhance the stakeholder experience through collaborative value creation and the highest quality of service delivery.</p>	<ul style="list-style-type: none"> » Improve our client response times and quality of engagement » Improve on our 2019 client engagement score » Maintain the integrity and trust of our regulatory relationships 	<ul style="list-style-type: none"> » Excellent client service centre performance with speedy turn-around times and high resolution velocity » Positive shift in client engagement reflected in independent NPS survey results » Solid relationships with the FSCA and PA following extensive on-site engagements throughout 2020 and no unresolved regulatory matters 	<p>Refer to the NPS score details on  page 17.</p>
 <p>Attract and retain diverse top talent that allows an exchange of knowledge to support a transition from the markets of today to the markets of tomorrow.</p>	<ul style="list-style-type: none"> » Revise and launch our vision, values and JSE Way » Deliver efficiencies through new ways of work and agile capability » Improve on our 2018 employee engagement score 	<ul style="list-style-type: none"> » Vision, values and JSE Way successfully launched through extensive engagement with leadership and staff » Effective remote working since February 2020 delivering efficiencies even with challenging projects such as system upgrades and disaster recovery tests » Clear upward shift in staff engagement scores reflected in independent survey results 	<p>Refer to the employee engagement survey on  page 68.</p>
 <p>Lead by example on the national agenda and promote South Africa as a global investment destination by partnering with the public and the private sector.</p>	<ul style="list-style-type: none"> » Deliver impactful corporate social investment (CSI), and financial literacy education, to enable future inclusion » Lead on the sustainability agenda » Partner with government and promote South Africa as an attractive investment destination » Maintain our BBBEE level 3 score and improve our BBBEE internal transformation 	<ul style="list-style-type: none"> » Strong CSI programme together with virtual Investment Challenge successfully delivered » Extensive engagement locally and internationally through the FSCRF, the UNGISD co-chair role, the SSE Climate Disclosure co-chair role and the JSE's own sustainability showcase days » The 8th SA Tomorrow conference delivered virtually in November 2020 » Achieved level 2 BBBEE score 	<p>Refer to the  online <i>social value report</i>.</p>

¹ The Group CEO is assessed by the GRC based on both the performance of the JSE against the 2020 corporate scorecard and on the impact of the Group CEO's leadership on the JSE.

Our 2022 strategy continued

The 2021 corporate scorecard

Our scorecard for 2021 includes initiatives that address all our material matters. The Group CEO scorecards for 2021 were approved by the Board in November 2020 and are articulated in the table below.

2022 strategic priorities	Corporate and Group CEO scorecard ¹ 2021
 <p>Partner to co-create for inclusive and sustainable growth and reduce equity market dependence.</p>	<ol style="list-style-type: none"> 1. Deliver financial performance in line with budgeted targets 2. Progress our inorganic growth strategy 3. Progress relevant products and services across the value chain 4. Close out and complete onboarding of acquisitions
 <p>Run trusted markets, products and services by ensuring market quality, settlement assurance, governance, operational availability and resilience.</p>	<ol style="list-style-type: none"> 1. Maintain our operational resilience 2. Invest in information security robustness 3. Drive continued improvements in our technology architecture 4. Deliver efficiencies in the regulation of our markets 5. Implement independent clearing house (ICH) operating model
 <p>Enhance the stakeholder experience through collaborative value creation and the highest quality of service delivery.</p>	<ol style="list-style-type: none"> 1. Improve customer experience across the value chain 2. Maintain the integrity and trust of our regulatory relationships
 <p>Attract and retain diverse top talent that allows an exchange of knowledge to support a transition from the markets of today to the markets of tomorrow.</p>	<ol style="list-style-type: none"> 1. Strengthen our corporate culture, Agile and new ways of work 2. Build new capabilities (skills of the future) 3. Enhance employee engagement
 <p>Lead by example on the national agenda and promote #SAInc. as a global investment destination by partnering with the public and the private sector.</p>	<ol style="list-style-type: none"> 1. Promote access to global investment opportunities in the South African market 2. Broaden access to financial markets and promote financial literacy 3. Build public/private partnerships and promote South Africa as an attractive investment destination 4. Embed sustainability products 5. Maintained BBBEE level 2 score and progress transformation in line with employment equity (EE) plan

¹ The Group CEO is assessed by the GRC based on both the performance of the JSE against the 2020 corporate scorecard and on the impact of the Group CEO's leadership on the JSE.

FACTORS IMPACTING VALUE CREATION

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Operating during a pandemic | The JSE's COVID-19 response

The JSE has remained open for business, and has provided a robust trading, clearing and settlement environment for all asset classes listed on the Exchange.

Government identified the JSE and its market as an essential service required to enable smooth functioning of the markets during the lockdown period.

The JSE recognises the substantial impact of the COVID-19 pandemic on our clients, the financial services sector, and our communities and society. The Group's response is underpinned by a focus on the health and safety of our staff, support for our clients and the operational resilience of our platforms and infrastructure.

Our response teams and plan are outlined on [page 82](#) (Protecting value creation chapter), and the impact of the pandemic on our risk profile and how our business continuity management plans addressed this are outlined on [pages 105 and 106](#).



Operating during a pandemic | The JSE's COVID-19 response continued

During this challenging period the JSE:



Focused on employee safety and wellness

The JSE remained open for business, with a smooth transition to remote working practices.

Our focus was to ensure employees were capacitated to work from home and to ensure employee safety, wellness and support.

(Managing and recognising our employees' contribution, [page 66](#))



Maintained operational resilience

We maintained uninterrupted trading, clearing and settlement with effective management of short positions and appropriate and responsive margin adjustments.

This was achieved through heightened focus on business continuity practices, scenario planning and risk assessments, and resulted in zero system downtime despite record trading days and increased volatility.

(Our operational performance, [page 50](#); Technology and information, [page 59](#); Business continuity management (BCM), [page 106](#))



Proactively addressed regulatory issues

Adjusted Listing Requirements to support issuers.

To help issuers manage the economic impact of the pandemic on their business, we temporarily adjusted our Listings Requirements with the support of the FSCA and implemented measures to facilitate expedited listings and capital raising.

(Regulation and policy, [page 75](#))



Demonstrated commercial agility

The JSE was agile and responsive to our clients' needs and addressed concerns through financial support and new products and services.

We provided relief measures for distressed clients, reduced trading fees for small caps and launched a digital AGM solution for issuers.

(Our operational performance, [pages 50 and 58](#))



Responded to the social crisis

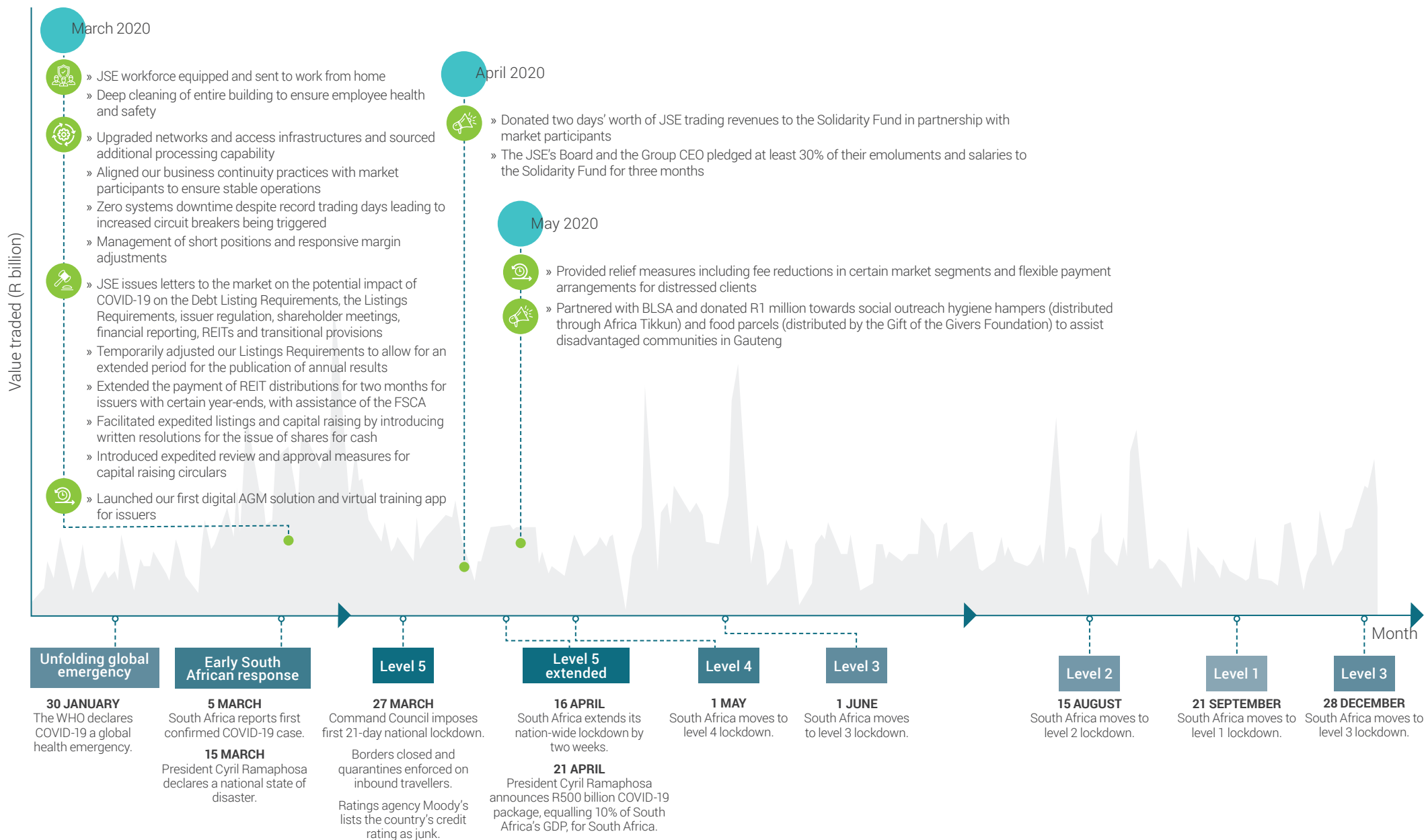
Supported national and social outreach projects to help protect those most impacted by the pandemic.

We primarily managed our approach through running the **#Trade4Solidarity** initiative and Board and employee donations to support the **Solidarity Fund**, as well as donating to a **social outreach** project. Operationally we remained committed to paying our contracted SME suppliers.

([Social value report](#), [page 20](#))

Operating during a pandemic | The JSE's COVID-19 response continued

Timeline of events



Operating context

The national economic environment has remained challenging, with the country dealing with a severe economic contraction, reduced national tax receipts and soaring unemployment.

Financial markets have been turbulent and volatile, with record trading volumes amplified by a sovereign credit rating downgrade, South Africa's exit from the World Government Bond Index, and rand volatility. South African markets have faced an uphill battle as deteriorating local fundamentals have been exacerbated by increased global risk off sentiment and the declining relevance of South Africa in an emerging market context.

- » The following market drivers and trends have a continuing impact on our business and performance. These matters, and how the JSE responds to them, are discussed throughout the integrated annual report, most notable in the Group CEO's review (pages 13 to 19), our 2022 strategy (pages 20 to 23) and material matters (pages 36 to 38).

1 The macro and South African economy

Overview

The macro-economy impacts market activity and the JSE's revenue performance in the long term. Revenue performance is largely driven by higher activity in the market. The business is often countercyclical in nature.

Globally

- » Uncertainty due to COVID-19 increased market volatility, and the economic impact increased the risk of insolvency of listed entities
- » Global recession and resultant lack of emerging market investments

Locally

- » Continued lack of business confidence and increasing cost pressures and inflation
- » Further downgrade of South Africa's credit rating to sub-investment grade
- » Low number of listings and an increased number of delistings
- » Trading of South African equities moving offshore, OTC markets and competition from new local exchanges

Additional information

- » CFO's financial review, page 39
- » Our operational performance, page 50

2 South Africa's socio-economic landscape

Overview

South Africa's unique and disparate economy is equally wrought with tensions and opportunities for change.

- » South Africa's environment consist of low growth, high unemployment and high levels of inequality, exacerbated by COVID-19's impact
- » The challenges require greater cooperation between social partners as they are too great for business, government or labour to deal with alone

Additional information

- » Transformation and socio-economic advancement, page 63
- » [Online social value report](#)

3 Regulatory trends

Overview

Changes in the market require the JSE to be at the forefront of regulation – both as a regulator and a regulated entity.

- » Several external regulations impacts on the JSE
 - o Exchange control reform
 - o Crypto assets
 - o Twin peaks framework
 - o European Union (EU) equivalence transparency regime
- » COVID-19 required an adaptable and flexible approach to regulation
- » Investors are seeking responsible ESG investments, further driven by local and international regulation such as carbon tax

Additional information

- » Regulation and policy, page 75

4 Technology trends

Overview

Technology is both an enabler and source of disruption.

- » Rapid technological innovation, particularly in digitisation, AI and automation are on the rise, with COVID-19 increasing digitalisation's impetus
- » Migration to the cloud, AI and machine learning are opportunities
- » Cybersecurity, particularly in the remote working environment remains a high priority

Additional information

- » Technology and innovation, page 59

5 Sustainability trends

Overview

The challenges experienced during 2020 and the hardships caused by COVID-19 accelerated certain sustainability trends aimed to achieve greater cooperation between social partners on sustainability matters.

- » Increased focus on "build back better" underpinned by sustainability thinking as the leading post-COVID-19 narrative
- » Social and socio-economic themes are rising in prominence
- » Investors and social activists are increasingly focusing on ESG, with growing momentum for an alignment of standards, frameworks and definitions

Additional information

- » [Online social value report](#)

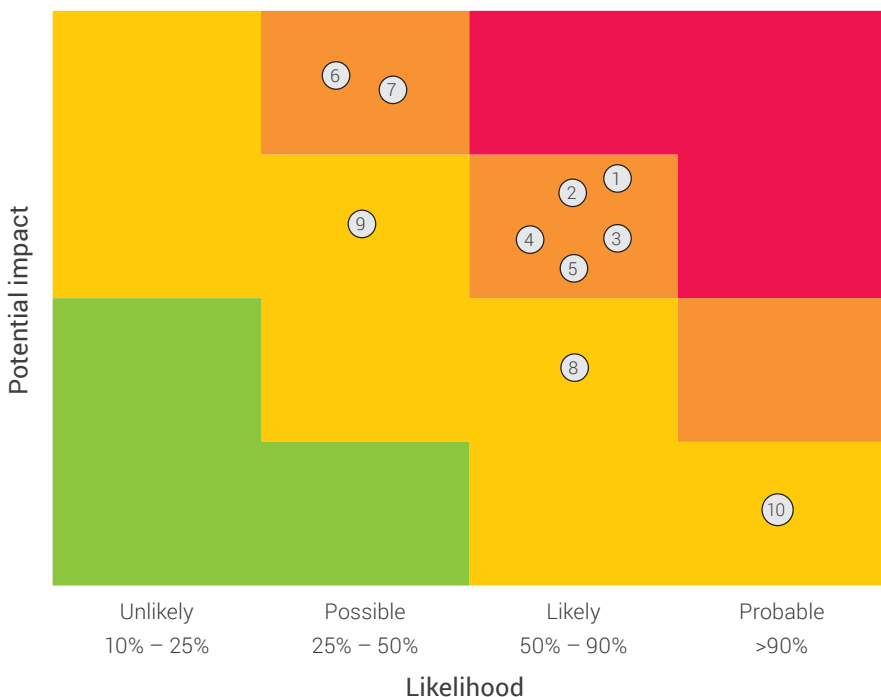
Our top risks

Our top risks reflect the challenges and opportunities posed by our operating context and those elements that could impact our long-term sustainability.

The JSE Group's risk and resilience programme enables the organisation to proactively anticipate risks and opportunities and to ensure that appropriate responses are developed and implemented within our risk appetite. Our risk management approach is outlined on [page 101](#).

The JSE's risk profile is mapped against the revised JSE strategic objectives. Our risks and our mitigation strategy are set out below.

Residual risk rating

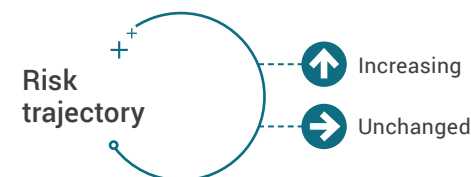
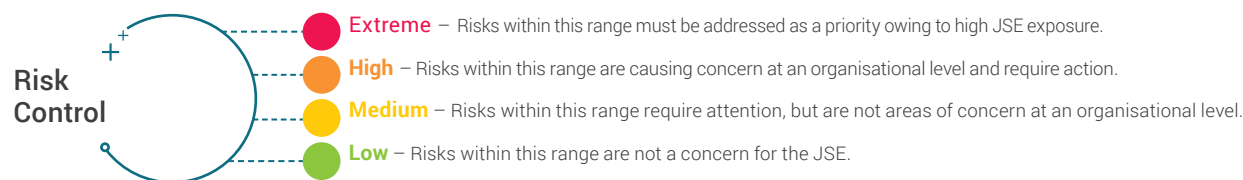


1. Financial performance risk
2. Cybersecurity risk
3. Default/counterparty failure risk*
4. Business model disruption risk*
5. Evolving business model risk
6. Critical third-party failure risk*
7. Operational vulnerability risk
8. Reputational risk*
9. Stakeholder management risk
10. Information governance risk

* Largely outside JSE control.

Movements in our top risks reflect changes in our operational context, our evolving strategy and an increased focus in specific aspects of certain risks, which have therefore been split out to facilitate increased focus.

- » The impact of COVID-19 on our business's resilience has resulted in the elevation of the risk of default counterparty failure, and the extraction of critical third-party failure risk from the operational vulnerability risk category.
- » Competition risk has been expanded and renamed. It is now called business model disruption risk, to encompass a broader definition of elements that may disrupt the JSE's business model, such as regulatory change and technology change. Similarly, information security risk has been renamed cybersecurity risk.
- » In response to the JSE's growth strategy, the evolving business model risk has been identified.
- » Reputational risk has previously been considered an overarching risk as it links to each area of the JSE's risk landscape. This has been extracted as a specific risk in response to the JSE's multiple roles and growth strategy.
- » The residual risk rating of five of the top risks reported in 2019 remain the same and these risks remain critical to the JSE. However, they are no longer among the top risks because of the emergence of other risks over the course of the year. These are outlined on [page 35](#).



Our top risks continued

1

Financial performance

Inability to meet financial performance and growth targets

Potential causes

- » Slow to negative economic growth
- » Unfavourable South African political conditions
- » JSE trading activity migrating to larger liquidity pools off shore
- » Revenue dependency on the activities driven by the Equity Market
- » Strategic cost management and increased risk of operational losses
- » Extreme weather changes and extreme natural disasters may affect JSE-listed companies and the JSE

How we manage the risk

- » Revenue diversification away from markets revenue
- » Ensuring the JSE remains up to date with the latest global equities technology and functionality
- » Scenario planning, financial and operational resilience stress testing
- » Promotion of JSE markets, products and services globally
- » New product development
- » Operational losses managed well within risk appetite
- » Efficient allocation of Group capital
- » Cost optimisation

2020 developments

- » Link SA transaction concluded successfully
- » Announced our investment in Globacap
- » MIT upgrade delivered successfully
- » Entered into an agreement with China Investment Information Services Limited (CIIS) to provide select JSE market data access to local distributors in mainland China
- » Sustainability segment launched
- » Launched FTSE/JSE Fixed Income Indices
- » Headcount remains at current planned levels

COVID-19 exposure

Operational losses managed well.

Future opportunities

- » Progress our inorganic growth strategy
- » Progress relevant products and services across the value chain
- » Close out and complete onboarding of acquisitions
- » Further OTC clearing
- » Further ESG and green economy initiatives
- » Build public/private partnerships and promote South Africa as an attractive investment destination

2

Cybersecurity risk (previously information security risk)

JSE digital assets being compromised through breaches and/or unauthorised access

Potential causes

- » Cyberattacks resulting in JSE digital assets being compromised and reputational damage

COVID-19 exposure

Increased vulnerability because of the increased opportunities and alertness of criminals as well as the geographic dispersion of remotely working employees, clients and suppliers owing to COVID-19.

- » Lack of adequate internal specialised skills and resources

How we manage the risk

- » Information security roadmap
- » Cyber-Risk Committee chaired by SARB
- » Information Security Steering Committee meetings

2020 developments

- » Information and cybersecurity have seen significant investments
- » IT security awareness campaigns intensified
- » Service providers contracted to provide security as a service to support the chief information officer (CIO)

Future opportunities

- » Continue with self-assessments
- » Continue to address security enhancements
- » Finalise the data privacy governance framework
- » Invest in information security robustness.
- » Drive continued improvements in our technology architecture

Our top risks continued

3

Default/counterparty failure risk

Default/counterparty credit risk: Failure of companies or individuals to pay debt obligations resulting in, for example, suspension of listed companies, default of trading/clearing members or banks and the resultant impact on the JSE in invoking default management procedures

Potential causes

- » Corporate failures resulting in, for example, suspensions or delistings, default of trading/clearing members/banks

COVID-19 exposure

Increased vulnerability owing to insolvency risk of listed entities and market participants as a result of the global economic impact of COVID-19.

How we manage the risk

- » Continuously monitor landscape and conduct financial stress testing
- » Process to manage trading member default (involves managing their client assets and rolling/failing their trades)

2020 developments

- » Financial stress testing factoring in all risk elements has been concluded
- » Tested ability to manage clearing member default, and reviewed Strate's process to manage CSDP default

COVID-19 exposure

Default management plan/guidelines have been developed to ensure a streamlined process for the management of defaults.

Future opportunities

- » Maintain our operational resilience

4

Business model disruption risk *(previously competition risk, expanded)*

Risk of JSE business model becoming obsolete owing to innovations by new and existing competitors, regulatory changes and the advent of disruptive technology

Potential causes

- » Trading activity migrating to larger global exchanges
- » Trading of South African equities moving to OTC markets such as private markets and competition from new local exchanges
- » Disruptive regulatory changes – change to SRO model, with trading and listing regulatory functions moving to the FSCA and/or introduction of the admit-to-trade business model
- » Disruptive technologies
- » Lack of a culture of innovation and reinvention
- » Project funding and delivery process too lengthy and centralised
- » Strategic direction unclear

How we manage the risk

- » Through our competitive response strategy
- » Through enhanced product and systems functionality across asset classes
- » The JSE monitors global competitors' market share and market quality and continually refines its value proposition and response plans
- » Investigating alternative funding sources
- » Prototyping with the use of the newest and latest technology
- » Keeping abreast of local and global developments

2020 developments

- » Reviewed and refined competitive response strategy
- » Furthered Equity Market functionality (dark trading functionality) and MIT upgrade (implemented successfully)
- » Announced commercial arrangement with Globacap, which looks at Private Market's solution and infrastructure asset class offering
- » Risk appetite statement defined to ensure sufficient risk-taking/fail-fast culture
- » New ways of work implementation well under way

Future opportunities

- » Explore other asset classes
- » Inorganic growth acquisitions
- » Upscale change management interventions – agile, fail-fast mentality

Our top risks continued

5

Evolving business model risk

The risk that the JSE’s architecture (including its purpose, vision, values, culture, risk philosophy and so on) is not transforming in tandem with the evolving business model as it expands its reach through inorganic growth and other non-traditional growth strategies and product offerings

Potential causes

- » JSE business model changing rapidly because of its inorganic growth strategy
- » Change introduced with additions of other businesses to JSE Group

How we manage the risk

- » Current JSE business model under review along with a review of its purpose, vision, values, culture, and risk philosophy to ensure it is appropriate for the rapidly changing JSE business model

2020 developments

- » Link SA (now called JSE Investor Services) business models are being reviewed as part of the integration plan
- » Work is already well under way to onboard Link into the JSE Group

Future opportunities

- » Integration plans of other inorganic initiatives to include the JSE’s evolving business model considerations

6

Operational vulnerability

Operational disruption and incidents resulting in downtime and impacting service delivery

Potential causes

- » Operational stability of JSE markets and systems impacting revenue and resulting in reputational damage
- » Manual processes and human error
- » Lack of embedded enterprise control framework
- » System outages owing to legacy systems that require decommissioning
- » Insufficient crisis management and business continuity management
- » Loss of staff/unfilled vacancies

How we manage the risk

- » We continue to strengthen our operational resilience, building on the significant work undertaken over the past two years to develop a more robust operating culture
- » Managing people and processes effectively
- » Employee wellness programmes, which include encouraging staff to take time off, activation of back-up plans and more robust four-eye principle applied on key processes
- » Operational resilience framework
- » Crisis management manual
- » Business continuity governance

2020 developments

- » Market availability up year on year
- » P1s down year on year
- » Successfully migrated our bonds data to a new platform
- » Disaster recovery business continuity plan (BCP) tests conducted
- » Real time clearing enhancements implemented successfully
- » Control management framework approved
- » Operational resilience framework approved
- » Business continuity governance updated
- » BCPs updated

Future opportunities

- » A number of initiatives are under way to improve our IT systems and tools
- » Opportunities to automate manual processes continuously identified and work under way
- » Control management framework rollout under way and progressing well for Cash Equities and Investor Services rollout planned for 2021
- » Operational resilience framework four-year roadmap set, with Cash Equities and Investor Services rollout planned for 2021
- » Return-to-office plan completed and will be implemented in 2021

COVID-19 exposure

- » Operational resilience working model managed well
- » Our human resources (HR) team engaged employees throughout the year with virtual training, education and support
- » Agile response to issuer regulation, with numerous interventions and major progress on investigations
- » Crisis management manual updated
- » Remote working business continuity implemented

Our top risks continued

7 Critical third-party failure (previously encompassed under operational vulnerability risk)

Failure of JSE-critical third party, such as a major service provider, client or partner, resulting in service disruptions and/or failure to deliver new products

Potential causes	How we manage the risk	2020 developments	Future opportunities
<ul style="list-style-type: none"> » Failure of critical third party, resulting in operational outage and reputational damage » Utility dependency resulting in extended power outage or water shortage 	<ul style="list-style-type: none"> » Quarterly Group risk assessment » Third-party contract management capability enhanced through additional resourcing and systems/processes » JSE’s current onsite storage of diesel and water supplies are adequate and there are sufficient business continuity arrangements in place to restock supplies » The JSE is part of the sub-committee of the Financial Sector Contingency Forum (FSCF) established October 2019 with the objective of planning for extended blackouts 	<ul style="list-style-type: none"> » Quarterly Group risk assessment completed on all critical third-party service providers » Backup/alternate strategies developed for all critical suppliers » Scenarios and respective response plans enhanced » JSE requested BCPs from all clients and software vendors <p>COVID-19 exposure</p> <ul style="list-style-type: none"> » Conducted contractual reviews with the aim of ensuring holistic business continuity management clauses on all contracts » COVID-19 supplier relief programme available to suppliers 	<ul style="list-style-type: none"> » Rollout scenarios and respective response plans in 2021

8 Reputation risk
Inability to meet stakeholder expectations in upholding market integrity

Potential causes	How we manage the risk	2020 developments	Future opportunities
<ul style="list-style-type: none"> » Corporate governance issues can translate into loss of value and increased risk levels owing to perceived lower market integrity » Lack of business confidence in JSE because of governance issues (such as fraud) relating to listed companies, resulting in listings failures/irregularities 	<ul style="list-style-type: none"> » Reputation management stakeholder mapping and crisis communication manual » Media engagement plan » Public censures, with fines » Reputation risk management framework 	<ul style="list-style-type: none"> » Reputation management stakeholder mapping and crisis communication manual and process updated » Extensive coordination with regulatory authorities, implementing new Debt Listing Requirements, as well as Standard Listings based on the UK requirements » Progressing investigations and findings in response to recent corporate governance failures 	<ul style="list-style-type: none"> » Proactive engagement with the media on the role of Issuer Regulation with regard to enforcement action related to listed companies » Reputation risk management framework being enhanced, to be finalised in 2021

Our top risks continued

9

Stakeholder management risk

Ineffective stakeholder management

Potential causes

- » Insufficient client satisfaction, resulting in reputational damage or revenue loss
- » Lack of a sufficient stakeholder communication strategy, resulting in reputational damage or lack of project delivery
- » High costs and inadequate or unclear value proposition
- » Lack of relevance, locally and on the continent
- » Limited resources, therefore, the sequencing and prioritisation of projects is key

COVID-19 exposure
Renewed client concerns around JSE fees as a result of the need to reduce costs because of the impact of COVID-19.

How we manage the risk

- » Client surveys
- » Stakeholder engagement forums
- » Various standard PA site visits
- » Customer experience change management programme
- » JSE website (including client portal)
- » Financial literacy education to enable future inclusion

2020 developments

- » Improvement in the NPS survey results
- » We have continued to engage extensively on the national agenda through BLSA, SA Tomorrow, engagements with key cabinet ministers and provincial premiers
- » The JSE's position paper, in partnership with Intellidex, on exchange control reforms
- » Extensive engagement, locally and internationally, through the FSCRF, the UNGISD co-chair role, the SSE Climate Disclosure co-chair role, and the JSE's own sustainability showcase days
- » Stakeholder engagement forums
- » Various standard PA on-site visits in 2020
- » Customer experience change management programme is being rolled out

COVID-19 exposure
» Regular, clear client communication for market and regulatory areas
» Updated approach to ensure impactful CSI (including initiatives in response to COVID-19)

Future opportunities

- » Engage with policy makers and regulators to help facilitate exchange control reforms in our capital markets to encourage inward investment into South Africa
- » Explicit connection with asset owners
- » Direct clearing
- » Authentication and certification services

Our top risks continued

10

Information governance risk

Lack of appropriate information governance, which results in data or information breaches or publication of incorrect information



Potential causes	How we manage the risk	2020 developments	Future opportunities
<ul style="list-style-type: none"> » Non-compliance to data privacy legislation » Poor data retention » Poor data quality/incorrect statistical reporting » Insufficient data classification » Poor data access management » Poor decision making owing to lack of information 	<ul style="list-style-type: none"> » Enterprise information governance through the Enterprise Information Governance Council » Data privacy governance framework to embed data privacy regulation and achieve compliance » Compliance with the Protection of Personal Information Act (PoPIA) » Various data privacy policies » Breaches, if any, are tracked and closely managed through the incident management process » Governance processes are in place to ensure appropriate data access rights » Confidentiality agreements are in place with staff who have access to confidential information 	<ul style="list-style-type: none"> » Compliance readiness with the PoPIA 	<ul style="list-style-type: none"> » Data privacy governance framework is being refined » Various initiatives under way to manage, maintain and improve information retention and data quality across the Group » Improving quality of currency and bond market statistical reporting currently prioritised for review » The data classification model is being revised and updated » Initiatives under way to improve the level of business intelligence and access to information for decision making

Our top risks continued

Top risks outside the top 10

The following risks were prominent in the top risk reporting in 2019, and align strongly with the JSE's material matters. Their impact and residual risk rating remains the same and they are therefore still closely monitored.

- » **Settlement risk:** Failed or rolled settlement owing to counterparty failure to deliver security or cash to effect settlement on time.
- » **Regulatory risk:** Risk of failure to perform JSE SRO regulatory duties in relation to material non-compliance by issuers with the Listings Requirements and/or market participants with JSE rules or financial markets legislation.
- » **Professional skills risk:** Inadequate skills/loss of critical skills and institutional memory to other exchanges or to emigration.
- » **Transformation risk:** Inability to meet transformation targets and promote South Africa's transformation.
- » **Technology risk:** Risk that the JSE does not embrace new technology to stay ahead of the curve and leverage efficiencies and/or risk of misalignment between the technology roadmap and architecture, and the JSE's strategic direction. Risk of inefficiencies in existing technology resulting in losses and/or missed opportunities.

Risks on the radar

We track and monitor the following emerging risks that have the potential to disrupt our business if they materialise:

- » Prolonged global recession;
- » Bankruptcies (big firms and SMEs) and industry consolidation;
- » Failure of industries or sectors to properly recover post the COVID-19 pandemic;
- » Social unrest and pressure on corporate South Africa to make a meaningful contribution to the real economy;
- » Growing importance of the sustainability agenda. Although COVID-19 moved the focus slightly, it has also repositioned it, by forcing people and organisations to implement behavioural changes and adopt sustainable practices. As a listed company, exchange and regulator, we need to be ready to respond, as growing demand for demonstrable changes could be disruptive, unless we are proactive;
- » Fiscal debt; and
- » Geopolitical tensions.

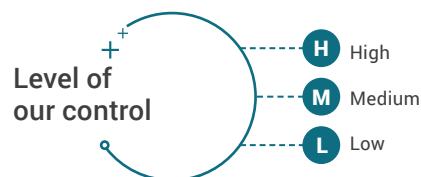


Material matters ⁰⁵

Our material matters shape our Group strategy and serve as a filter for determining the material information to be included in this report.

The JSE revisits our material matters annually. Our process is workshopped by JSE senior management and approved by the Board. The Group considers the impact of changing stakeholder needs and trends in the macro-environment on our value creation, and assesses if our material matters reflect the Group’s business drivers, current risks and opportunities. Our 2020 assessment resulted in updates to the nine matters reported in 2019, and the addition of one new matter.

Each material matter listed below has a high impact on the JSE’s ability to create value over time. We indicate the level of the JSE’s control over each matter and reflect where the level of impact has changed, compared to 2019. The impact of most of the material matters has increased over the past year.



1 Quality of the market

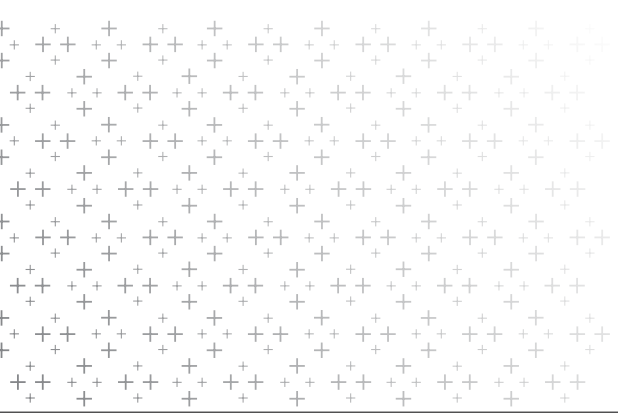


Our viability depends on a healthy Primary Market, where the JSE is an attractive venue for raising capital. The JSE aims to attract quality listings. This is challenging in a low-growth economy. Serving the SMEs sector and AltX increases the health of the Primary Market.

ESG matters influence companies’ activities, profitability and the long-term attractiveness and sustainability of the market. Investors are seeking responsible investments, and local and international regulation, including climate change and carbon tax, is further driving this agenda.

Corporate governance and ethics in South African companies and the perception of the JSE’s regulatory quality impact the JSE’s brand and reputation, and how foreign investors view South Africa as an investment destination. A series of public and private sector fraud and corruption scandals has created a corporate trust deficit. This has impacted the JSE’s reputation through the Group’s perceived regulatory role on these matters, and reduced foreign investor confidence in South Africa.

Our role is to provide and oversee an effective regulatory environment with disclosure that assists investors in making decisions, and leverage our sphere of influence to raise the profile of ESG matters and ensure the long-term quality of the markets.



Material matters continued

2 Level of market activity and quality



M

Local and global economic growth impacts the trade environment and business activities that generate revenue for the JSE. We are also exposed to emerging markets sentiment, and the influence of the South African political environment, policy uncertainty and utility constraints (electricity and water), which impact financial market activity. In 2020 there were specific events that drove volatility, including COVID-19.

The JSE assesses its market quality through measuring liquidity, transparency, price discovery and transaction costs, among others. The liquidity and quality of our Secondary Market trading directly impact our financial performance. Changes in the regulatory environment, the technology landscape and evolving client needs and expectations all impact the level of Secondary Market trading.

The JSE continuously reviews its business model to find opportunities to grow sustainably across the value chain and diversify revenue from a dependence on cash Equity Market trading – this includes non-organic business lines and an emphasis on growing annuity income streams. Cost control remains a key focus to maintain operating margins.

3 Operational availability and stability



H

The JSE's operational viability depends on its ability to provide a reliable, stable and secure trading and clearing environment that meets its clients' requirements at a competitive price.

As a financial market infrastructure provider, we operate in a high-availability environment – system downtime could have a significant knock-on effect on clients and the economy at large. The reliability, effectiveness and efficiency of systems, processes, controls and employees have a direct impact (positive or negative) on the JSE's reputation and earnings.

The COVID-19 pandemic emphasised the importance of business continuity and represented a practical stress test on our systems, processes and controls. During this volatile period, with record trade volumes and most of our resources off site, the Exchange continued to operate and experienced zero downtime.

We ensure business continuity by investing in our operational capabilities (including information security and cybersecurity), technical skills (people), backup systems (for example, power generators) and technology, and by continuously enhancing our incident management, cost control and stakeholder communication.

4 Enabling technology to provide innovative solutions



H

Technology is at the centre of the JSE's business. We have a significant investment in trading and clearing platforms to serve our markets, which are integrated with multiple and complex support systems and applications. Our technology needs to be functional, efficient, reliable and cost effective in order to provide clients with solutions that meet their specific needs, address regulatory requirements and support the capital market ecosystem.

Legacy applications, the complexity of our technology environment and the need for fit-for-purpose information security and cyber risk protection require an ongoing material investment. This investment and emerging disruptive technologies increase our operational risk and impact our financial capital, our systems and infrastructure, and our people. However, they also provide us with an opportunity to enhance the JSE's products, services and processes through the innovative use of technology.

In managing this material matter, the JSE assesses the extent of the necessary investments, the time to market for new solutions, its dependency on key suppliers and the impact on clients – including the effect on their cost base to adapt to new solutions, possible changes to fee structures and the benefits they will receive.

5 Calibre of oversight and regulation



M

As the JSE is both a regulator and a market operator, we recognise and engage on stakeholders' perceptions of a conflict of interest.

As a regulator, regulations impact how clients interact with the JSE, and we share regulatory insights and enhancements with the market. We balance the need for effective regulation while assessing the regulatory burden on participants. Our responsive regulatory teams actively assess regulations in times of uncertainty. For example, we enabled certain extensions in response to the challenges arising from COVID-19.

We will continue to engage proactively to identify possible enhancements to the Listings Requirements, increase the quality of our regulatory activities and address gaps in the market perception of our regulatory role.

Material matters continued

6 Transformation and socio-economic advancement

We recognise that, within the ambit of the JSE's operations and our sphere of influence, we have a role to play in advancing:

- » transformation in our own business and ecosystem;
- » influencing inclusive growth through access to our products and services;
- » providing SMEs access to capital through access to the listed market;
- » socio-economic development; and
- » the socio-economic position of the people we affect.

South Africa's failure to achieve broad-based growth impedes the growth of the JSE's client base.

Our clients also expect the JSE to have strong BBBEE credentials to support their BBBEE ratings.

We aim to create or enable solutions for transformation aligned to our business, and we explore ways to enhance the JSE's transformation credentials and support the national transformation agenda. We use our regulatory powers in a fair, equitable and responsible manner to support changes (through the Listings Requirements). This guides our clients' focus on their transformation responsibilities. We aim to broaden the listing market to enable SMEs to list and raise capital and thus build the economy, and allowing retail clients to invest in the market. We seek to actively engage with government and other stakeholders and participate in policy forums, roadshows and workshops to promote #SAInc.

7 Managing critical and essential skills and talent

The JSE needs to attract, retain and develop a motivated, skilled and diverse workforce that is suited to its current and future needs.

Our ability to maintain operational availability and stability, and to effectively and efficiently use technology to provide innovative solutions, depends on our people. Scarce and highly sought-after skills in the financial markets and technology areas include risk, post-trade services, regulation and information services expertise. We review and update our policies to be supportive and progressive and make the JSE an employer of choice. We endeavour to be conscious of our employees' needs and Group culture, particularly in our current context where the work environment has shifted to remote working. We continue offering training and mentoring programmes for employees as we seek to invest in and retain world-class talent. We also manage executive and senior leadership transitions, and retaining critical institutional knowledge remains a focus area. We use cross-skilling and upskilling to proactively manage key person dependencies.

8 Regulatory compliance and settlement assurance

The fast-evolving regulatory environment impacts how the JSE operates and has a related financial and opportunity cost, for the JSE and its clients. We strive to comply with all relevant laws and regulations, and our governance process is proactive in identifying and acting on legislative changes. These changes may also afford us the opportunity to diversify our products and services.

Regulation requires the JSE to provide settlement assurance for trades executed on the central order book, creating the risk of having to settle large amounts in the event of default. To mitigate this risk, we monitor the risk taken by each member and the adequacy of each member's capital daily, and we ensure that the member's main business activity is that of securities broking. We maintain sufficient capital on our own balance sheet to protect against a default event, and we perform default simulations.

9 Concentration and interdependency of the capital market ecosystem

By its nature, the local capital market creates interdependency with key stakeholders and a concentration in clients, products and service providers. Together with this interdependency and concentration, the JSE's complex operating environment can impact strategy execution, or the speed thereof. Therefore, it is important to maintain collaborative stakeholder relationships, including with market infrastructures (for example, Strate Proprietary Limited (Strate)), regulators and clients, so that we can maintain an enhanced market infrastructure. We need buy-in from stakeholders to effect significant changes to technology and/or processes. The JSE continuously reviews its business model to find opportunities to grow sustainability across the value chain and to diversify revenue streams to lessen its concentration risk.

10 Competition and disruptors

The JSE is subject to competition and business disruptions in the same way as other companies are. We compete as an investment destination, and against organisations that provide alternative capital raising, trading, clearing or settlement platforms and data functions. Known business disruptors include blockchain and fintech companies.

The JSE needs to be innovative in its offerings and to seek opportunities that ensure its products and services are reliable, stable, secure and of the highest quality at competitive prices. We continue to evolve our business model to better serve the market and remain competitive.

2020 PERFORMANCE

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CFO's financial review

Robust performance with positive operating leverage, strong cash generation and progressive ordinary dividend.



The year in review

Trading and profitability

+13%

YoY growth in total revenue to R2.5 billion (2019: R2.2 billion)

+11%

YoY growth in operating expenses to R1.7 billion (2019: R1.5 billion)

+4%**

YoY growth in personnel expenses to R601 million (2019: R580 million)

+1pt

YoY growth in EBIT margin to 32% (2019: 31%)

27%

Effective tax rate (2019: 26%)

15%

YoY growth in HEPS and EPS to 936.7 cents (2019: HEPS 814.6 cents; EPS 814.8 cents)

Cash and capital allocation

14%

YoY growth in cash generated from operations to R1.03 billion (2019: R880 million)

104%

Operating cash conversion ratio*

R89 million

Capital expenditure (2019: R101 million)

R2.5 billion

Cash and cash equivalents at end December 2020 (2019: R2.6 billion)

+5%

YoY growth in ordinary dividend per share to 725 cents (2019: 690 cents)

+19%

YoY growth in EBITDA to R1.06 billion (2019: R889 million)

* Cash conversion ratio defined as cash generated from operations reported to adjusted earnings.

** Growth includes 1% JSE Investor Services as per statutory financials.

CFO's financial review continued

In the context of a challenging operating environment, we are pleased to share a robust set of financial results for 2020. These results indicate the following:

- » Strong business resilience and continuity against unprecedented challenges generated by the COVID-19 pandemic;
- » Successful completion of the Link SA market services (now called JSE Investor Services) acquisition and first initial steps in executing our inorganic growth strategy;
- » Positive operating leverage impact while we continued to drive growth and IT robustness;
- » Sustained earnings quality and cash generation, a key facet of the JSE business model;
- » CAPEX supporting operational resilience and preserving balance sheet liquidity; and
- » Maintained a healthy balance sheet with no financial debt, allowing a 5% increase in our ordinary dividend and providing inorganic growth optionality. The Board resolved to adjust the Group's dividend policy to reflect a pay-out ratio of 67% to 100% of current earnings.

External factors impacting financial performance 2020

- » COVID-19, its knock-on effects and related operational challenges
- » Highly volatile market conditions: An increase in revenue activity drivers and central order book trading
- » Sovereign credit rating downgrade and South Africa's exit from the World Government Bond Index
- » Rand volatility

Key themes

- 1 Revenue growth from high market volatility and activity
- 2 Operating expenditure for growth and robustness
- 3 Rollout of our CAPEX plan
- 4 Progressing our inorganic growth strategy
- 5 Strong cash generation and sustainable returns to shareholders
- 6 Maintaining sufficient regulatory capital

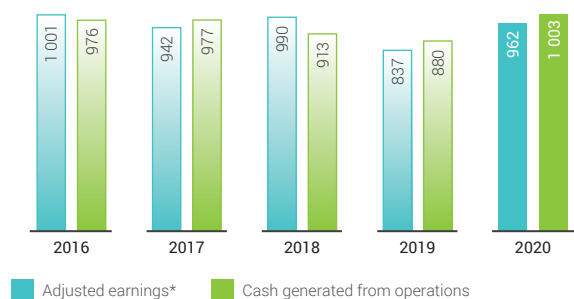
1 Revenue growth from high market volatility and activity

Total revenue increased by 13% to R2.5 billion (2019: R2.2 billion), with both operating revenue and total revenue at record highs.

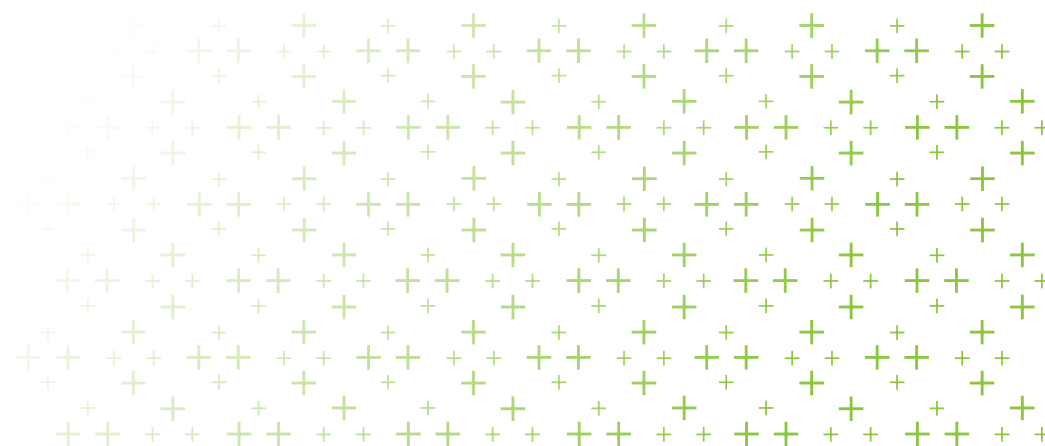
This performance was achieved through the following:

- » An increase in secondary market activity drivers and central order book trading, mainly for equities;
- » This was reflected in higher revenue for Post-Trade Services, which are driven to a large extent by market activity;
- » Sustained growth in Information Services; and
- » Other income growth, which includes a net increase in forex profits as well as regulatory fines.

Quality of earnings for 2020 (R million)

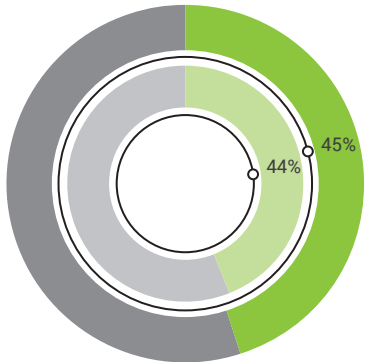
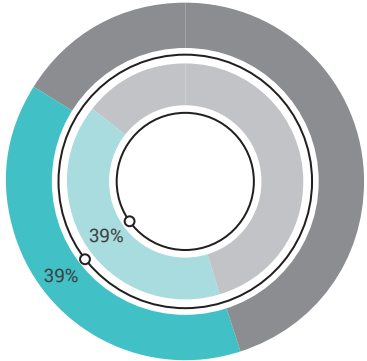
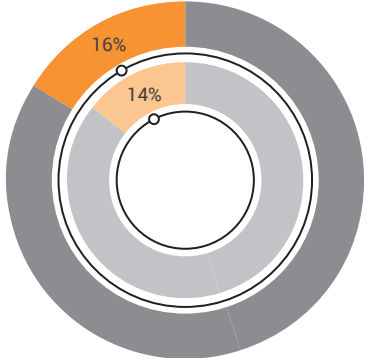


* Earnings have been adjusted for non-cash items (depreciation, amortisation, forex profit/loss, impairments, goodwill write-down).



CFO's financial review continued

The JSE business segments contributed to revenue as follows:

Segment	Contribution	YoY revenue growth	Key drivers
Capital Markets		+7%	<p>Strong revenue growth, despite activity driver contraction in some markets</p> <ul style="list-style-type: none"> » Equity Market +14% (+R60 million) » Bonds and Financial Derivatives +2% (+R3 million) » Primary Capital Markets +3% (+R5 million) » Commodity Derivatives +7% (+R5 million)
Post-Trade Services		+14%	<p>Capitalising on heightened transaction volumes and billable value traded in the Equity Market with more central order book activity</p> <ul style="list-style-type: none"> » Clearing and Settlement +16% (+R61 million) » Back-Office Services (BDA) +13% (+R43 million) » Funds under management +9% (+R6 million)
Information Services		+15%	<p>Sustained growth driven by new business growth, price increases and FX gains</p>

Outer circle: 2020 revenue breakdown.
Inner circle: 2019 revenue breakdown.

2020 market activity drivers

4	Number of IPOs* (2019: 5)
21%	Equity transactions (2019: 10%)
7%	Billable equity value traded** (2019: -2%)
-7%	Equity derivatives value traded (2019: 2%)
-7%	Bond nominal value traded (2019: 16%)
-8%	Currency derivatives contracts (2019: -7%)
Flat	Commodity derivatives contracts (2019: 2%)
14%	Interest rate derivatives contracts (2019: -6%)

* Corporate actions – no new listings.

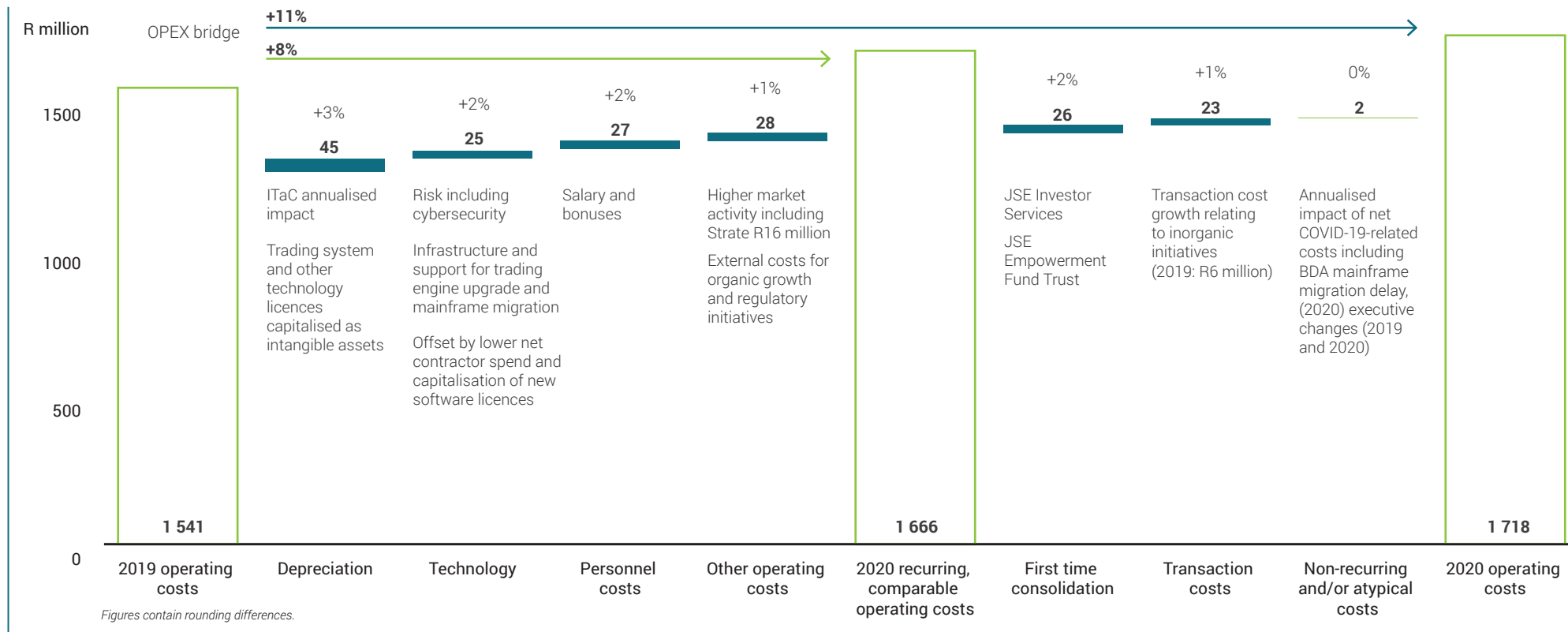
** Published trading statistics ↑ 13% (2019: -7%); published average daily value (ADV) ↑ 11% to R23 billion (2019: R21 billion); billable ADV ↑ 5% to R28 billion (2019: R27 billion).

CFO's financial review continued

2 Operating expenditure for growth and robustness

Investments to support the growth and robustness of our business are reflected in increased costs.

OPEX increased by 11% to R1.7 billion (2019: R1.5 billion). This includes the first-time consolidation of JSE Investor Services operating expenses of R15 million for two months and JSE Empowerment Fund Trust (JEF) of R11 million for the year, contributing to a 2% increase in operating expenditure. Expenses increased largely in the following areas, as can be viewed in the bridge below.



Cost growth reflected below relates to JSE Limited and the rest of the Group's subsidiaries as follows:

- » **Personnel costs** increased by 3% YoY and were well under control. Average headcount in 2020 was 402 (2019: 395) and 406 at the end of December 2020 (December 2019: 392).
- » **Depreciation and amortisation** increased by 22% YoY owing to the annualised depreciation impact of ITaC and the capitalisation of software licences as intangible assets and trading platform upgrade.

- » **Technology costs** increased by 12% owing to higher spend on risk management, the trading system upgrade and the mainframe migration in BDA (refer to [pages 43](#) for more detail). This was partially offset by lower net spend on contractors and the reclassification of software licences.
- » **General expenses** increased by 11% owing to higher market-activity-related costs, external costs for growth initiatives, which include due diligence costs, and legal and professional fees.

CFO's financial review continued

Further detail on OPEX is unpacked below:

Personnel costs

Personnel costs increased 3% or R15 million to R595 million (2019: R580 million) owing to the following:

Headcount



- » Gross remuneration, which increased by 4% to R435 million (2019: R418 million). The headcount as at 31 December was 406 (2019: 392), while the average headcount for 2020 was 402 (2019: 395);
- » The net impact of executive changes, which affected both 2019 (the CEO transition) and 2020 (executive changes), was a year-on-year reduction of R20 million; and
- » Discretionary bonus of R76 million or 9.7% of NPAT (2019: R64 million or 9.2% of NPAT).

Outlook*

Salaries are benchmarked against local peers according to the PwC Remchannel database. There are no current plans to change headcount structure.

The organisational structure is set at 427 employees with a 5% vacancy rate. In 2021, average salary increases are limited to inflation estimates.

JSE Investor Services

Headcount of 153 as at end December 2020 of which 53 are contractors.

Technology costs

Technology costs increased 12% to R320 million (2019: R285 million) owing to the following:

- » Increased spend on risk including cybersecurity to R35 million (2019: R14 million);
- » Increased BDA costs of R15 million, largely due to the mainframe migration including parallel costs due to COVID-19 impact on project timing; and
- » Project-related infrastructure and support cost for the trading engine upgrade, mainframe migration, and the first full year impact of ITaC support and maintenance of R24 million (2019: R0).

Previously technology costs were rebased to full year 2016 numbers owing to technology cost reduction plans in 2017 to 2019.

Outlook*

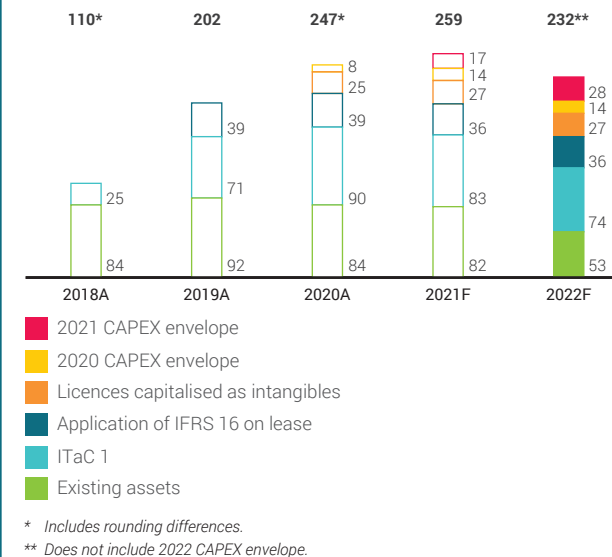
The bulk of costs are contractual, with annual inflationary increases.

Cybersecurity spend is typically in excess of inflation.

Depreciation and amortisation

Depreciation and amortisation increased by 22% to R247 million (2019: R202 million).

Multi-year depreciation profile (R million)



The increased depreciation and amortisation can largely be attributed to the first full-year impact of ITaC amortisation of R22 million and a R25 million impact of new contracts for long-term software licences, capitalised as intangible assets, and the trading platform upgrade of R5 million.

Outlook*

We have provided a multi-year depreciation profile of known CAPEX in the graph above for 2021 and 2022.

2021: R259 million

2022: R232 million

* Excludes JSE Investor Services.

CFO's financial review continued

General expenses

General expenses increased by 11% to R528 million (2019: R474 million) owing to the following:

- » Transaction costs of R29 million for JSE Investor Services and Globacap (2019: R6 million);
- » Strate *ad valorem* fees, SWIFT charges and clearing and settlement fees increased by R16 million;
- » JEF costs of R11 million for bursaries awarded to trust recipients (partially offset by net finance income); and
- » JSE Investor Services costs of R15 million (2019: R0 million): largely personnel expenses, general expenses and amortisation of intangible assets.

Outlook*

We manage general expenses growth tightly and for many cost lines, growth is contained below inflation. Transaction costs are reported in this cost category.

Managing the cost growth trajectory will remain a key priority, with the aim of improving margins over time.

3 Disciplined roll-out of our CAPEX plan

The JSE annual CAPEX budget is embodied in the capital allocation philosophy of the Group.

Capital allocation is divided into the following three pillars, namely:

- 1) Regulatory capital held for the Exchange and clearing house;
- 2) CAPEX for the maintenance and upgrade of infrastructure and systems, as well as organic growth initiatives; and
- 3) Capital retained for inorganic growth initiatives and capital to be returned to shareholders.

The sizing of the CAPEX envelope, the second pillar of our capital allocation philosophy, is determined by the JSE's capital intensity policy, which is linked to affordability. The JSE prioritises CAPEX for the maintenance and upgrade of infrastructure and systems as technological robustness is key to our business. A portion of CAPEX is also allocated for organic growth initiatives.

In 2020, CAPEX decreased to R89 million (2019: R101 million).

CAPEX in 2020 largely owed to the maintenance and upgrade of our systems, primarily MIT. The OTC clearing business case, which is still in design phase, was expensed rather than capitalised.

2020 focused on the following initiatives:

- 1) Trading engine upgrade;
- 2) New master reference data for cash bonds;
- 3) Smart regulation;
- 4) Clearing system enhancements; and
- 5) Replenishment and rejuvenation of IT infrastructure.

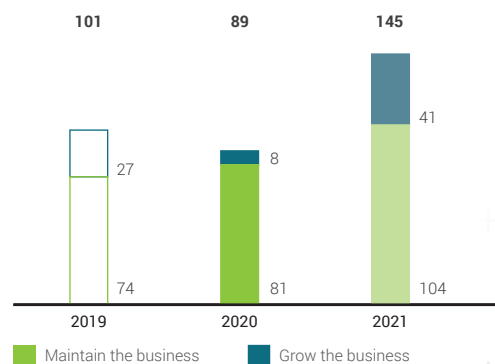
Outlook*

All planned investments and 2021 capital requirements can be funded from the Group's own resources.

2021 total CAPEX: R145 million with a focus on:

- 1) maintenance and upgrade of our infrastructure;
- 2) inorganic growth investments;
- 3) organic growth including private placement platform for SMEs and infrastructure finance;
- 4) smart regulation;
- 5) IT security; and
- 6) leasehold improvements

Disciplined CAPEX roll-out driven by trading engine upgrade (R million)



* Excludes JSE Investor Services.

CFO’s financial review continued

4 Progressing our inorganic growth strategy

We have had early success in executing on our inorganic growth strategy.

The JSE’s revenue model is highly dependent on transactional revenue with a high level of concentration from equities. Reliance on Equity Market revenues exposes us to wide-ranging risks. Globally, private markets have been growing significantly faster than public debt and equity markets. Global exchanges have pursued acquisitions based on:

- » diversification of revenue;
- » higher quality future earnings potential;
- » more sustainable revenues in a period of lower trading activity (excluding the effect of COVID-19); and
- » growth in service, product and offering further along the value chain such as issuer services.

We believe that there are opportunities to diversify our focus and create a broader, more sustainable annuity base in a few key categories:

- » Issuer Services
- » Data/indices
- » Technology

Our target capital structure will, over time, be a function of opportunities for our growth strategy and generating risk-adjusted returns for shareholders. We are currently well positioned to execute on our strategy, with a healthy balance sheet, which provides optionality for future growth.

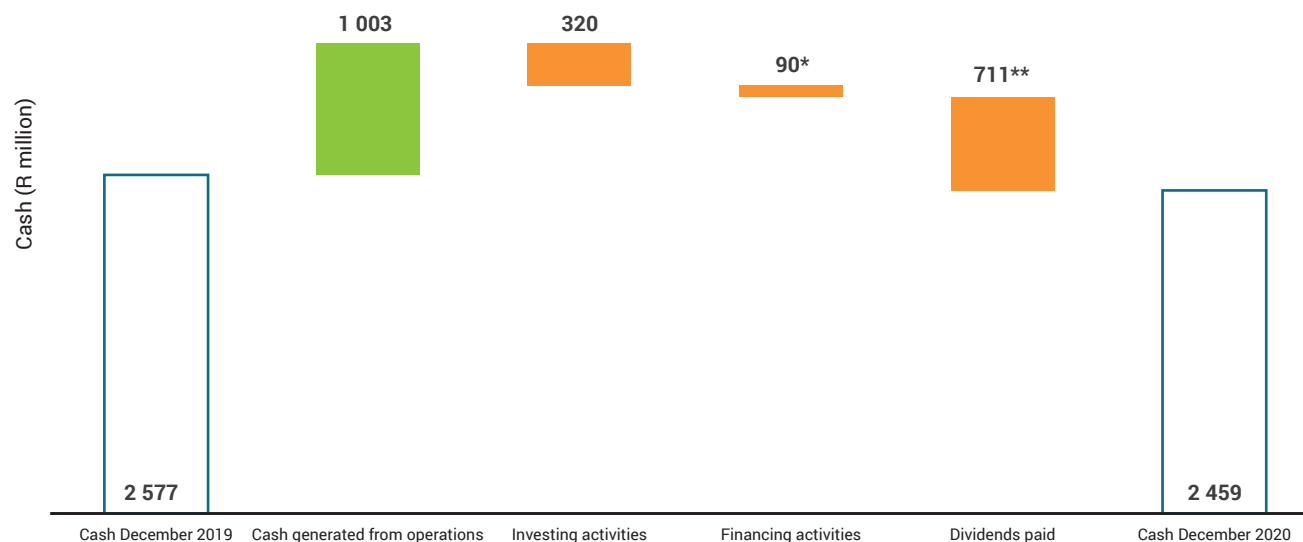
At present, we are pursuing a growth strategy from M&A with a concentration on bolt-on opportunities. This year we recruited the head of our internal deals team who has extensive investment banking experience. The ongoing focus of the team is to monitor market opportunities which generate long-term value for all JSE stakeholders. All internal processes are in place to ensure we find the right opportunities, conduct appropriate due diligence, negotiate effectively and, if a deal is signed, successfully integrate newly acquired businesses into the JSE family.

We have made strides in executing on our inorganic growth strategy. Our corporate highlight for 2020 was the successful conclusion of the Link SA acquisition on 2 November 2020. This enhances our product offering across the value chain, improves the quality of our earnings through annuity revenue and which offers the opportunity to exploit new revenue synergies in the medium term. The commercial arrangement with Globacap, including our £4 million (R84 million) investment, was also announced in November. This initiative will extend the JSE’s reach into private markets and digital registry services, and over time broaden our revenue base. This transaction provides access to a new segment and the opportunity to explore and experiment with DLT in close collaboration with a leading capital markets fintech.

The Group continues to be strongly cash generative, with net cash from operations at a record high of R1.03 billion (2019: R880 million) as can be seen from the graph below.

Cash and cash equivalents on hand at 31 December amounted to R2.5 billion (2019: R2.6 billion), after the investment into Link SA of R225 million. We also paid a minority equity stake in Globacap in January 2021.

2020 net cash generation



* Includes the effect of exchange rate fluctuations on foreign-denominated cash held and proceeds from sale of treasury shares.

** Excludes dividends paid to JSE Empowerment Fund Trust (inter-group).

CFO's financial review continued

5 Strong cash generation and sustainable returns to shareholders

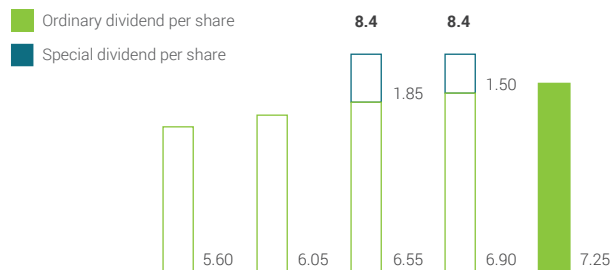
Progressive ordinary dividend.

In accordance with the JSE's dividend policy, the practice has been to return distributable cash to shareholders after ring-fencing cash for regulatory capital requirements and investment (CAPEX and inorganic opportunities).

The ordinary dividend of 725 cents per share for 2020 represents a progressive 5% increase in nominal terms and translates into an ordinary dividend pay-out ratio of 83% (2019: 87%). The Board resolved to adjust the Group's dividend policy to reflect a pay-out ratio of 67% to 100% of current earnings. The previous pay-out range was 40% to 67% of current profits, and the widened range reflects the fact that cash generated exceeds NPAT, largely as a consequence of the technology investments in previous years. This trend is expected to continue for the next few years.

The graph below shows our progressive ordinary dividend payments over the past five years.

Progressive ordinary dividend up 5%



	2016	2017	2018	2019	2020
Total dividend (R million)	487	526	728	728*	630
Ordinary dividend pay-out ratio (%)**	52	65	62	87	83
Total dividend pay-out ratio (%)**	52	65	80	101	83

* Includes dividends paid to JSE Empowerment Fund.
 ** Earnings have been adjusted for non-distributable earnings.

» The dividends have been declared from current profits.

Dividends: Guiding principles

In considering the payment of the dividends, the Board will, with the assistance of the GAC, take the following into account:

- » The current financial results of the Company and the solvency and liquidity test as set out in the Companies Act; and
- » The future funding and investment needs, as well as the regulatory capital requirements of the Company.

The Board reviewed the recommendations of the GAC in respect of the Company's dividend policy, and reaffirmed that the Company aims for a progressive increase in the nominal value of the ordinary dividend over time, subject to affordability and taking into account the regulatory capital and investment requirements of the Group, including possible acquisitions.

The Board and management remain confident as to the underlying strength of the JSE's operations and its continued strong cash flows. All planned investments and capital requirements for 2020 were funded from own resources.

6 Maintaining sufficient regulatory capital

The JSE and JSE Clear are sufficiently capitalised.

The JSE, the Exchange and JSE Clear, the CCP, are required by the Financial Markets Authority to hold regulatory capital in the form of equity, supported by liquidity.

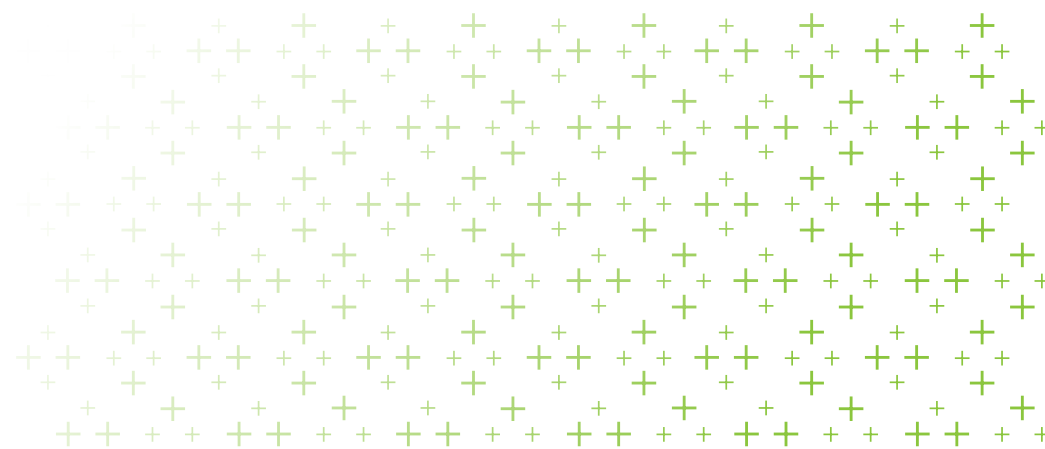
Risks, for which capital is held, fall into the following four categories:

- » Business;
- » Investment;
- » Operational; and
- » Wind down or recovery risk.

The JSE and JSE Clear hold higher economic capital (based on the Group's assessment of risk per category) and regulatory capital (minimum level of capital required by the regulations in the form of equity).

The JSE's capital is supported by liquidity at the higher of calculated capital based on risk scenarios (including a buffer) or six months of cash operational expenses. JSE Clear capital is fully supported by cash.

The JSE and JSE Clear are sufficiently capitalised.



CFO's financial review continued

Income statement performance

Summarised consolidated income statement

R million	2020	2019	Growth %
Revenue	2 446	2 187	12%
Other income	82	41	98%
Total revenue	2 528	2 229	13%
Personnel expenses	601	580	4%
Other expenses	1 117	961	16%
Total expenses	1 718	1 541	11%
EBIT	811	687	18%
EBIT %	32%	31%	1pt
Net finance income	200	213	(6%)
Share of profit from associate	54	48	14%
Profit before income tax	1 065	948	12%
Income tax expense	283	248	14%
Profit for the year from continuing operations	781	700	12%
Loss after tax for the year from discontinued operations	3	5	(42%)
NPAT before non-controlling interest	779	695	12%
Non-controlling interest	0.3	-	100%
NPAT attributable to JSE Group	778	695	12%
NPAT %	31%	31%	0pt
EPS (cents)	936.7	814.8	15%
HEPS (cents)	936.7	814.6	15%
EBITDA	1 060	889	19%

Contains rounding differences.

Other income increased mainly owing to issued regulatory fines and foreign exchange profits on US dollar denominated assets.

Includes funds under management of R82 million, up 9% from 2019.

Consolidation of the JEF Trust for the first time, resulting in an increase in operating costs as well as an increase of net finance income.

1% gain in EBIT margin to 32%.

Net finance income decreased owing to the lower yields (following multiple repo rate reductions by the SARB during the course of 2020) on JSE cash balances partially offset by growth in margin deposits from JSE Clear.

Outlook: The JSE had multiple repo rate decreases in 2020. As a consequence the full effect didn't come through to the yield as the majority of funds was still on term. Now that those investments have matured, we are seeing the impact of the lower interest rate environment coming through in 2021 on the net finance income line.

Strong NPAT growth of 12% despite a decrease in net finance income.

The growth in distributable earnings is up 10% (excluding regulatory fines and investor protection funds).

FX impact

The following comes from the impact of FX on our business:

- » The realised profit on the sale of USD in 2020 of R21 million; and
- » In the Information Services space we bill on the average FX rate for the month. It is important to recognise that the rand strengthening in 2021 will impact the market data rand nominal value.

CFO's financial review continued

Robust balance sheet

Summarised consolidated statement of financial position

R million	Year ended 31 December 2020	Year ended 31 December 2019
Assets		
Non-current assets	1 871	1 716
Property and equipment	140	184
Intangible assets	821	593
Investment in associate	320	293
Other non-current assets	590	646
Current assets	49 754	38 512
Margin deposits	46 308	34 850
JSE Clear Derivatives Default Fund deposit	500	500
Trade and other receivables	475	520
Cash and cash equivalents	2 459	2 577
Other current assets	12	65
Total assets	51 625	40 227
Equity and liabilities		
Total equity	4 154	3 969
Stated capital	(33)	(18)
Reserves	677	548
Retained earnings	3 473	3 439
Non-controlling interest	38	–
Non-current liabilities	274	318
Current liabilities	47 197	35 940
Margin deposits	46 308	34 850
JSE Clear Derivatives Default Fund contribution	400	400
Other current liabilities	489	690
Total equity and liabilities	51 625	40 227

Includes goodwill and customer contracts intangible asset.

Strong cash exit, after investment in JSE Investor Services.

The above represents a condensed version of the Group balance sheet.

Please refer to the condensed consolidated financial statements for the statutory version.

CFO's financial review continued

Outlook and future focus

Focus will be on driving revenues, particularly from new lines of business beyond equity markets.

The balance between growing and maintaining the resilience of the business will remain a key priority. With this in mind the Audit Committee's attention was largely focused on the most appropriate dividend policy for the Group where the JSE is able to sustainably grow its ordinary dividend over time while being able to pursue and drive its inorganic growth strategy.

We will focus on driving revenues beyond equity markets, with an emphasis on annuity revenues. CAPEX will be largely directed towards business maintenance and upgrade while operating cost control will remain a priority.

The JSE remains committed to providing a trusted market infrastructure. We will execute our strategy with discipline and continue to rapidly improve our service offerings and technology to serve our clients with consistent excellence.

The Group's revenue is variable and largely driven by the level of activity in the various markets that we operate. For this reason, we make no projections regarding the Group's revenue. However, we provide guidance on costs and CAPEX areas of the business where we have some level of control.

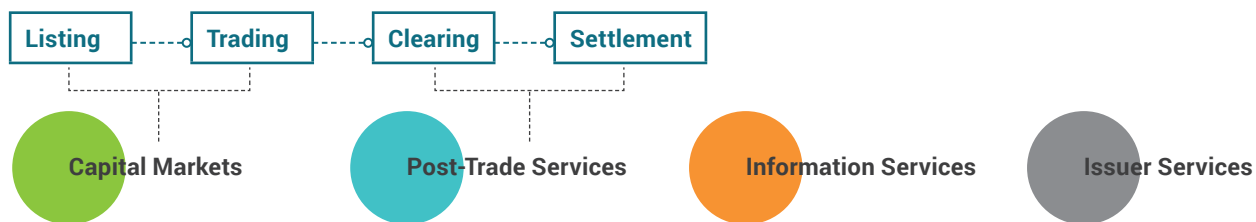


Aarti Takoordeen
CFO



Our operational performance

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 this report and in the Group CEO's review.



Capital Markets

Primary Market

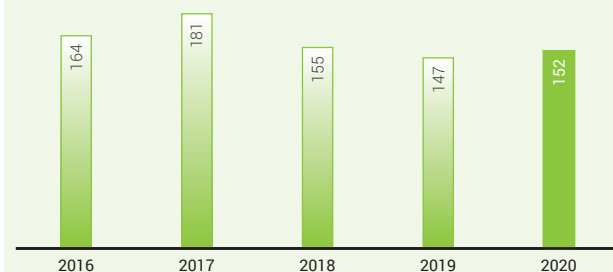
How money is made

Fees for new issuances, annual listing fees for existing issuers and documentation fees for dealing with specific corporate actions that companies undertake.

7% of total Group revenue (2019: 7%)

Revenue **R152 million**

Revenue (R million)



Performance

- » Four listings as a result of corporate actions (2019: five).
- » Five new ETFs (2019: 6).
- » 40 new ETNs (2019: 5).
- » 241 new warrants and structured products (2019: 293).
- » 566 new bonds listed (2019: 710). Total nominal value of listed bonds was R3.3 trillion (2019: R3.1 trillion).
- » 20 delistings (2019: 24).
- » One new green bond listing (total: 11).

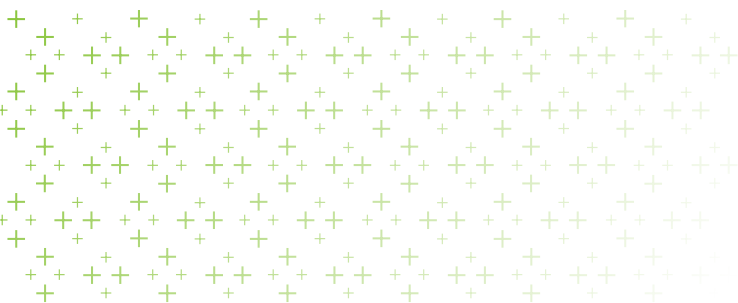
Revenue drivers

- » Revenue increased by 3%.
- » New IPOs came under further pressure in 2020 owing to uncertain market conditions. Listings have largely been a result of corporate actions, and in the ETFs, ETNs and structured product space.
- » Most secondary capital raising came from large-cap companies. Medium and small-cap companies are experiencing depressed valuations and are apprehensive about raising additional capital, fearing share dilution at current prices.
- » There was new equity capital raised in the Secondary Market of R67 billion (2019: R36 billion).
- » Delistings were largely the result of corporate actions and schemes of arrangement in mostly small to mid, illiquid counters. In some instances, a depressed share price presents an opportunity for founders or controlling shareholders to make an offer to minorities. This behaviour is typical of a trough in the economic cycle. Although the number of listed entities declined, market capitalisation of all entities listed on the JSE increased by 2% during 2020 and there was an increase in the listing of ETNs and warrants.
- » We have seen a growing demand for green bonds in emerging markets, driven by private borrowers looking for investments in sustainable energy, cleaner water, transport and smart buildings.

Initiatives and outlook

- » **Regulatory support:**
 - o The JSE worked with regulators to secure extensions to financial reporting requirements and a temporary amendment to the Listings Requirements for the issue of shares for cash. Further detail is available on [page 76](#).
- » **Approved changes to Debt Listing Requirements:**
 - o The amendments to the Debt Listing Requirements, in principle, deal with significant enhancements to (i) corporate governance, with a prominent focus on state-owned entities and (ii) disclosure in general in the debt market for the protection of investors. Further detail is available on [page 79](#).
- » **Standard listing framework:**
 - o The JSE announced that, after due consideration and engagement with the London Stock Exchange (LSE) regarding the regulatory framework applicable to standard listings, the JSE will now accept applicant issuers (eligible for both the Main Board and AltX) with a standard listing on the LSE for purposes of a secondary listing on the JSE.

Our operational performance continued



» Launched new sustainability and social bond segment:

- o The JSE's new sustainability segment provides a platform for companies to raise debt for green, social and sustainable initiatives in a trusted global marketplace. Further detail is available [online](#) in the *social value report*.
- o Nedbank listed a 10-year, R2 billion green bond that was privately placed with the African Development Bank (AfDB). The JSE now has 11 listed green bond instruments through five issuers, including banks, corporates, international development finance institutions (DFIs) and local municipalities. The total nominal amount is R8.5 billion.

» Investment in Globacap:

- o Exchanges world-wide have created private marketplaces for issuances and capital raising. The JSE has entered into a commercial arrangement with Globacap to establish a private placements platform to advance and digitise capital raising for infrastructure finance and SMEs. The deal will help to stimulate investment into those markets and support job creation and economic growth. Refer to [page 60](#) for further detail on the announced Globacap transaction.

» New listing opportunities in 2021:

- o Certainty regarding the effectiveness of a COVID-19 vaccination programme and proof of an economic recovery would be significant catalysts to improving market sentiment thereby unlocking new listings opportunities. With the rise in more sustainable investing globally, we hope to see more listings on the sustainability segment.
- o The JSE will focus on securing inward listings. We continue to examine ways to broaden the inward listing framework to attract more foreign issuers onto the JSE. The newly introduced standard listing framework is an example of these efforts. We will target foreign issuers in 2021.

“ We have seen a growing demand for green bonds in emerging markets, driven by private borrowers looking for investments in sustainable energy, cleaner water, transport and smart buildings. ”

Our operational performance continued



Secondary Market | Equity Market

How money is made

Trading fees are charged for value traded on a tiered basis:

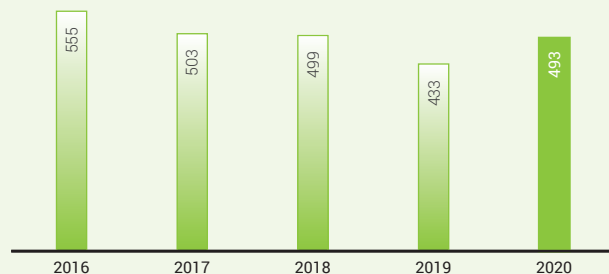
- » Six cascading tiers with a trade cap of R420.40 for central order book trades (range: 0.37 to 0.48 bps).
- » Complex order suite: 0.53 bps, with a R3 153 cap.

Rental is charged for colocation racks across all markets, not just the Equity Market.

21% of total Group revenue (2019: 21%)

Revenue **R493 million**

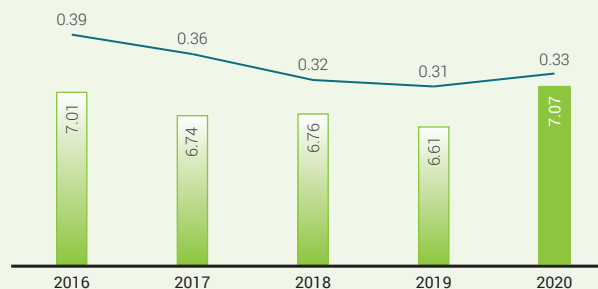
Equity market revenue (R million)



Performance

- » 7% up: Billable value traded.
- » 13% up: Value traded up to R5.8 trillion (2020) versus R5.1 trillion (2019).
- » 11% up: Daily value traded up to R22.7 billion (2020) versus R20.6 billion (2019).
- » 21% up: Transactions rose to 93 million (2020) versus 77 million (2019).
- » Colocation activity contributed 50% of overall value traded (2019: 42%), with 40 racks (2019: 32).

Billable value traded and effective rate



■ Billable value traded (R trillion) — Effective rate (bps)*

* Effective rate: revenue divided billable value traded.

Revenue drivers

- » Revenue increased by 14% owing to an increase in billable value traded and more central order book activity resulting in higher effective pricing.
- » The South African equities market experienced high levels of volatility and market activity in H1. H2 saw mixed performance.
 - o We continued to see an extension of trade flows and activity, driven primarily by non-resident net sales of South African equities. Moves on stimulus measures, rate cuts, and the South African double downgrade by Fitch and Moody's all fuelled event-driven H1 liquidity. This resulted in a number of new record days, amid local and international index rebalances and JSE closeout months, further propelled by COVID-19-related volatility and the April 2020 oil crash.
 - o Trading activity in the second half of the year was mixed, reflecting a combination of normalised market volatility from the elevated levels experienced in March as well as impetus from JSE closeout months.
- » The JSE's headline All Share Index recovered from a year-to-date low of -22.92% in March 2020 (1 January to 31 March 2020), to 33.53% (31 March to 31 December 2020) on 31 December 2020, with the full year index return of 4.07%.
- » Overall, the number of transactions has increased, which has led to average deal sizes coming down to approximately R63 400 (2019: R68 000).

Our operational performance continued

Initiatives and outlook

» Core trading engine upgrade (MIT technology)

- o In 2020, we continued enhancing our trading engine to support improved order handling and introduced application programme interface (API) changes on microsecond time stamping and liquidity indicators. A further trading engine upgrade is planned for 2021, to pursue a range of new products and enhancements to pegged hidden orders and iceberg orders. This upgrade will also make it possible to automate forex closeouts and improve market announcements.

» Liquidity and execution

- o Following consultation with market participants, the JSE will work with members and their clients to find addressable liquidity and better quality of execution. This is currently being supported by comprehensive proprietary JSE market quality analysis work, which covers metrics on market efficiency, resilience and stability.

» Other initiatives

- o In order to grow trading activity and drive the inward flow of investments into South Africa, the JSE will participate in industry working groups on non-ZAR collateral and non-ZAR-denominated listings, as well as roadshows and conferences to spur investment into South Africa.

Secondary Market | Bonds and Financial Derivatives Market

How money is made

Revenue is generated through a range of fee models based on the number of contracts traded, the market value of transactions or the value of the applicable index.

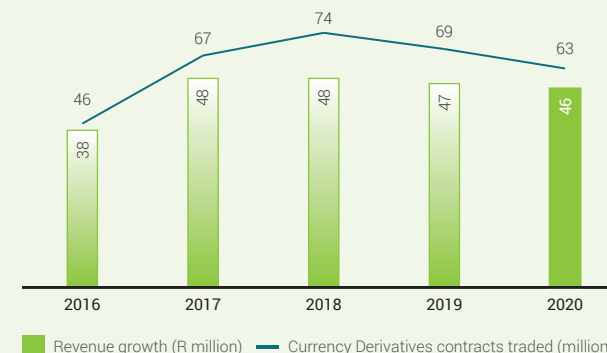
In order to promote on-screen trading, the fee associated with on-screen trading is normally lower than that for reported trades.

11% of total Group revenue (2019: 13%)

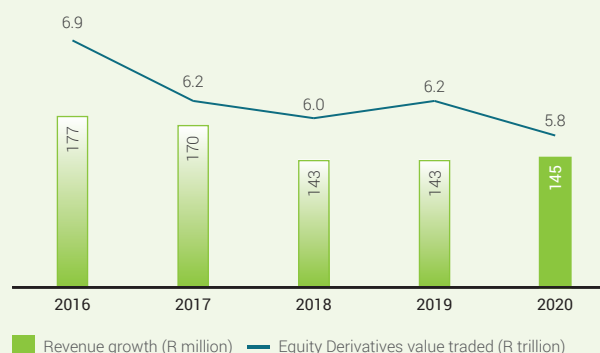
Revenue **R262*** million

* Includes bond electronic trading platform.

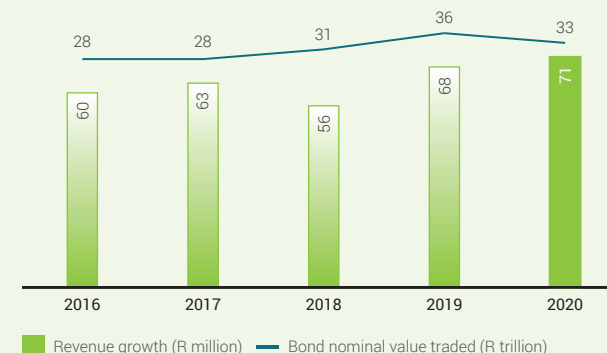
Currency Derivatives revenue and contracts traded



Equity Derivatives revenue and value traded



Interest rate revenue and bond nominal value



Our operational performance continued

Equity Derivatives Market

Performance

- » -7% down: Value traded to R5.8 trillion (2020) versus R6.2 trillion (2019).
- » -8% down: Daily value traded up to R23.0 billion (2020) versus R24.8 billion (2019).
- » 25% up: Volume traded jumped to 103.2 million (2020) versus 82.6 million (2019).
- » 14% up: Deals (trades) rose to 4 million (2020) versus 3.5 million (2019).

Revenue drivers

- » Revenue increased by 1% owing to product pricing mix with an increase in index futures transactions, International Derivatives (IDX) and Can-Do Options (Exotics).
- » The Equity Derivatives Market came under pressure in the face of volatility in 2020.
- » Value traded was down owing to weakness in the JSE Top 40 Index, which commands the largest percentage in contracts traded, as well as single-stock futures (SSFs). Index futures remained the most traded contract, but their value traded was down (-4%) relative to FY 2019.
- » Index Futures' value traded was down 10% to R4.6 trillion (2020) versus R5.1 trillion (2019).
- » Index Options' value traded was up 20% to R596 billion (2020) versus R495 billion (2019).
- » Dividend-neutral SSFs increased activity in the single-stock market, as dividend uncertainty fuelled demand in this product.
- » Options on baskets, IDX and Exotic futures saw elevated interest relative to previous years in volatile markets.

Initiatives and outlook

- » The JSE reduced trading fees and introduced trade caps on SSFs, and introduced a maker-taker pricing model for index options and SSF options in January 2020 to encourage liquidity and volumes.
- » Following market consultation with market-makers (banks) and interdealer brokers, the JSE will be exploring a market-making scheme for index options to start encouraging liquidity.

Currency Derivatives Market

Performance¹

- » -8% down: Contracts traded declined to 62.9 million (2019: 68.7 million).
- » -39% down: Decrease in open interest.

Revenue drivers

- » Revenue declined by 3% largely owing to decrease in contracts traded.
- » The currency market has largely been defined by the global events of 2020.
- » During the height of the market crisis in March, bid-offer spreads in the currency market were 40 – 50% higher than their pre-COVID-19 levels. While this has started to normalise, volatility in the rand has contributed to erratic trading activity in this space, where a large portion of the trade is linked to hedging activity in the Equity Market.

Initiatives and outlook

- » *Automation of the FX auction for market makers*
 - o The implementation of the FX auction automation is scheduled as part of the trading engine upgrade. It will enable banks to use self-service to participate in the auction, removing the risk of human error as well as technological risks previously experienced when running the report manually, using email and spreadsheets

The FX market is used predominantly for hedging purposes, so it is reliant on market volatility for increased activity. A weaker USD is expected in 2021, which would create a bias towards reduced hedging needs for the main client base of the JSE. Therefore, limited market activity in the products currently on offer is expected, much like what was seen in 2020.

Interest Rate Market

Performance

- » -7% down: Bond nominal value of R33 397 trillion (2019: R35 819 trillion).
- » 17% up: Interest rate derivatives contracts up to 13 million (2020) versus 11 million (2019).
- » -1% down: Bond electronic trading platform (ETP) nominal value traded of R438.7 billion (2019: R441.5 billion).
- » Bond ETP revenue contributed R8 million.

Revenue drivers

- » Revenue increased by 4% largely owing to the increase in standard trades. The bond and repo markets revenue and drivers are different. The repo trade is a funding mechanism and the spot bond is a trading mechanism. As a result, standard trades were up and the increase in revenue from standard trades was greater than the reduction in the repo market.
- » Volatility impacted the bond market, resulting in a significant increase in standard trades, driven by large foreign outflows, COVID-19 and South Africa's exit from the World Government Bond Index.
- » The bond market has seen historic bid-offer spreads – rising from 4 – 5 bps before the COVID-19 pandemic to as high as 50 bps at the peak of the crisis.
- » In the bond repo market, there has been a definitive shift away from longer-dated positions. The move to smaller cash positions held for shorter durations is an indication of reduced financing activity and can largely be interpreted as expressing risk-off sentiment.
- » In the Interest Rate Derivatives Market the increased volatility and trade activity resulted in increased hedging activity in the bond futures market driving growth in revenue.

Initiatives and outlook

- » *Repositioned the listed JIBAR futures product*
 - o We have seen two market makers and some activity and intend to grow this during 2021.

¹ Following the Integrated Trading and Clearing implementation in April 2019, the methodology used to calculate contracts traded changed to exclude deal management statistics. As a result, the reported statistic shows contracts traded down 13% year-on-year in the first half of 2020. However, a comparison of like-for-like statistics shows that contracts traded increased over the same period year-on-year, resulting in increased revenue in the first half of this year.

Our operational performance continued

Secondary Market | Commodity Derivatives Market

How money is made

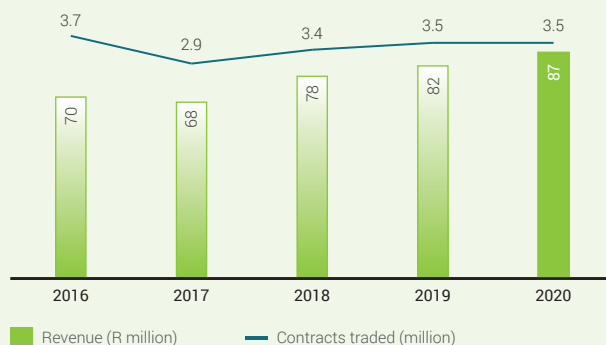
A fee per contract traded, based on the underlying instrument.

A fee per ton of grain physically delivered.

4% of total Group revenue (2019: 4%)

Revenue **R87 million**

Capital Markets: Commodity Derivatives



Note: Revenue % changes calculated on unrounded figures.

Performance

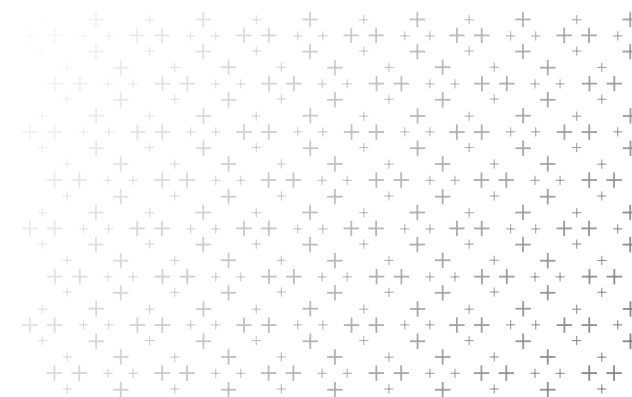
- » Volumes traded remained flat at 3.5 million contracts.
- » Value traded increased by 13% to R915 billion.

Revenue drivers

- » Revenue increased by 7% largely owing to an increase in annual pricing and product mix.
- » Value traded in the commodity derivatives market is up, driven by the agricultural market, which accounted for approximately 98% of volume traded.
- » Rising export demand and higher global commodity prices have provided support for domestic prices.
- » Precious metals, one of the biggest global outperformers in 2020, contributes just 0.5% of volumes traded on our market, so we saw limited upside from this.
- » South Africa's agricultural sector, which is export oriented, has seen limited disruption from COVID-19, as global agricultural and food trade has generally remained operational.
- » The 2020/21 marketing season delivered a bumper crop for both white and yellow maize, but volumes of grades 2 and 3 were significantly higher than normal. This means that the carry-over stock for exportable grade 1 white maize may be tight towards the end of the marketing season in March 2021.
- » Current stock levels in commercial storage facilities are still good, even with exports of white and yellow maize currently at over 1.8 million tonnes.

Initiatives and outlook

- » Diesel contract:
 - o A diesel contract was designed in 2020. Product holders at the expiry of the futures contract are cash settled based on a JSE-published settlement value. Clients that are authorised and interested in physical delivery and can use the spot basis functionality to facilitate physical deliveries during the delivery month. This contract is a global first for commodity derivative contracts. It strikes a balance between cash and physical settlement and has necessitated further system developments.
 - o Go-live is envisaged for 2021.
- » Agricultural contract improvements:
 - o Work is under way to introduce enhancements to agricultural contract specifications aimed at improving the transparency of storage facilities' audit reports and disclosure of actual loading capabilities at registered sites. We are working closely with approved storage operators and industry participants to provide practical enhancements to the JSE requirements to ensure that position holders taking delivery of product from JSE-approved storage facilities can secure their product.



Our operational performance continued

Post-Trade Services

Clearing and Settlement

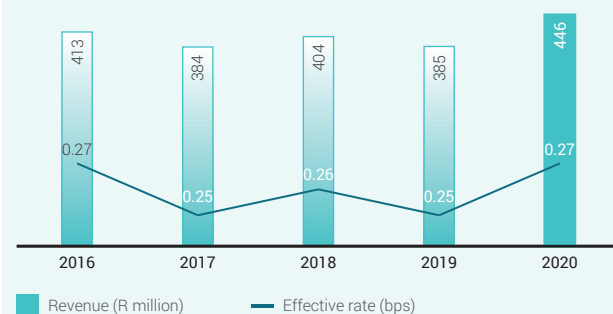
How money is made

Revenue is derived from a clearing and settlement fee charged on equity trades, set at a 0.0036% value-based charge, with a maximum fee per transaction leg of R183.

In the derivatives markets, the clearing and settlement fee is incorporated into a single bundled contract fee which also includes a trading fee, and which is accounted for in the Capital Markets division. A risk management fee is also charged, and is derived based on the margin collected for derivatives transactions and is calculated as a percentage of the interest earned on the investment of the margin.

19% of total Group revenue (2019: 19%)

Revenue **R446 million**



Note: Reflects only Equity Market clearing fees. Revenue % changes calculated on unrounded figures.

Performance

- » Billable value traded in the Equity Market up 7%.
- » Reflects only Equity Market clearing fees.

Revenue drivers

- » Revenue increased 16% owing to the higher billable value traded in the Equity Market and more central order book activity resulting in higher effective pricing.

Initiatives and outlook

- » **JSE Clear's transition to an ICH:**
 - o The FMA regulations require JSE Clear to secure an ICH licence by 1 January 2022. JSE Clear has historically operated under an Associated Clearing House licence, providing clearing and risk management services to the Derivatives Market in terms of the JSE's Rules.
 - o JSE Clear has prepared the licence application and will submit in 2021.
 - o Securing an ICH licence does not require a legal separation from the JSE Group, or a change in ownership structure, but requires JSE Clear to comply with a number of governance and rulebook requirements.
 - o JSE Clear has progressed well in already implementing a number of the operating model changes required, and is confident that the remaining matters will be completed well before the regulatory deadline.
- » **OTC CCP clearing house:**
 - o The JSE is investigating central clearing capability for the South Africa OTC markets. Central clearing of OTC products is a G20 commitment made by South Africa to reform OTC derivatives markets to improve their transparency, prevent market abuse and reduce systemic risks.
 - o Wider utilisation of a CCP risk model will be beneficial in retaining international credibility and international investment interest. For example, following Brazil's downgrade to junk status in 2016, its bond yields have improved from 16% to 6.8%, largely due to initiatives including promotion of improved pro-governance policies, improved discipline and reforms such as central clearing.
 - o The JSE has progressed the design and business case to develop a CCP for the South African OTC derivatives market.

Back-Office Services (BDA)

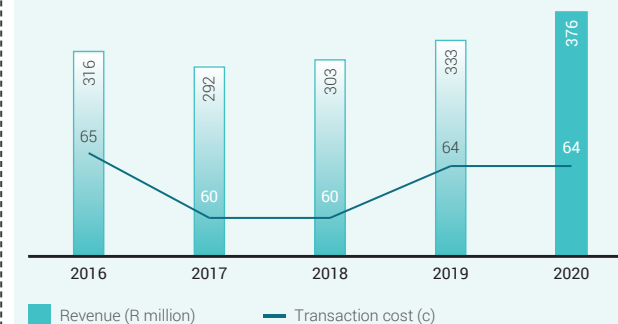
How money is made

BDA revenues are somewhat linked to the number of equity transactions that take place on the Cash Equity Market.

BDA transaction fees are mostly charged on a per BDA transaction basis, while connectivity, subscription and dissemination fees are charged separately.

16% of total Group revenue (2019: 16%)

Revenue **R376 million**



Note: Revenue % changes calculated on unrounded figures.

Performance

- » Equity Market transaction up 21%.

Revenue drivers

- » Revenue increased by 13% following an increase in the number of transactions, coupled with smaller transaction sizes.
- » A portion of BDA revenue composition (about 20%) is not directly linked to transactions (dissemination and reports).

Initiatives and outlook

- » **BDA mainframe migration to JSE data centre:**
 - o The BDA operating system has been upgraded in preparation for the migration of the BDA mainframe to the JSE data centre. The mainframe migration will be finalised in 2021.

Our operational performance continued

Information Services

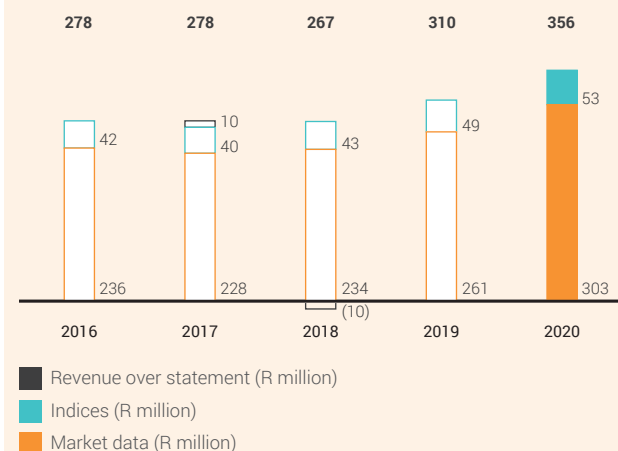
How money is made

Revenue is generated by selling data products across all of the JSE's markets and licensing the distribution and use of these data products.

Licensing fees include end-user terminal fees, non-display use fees and fees for passively tracking products on indices.

16% of total Group revenue (2019: 15%)

Revenue **R356 million**



Performance

- » 24 new clients signed up for market data products.

Revenue drivers

- » Revenue increased by 15% owing to annual price increases, foreign exchange gains on USD-denominated revenue and new business.

Initiatives and outlook

» Launched FTSE/JSE Fixed Income Indices:

- o The JSE extended its existing equity index partnership with FTSE Russell (FTSE) to incorporate the JSE bond indices. The FTSE/JSE Fixed Income Index Series now incorporates the FTSE/JSE All Bond Index (ALBI) and the FTSE/JSE Composite Inflation Linked Index (CILI), as well as various sub-indices. New and enhanced data products were launched in 2020, providing index clients with expanded and better quality data. With FTSE Russell as the index administrator, the indices can be more readily used by global investors who are subject to benchmark regulation. FTSE/JSE will consider enhancements to the index methodology and index offering from 2021, through a process of market consultation and client co-creation. London-based FTSE Russell is a subsidiary of the London Stock Exchange Group and is a global leader in the provision of financial indices and analytics.

» Launched new data pricing structure for retail brokers

- o In April 2020, the JSE launched a new data licensing model for retail brokers to encourage the use of live data by retail traders. The model provides deep discounts for bulk user bands. There has been an uptick in the number of retail users accessing live prices since the implementation and the JSE expects to see more participation in the equity market as a result.

» Reference data solution for bonds:

- o The JSE implemented the centralised reference data solution for the cash bond market. This system supports data management functions, bringing improvements in data processing, workflow and quality management, and introduces the tracking of future-dated changes. The first set of market data products that leverages this new functionality has already been launched. Additional product launches are scheduled for 2021.

» Asia strategy:

- o The JSE has entered into an agreement with China Investment Information Services Limited (CIIS), a subsidiary of the Shanghai Stock Exchange, to provide select JSE market data access to local distributors in mainland China. This forms part of the JSE's long-term focus on growing and deepening the local market by attracting new clients to trade and invest in South Africa. CIIS is appointed to distribute and market securities-related information. The CIIS platform includes coverage of third-party content from several global exchanges, such as Deutsche Börse Group, Moscow Exchange Group and B3. The agreement will enable the JSE to distribute real-time JSE market data to mainland China through CIIS's existing network of data distributors. The availability of JSE market data enables us to turn our attention to building interest in the JSE as a trading destination. We believe that a diverse and broad client base will help to deepen liquidity and activity in the South African market. CIIS and the JSE are currently finalising enablement arrangements, with the aim of making the data available in the first half of 2021.
- o The JSE will look to widening the reach of JSE data in Southeast Asia. We are exploring collaboration opportunities with existing data vendors in the region and discussing a complimentary period to generate interest.

» Data platform initiatives

- A number of initiatives in support of the JSE's modern data platform are poised to commence:
- o **JSE data foundry:** This new platform to handle the flow of data between JSE systems and clients introduces modern data access protocols and enhanced flexibility.
 - o **Trade analytics:** A third-party service provides analytics over our Equity Market using full-depth tick data. This enhances our own business intelligence, brings improved market quality metrics and creates an execution quality tool that can be sold to clients in future.
 - o **DataBP reporting platform:** Allows clients better reporting functionality in terms of their variable data usage and billing, but also paves the way for self-service and digital contract management for market data, including new order forms and cancellation submissions.
 - o We are investigating offering around third-party financial and alternative data, as well as tools to enhance investor relations activities.

Our operational performance continued

Issuer Services

How money is made

Issuer Services provides the following services for JSE-listed companies and charges a fee for these services:

- » Venue hire for results presentations and investor engagements;
- » The JSE Training Academy, to assist stakeholders on their JSE journey, including Board training; and
- » AGM facilitation, which includes proxy solicitation, electronic voting (enabling virtual AGMs) and minute-taking services.

JSE Investor Services

- » This subsidiary of the JSE offers transfer secretarial services to issuers, including share register maintenance, issuer communication, the handling of corporate actions, share scheme management as well as a central securities depository participant (CSDP) offering

0% of total Group revenue* (2019: 1%)

Revenue **R6 million** (2019: R12 million)

* This figure does not include JSE Investor Services.

Revenue drivers

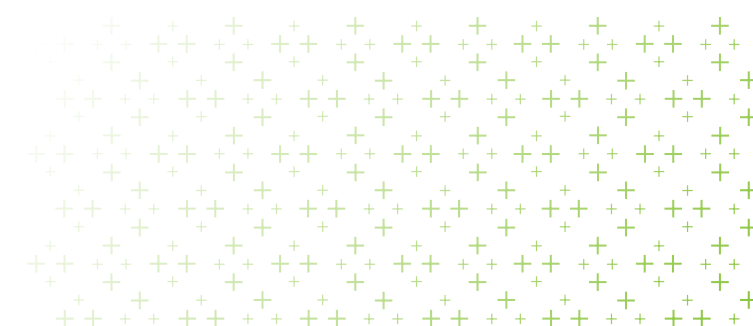
- » Revenue decreased by 46% largely owing to the closure of JSE-hosted events and in-person training owing to COVID-19.
- » Revenue was largely driven by the JSE's new virtual AGM service and virtual training.

Initiatives and outlook

- » **Launched a digital AGM solution for issuers:**
 - o The JSE partnered with The Meeting Specialist (TMS) to launch the first virtual AGMs in South Africa to enable clients to engage with shareholders during the COVID-19 pandemic. The launch of the virtual AGM platform came at a time when business continuity was paramount to ensuring the running of the South African economy.
 - o The platform caters for virtual AGMs and electronic voting, and also allows participants to connect from any location in the world using smart devices.
- » **Launched virtual training**
 - o The JSE launched virtual training in response to the pandemic. The cost-effective virtual training is aligned with the JSE's implementation of business continuity measures during this period, in which physical meetings are not possible. The launch of the JSE Training Academy app also supported these initiatives.

» JSE Investor Services

- o The JSE acquired a 74.85% stake in Link SA for a cash amount of R224.5 million in November 2020 following approval from the Competition Tribunal.
- o Link SA's BEE shareholder retains the remaining 25.15% stake.
- o Link SA, renamed to JSE Investor Services, is the second largest share registry business in South Africa, and has a client base that includes six of the top 40 issuers.
- o The business primarily offers transfer secretarial and registry services, including registry maintenance (for example, maintaining companies' share registers), treasury services (for example, calculating and managing the payment of dividends and distributions for companies), and corporate actions (for example, planning and managing rights issues, elections and dividend payments on behalf of companies). This acquisition paves the way for exciting new opportunities in the issuer services space. The JSE intends to introduce products and services to corporate entities in South Africa, with a focus on shareholder communication and engagement.



Technology and information

The JSE leveraged technology to facilitate secure, performing and reliable new remote working models, which became the norm in 2020.

As a licensed financial market infrastructure provider, the JSE operates in a high-availability environment, so the choices we make regarding our technology architecture; the reliability of our technology platforms, on which market participants depend; and the efficiency of our operating processes all have a direct impact on our earnings, reputation and ongoing sustainability.

Highlights

99.95%

Market availability
(2019: 99.76%)

Zero equity system downtime.

Uninterrupted equity trading, clearing and settlement.

Employees embraced new patterns and methods of remote work.

Significant investments in IT robustness.

Reduction by 57.14% in IT incidents¹ that disrupted the market results, particularly in the context of the volumes processed and the long hours staff worked through the national lockdown.

Concluded the IT due diligence for the Globacap transaction

Successfully completed the MIT technology upgrade for Equities, Equity Derivatives and the Currency markets

Successfully rejuvenated the reference data management platform for cash bonds

Strengthened cybersecurity through further investment in advanced cybersecurity technologies

Progressed PoPIA readiness

Challenges

COVID-19 impacts caused delays in the BDA mainframe migration, the diesel future contract roll-out and the bond repurchase agreement (repo) migration to MTS

Balancing the demand to change the business with the need to run and maintain the business

Rejuvenating aging applications and infrastructure in step with the need to grow the business using new-generation technologies

Maintaining vigilance and an appropriate cybersecurity posture with a distributed workforce and a remote working model during COVID-19



Leading and globally respected trading systems underpin our Equity and Derivatives markets.



¹ Incidents are measured and recorded according to their impact and urgency. A priority one incident (P1) is considered a critical business impact, priority two (P2) is a significant business impact and priority three (P3) is a limited business impact.

Technology and information continued

Technology and information strategy: Preparing for the future

Our IT strategy is directly aligned with the JSE's purpose to operate a trusted marketplace for an inclusive and prosperous future.

Our clients and markets are interconnected by trusted, high-performing platforms and secure networks. The JSE's technologies continue to attract substantial investment to ensure we maintain the pace set by clients' needs, the evolution of financial markets and technology disruptions. A strategic investment in Globacap during 2020 has made it possible to leverage its platform for private markets, which is underpinned by blockchain technology.

The focus for 2020 was on mobilising and supporting an effective and efficient workforce by extending existing technologies, such as Microsoft products, and facilitating trust in the market for the next five years by upgrading the core-trading engine. Substantial progress has been made on the cybersecurity strategy and attaining cybersecurity maturity. AI capabilities were embedded in recently deployed cyber technologies to manage the JSE's security posture proactively.

Globacap transaction

The JSE entered into a transaction with next-generation UK fintech company Globacap to progress a digital private placements platform and registry services.

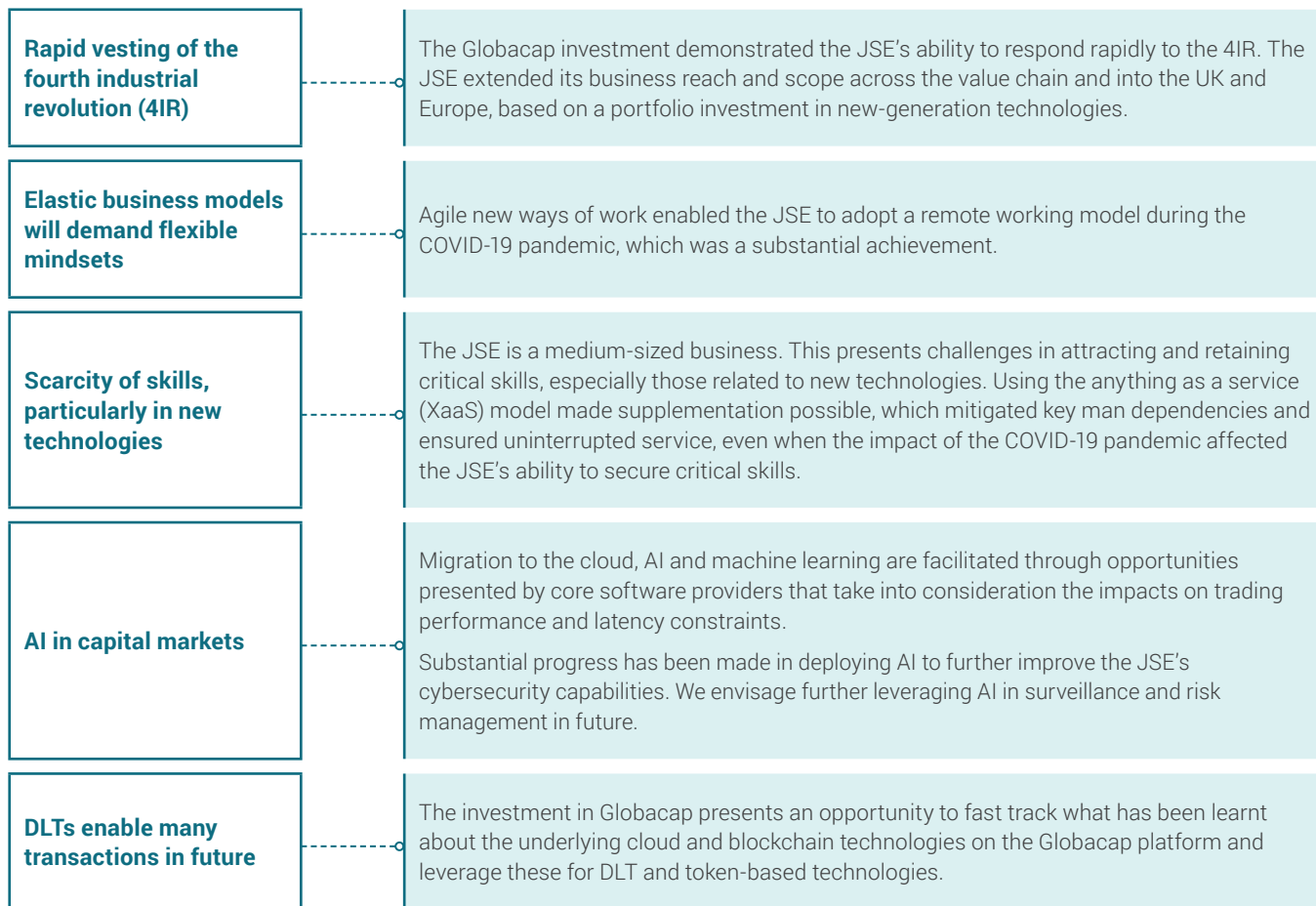
Globacap is a leading regulated private placement and capital management platform that digitally administrates over £1 billion of private shares and debt instruments for 60 companies and over 8 000 shareholders world-wide in 35 countries. Globacap's unique DLT allows digital registrar services to be reflected in real time.

The JSE will use Globacap's innovative technology and expertise to progress infrastructure finance and SME private funding. The deal will help stimulate investment into those markets by narrowing the funding gap and supporting job creation and economic growth.

Strategy, architecture and emerging technologies

The IT landscape remains a fast changing one. The COVID-19 pandemic gave digitalisation increased impetus and the JSE leveraged technology to facilitate secure and reliable new remote working models, which became the norm in 2020.

Engaging in the future IT landscape



Technology and information continued

Our IT operating model and framework

The JSE's IT division focused on embedding the basics of the IT4IT™ operating model during 2020.

The IT management structures that were revitalised during 2019 matured well. The IT Manco is effective and efficient in coordinating operational activities and strategic initiatives. Processes and oversight were structured and standardised, and regular monitoring and guidance resulted in sustained operational stability and reliable performance during the exceptional volumes that were processed immediately after the sovereign debt downgrade and owing to the impact of COVID-19. Integration and collaboration across the enterprise have increased, as illustrated by the successful upgrade of the core exchange engine during the COVID-19 lockdown period.

We continued to implement the Scaled Agile Framework (SAFe®) that was adopted in 2018, to embed agile and new ways of work across the business.

Risk oversight, management and mitigation have been structured and aligned with the ERM framework. A focus on risk management resulted in an overall reduction in the IT risk profile. The IT management and risk frameworks will be further matured in future.

Cybersecurity

We focused on information security, access control and cybersecurity readiness. Providing a safe, secure and trusted marketplace is a fundamental feature of our business.

Progress has been made towards improving our cybersecurity posture, based on the Committee on Payments and Market Infrastructures and the International Organization of Securities Commissions (CPMI-IOSCO) Guidance on Cyber Resilience for Financial Market Infrastructures.

Governance and oversight of the cybersecurity landscape have matured, with the Information Security Steering Committee and the Operational Security Forum becoming operationally effective. The interlinking of these forums with the IT Risk Forum and ERM functions enables a direct line of sight in monitoring and responding to any cybersecurity-related incidents.

The cybersecurity strategy and architecture are well under way and have been effective in curtailing security threats, such as phishing and distributed denial-of-service (DDoS) attacks. The mobile security capability has been enhanced and internal monitoring and controls have significantly improved.

Data information

Driving compliance with the PoPIA

We prioritised our data privacy and prepared for the introduction of the PoPIA provisions, which came into force on 1 July 2020, with a 12-month period to be compliant. The PoPIA governs how organisations collect, use, store and delete personal information for natural and juristic persons.

Our Enterprise Information Governance team, led by the JSE's privacy officer, is responsible for the Company's enterprise information governance framework. The privacy officer is supported by the appointment of divisional privacy champions, who are responsible for driving privacy implementation and governance within their business unit and play a key role in the data incident management process. The privacy champion forum meets monthly.

Several policies have been amended and reviewed during the year, including the JSE privacy notice, data management policy, record retention policy, employee privacy notice and data incident management plan. All staff have attended compliance training, which covers privacy principles and data incident management.

The JSE has identified and validated the key processes that still require refinement or implementation to become fully compliant with the PoPIA, and have mapped out the delivery roadmap to execute on these by July 2021. Although the PoPIA is a key regulatory consideration, treatment of confidential information under the FMA and general information governance principles are integrated into our compliance approach.

Focus on data policy and licensing

The continued evolution of the market data policy framework is essential to support market growth and development. Policy enhancements and launches in 2020 included work on index multi-use, non-professional end-user licence for live equity data and end of day equity juristic end-user licensing.

The JSE launched a series of complimentary training webinars on market data policy and licensing in 2020, to support clients in policy understanding and compliance.

Inclusion of fixed income indices in FTSE/JSE partnership

The JSE is the index administrator of the JSE All Bond Index and the JSE Composite Inflation Linked Index. In April 2020, administration of these indices was transferred to FTSE Russell, complementing the existing FTSE/JSE equity index partnership launched in 2002. FTSE Russell is one of the major global index providers and assumes the governance and regulatory responsibilities related to index administration. Initial delivery from the expanded partnership included a migration of the index calculation to the robust technology platforms for FTSE Russell, as well as an overhaul of the data products and services available to clients.

A new FTSE/JSE Fixed Income Index Advisory Committee will be established in the first quarter of 2021, and this body will help the JSE to steer the future development of these important benchmarks.

Technology and information continued



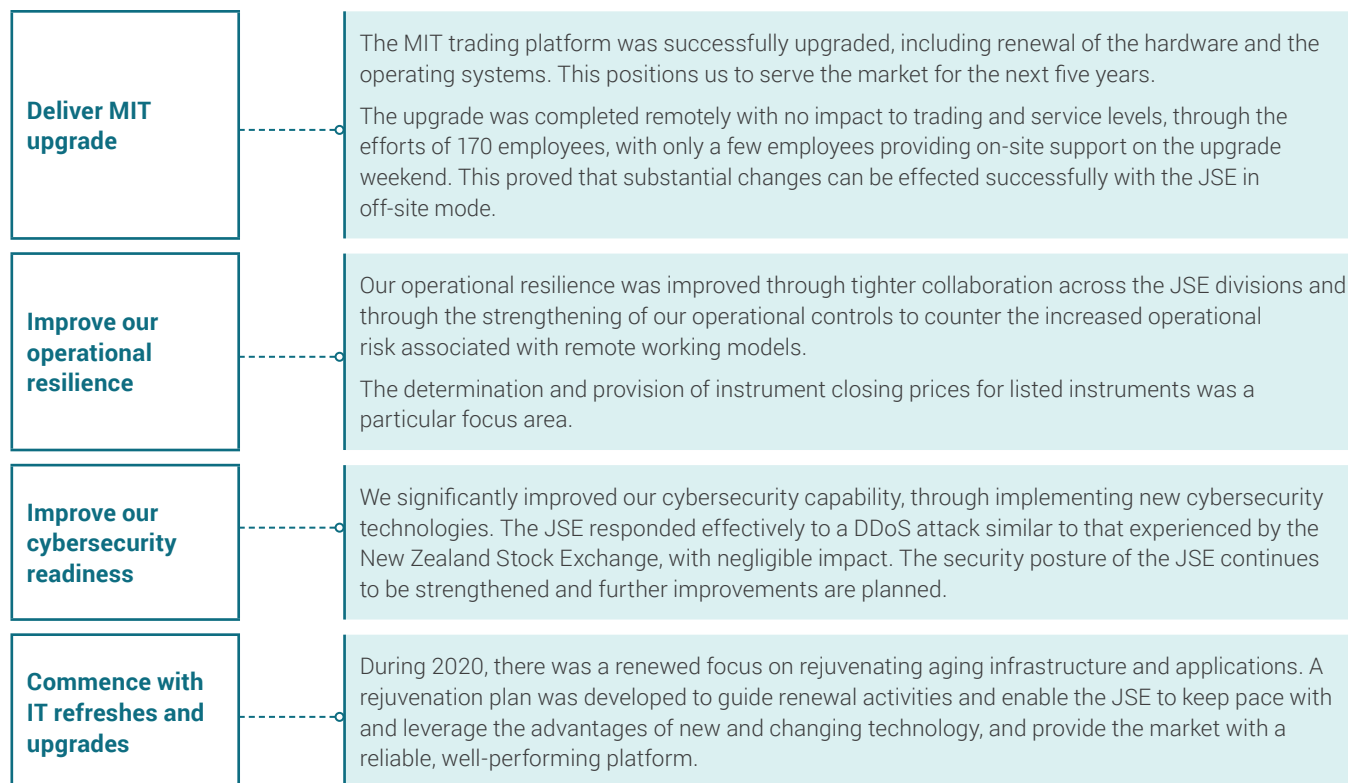
Ensuring continued operations during COVID-19

The effect of COVID-19 on the JSE's IT operations was a key focus area during this reporting period.

The following areas have required increased input and attention from the IT division to ensure we continue to support projects, operational resilience and the security of our systems.

- » **Remote working:** Collaboration applications, laptops and mobile devices were quickly provided to enable working from home for the entire JSE workforce during the lockdown period that commenced in March 2020. The remote working process and model were effective and efficient. Platforms were fully remotely operated and maintained throughout 2020, yet they remained stable and performed well.
- » **COVID-19 cybersecurity:** There was an increase in phishing incidents. Regular communication with end-users and continuous technical adjustments reduced the likelihood that the JSE landscape would be compromised.
- » **Stable operations:** Operations have remained stable. Operational performance levels have improved compared to 2019. There have been fewer market disruptions and trading and clearing availability has been higher.
- » **Project delivery:** The momentum on projects decreased as the JSE moved off site and the focus on maintaining operational stability for the markets increased. The upgrade of MIT was slightly delayed as market participants also adjusted to new ways of work. It was implemented one month later than planned. The BDA mainframe migration was initially affected by one month, owing to supplier delays. However, the unavailability of testing slots caused a knock-on effect that resulted in the initiative being deferred to early 2021.
- » **Staff wellbeing** was continuously monitored and action was taken to ensure that motivation and commitment levels remained high. Our employees' contribution to maintaining a reliable and trusted market was commendable.

Technology priorities delivered in 2020



Future focus areas

We will continue to roll out our rejuvenation plan, with a significant upgrade to the technical infrastructure of the clearing platform. The application suite is expected to remain unaffected and limited impact on the trading and clearing communities is foreseen.

Cloud-based deployments will increase. A cloud-first approach is being actively driven.

Support for the implementation of new products and services into the market will continue. This will include leveraging various deployment models, such as software as a service (SaaS), platform as a service (PaaS) and infrastructure as a service (IaaS).

The focus on cybersecurity will continue.

Transformation and socio-economic advancement

The JSE’s transformation efforts are focused on areas that will broaden the talent pool, develop people, improve stakeholder relationships, improve enterprise and supplier development (SD) and support procurement initiatives.

At the JSE, we start from within, becoming demographically representative in terms of knowledge, skills, experience, race, gender and disabilities, thereby creating a diverse workforce from different cultures, backgrounds, skills and communities.

The Board, executive management and senior employees of the JSE:

- » recognise and understand that transformation is a moral and strategic business imperative;
- » embrace the challenge of being a progressive and transformed organisation;
- » value equity, fairness and diversity; and
- » are active in driving the appropriate mindset and behaviour.

The JSE focuses its development activities on areas believed to be relevant to South Africa (for example, poverty alleviation, job creation and youth and community development) and the business activities of the JSE (such as enterprise development (ED) and financial literacy).

We are measured under the revised Financial Sector Charter (RFSC) and have improved our rating to a level 2 rating, (2019: Level 3 Rating), thus reaching our 2020 target.

Black ownership statistics

	2020	2019
Voting rights of Black people	18.76%	18.74%
Voting rights of Black women	7.30%	7.12%
Economic interest of Black people	12.49%	12.49%
Economic interest of Black women	4.60%	4.90%



Supporting local communities during COVID-19

As the JSE, we strive to make a difference and meaningful impact in disadvantaged communities. This year the JSE has collaborated efforts with BLSA and Afrika Tikkun to drive a community campaign, with the objective of creating healthy hygiene habits and stressing the importance of eliminating the spread of COVID-19 by providing hygiene hampers and food parcels to the needy. This was rolled out in various areas such as:

- » Alexandra;
- » Diepsloot;
- » Orange Farm;
- » Johannesburg Inner City;
- » Mfuleni; and
- » Pretoria central business district.

A total of R2 million was made available by the JSE and BLSA which contributed to the distribution of 2 000 food parcels and 22 000 hygiene hampers consisting of hand sanitisers, antibacterial soap, pocket tissues and a user guide in English, Setswana and IsiZulu.

The JSE also partnered with the **National Solidarity Fund** to launch its first virtual Market Open on 15 April 2020 and donated two days of trading revenues. This was followed by the additional contributions made by JSE employees, Exco and the Board.

Independent verification of the BBBEE status of the JSE

AQRate Proprietary Limited (AQRate), an independent South African National Accreditation System (SANAS)-accredited verifier, conducted a review of the JSE scorecard and related supporting documents in accordance with the requirements of SANAS R47-02 and the gazetted verification manual. These standards require that AQRate plans and performs the verification process and procedures to obtain reasonable assurance about the BBBEE status of the JSE under the RFSC. Summary scorecard: period from 1 January 2020 to 31 December 2020. Valid until February 2022.

Scorecard element

	2020	2019
Equity ownership	15.38	15.41
Management control	17.02	17.32
Skills development	14.58	9.78
Preferential procurement	22.73	22.97
ED/SD	12.16	13.2
Socio-economic development and consumer education	8.00	8
Total	89.87	86.68

Transformation and socio-economic advancement continued

Focus area	Our objectives	What we are doing and progress to date	Performance
<p>Enterprise development and supplier development</p>	<ul style="list-style-type: none"> » Supplier development: Identify fit-for-purpose SD opportunities. » Enterprise development: Maintain current ED initiatives. 	<p>The JSE’s Black stockbroker ED programme provides financial assistance to emerging Black stockbroking firms to support them in the sustainable growth of their businesses. It continued in 2020. Qualifying participants receive 33% of their equity trading fees as well as 33% of their new API connectivity fees back in cash, quarterly in arrears. Participants are expected to use the funds for the purposes of developing their businesses, whether by employing more resources or by acquiring technological tools that will enable the firms to enhance their service offering and ultimately their business activity and growth.</p> <p>The JSE continued with its SD initiative and identified 21 organisations to assist. This programme helps SMEs to grow their businesses, expand their customer base, increase their turnover and profitability, and scale their operations to be more sustainable. These SMEs should then be able to participate in the corporate supply chain. Further detail is available online in our <i>social value report</i>.</p>	<p>R9.5 million spent, equating to 0.5% of NPAT (2019: R6.3 million; 0.5% of NPAT).</p> <p>13 members out of 48 equity trading members (2019: 14 out of 54) receive financial support.</p> <p>SD financial support to 21 organisations: R5.5 million (40% of 2% of FY2019 NPAT).</p>
<p>Preferential procurement</p>	<p>Embed preferential procurement practices.</p>	<p>Our amended procurement policy promotes preferential procurement practices that consider the BBBEE levels of potential suppliers. Only suppliers that meet the BBBEE, Black and/or Black woman ownership, or exempt micro-enterprise (EME) and qualifying small enterprise (QSE) targets are placed on the preferred supplier list. Black-owned EMEs and QSEs are further supported by being placed on a 15-day payment period to minimise cash flow issues.</p>	<p>Procurement spend in the supply chain is 81% of total measured procurement spend (TMPS), R700 million (2019: R620 million; 75% of TMPS).</p>
<p>Consumer education and socio-economic development</p>	<p>Retain the JSE Investment Challenge as our flagship consumer education initiative.</p>	<p>The JSE continues to prioritise its education-focused activities, such as operating the JSE Investment Challenge. The challenge has run over the past 40 years. It involves participation in a fun, interactive, online trading game and is a focused and far-reaching educational programme. It is aimed at introducing South African high school learners and university students to the world of finance and investments in JSE-listed shares, helping to demystify the stock exchange.</p>	<p>The number of high school participants decreased from 19 024 to 9 429 and the number of university participants decreased from 4 038 to 2 588.</p> <p>Spend: R3.2 million (2019: R4.2 million).</p>

Transformation and socio-economic advancement continued

Focus area	Our objectives	What we are doing and progress to date	Performance
Socio-economic development	The JSE's socio-economic development initiatives focus on education, healthcare, and skills and development for disadvantaged communities, and are executed through registered not-for-profit organisations. The JSE invests by providing time, effort and money and believes that individuals should benefit directly through positive and meaningful contributions that are sustainable.	The JSE enabled 25 chartered financial analyst (CFA) (level 1) students to attend extra classes through Novia One Group. Fundisa funding was provided to learners from low-income families to pay for quality accredited qualifications at a public college or university.	Spend: R4.1 million (2019: R5.4 million).
Skills development	Implement strategic talent management initiatives.	Our learnership programme for people with disabilities continued throughout 2019. We launched a 12-month learnership for 21 people living with disabilities in July 2019. All participants are Black South African females with disabilities. The JSE absorbed a large percentage of its learners from the 2018 learnership programme.	21 Black individuals participated in learnership programmes. Of those, 100% were females and 0% were males. R4 million, 50% of our training spend for 2020 was allocated to Black employees. Total skills development spend: R8 million, of which R661 500 is disabled learner salaries.
Employment equity	Drive progressive and integrated people plans.	Our compulsory diversity training workshops for all employees serve as a building block for an inclusive culture. The workshops support robust conversations and provide an opportunity to gain a shared understanding of key transformation priorities. Achieving EE at senior and middle management levels remains a challenge and continues to be a focus area.	17% Black employee complement, with 3% in senior management and 9% in middle management. 19% of employees attended the workshops.
Management control	Continue building a transformed Board and Exco over time.	We will continue to focus on EE appointments at Exco level.	The JSE Board consists of 64% Black and 73% female members. Black representation at Exco level decreased from 50% to 43%.
Ownership	Increase Black ownership of the JSE sustainably and economically viably over time.	The JEF Trust provides academically deserving Black South African students with the finance and support to acquire appropriate qualifications and the opportunity to enter the financial services sector on completion of their university training. Since the inception of the trust in 2009, it has supported 645 students with total disbursements of R74 million.	Spend: R10.5 million (2019: R9.4 million) Beneficiaries: 66 (2019: 64).

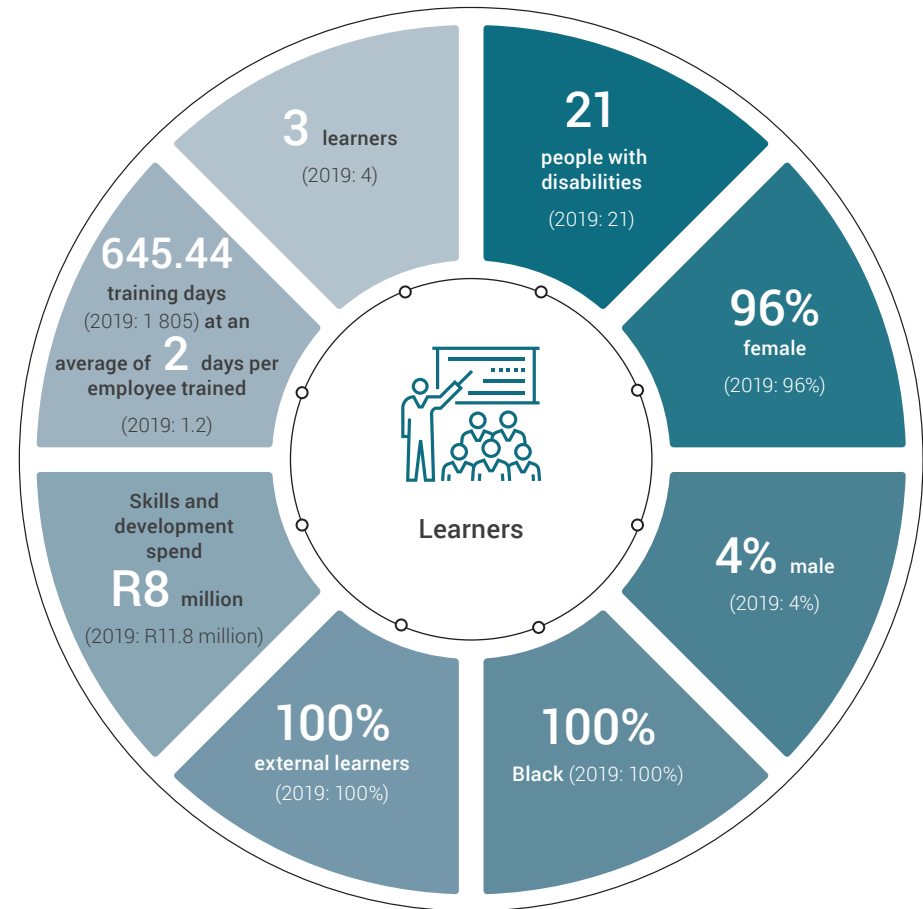
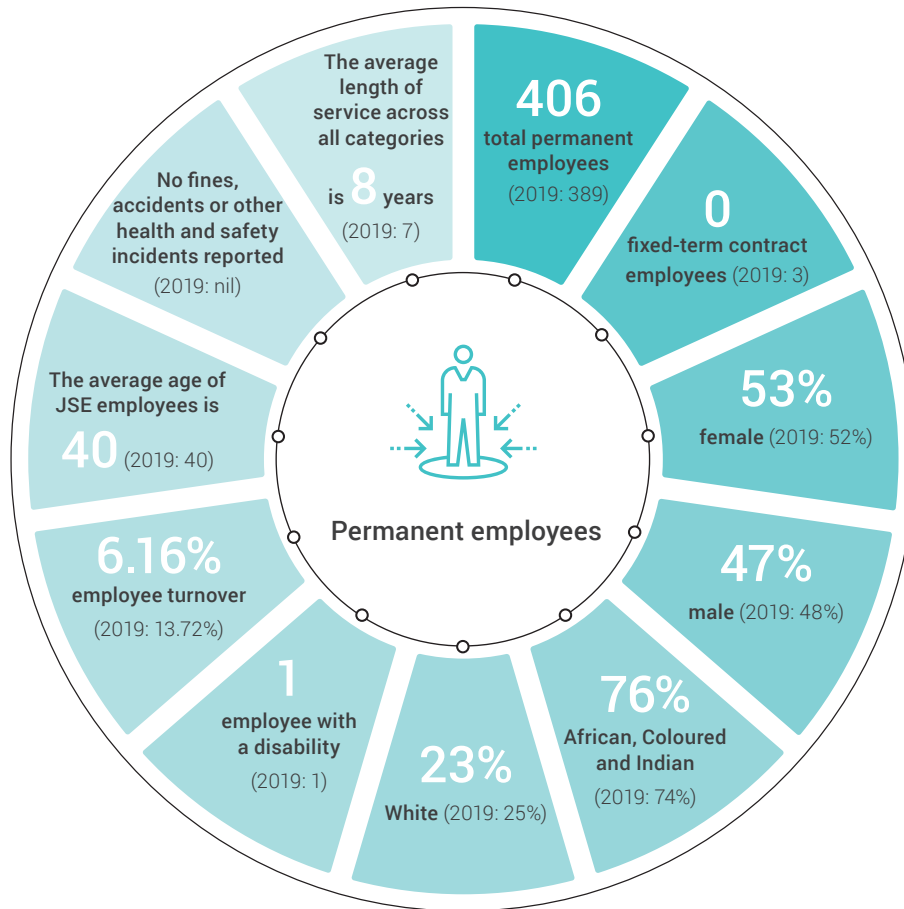
Managing and recognising our employees' contribution

The early investment in the JSE's business agility capability played a significant role in how effectively we responded to COVID-19.

Our values drive how we attract, develop, remunerate, engage and retain diverse top talent. We ensure we can fulfil current and future talent requirements, enable business transformation and meet the needs of a changing and diverse society.

We continue to review our current capabilities and launched a future capability assessment and development programme. This programme will ensure we have the correct skills and technological expertise to serve our increasingly digital and interconnected markets. We continue to invest in our culture initiatives and educate employees about conducting business ethically.

Our employees and learners in numbers



Managing and recognising our employees' contribution continued



Supporting our employees during COVID-19

The JSE responded to the COVID-19 outbreak by offering employees compassion and support. By swiftly addressing employees' fears and concerns, the JSE provided leadership in the following areas:

Capacitated to work remotely

- » All employees were capacitated to work from home with office set-up support, office equipment and access to internet services, at the expense of the Exchange.
- » All employees (excluding the JSE Exco) were granted a one-off *ex-gratia* allowance of R2 500 for continued work expenses to mitigate the challenges of balancing their personal lives with working from home.
- » Leadership teams were offered insights into managing employees working remotely.
- » We implemented a No Meeting Wednesdays pilot programme to help employees cut down on meetings to allow them time to focus on projects and work.
- » Employees were able to continue training through online learning and development opportunities.

Financial support

- » Employees also had access to financial planning support, including access to certified planners and credit monitoring.
- » Financial assistance was made available to employees whose spouses had been affected or had lost income owing to the COVID-19 pandemic.

Managing overall wellness

- » Wellbeing sessions geared to mental health and wellbeing were offered.
- » We partnered with the Discovery Health Medical Scheme for COVID-19 case management.
- » All employees had telephonic or text access to mental health professionals through the Employee Assistance Programme.
- » All employees were provided with access to professionals who offered strategies and coping mechanisms for working from home when there are children at home.
- » Virtual workout sessions were offered to encourage employees to exercise regularly.

Attracting and retaining diverse talent

The JSE took key actions to support its strategic priority of attracting and retaining diverse top talent. All employees at the JSE use the JSE Training Academy digital platform to learn about essential training and mandatory courses. We continued to offer coaching programmes for high-potential leaders. The benefits are already evident in the rising confidence and engagement levels of the senior team.

Developing our people

The JSE needs to evolve its workforce to keep pace with the rapidly changing technological and financial market environment. The critical skills we target include expertise in capital markets, risk, post-trade services, regulation, issuer services and information services.

Our focus is on:

- » letting our business strategy guide our talent requirements;
- » achieving the transition to new ways of work to sustain and embed an agile culture;
- » building sustainable leadership by continuing with the coaching programme implemented in 2019 and rolling out a mentorship programme;
- » using our culture programme in conjunction with the employee engagement survey results to refine employee engagement action plans;
- » continuing with the JSE Way awards programme to foster a culture of recognition; and
- » developing employees by sharing knowledge and talent, enabling collaboration and fostering internal growth. We aim to segment talent to better address pivotal roles and success profiles, and to find ways to attract the best talent.

We have enhanced our skills development programmes, which include:

- » leadership development programmes (senior, middle and new managers programmes);
- » JSE-specific programmes and the JSE Training Academy digital learning platform;
- » South African Institute of Financial Markets (SAIFM) programmes, which we offer in partnership with SAIFM;

- » subscriptions to local and world-class learning platforms, including Pluralsight, edX.org, Expert IT Training for Networking, Cyber Security and Cloud (INE), and K2 Workflow South Africa; and
- » sponsoring 48 employees to study towards bachelor's degrees and other accredited qualifications.

The JSE spent R8 million on learning and development in 2020 (2019: R11.8 million), and 78% of beneficiaries were previously disadvantaged. We offer a blended training approach, which allows employees to address individual skills needs and team development imperatives.

We held a talent review during the year, which confirmed that our bench strength has improved and that we are creating the right platform to develop future talent. We tailor our succession planning to have the right number of quality people to meet our current and future needs. We mitigate our current risk by (i) having robust succession plans for all critical roles, (ii) using knowledge management and collaborative platforms and (iii) mapping critical roles to the available talent in the market for proactive acquisition to reduce our key man dependencies.

We also apply our succession plan to overcome roles with key person dependency. Back-up individuals have been identified for key person roles in order to ensure business continuity and not put the business at risk, should the services of a key employee be terminated or they resign.

The director: human resources supports the Group CEO in hiring the executive team and shaping the senior talent pool. The GRC annually interrogates the detailed talent maps and development plans for each senior manager. It also reviews progress on managers' leadership development and sets race and gender targets to incorporate into management's talent planning. All Exco appointments are discussed with the Board Chairman before finalisation. We assign coaches for all the identified successors in senior leadership positions.

Managing and recognising our employees' contribution continued

73

Employees using the JSE Sponsored Education Fund
(2019: 85)

organisational engagement and alignment with regard to the vision, mission, purpose and values; as well as employee wellbeing and leadership enablement programmes.

A solid agile foundation

During the past 12 months, the JSE has created a solid agile foundation and shown notable improvements in both business agility and maturity metrics against a set baseline and global benchmark. The critical driving force behind the effective agile mechanisms is the lean agile centre of excellence (LACE). This group comprises the agile project management office (PMO), agile transformation, HR and key business representatives from across the JSE.

We are pleased with our measured 12-month agile transformation improvement increments but note that these gains came off a relatively low initial baseline (September 2019). The JSE's current business agility remains slightly behind 2020 global benchmarks that we are aiming to achieve.

The improving business agility across the entire organisation played a significant role in the effectiveness of the JSE's response to COVID-19.

Organisational alignment: JSE vision, mission, purpose and values

The enhancement of the JSE culture journey commenced in 2019, with the revision and introduction of the new culture and strategy components as well as the new vision, mission, purpose and values by the Exco and leadership team.

An employee engagement campaign was implemented from February 2020 to galvanise the organisation towards the new JSE vision, purpose, mission and values. The campaign yielded positivity across the organisation as various engagement and communication activities unified the entire organisation in support of the vision, mission, purpose and values.

All HR supporting processes and systems, such as performance management, reward and recognition, JSE Connect, the JSE intranet and the JSE website were updated to include the culture and strategy components. All JSE internal communication, including staff imbizos, incorporated the culture and strategy components in order to enable their adoption.

59

Employees attending leadership development training (including leadership short sessions)
(2019: 92)

89

Institutions and trainers
(2019: 126)

22 715

Hours spent on employee training
(2019: 10 696)

22

Beneficiaries with disabilities trained
(2019: 21)

100

Employees using the JSE Training Academy app (%)
(2019: 80)

Adapting our culture

We are committed to improving our culture through high levels of employee engagement, the employee experience and employee wellbeing.

The JSE embarked on a culture journey to enhance its culture and, in so doing, to become a great place to work for its employees and ultimately improve the employee experience and employee engagement and to elevate the JSE culture to excellence in order to attract and retain the best talent in the market. A series of programmes and initiatives were implemented to improve employee engagement, the employee experience and employee wellbeing. These included

Employee wellbeing

The JSE has a long-standing employee wellbeing programme. When the COVID-19 pandemic necessitated remote working in March 2020, a virtual employee wellbeing programme was implemented to support and enable employee wellness and effectiveness while employees were working remotely.

The employee wellbeing programme has been aligned to the culture and strategy campaign. It includes interventions such as fitness sessions, diet and nutrition education sessions, physical wellbeing sessions, mental wellbeing sessions and financial wellness sessions. Employee enablement initiatives to educate and support employees in overall life improvement, work effectiveness, and family and childcare support during the pandemic have also been included.

A leadership enablement programme was also implemented to enable the JSE leadership to be effective leaders and to empower them with key leadership skills necessary for remote working and for new ways of working beyond COVID-19. The leadership enablement programme included educational sessions on key topics such as servant leadership, diversity and inclusion, being a humane leader, transformational leadership and performance management.

Employee engagement and experience

The JSE conducts an employee engagement survey every second year to assess the level of employee engagement, the employee experience and employee wellbeing. Oversight of human capital and the employee engagement survey is the responsibility of the Group Sustainability Committee (GSC).

In addition to a number of short surveys throughout the year to assess our staff experience and determine how we could better support them, we also conducted our employee engagement survey during October 2020.

Managing and recognising our employees' contribution continued

The 2020 employee engagement survey

- » Aim: To assess whether employee engagement, the employee experience and employee wellbeing have improved based on effectiveness of interventions stemming from the 2018 survey results.
- » Outcomes:
 - ✓ The JSE consistently achieved above norms, highlighting that the JSE is a sought-after place to work with a strong and positive work culture.
- » Results indicate:
 - ✓ These results demonstrate that the interventions implemented subsequent to the 2018 results, the leadership enablement and employee empowerment programmes yielded the desired effect, shifting the average score upwards.
 - ✓ Areas for improvement: Our target is to consistently reach high performance levels across all themes. Among other aspects, staff would like to be more inspired by what they do, which implies going beyond business results to include their impact on society and the environment.

conduct is an integral part of our corporate culture. Our behaviour in the performance of our day-to-day duties and interactions with stakeholders is underpinned by our values and is indicative of how we think and feel about doing business and interacting in the broader economic and social environment.

Ethical behaviour and anti-corruption measures are instilled formally through our code of conduct and ethics policy, procedures and training material, as well as through compliance oversight of the Group's adherence to relevant laws and regulations. The code of conduct sets out our individual responsibilities as colleagues, stakeholders and business partners, and guides our behaviour when we make decisions. It is based on a strong foundation of ethical leadership and a commitment to doing the right thing.

We hold ourselves to high ethical standards and, wherever possible, we insist that the external parties with whom we interact apply the same standards.

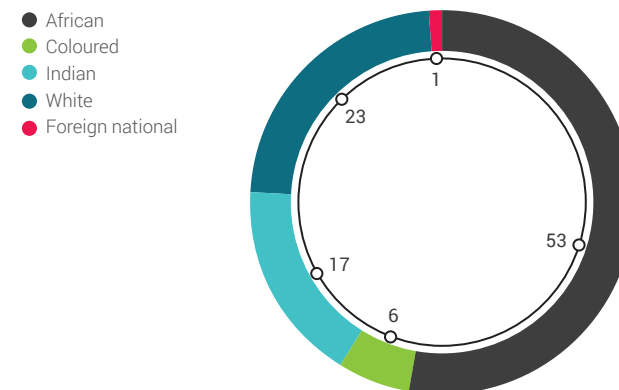
Responsible business and good governance principles are promoted by the Listings Requirements, the effective regulation and surveillance of our markets, the FTSE/JSE Responsible Investment Index Series, and our support of a variety of good governance and best practice initiatives, in South Africa and internationally.

Strengthening diversity

The JSE supports the country's transformation objectives and is committed to becoming demographically representative in knowledge, skills and experience, race, gender and disability, while redressing historical inequality. We have an EE policy that aims to eliminate unfair discrimination and we hold compulsory diversity and inclusion workshops for all employees. These workshops facilitate discussion and a shared understanding of diversity and the JSE's transformation priorities. We have successfully completed the second year of our three-year EE plan and are making progress towards our objectives.

76% of our employees are African, Coloured and Indian and we continue to improve this representation in senior and top management. Our learnership programme for unemployed Black youths contributes to a pipeline of skilled Black employees. Our focus is on disabled learners, which is critical to driving transformation. In addition, based on an internal review, the JSE does not have a gender or race pay disparity.

Race breakdown, 31 December 2020 (%)



Female representation at:



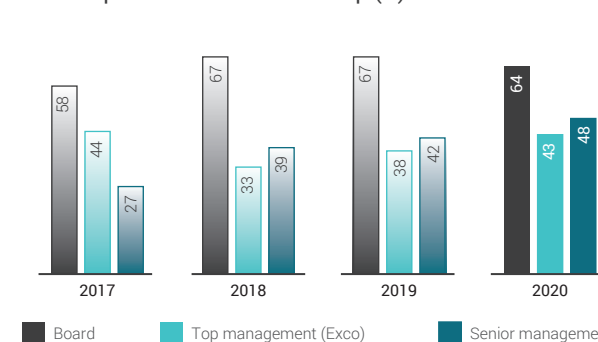
Reinforcing our ethics 01 02

We remain focused on adhering to applicable legislation and being an ethical, environmentally responsible business. We have zero tolerance for bribery, corruption, misconduct, fraud, theft and unethical behaviour. Breaches of the JSE Group Code of Conduct and Ethics may result in disciplinary action or criminal prosecution. All employees are required to report actual or potential breaches to management, the head of Group compliance or the whistle-blower hotline. Five calls were received during 2020 (2019: nil).

What guides our approach to ethics?

The Board is responsible for ensuring the ethical conduct of the employees of the Group, and is committed to the King IV principles of accountability, integrity, fairness and transparency, which are reflected in the Board's charter. The reputation of the JSE is built on the actions and decisions taken by all employees in our interactions, whether internal or external, and ethical

Black representation in leadership (%)



Managing and recognising our employees' contribution continued

Rewarding performance

Fair and responsible remuneration

The Board, working through Group Remco, seeks to ensure that total remuneration paid by the Group is aligned with the JSE's value-creating strategies, is sustainable and meets the legitimate expectations of stakeholders.

Within this philosophy, Group Remco aims to apply the approved remuneration policy and the associated practices so that executive remuneration is fair and reasonable within the context of the Group's overall remuneration.

This implementation report sets out the details and key outcomes of the remuneration paid in 2020.

Guaranteed remuneration adjustments

Guaranteed remuneration serves as compensation for work performed and is:

- » linked to clear role descriptions;
- » based on the principle of equal pay for equal work;
- » benchmarked against independent market data in order to pay at market median, and validated by the JSE's independent remuneration advisors; and
- » reviewed annually for all staff, with adjustments applicable from 1 January each year.

Annual increases cater for inflation adjustments, grade changes where applicable, as well as merit increases for top performers. Any unjustifiable income disparities (including race, gender and tenure) are subject to adjustment. Overall pay ratios between executives and other employees are also considered when determining annual salary increments.

Annual incentives awarded for 2020

In terms of the JSE's approved remuneration policy, the maximum amount that may be awarded in annual short-term incentives is limited to 10% of that year's NPAT. The JSE's financial performance in any given year is a key determinant, but not the sole factor, in determining the final quantum of the discretionary bonus pool.

Group Remco determined that management and staff had delivered an excellent corporate performance in 2020 under challenging conditions, and awarded a discretionary bonus pool of R75.3 million (2019: R64 million). This translates into a bonus pool of 9.6% of NPAT (2019: 9.2%). No bonus shares were awarded for the 2020 year, and all discretionary bonus awards were payable in cash.

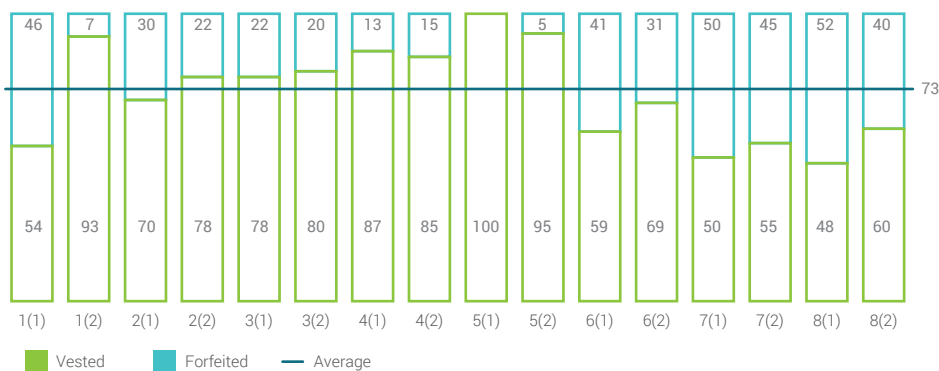
Long-term incentives vesting in 2020

By design, the LTIS 2010 scheme (now closed) and the new LTIS 2018 scheme approved by shareholders in 2018 are structured for on-target vesting of 70% (with the size of the original award being calibrated to account for this expected 70% vesting).

This means that on average over the life of these schemes, 70% of the share awards ought to vest if management achieves on-target performance against the pre-set corporate performance metrics.

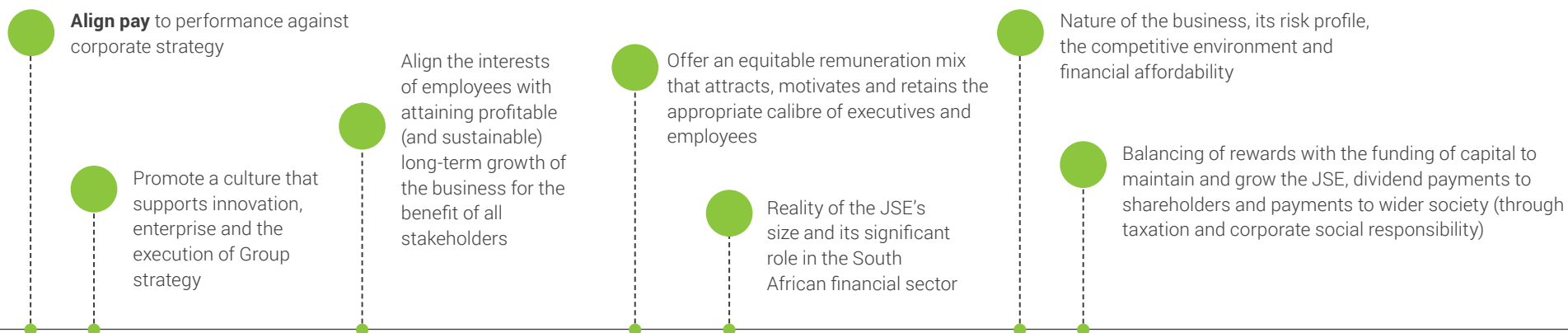
The LTIS 2010 scheme has closed with all allocations having vested. Over the life of the LTIS 2010 scheme, the overall vesting percentage is 73%. Where corporate performance targets are not met, the relevant portion of the share awards are forfeited (there is no subsequent retesting of performance).

LTIS 2010 vesting profile (%)



Managing and recognising our employees' contribution continued

Remuneration philosophy objective



Inherent in this philosophy is the linkage between pay and short and long-term performance (both at an individual and corporate level).

Remuneration is structured in a fair and reasonable manner, recognising individual contributions and collective results. There is a clear differentiation between executives and employees based on line-of-sight responsibility, accountability, competencies, work performance and scarcity of skills.

In order to drive a pay-for-performance approach, there is also an increasing element of variable pay at senior management levels.

“ This remuneration philosophy is expressed through a comprehensive remuneration policy, supported by specific remuneration practices. ”

The following is factored into our remuneration policy and practices:

- » The principle of equal pay for work of equal value:
 - o Guaranteed pay is determined based on clear role descriptions and validated by an independent remuneration advisor;
 - o Pay levels are benchmarked against independent market data, and any unjustifiable income;
- » Disparities (including race, gender and tenure) are subject to adjustment;
- » Overall pay ratios between executives and other employees are considered when determining annual salary increments;
- » The JSE invests in employees through career pathing, talent mapping and providing skills development opportunities to promote progress within the JSE; and
- » Provision of financial education, debt counselling and training on basic financial education to assist employees in avoiding overindebtedness.

Our remuneration philosophy creates sustainable value as it is:

- » aligned with stakeholder interests;
- » congruent with strategic priorities and values;
- » linked to corporate and individual performance;
- » competitive with market norms and benchmarks; and
- » transparent and understandable.

Refer to our [online remuneration report](#) for detailed information.

Managing and recognising our employees' contribution continued

Remuneration model

Our remuneration model comprises three core elements – guaranteed pay, annual incentives and long-term incentives (LTIs). These are linked to performance to ensure that high levels of pay are awarded only for high performance and where there is sustained value creation for shareholders.

	Fixed pay	Variable pay	
Element	Guaranteed pay and benefits	Annual incentives	LTIs
Characteristics	<ul style="list-style-type: none"> » Set around median for the specific role » Based on the premise of equal pay for work of equal value » Provide a guaranteed level of earnings 	<ul style="list-style-type: none"> » Payable for the financial year » Reward high performance » Linked to corporate financial performance, delivery of strategic priorities and personal performance 	<ul style="list-style-type: none"> » Payable in respect of sustained corporate performance over three to four years » Attract and retain high-performing talent and critical and scarce skills » Create a share ownership culture among senior employees » Measured against pre-set financial and strategic targets
Component	<ul style="list-style-type: none"> » Basic salary » Defined contribution pension plan » Medical aid benefits 	<ul style="list-style-type: none"> » Discretionary cash bonus 	<ul style="list-style-type: none"> » Performance share schemes: <ul style="list-style-type: none"> o Long-term incentive scheme (LTIS) 2010: Scheme closed with final allocation awarded in 2017. Remaining allocations will vest over time until 2021 o LTIS 2018: First allocation awarded in 2018 and will vest from 2021 » Critical skills cash scheme
Purpose	<ul style="list-style-type: none"> » Compensate employees for work performed » Attraction and retention 	<ul style="list-style-type: none"> » Reward employees for the specific financial year's corporate financial performance, delivery of strategic priorities and personal performance » Attraction and retention 	<ul style="list-style-type: none"> » LTIS 2010/2018: Incentivise corporate performance and long-term shareholder value creation » Critical skills cash scheme: Retention of senior employees with scarce or critical skills

Managing and recognising our employees' contribution continued

Element	Fixed pay	Variable pay	
	Guaranteed pay and benefits	Annual incentives	LTIs
Eligibility	All employees	All employees	<ul style="list-style-type: none"> » LTIS 2010/2018: Senior leadership group involved in strategic decision making » Critical skills cash scheme: Key employees with scarce or critical skills (who do not participate in LTIS 2010/2018)
How the pay is set	<ul style="list-style-type: none"> » Structured on a total cost to company basis » Benchmarked against independent market data » Reflects scope and depth of role, experience required, level of responsibility and individual performance <p>Benchmarks Financial services industry and general corporate benchmarks are used to determine competitive guaranteed pay levels for all roles. The PwC Remchannel database is used with input from independent specialists to ensure all roles are correctly sized and graded as part of the salary benchmarking process.</p> <p>The policy aims to move base salaries towards median, although cost considerations sometimes do not allow this. In certain instances – either for historical reasons or to retain scarce skills – salaries above median are paid.</p>	<ul style="list-style-type: none"> » GRC determines the discretionary bonus pool based on its assessment of annual corporate performance » Individual discretionary bonus awards are linked to seniority, individual performance and contribution to corporate performance <p>Performance is rewarded as follows:</p> <ul style="list-style-type: none"> » Group CEO receives a discretionary bonus cash award of up to 200% of guaranteed pay based on GRC performance assessment; » Exco members receive discretionary bonus cash awards of up to 150% of guaranteed pay based on performance as assessed by the Group CEO and subject to GRC oversight; » Employees rated as top performers receive discretionary bonus cash awards of between 16% and 50% of guaranteed pay; » Employees rated as meeting expectations receive a discretionary bonus cash award of approximately one month's guaranteed pay; and » All permanent employees can receive an award of JSE Limited ordinary shares (known as bonus shares) based on GRC discretion (historically, no more than 6% of the discretionary bonus pool). 	<ul style="list-style-type: none"> » LTIS 2010/2018 are annual awards of JSE ordinary shares; future vesting is linked to corporate performance measured over three and four years » Critical skills cash scheme is an annual cash award up to 25% of the participant's annual salary; future vesting is linked to continued employment and performance

Managing and recognising our employees' contribution continued

Element	Fixed pay	Variable pay	
	Guaranteed pay and benefits	Annual incentives	LTIs
Performance hurdle	Not applicable	<ul style="list-style-type: none"> » Fully discretionary based on GRC assessment of annual corporate performance » Discretionary bonus pool is only awarded if pre-set financial and strategic targets are achieved » No deferral of discretionary bonus cash awards » When a portion of the discretionary bonus pool is paid in JSE Limited ordinary shares, the shares vest within 12 months of year-end 	<ul style="list-style-type: none"> » LTIS 2010/2018: Continued employment and achievement of corporate performance targets » Critical skills cash scheme: Continued employment, JSE's overall corporate performance and individual performance » LTIS 2010/2018: Shares vest over three and four years » Critical skills cash scheme: Cash awards vest over two years
Deferral	Not applicable	<ul style="list-style-type: none"> » No deferral of discretionary bonus cash awards » When a portion of the discretionary bonus pool is paid in JSE Limited ordinary shares, the shares vest within 12 months of year-end 	<ul style="list-style-type: none"> » LTIS 2010/2018: Shares vest over three and four years » Critical skills cash scheme: Cash awards vest over two years
Link between remuneration and Group performance	Not applicable	<ul style="list-style-type: none"> » Deliver on the financial, operational and strategic targets as set out in the corporate scorecard » Targets are not weighted, although the GRC places greater emphasis on financial performance 	LTIS 2018: <ul style="list-style-type: none"> » Return on equity (ROE) » Compound growth in earnings (EBIT) » Relative total shareholder return (TSR) against a peer group » Strategic metrics

REGULATION AND POLICY ¹⁴

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The JSE is both a frontline regulator and a commercial entity.

As an SRO, we strive to ensure an appropriate balance between the pursuit of shareholder returns and the regulation of the markets we operate. We are committed to conduct the business of the JSE in a fair and transparent manner.

The JSE's integral function is to:



The JSE is a licensed exchange in terms of the FMA. The FMA circumscribes its regulatory duties, powers and functions, including the JSE's obligation to make listings requirements and enforce them.

The JSE advocates for the enhancement of corporate governance and the quality of financial reporting disclosures by companies that have equity or debt securities listed on the JSE for the benefit of shareholders, securities holders, investors and other market stakeholders.

There are various role-players in the South African financial markets ecosystem and they perform various roles in creating a sound South African financial market for the benefit of the investment community. Companies may be regulated by more than one regulator and these role-players provide critical checks and balances for a robust governance ecosystem for all companies doing business in South Africa.

Our regulators

We strive to comply with all relevant laws and regulations, and our governance process is proactive in identifying and acting on legislative changes. These changes may also afford the opportunity to diversify our products and services.

Our regulators

The integrity of the JSE's regulatory relationships is fundamental to the exercise of its regulatory authority.

- » The Financial Sector Regulation Act, 9 of 2017 (FSRA) established South Africa's twin peaks regulatory regime and the FSCA is the JSE's lead regulator.
- » JSE Limited and JSE Clear, as market infrastructures, are subject to prudential regulation by the PA, a division of the SARB.

Key developments in 2020

In-depth on-site reviews of JSE Limited and JSE Clear.

- » The PA engaged directly with the JSE board and the JSE Clear Board on strategy and risk management.
- » The PA raised no negative findings in 2020.

Regulatory engagement with the PA

The prudential regulation includes detailed quarterly reporting to the PA and on-site reviews. In 2020, there were 10 PA supervisory meetings for both the JSE and JSE Clear involving executives across the Group and senior finance, risk, operations, IT, audit and compliance team members. The PA raised no negative findings during 2020.

The PA also engaged directly with the JSE Board and the JSE Clear board on strategy and risk management. We anticipate an increase in the level and intensity of this interaction during 2021.

See [page 111](#) for more information on how the JSE manages its own compliance.

Market infrastructures

Regulation requires the JSE to make provision for the clearing and settlement of transactions in listed securities through the Exchange.

JSE Limited

For the cash equities market, the JSE rules make provision for a range of measures to ensure that settlement of transactions through the Exchange takes place. It includes the payment of a margin on unsettled transactions by member firms and ongoing monitoring of members' regulatory capital to ensure they can meet settlement obligations.

JSE Clear

The JSE appointed JSE Clear as a licensed clearing house (in terms of the FMA) to clear transactions in listed derivatives effected through the Exchange. It is a CCP for trades executed on the JSE's derivatives markets.

The FMA requires that clearing houses implement an effective and reliable infrastructure for the securities that they clear. Additionally, principle 13 of the International Organization of Securities Commissions (IOSCO) principles for financial market infrastructures (PFMI) specifies that the default procedures of financial market infrastructures must be tested and reviewed annually.

JSE Clear manages counterparty credit risk, liquidity risk, operational risk and regulatory compliance risk. It performs annual clearing member default simulations to ensure that it, and the clearing members, have the necessary processes in place to manage a clearing member default.

JSE Clear conducted a full default simulation in November 2020. The focus of this latest simulation was on a Clearing Member default in the agricultural derivatives market and the outcome was positive and indicative of our ability to effectively manage an event of default.

JSE Clear will transition to become an ICH by 1 January 2022, in accordance with section 110 of the FMA.

An operating model for the new ICH has been developed and agreed internally, which sets out the new governance structures of the CCP, as well as the nature and form of the ongoing relationship in respect of the provision of services and functions between JSE Limited and JSE Clear. The rulebook for the ICH is being finalised in consultation with Clearing Members. JSE Clear will submit its formal licence application in 2021 once the application template has been finalised by the regulator.

Our regulatory and governance role

Regulations impact how clients interact with the JSE, and we share regulatory insights and enhancements with the market. We balance the need for effective regulation with our assessment of the regulatory burden on participants.

As the JSE is both a regulator and a market operator, we recognise and engage on stakeholders' perceptions of a conflict of interest. Over the past two years, the JSE's regulatory and governance role has attracted more attention, notably in response to various scandals in corporate South Africa.

One of our primary responses was to re-examine our role, and particularly the quality and detail of the Listings Requirements. Various changes to the Listings Requirements are now in effect, following a market consultation process. Our investigations unit has also made significant progress this year with the release of findings (and the imposition of sanctions) on companies that have transgressed the Listings Requirements. This contributed to heightened awareness of the general need for improved corporate governance in corporate South Africa.

We will continue to engage proactively to identify possible enhancements to the Listings Requirements to increase the quality of our regulatory activities, and to address gaps in market perceptions of our regulatory role.

Regulatory and governance structures

Issuer Regulation division

The Issuer Regulation division is the custodian of the Listings Requirements and is responsible for their interpretation, application and enforcement.

The **Listings Requirements** apply to companies seeking a listing of securities for the first time and to companies that already have securities listed on the JSE (shares or other specialist securities, such as debt securities or exchange-traded funds).

Pursuant to the FMA, the Listings Requirements are binding on issuers, its directors, officers, agents and employees.

The Listings Requirements aim to ensure that JSE market participants have an orderly marketplace for trading in securities listed on the JSE and to regulate the market accordingly.

They contain the rules and procedures governing new applications for listing, certain corporate actions and continuing obligations applicable to issuers and issuers of specialist securities.

Where the JSE finds that an applicant issuer or its director(s)/ officer(s) have contravened or failed to adhere to the Listings Requirements, the JSE may:

- » censure the issuer and/or the issuer's director(s)/officer(s), individually or jointly, by means of private or public censure;
- » impose a fine on the issuer and/or the issuer's director(s)/ officer(s), individually or jointly;
- » disqualify an issuer's director(s)/officer(s) from holding the office of a director or officer of a listed company for any period of time; and
- » issue any other penalty that is appropriate under the circumstances.

The **sanctions** that may be imposed by the JSE are in addition to any sanctions, fines or prosecution that may be sought or imposed by the FSCA.

The **protection of investors** (retail and wholesale) takes precedence when setting regulatory standards, as does promoting investor confidence in standards of disclosure and corporate governance.

As with its global peers, the JSE does this by ensuring that:

- » all applicant issuers meet minimum entry requirements. Compliance is determined based on the input of various role-players; and
- » sufficient disclosure of relevant information is made available publicly and timeously so investors are able to inform themselves of all relevant facts before deciding whether to trade in securities.



Self-Regulatory Organisation (SRO) Report
[The JSE's SRO report is available online.](#)

Our regulatory and governance role continued

Market Regulation division

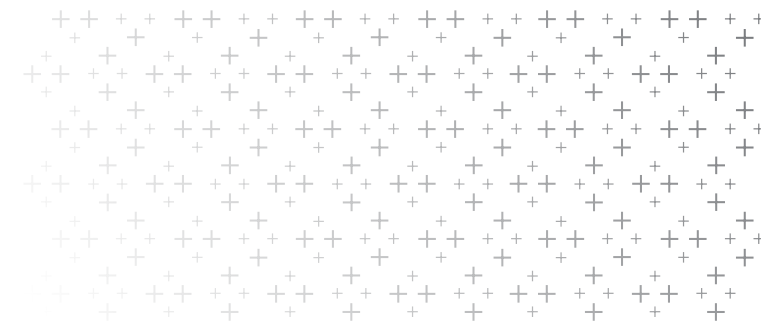
The Market Regulation division is responsible for overseeing trading in the markets operated by the JSE, with the primary aim of identifying potential market abuse, including insider trading and market manipulation.

The JSE does not have powers to investigate market abuse. **Market abuse** is a statutory offence in terms of the FMA. The statutory powers to conduct market abuse investigations and to initiate enforcement action, if necessary, are vested in the **FSCA**.

The Market Regulation division **monitors trading** in all JSE-listed securities using surveillance systems designed to detect and analyse suspicious trading activity. If it identifies trading activity that it believes warrants further scrutiny, the findings are discussed with the FSCA. The FSCA determines whether the identified trading activity should be formally investigated.

The FSCA can also initiate a market abuse investigation based on information referred by another licensed exchange or by any other party.

The Market Regulation division also **supervises the compliance** of authorised JSE member firms with the rules dealing with the use of the JSE's trading systems, the regulated services provided to their clients and the financial soundness of the member firms, as well as with various governance, risk management and internal control arrangements.



The JSE's regulatory response to COVID-19

Our regulatory teams proactively assess regulations in times of uncertainty. The COVID-19 pandemic has demanded an adaptable and flexible approach, with dedicated internal workstreams focusing on various regulatory issues. This enabled the JSE to respond proactively by providing guidance to issuers on how to approach important regulatory matters, such as the publication of COVID-19 price sensitive information; the preparation and publication of financial results, considering the COVID-19 impact on International Financial Reporting Standards (IFRS); and advising issuers on convening virtual general meetings. We have issued more than 20 guidance letters in 2020 to assist issuers with the impact of COVID-19.

The JSE constantly monitored local and international developments, and continues to do so, to ensure that JSE-critical service providers, including sponsors, maintain business continuity and to remain informed on the global financial markets' COVID-19 response.

The JSE continues to work closely with other industry bodies and regulators, including the FSCA, National Treasury, REIT Association, Independent Regulatory Board for Auditors, South African Institute of Chartered Accountants, and the Companies and Intellectual Property Commission. This is to ensure that all possible approaches are considered to assist issuers in dealing with the impact of COVID-19.



Proactively addressed regulatory issues

The JSE guidance and actions relating to COVID-19 include, but are not limited to the following:

- » extending the transitional provisions on certain amendments to the Listings Requirements that came in force on 2 December 2019 to allow issuers to focus on their business operations;
- » implementing processes/frameworks for companies to engage with the JSE on late preparation and distribution of financial information;
- » issuing extensions for certain year-ends for publication of financial results, in conjunction with the FSCA;
- » introducing expedited review and approval measures for capital raising circulars;
- » drawing attention to various accounting and auditing-related COVID-19 material that was issued to assist issuers in navigating their financial reporting obligations under the Listings Requirements;
- » extending the payment of REIT distributions for two months for issuers with certain year-ends, in conjunction with the FSCA; and
- » remaining in regular contact with sponsors to stay close to issues on the ground to facilitate being proactive on challenges experienced by issuers.

Our regulatory and governance role continued

Debt Listing Requirements

The following amendments to the Debt Listing Requirements came into force in 2020.

<p>Sustainability segment</p>	<p>The JSE amended the Debt Listing Requirements to expand the green segment into a sustainability segment, which includes sustainability instruments under the green bond principles, social bond principles and sustainability guidelines.</p> <p>FSCA approval was obtained, effective 23 July 2020.</p>
<p>Part 2 of 2018</p>	<p>The JSE amended the Debt Listing Requirements to introduce significant enhancements to (i) corporate governance, with a specific focus on state-owned entities, and (ii) disclosure and transparency in general in the debt market.</p> <p>FSCA approval was obtained, effective 31 August 2020. Transitional provisions were issued on 26 August 2020 and all amendments were effective by 31 December 2020.</p>



Policy and regulatory developments

The JSE actively engages international and local policy makers and regulators to advocate for the development of fair, efficient and transparent markets for the benefit of the growth of the South African economy, and monitors and responds to policy and regulatory developments that may impact the JSE, its participants or the South African capital markets in general.

Regulatory developments on the horizon

<p>Exchange control reform</p>	<p>The JSE, in partnership with Intellidex, engaged the National Treasury and the SARB on the importance of a modern, transparent framework for cross-border flows, advocating for three changes in capital flow reform:</p> <ul style="list-style-type: none"> » Standardising the treatment of inward-listed instruments: Under the proposed reforms, all inward-listed instruments on South African exchanges will be classified as domestic. Previously, institutional investors were required to treat inward-listed equities as domestic, and inward-listed debt, derivatives and ETFs were treated as foreign. » Permission to list non-rand denominated instruments: Previously, all listed instruments in South Africa were required to be in listed in rand. Multi-currency listings will provide the opportunity for investors to invest in non-rand denominated assets in South Africa, rather than externalising capital to enable offshore exposure. » Collateral for derivative exposure: Foreign investors currently have to convert to rand to post collateral for derivatives exposures. Permitting non-rand collateral will improve the competitiveness of South African markets in attracting international investment. <p>A suite of changes to capital flow management (including the reforms proposed above) was announced by the Minister of Finance in the Medium-Term Budget Policy Statement. This positions South Africa as a competitive investment destination, opening the door for increased international investment and laying the foundation to securing OECD status for South Africa.</p> <p>The JSE is actively engaging with policy makers and regulators to help facilitate these changes. We believe these reforms will be positive for inward investment to South Africa, strengthen and enhance South Africa's capital market's appeal, and enable the issuing of a broader range of products. The listing of non-rand denominated instruments and the posting of foreign currency collateral provides diversification and alternatives for market participants. These reforms would foster job creation, economic activity and potential tax revenue growth for the country, as the products and assets are managed in South Africa.</p> <p>During 2021, National Treasury and the SARB will be establishing a technical working group of regulators, industry associations and other stakeholders to identify measures to position South Africa as a gateway into Africa, and to determine a road map for the above reforms.</p>
<p>Crypto assets</p>	<p>The IFWG published a position paper on crypto assets with the aim to provide specific recommendations for the development of a regulatory framework for crypto assets. The position paper builds on a consultation paper on policy proposals for crypto assets which was published by the IFWG in 2019.</p> <p>In the evolving policy framework and as interim arrangement to protect customers, the FSCA published a notice for comment which provides for the declaration of crypto assets as a financial product under the Financial Advisory and Intermediary Services Act, 37 of 2002.</p> <p>The finalisation of the crypto asset regulatory framework within the twin peaks regulatory framework heralds for the JSE opportunities for new products referencing crypto assets and wider investment opportunities for investors.</p>

Policy and regulatory developments continued

Twin peaks framework

A number of legislative instruments to complete the twin peaks regulatory framework have not been finalised, leading to some policy uncertainty:

- » **The revised draft Conduct of Financial Institutions (CoFI) Bill** was published for public comment. The first draft of the CoFI Bill was published for comment in December 2018. Significant revisions have been made to the revised draft CoFI Bill and the key revisions were published in a Response Document. The regulatory framework remains unclear as the revision of the FMA has not been completed. This opacity is acknowledged in the Response Document and it is noted that there may be changes to the CoFI Bill once the revision to the FMA is finalised.
- » **FMA** – National Treasury published a discussion paper, *Building Competitive Financial Markets for Innovation and Growth – A Work Programme for Structural Reforms to South Africa's Financial Markets (Discussion Paper)* for comment, which sets out the review of the FMA and aims to provide alignment of the financial markets legislative architecture with the twin peaks framework. The review of the domestic wholesale financial markets, stakeholders' input, international regulatory developments and South Africa's international regulatory commitments have influenced the scope and direction of the review. The anticipated next step is the publication of the draft amendments to the FMA.
- » **The Financial Sector Laws Amendment Bill** provides for the resolution of systemically important financial institutions and deposit insurance for banks. Consequential amendments to the Insolvency Act 24 of 1936, which are required to enable the JSE to accept securities as collateral in lieu of margin, are included in this bill. This bill is expected to be introduced in parliament in 2021.
- » **The Draft Financial Sector Levies Bill** provides for the funding of the twin peaks framework by the imposition and collection of levies from market infrastructures and financial institutions, for the benefit of the FSCA, the PA, the Financial Services Tribunal, the Ombud Council, the Office of the Pension Funds Adjudicator and the Office of the Ombud for Financial Services Providers. This bill is expected to be introduced in parliament in 2021

EU equivalence transparency regime

The European Securities and Markets Authority, under the EU Markets in Financial Instruments Directive (MiFID II), determined that three JSE markets meet the criteria as a trading venue for the purposes of the MiFID II post-trade transparency regime. This means that EU investment firms are not required to publish information, through approved EU publication arrangements, about transactions that are concluded on bond ETP, equities and equity derivatives markets.



PROTECTING VALUE CREATION

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Commitment to governance

The Board is committed to robust governance practices that support the Group's vision of growing shared prosperity.

The JSE is committed to robust governance practices, sound leadership and the highest standards of ethics and integrity. The way we approach governance sets the tone and provides the framework for how the business is managed, and contributes to employees living our values. The aim of our governance practices is to ensure accountability, support a strong risk-aware culture, enhance transparency and deliver effective leadership in the pursuit of sustained creation of value for all our stakeholders.

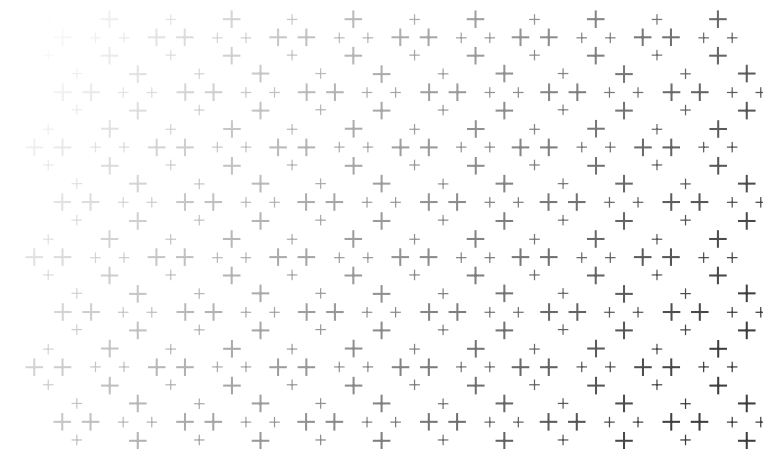
The Board is guided by a range of local and international requirements, standards and guidance, including, but not limited to, the Companies Act, 71 of 2008 (as amended) (Companies Act); the Financial Markets Act, 19 of 2012 (FMA); the Listings Requirements; and King IV. These requirements are incorporated into the Board's policies, processes and operating procedures. Compliance with applicable statutes, regulatory notices and good governance practices is overseen by the Board, supported by the Group's governance and assurance team.

Our governance practices are integrated across the JSE Group. We seek to inculcate appropriate governance policies and practices within our subsidiaries, while respecting the independence and legal responsibilities of each Group entity. The JSE Board remains accountable for approving the governance framework and policies of the Group and ensuring effective oversight of the governance, strategy, material matters and risks across the Group. Executive management is responsible for implementing the specific procedures to achieve effective governance.

Sound corporate governance contributes to corporate performance over time, and this has manifested in the following:

- » A diverse and transformed Board, characterised by independent thinking and robust contributions to board decision-making;
- » Integrity, transparency and quality of reporting by management to the Board;
- » Deep engagement in strategic dialogue, with the aim of driving improved returns in the medium term;
- » Enhanced risk management processes, with the aim of inculcating a stronger risk-aware culture, and improvements in operational resilience;
- » Improved levels of assurance, particularly through the Group Internal Audit function, on all key aspects of the business; and
- » Improvements over time in reporting to stakeholders.

The Board is of the view that it has embedded an organisational-wide culture of good governance that has contributed to preserving value, reducing risk and enhancing sustainability.



Commitment to governance continued

Governance universe

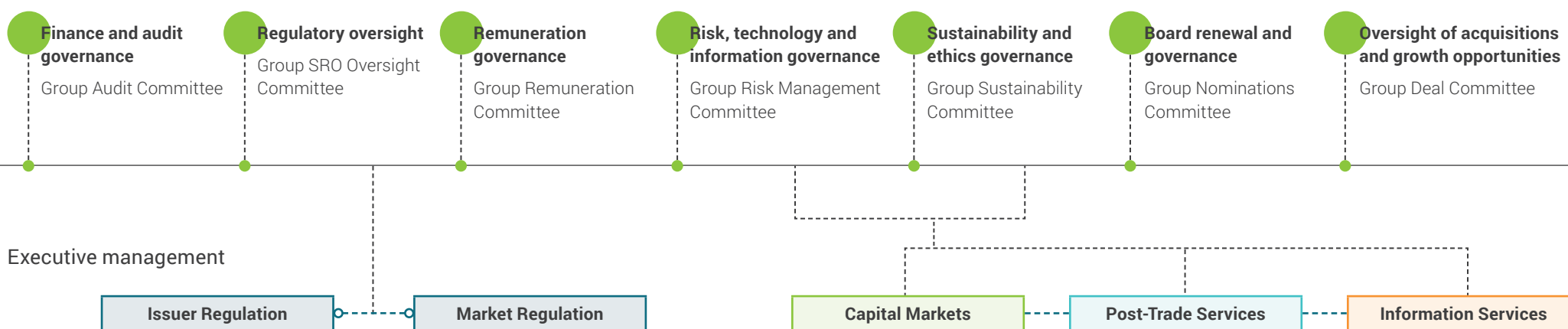
Board

The Board is the custodian of corporate governance and is ultimately responsible for the JSE's adherence to sound corporate governance practices and high ethical standards, and for ensuring the business operates in a fair and transparent manner.

There is a clear delineation of roles and responsibilities between the Board and executive management. Our governance framework, anchored in the Companies Act, FMA and the JSE's memorandum of incorporation (MOI), allows for delegation and assignment of authority, while enabling the Board to maintain effective control of the Group. "The Board confirms that it has complied with all statutory requirements as well as the provisions of the MOI for the year ended 31 December 2020."

The JSE aims to ensure that the roles, mandates and committee compositions allow for shared responsibilities, dispersed influence and balanced perspectives on the strategic matters facing the Board. Governance structures and processes are formally reviewed annually and changes are adopted where appropriate to accommodate internal developments and market best practice. Each Board committee operates in accordance with its written terms of reference and defined focus areas to deliver our governance outcomes.

Board committees



Each Board committee confirmed that it has executed its responsibilities in accordance with its terms of reference. ⁰⁸

Governance outcomes

Value creation is protected by achieving the governance outcomes as outlined in King IV. The Board has satisfied itself that the JSE has complied with the King IV principles in all material respects. A summary of how the King IV principles were applied is available on [pages 116 to 120](#).

The Board is satisfied that it has fulfilled its responsibilities as set out in the Board charter, and that the Board and Board committees have discharged their fiduciary duties, acted in good faith, with diligence and care, and in the best interests of the JSE and all its stakeholders. ⁰⁶

Ethical leadership – Good performance – Trust and legitimacy – Effective control

Our leadership teams

The JSE leadership's primary objective remains to drive our strategy to be the best globally connected platform for inclusive and sustainable value creation.

Independent non-executive directors



Nonkululeko Nyembezi (60)

Independent non-executive Chairman

BSc (EE); MSc (EE); MBA

Key strengths

Extensive experience in strategy development, technology and execution. Solid financial acumen and leadership experience gained across a range of business sectors and industries

Non-executive director of:

- » Standard Bank Group
- » Anglo American plc
- » Macsteel Service Centres SA Proprietary Limited
- » Macsteel International Holdings BV

Appointed to the Board in 2009 | Tenure as director: 11 years

Dr Suresh Kana (65)

Lead independent non-executive director

CA(SA); CD(SA); MCom; PhD (Honorary)

Key strengths

Seasoned accounting professional with extensive experience in corporate governance and corporate social responsibility best practice and corporate reporting, and risk management as the former CEO and territory senior partner of PwC Africa

- » Chairman of Murray & Roberts Holdings Limited
- » Lead independent director of Transaction Capital Limited
- » Chairman of the audit committee of the UN World Food Programme

Appointed to the Board in 2015 | Tenure as director: 5 years

Zarina Bassa (56)

Independent non-executive director

BAcc; DipAcc; CA(SA)

Key strengths

Accounting professional with extensive experience in auditing, risk and compliance. Extensive strategic and operational experience in banking and financial services, as well as within audit and advisory services. Previously a partner and chief operating officer of EY's sub-Saharan Africa practices

Non-executive director of:

- » Woolworths Holdings Limited
- » Investec Limited
- » Investec plc
- » Oceana Group Limited
- » Chairman of Yebo Yethu Limited

Appointed to the Board in 2018 | Tenure as director: 2 years

Siobhan Cleary (46)

Independent non-executive director

BA LLB; MA; MBA; Fellowship: Yale World Programme

Key strengths

Expertise in strategy, research and policy development in local and global capital markets, and as thought leader and practitioner in sustainability markets

Former head of research and public policy at World Federation of Exchanges

Appointed to the Board in 2020 | Tenure as director: 1 year

Nolitha Fakude (56)

Independent non-executive director

BA (Hons)

Key strengths

Extensive executive-level experience in transformation, human resource development strategy and leadership as well as education and training across a range of industries and sectors, including retail, management consulting, financial services, mining, oil and gas

Non-executive director of:

- » Discovery Bank Holdings
- » Anglo American plc
- » Chairman – Anglo American Management Board: South Africa
- » Vice president – Minerals Council
- » International Woman's Forum South Africa (IWFSA)

Appointed to the Board in 2017 | Tenure as director: 3 years

Faith Khanyile (52)

Independent non-executive director

BA (Hons); MBA; HDip Tax; PhD (Honorary)

Key strengths

Experience in investment banking, strategy development and execution, corporate relationship management, governance and leadership

Non-executive director of:

- » Discovery Limited
- » Transcend Residential Property Fund.
- » CEO of WDB Investment Holdings

Appointed to the Board in 2018 | Tenure as director: 2 years

Dr Mantsika Matookane (45)

Independent non-executive director

BSc; PhD; MBA

Key strengths

Expertise in innovation and technology and cyber resilience. Leadership experience in retail and financial services

Non-executive director of:

- » Nedbank Group Limited
- » CEO of Truesport Investments Proprietary Limited

Appointed to the Board in 2012 | Tenure as director: 8 years

Our leadership teams continued

Non-executive directors



Ian Kirk (62)

Non-executive director

BCom (Hons); CA(SA); FCA (Ireland); HDip BDP

Key strengths

Extensive experience in strategy development, business transformation, audit and advisory, and insurance

- » Former group chief executive of Sanlam Limited
- » Non-executive director of Transaction Capital Limited
- » Member of the Presidential State-owned Enterprise Council

Appointed to the Board in 2020 | Tenure as director: 8 months

Ben Kruger (61)

Non-executive director

BCom (Hons); CA(SA)

Key strengths

Extensive experience in financial services executing strategy. Executive roles in finance, corporate and investment banking and universal banking

- » Former executive director of Standard Bank Group Limited and Standard Bank of South Africa Limited
- » Non-executive director of Stanbic IBTC Nigeria and ICBC Standard Bank plc

Appointed to the Board in 2018 | Tenure as director: 2 years

Executive directors and officers



Leila Fourie (52)

Group CEO

BA (Hons); MCom; PhD

Key strengths

Diverse experience in consulting, investment banking, retail banking and capital markets

- » Director of JSE-related companies
- Appointed to the Board in 2019 | Appointed CEO in 2019
Tenure as director: 1 year

Aarti Takoordeen (40)

CFO

BCompt (Hons); CTA; CA(SA)

Key strengths

Finance professional with extensive experience in commercial finance and business intelligence

- » Director of JSE-related companies
- Appointed to the Board in 2013 | Appointed CFO in 2013
Tenure as director: 7 years

Graeme Brookes (52)

Group company secretary

BCom

Key strengths

Extensive experience in corporate governance, risk and compliance

- » Director of JSE-related companies
- Appointed in 2014 | Tenure as Group company secretary: 6 years

Directors who retired or resigned during the year

John Burke (54)

Alternate director

Director: Issuer Regulation

Retired: Effective 1 February 2020

Michael Jordaan (52)

Independent non-executive director

Retired: Effective 25 June 2020

David Lawrence (68)

Non-executive director

Retired: Effective 25 June 2020

Fatima Daniels (59)

Independent non-executive director

Resigned: Effective 8 July 2020

Biographical details are correct as at 31 December 2020. Tenure as a director is calculated from the date that an appointment is first ratified by shareholders to the date of the AGM to be held on 3 June 2021.

Our leadership teams continued

Executive team



Leila Fourie (52)
Group CEO
 (Executive director)

Aarti Takoordeen (40)
CFO
 (Executive director)

Valdene Reddy (38)
Director: Capital Markets
BBusSc

- » Financial Sector Transformation Council and Financial Services Working Group of BRICS Business Council

Appointed to Exco in 2020 | Years in service: 6 years

Dr Alicia Greenwood (49)
Director: Post-Trade Services
BSc (Hons); PhD

- » Invitee to JSE GRMC and JSE Clear Risk Committee
- » Member of JSE Clear Board and Strate Board

Appointed to Exco in 2016 | Years in service: 5 years

Mark Randall (40)
Director: Information Services
BCom

- » Fellow of the Actuarial Society of South Africa

Appointed to Exco in 2018 | Years in service: 8 years

Hendrik Kotze (56)
Chief information officer
BCom; CPIM (APICS)

Appointed to Exco in December 2018 | Years in service: 2 years

Donald Khumalo (43)
Director: Human Resources
BA; BA (Hons); Management Development Programme, Advanced Executive Programme

Appointed to Exco in 2016 | Years in service: 5 years

Changes to Exco

Zanele Morrison (45)
Director: Marketing and Corporate Affairs
Resigned: Effective 31 August 2020

Itumeleng Monale
Chief operating officer
Appointed: 25 January 2021

Vuyo Lee
Director: Marketing and Corporate Affairs
Appointed: 1 March 2021

57% Executive gender diversity (% female)

43% Executive race diversity (% Black)

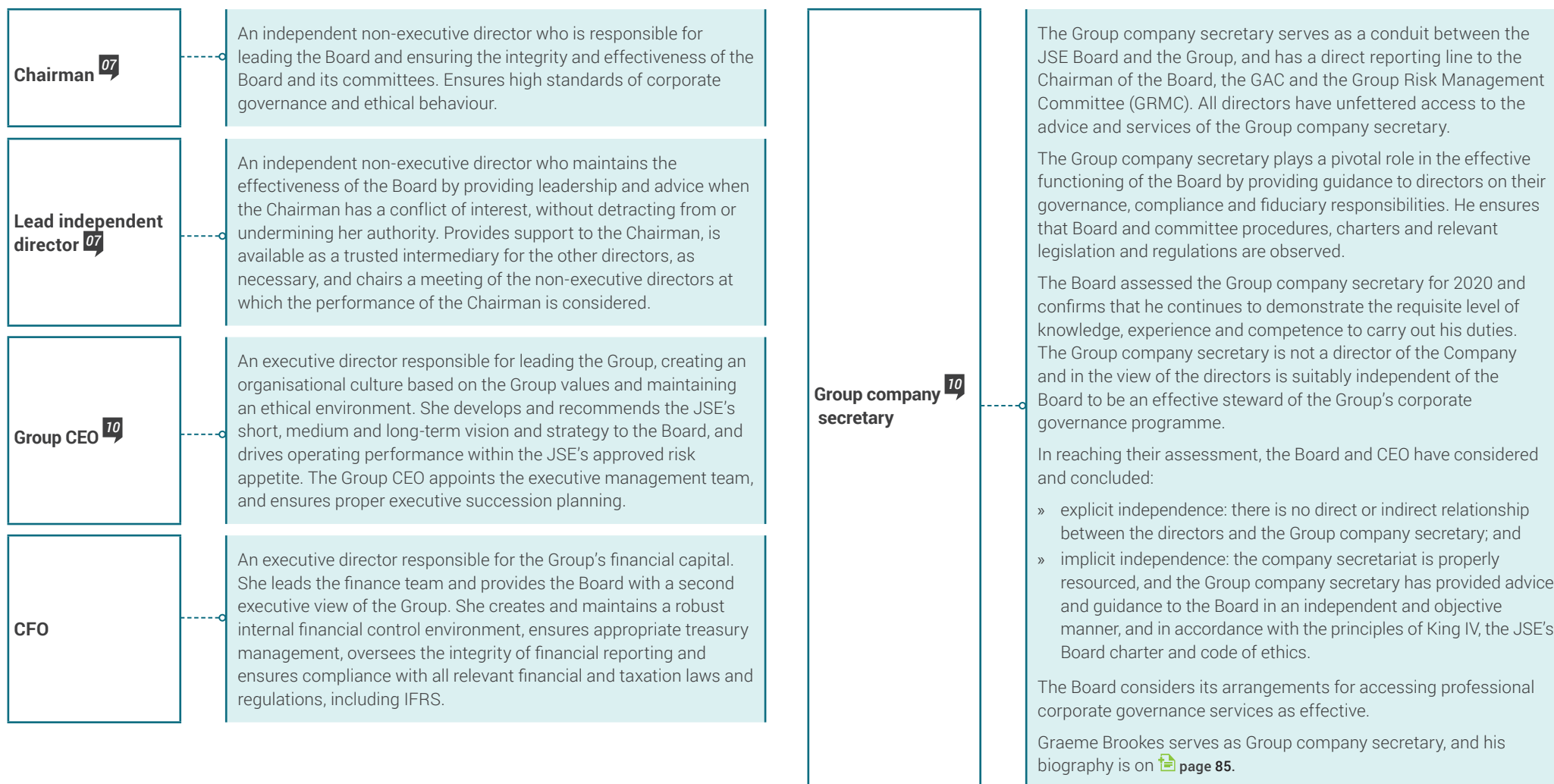
4 years Average executive tenure (% years)

Biographical details are correct as at 31 December 2020.

Our leadership teams continued

Effective leadership

Independent Board oversight is an essential component of good performance and effective control. There is a clear delineation between the roles of directors and management. The role of the independent non-executive Chairman is distinct and separate from that of the Group CEO. The separation of responsibilities is designed to ensure that no single person has unfettered decision-making powers and that the appropriate balance of power and authority exist on the Board. Two members of executive management, namely the Group CEO and the CFO, serve on the Board to ensure that non-executive directors have more than one point of direct interaction with management at all times.



Governance structures

Board composition, diversity and tenure as at 31 December 2020

Unitary Board structure

Board composition

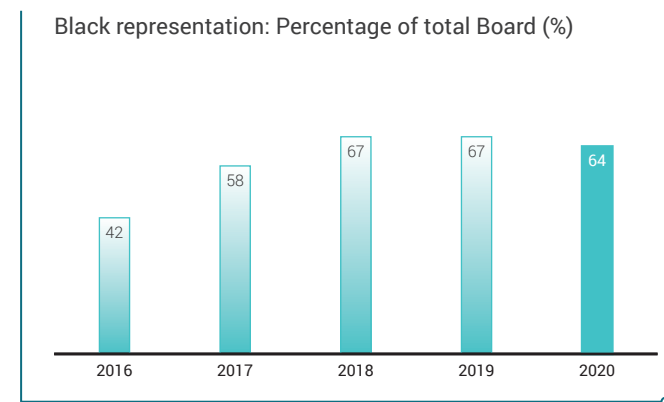
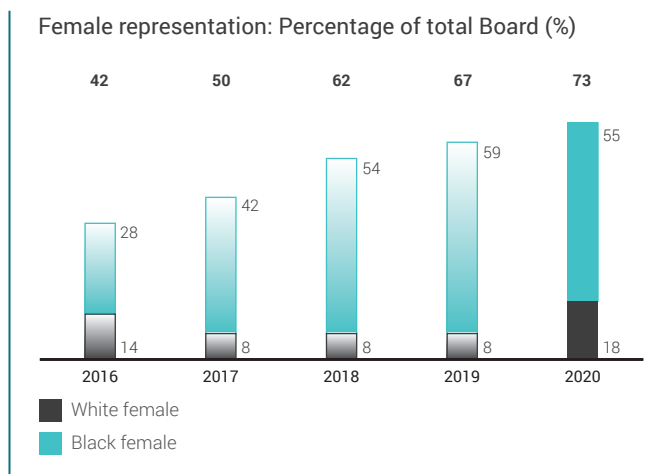
Policy: Board must comprise a majority of independent non-executive directors with separate roles for Chairman and Group CEO.

As at 31 December 2020, the JSE's Board comprised:



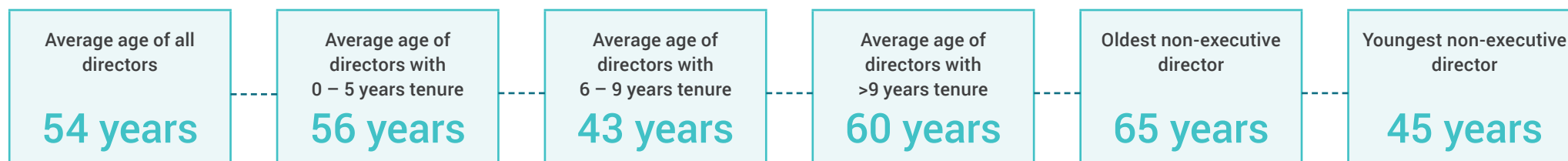
Board diversity of gender and race

Policy: Maintain over time a minimum of 50% female Board members, and a minimum of 67% Black Board members.



Board diversity in age

Policy: No formal policy on retirement age applies.



Governance structures continued

Board diversity of skill and expertise ⁰⁷

Policy: The Board should comprise directors with a wide range of knowledge, skills, experience and behavioural competencies across various industries and disciplines.

The Board's areas of expertise are:

- » accounting, audit and internal control;
- » strategy development and execution;
- » risk and compliance;
- » corporate governance;
- » corporate social responsibility;
- » transformation and human resource development;
- » entrepreneurship;
- » investment banking and financial services;
- » regulatory; and
- » technology and cyber resilience.

The Board comprises an appropriate balance of knowledge, skills, experience, cultural diversity and independence to objectively and effectively discharge its governance role and responsibilities. The Board was well equipped to deal with the disruption and challenges posed by the COVID-19 pandemic, and has the skills, competencies and wide business experience to respond effectively to the changing regulatory, technological and competitive landscape faced by the JSE.

Independence

Policy: An independent director should be independent in character and judgement. There should be no relationships or circumstances which are likely to affect, or could appear to affect, this independence. In assessing independence, the Board considers all aspects of the relationship between the director and the JSE, not only the length of service.

2020 assessment outcome

The Board considers all of its non-executive directors to be independent, except for Ian Kirk and Ben Kruger, as a result of the business relationship that their affiliated companies have with the JSE. Refer to the directors' report in the annual financial statements for non-executive directors' interests in the JSE.

The Board considers the Chairman to be independent. The Board has also appointed an independent non-executive director as a lead independent director.

Board tenure

Policy: At least one-third of all directors (including executive directors) are required to retire by rotation each year. All directors are subject to retirement by rotation and re-election at least once every three years. Retiring directors, if eligible, may be re-elected by shareholders. Non-executive directors who have served for nine consecutive years may thereafter stand for annual re-election up to a maximum term of 12 consecutive years. In exceptional circumstances, the Board may motivate to shareholders for an extension beyond 12 years.

Average non-executive director tenure	0 – 5 years	6 – 9 years	>9 years
Independent	ZBM Bassa MS Cleary VN Fakude SP Kana FN Khanyile	MA Matookane	NMC Nyembezi
Non-executive	IM Kirk BJ Kruger		
Executive	L Fourie	A Takoordeen	
Average tenure	2 years	7.5 years	11 years

The Chairman has served 11 years on the Board and is scheduled to retire from the Board at the AGM in May 2022. The Board plans to complete the Chairman succession process in H1 2021 so as to ensure a smooth handover of responsibilities in 2022.

Governance structures continued

Director rotation

Rotation of Board members is structured so as to retain valuable skills, to ensure continuity of knowledge and experience, and to introduce persons with new ideas and expertise.

- » Ms Siobhan Cleary joined the Board as an independent non-executive director on 1 February 2020, and was elected by shareholders at the first AGM after her appointment, held on 25 June 2020.
- » Mr Ian Kirk joined the Board as a non-executive director on 1 October 2020, and will stand for election by shareholders at the first AGM after his appointment, to be held on 3 June 2021.
- » Ms Nonkululeko Nyembezi has served as an independent non-executive director for 11 years (and since 2014 as Chairman of the Board), and will stand for re-election by shareholders for a final one-year term at the AGM to be held on 3 June 2021. Ms Nyembezi is scheduled to retire from the Board at the AGM in May 2022.

2022	AGM 3 June 2021	2020	2019	2018	2017	2016
SP Kana BJ Kruger FN Khanyile ZBM Bassa	VN Fakude MA Matookane A Takoordeen		SP Kana	A Takoordeen NP Mnxasana MA Matookane	NMC Nyembezi M Jordaan ² NF Newton-King	AD Botha AM Mazwai DM Lawrence
MA Matookane	NMC Nyembezi ¹	NMC Nyembezi	NMC Nyembezi DM Lawrence ²	NG Payne	AD Botha AM Mazwai NG Payne	
New Board member	IM Kirk	L Fourie MS Cleary	BJ Kruger F Daniels ³ FN Khanyile ZBM Bassa	VN Fakude		SP Kana

Triennial rotation in terms of MOI

Annual re-election (after a nine-year tenure) in terms of JSE tenure policy

First election by shareholders

¹ Scheduled to retire from the Board at the AGM in May 2022.

² Retired from the Board at the AGM held on 25 June 2020.

³ Resigned from the Board on 8 July 2020.

The following resolutions are included in the AGM notice available at <https://www.jse.co.za/investor-relations/results>:

- » Ordinary resolution number 1: Election of directors appointed to the Board of Directors during the year;
- » Ordinary resolution number 2: Re-election of directors retiring by rotation (triennial rotation); and
- » Ordinary resolution number 3: Re-election of directors who retire in terms of the JSE's policy on non-executive director tenure.

Governance structures continued

Board meeting attendance and director responsibilities in 2020

The Board is required to meet a minimum of four times per year and more frequently, should circumstances require. The increased number of Board meetings this year was to ensure the challenges posed by the COVID-19 pandemic were appropriately considered and addressed. The Board also engaged in two Board strategy sessions during the year.

Director	Role	Overall attendance	Board	Board strategy session	GAC	GRMC	GSC	GRC	GSROOC	GDC	GNC
Number of meetings			7	2	3	4	3	4	2	5	3
Non-executive directors											
N Nyembezi	Independent NED (and chairs Board and GNC)	90%	7 ¹	2				3		5	2
SP Kana	Lead Independent Director (and chairs GAC and GSC)	100%	7	2	3	4	3		2		3
Z Bassa	Independent NED (and chairs GSROOC)	100%	7	2	3	4			2		
S Cleary²	Independent NED	93%	7	2	[1/1] ²		2		2		
F Daniels³	Independent NED	100%	[4/4]	N/A	[1/1]			[1/1]	[1/1]	[1/1]	
VN Fakude	Independent NED (and chairs GRC)	88%	6	2			2	4			
M Jordaan⁴	Independent NED	100%	[4/4]	N/A		[2/2]					
F Khanyile	Independent NED	100%	7	2	3				2	5	
I Kirk⁵	NED	100%	[2/2]	N/A		[1/1]		[2/2]		[2/2]	
BJ Kruger	NED (and chairs GDC ⁶)	100%	7	2		4		4		5	[2/2] ⁷
D Lawrence⁸	NED	100%	[4/4]	N/A		[2/2]	[1/1]	[1/1]		[1/1]	[1/1]
MA Matooane	Independent NED (and chairs GRMC)	100%	7	2		4	3				
Executive directors											
L Fourie	Group CEO	100%	7	2		4				5	
A Takoordeen	CFO	100%	7	2						5	
Standing attendee											
GA Brookes	Group company secretary	100%	7	2	3	4	3	4	2	5	3

¹ Attended 24 February 2020 meeting via teleconference and Dr SP Kana chaired meeting.
² Appointed to the Board effective 1 February 2020 and to GAC effective 6 August 2020.
³ Resigned with effect 8 July 2020.
⁴ Retired with effect 25 June 2020.

⁵ Appointed with effect 1 October 2020.
⁶ Appointed as chairman upon resignation of Mr D Lawrence.
⁷ Appointed to GNC with effect 26 June 2020.
⁸ Retired with effect 25 June 2020.

GAC – Group Audit Committee
 GRMC – Group Risk Management Committee
 GRC – Group Remuneration Committee
 GSC – Group Sustainability Committee

GSROOC – Group SRO Oversight Committee
 GNC – Group Nominations Committee
 GDC – Group Deal Committee
 NED – Non-executive director

Governance structures continued

Board committees

The objective and composition of the Board committees are described below. The responsibilities delegated to these committees are formally documented in each committee's terms of reference, which are approved by our Board and reviewed on an annual basis. After each committee meeting, committee chairmen report back to the Board, which facilitates transparent communication between directors and ensures that all aspects of the Board's mandate are addressed.

Group Audit Committee

Independence of committee: 100%

Objective

Statutory committee constituted in terms of section 94(7) of the Companies Act. The committee's main objective is to evaluate the adequacy and efficiency of accounting policies, internal controls, and financial and corporate reporting processes. In addition, the committee assesses the effectiveness of the internal auditors and the independence and effectiveness of the external auditors.

Members (number of meetings)

SP Kana (chairman) [3/3]
 Z Bassa [3/3]
 S Cleary [1/1]
 F Daniels [1/1]
 FN Khanyile [3/3]

Invitees

N Nyembezi
 L Fourie
 A Takoordeen
 External auditors
 FSCA representative
 Group internal auditors
 Group company secretary

Further reading

[Directors' report and GAC report in the annual financial statements.](#)

Group Risk Management Committee

Independence of committee: 50%

Objective

The committee oversees the Group's risk management policies, procedures and activities, is responsible for governance of technology and information and closely monitors the risk register and effectiveness of risk mitigating strategies.

Members (number of meetings)

MA Matooane (chairman) [4/4]
 Z Bassa [4/4]
 L Fourie [4/4]
 M Jordaan [2/2]
 SP Kana [4/4]
 I Kirk [1/1]
 BJ Kruger [4/4]
 DM Lawrence [2/2]

Invitees

S Cleary
 N Nyembezi
 A Takoordeen
 CIO
 Chief risk officer
 External auditors
 FSCA representative
 Group internal audit
 Director: Capital Markets
 Director: Information Services
 Director: Post-Trade Services
 Group company secretary

Further reading

Additional information is available under risk governance on [pages 101 to 105.](#)

Group Sustainability Committee

Independence of committee: 100%

Objective

Statutory committee constituted in terms of section 94(7) of the Companies Act to monitor and report on the manner and extent to which the Group protects, enhances and invests in the economy and in society.

Members (number of meetings)

SP Kana (chairman) [3/3]
 S Cleary [2/3]
 VN Fakude [2/3]
 DM Lawrence [1/1]
 MA Matooane [3/3]

Invitees

N Nyembezi
 L Fourie
 Director: Human Resources
 Group company secretary

Further reading

Refer to the reinforcing our ethics section on [page 69](#), as well as in the [online social value report](#).

Governance structures continued

Group Remuneration Committee

Independence of committee: 50%

Objective

The committee oversees strategic HR matters paying focus on the remuneration policies for directors, executives and employees.

Members (number of meetings)

VN Fakude (chairman) [4/4]
F Daniels [1/1]
I Kirk [2/2]
BJ Kruger [4/4]
DM Lawrence [1/1]
N Nyembezi [3/4]

Invitees

L Fourie
Director: Human Resources
Group company secretary

Further reading

Refer to the rewarding performance section on [page 70](#), as well as in the [online remuneration report](#).

Group Nominations Committee

Independence of committee: 67%

Objective

The committee is responsible for Board governance policies, composition, succession planning and the annual Board effectiveness review.

Members (number of meetings)

N Nyembezi (chairman) [2/3]
SP Kana [3/3]
BJ Kruger [2/2]
DM Lawrence [1/1]

Invitees

L Fourie
Group company secretary

Group SRO Oversight Committee

Independence of committee: 100%

Objective

The committee has an independent role, providing oversight of all regulatory matters, policies and related activities of the JSE Group.

Members (number of meetings)

Z Bassa (chairman) [2/2]
S Cleary [2/2]
F Daniels [1/1]
F Khanyile [2/2]
SP Kana [2/2]

Invitees

N Nyembezi
L Fourie
Director: Issuer Regulation
Director: Market Regulation
Group company secretary

Further reading

Refer to the Group SRO Oversight Committee report which is available in the [online social value report](#).

Group Deal Committee

Independence of committee: 33%

Objective

An *ad hoc* committee of the Board established in April 2019. It provides a forum for the directors to consider and evaluate potential opportunities for strategic partnerships and acquisitions.

Members (number of meetings)

B Kruger (chairman) [5/5]
F Daniels [1/1]
L Fourie [5/5]
F Khanyile [5/5]
I Kirk [3/3]
D Lawrence [1/1]
N Nyembezi [5/5]
A Takoordeen [5/5]

Invitees

Director: Capital Markets
Group company secretary

Enhancing good governance

Leveraging good governance to ensure the long-term sustainability of our business.

The JSE is an integral part of society and we are very aware of the role and impact our business has on the environment around us. We undertake to behave in a manner that explicitly considers sustainability across our value chain as an exchange and as a central player in the South African economy.

The JSE adopted a stakeholder-inclusive approach to governance as we believe that by balancing the needs and interests of our various stakeholders, we will ultimately foster the long-term sustainability of our business. To ensure long-term sustainability our strategy is underpinned by the key elements that drive sustainable growth namely:



Economic considerations



Societal considerations
Environmental impact considerations

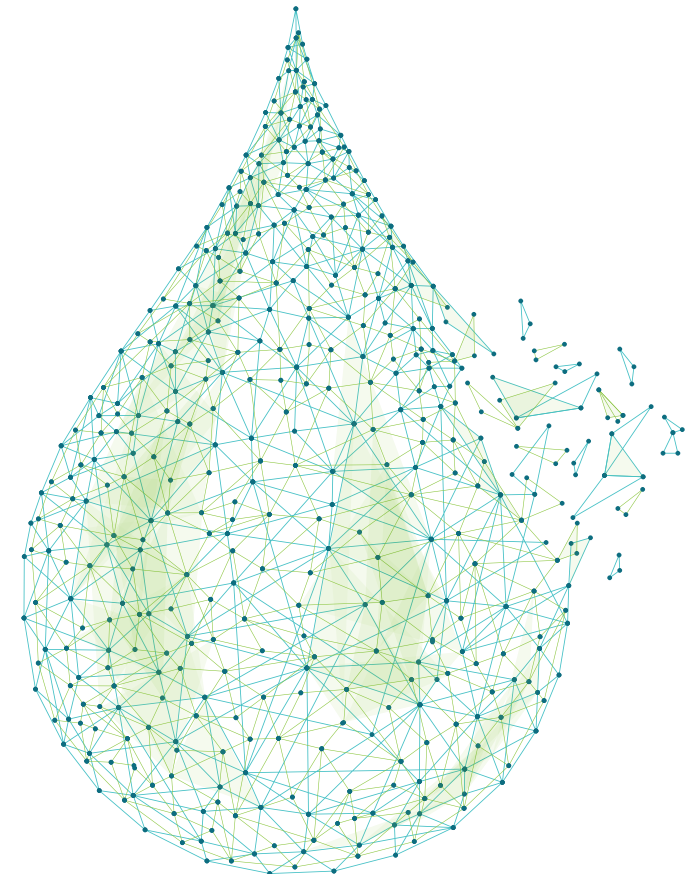


Organisational culture considerations

While the 2020 scorecard includes initiatives that address all our material matters, the Board, with the support of the Board committees, paid particular focus on the following issues:

- » Delivery on our growth strategy which focuses more actively on pursuing inorganic opportunities and creating new lines of business beyond equity trading;
- » Improving operational resilience with due consideration of business continuity processes and the resilience of our mitigation and adaptation strategies;
- » Ensuring information security readiness;
- » Embedding a risk aware culture within the organisation;
- » Ensuring active stakeholder engagement; and
- » Developing critical and essential skills and talent.



The key actions taken by the Board in response to these focus areas are set out on the following page.






Enhancing good governance continued

Board as a driver of value protection ⁰⁸

During 2020 mindful focus was given, by the Board and its various committees, to the following governance processes to ensure the achievement of the Group’s strategic objectives and realisation of desired governance outcomes.

Key focus areas	Key priorities in 2020	Key Board actions	Board	GAC	GRMC	GRC	GSC	GDC	GNC	GSROOC	
Strategy and performance ⁰⁴											
Review the business model to find opportunities to grow sustainably across the value chain and diversify revenue by placing an emphasis on growing annuity income streams and pursuing inorganic business opportunities.  Connected to material matter ²	Delivery on our growth strategy which focuses more actively on pursuing inorganic opportunities and creating new lines of business beyond equity trading	» Reviewed and approved a clear purpose-driven strategy that is focused more actively on driving revenue from new lines of business beyond equity market trading	●	●							
		» Monitored progress and delivery on the JSE’s growth strategy, with key focus on the initiatives that aim to drive revenue and create new lines of business beyond equity markets, namely: o Approved the JSE entering into an agreement with Globacap to progress a digital private placements platform and registry services o Provided oversight over the integration of JSE Investor Services Proprietary Limited (Link SA) into the Group	●	●				●			
		» Oversaw initiatives aimed at growing core business through innovative and relevant products and services, and approved delivery of a range of new products and services in Capital Markets and Information Services	●	●							
Technology and information governance ¹²											
Investing in our operational capabilities (including information security and cybersecurity), technical skills, backup systems and technology to ensure operational stability of our markets and reduce operational disruption.  Connected to material matters ^{3 4}	Improve operational resilience to run a trusted market place that meets our clients’ needs	» Approved the control management framework and closely monitored progress on its implementation » Reviewed and approved the operational resilience framework	●	●	●						
		Improve cybersecurity readiness	» Closely monitored delivery on the information security roadmap aimed to improve the JSE’s information security maturity level » Approved and monitored the implementation of new cybersecurity technologies which significantly improved the JSE’s cybersecurity capability	●	●						

Enhancing good governance continued

Key focus areas	Key priorities in 2020	Key Board actions	Board	GAC	GRMC	GRC	GSC	GDC	GNC	GSROOC
Stakeholder engagement approach 16										
<p>Enhanced stakeholder experience through collaborative value creation and the highest quality of service delivery.</p>  <p>Connected to material matter 5</p>	<p>Enhancing customer experience and improving the quality of our engagements</p>	<ul style="list-style-type: none"> » Oversaw the delivery of the customer experience change management programme thus embedding a culture of customer awareness 	●				●			
Risk management 17										
<p>Create a risk-aware culture by integrating risk and resilience activities into business processes and decision making.</p>  <p>Connected to all material matters</p>	<p>Embed a risk-aware culture</p>	<ul style="list-style-type: none"> » Approved and exercised oversight over the phased implementation of the control management framework » Undertook a matured scenario planning exercise and provided guidance into the accompanying framework 	●	●	●					
Talent management										
<p>Increased base of skilled, agile and future-fit employees to better serve our increasingly digital and interconnected markets.</p>  <p>Connected to material matter 7</p>	<p>Employee safety and wellness</p>	<ul style="list-style-type: none"> » Monitored the implementation of a virtual employee wellbeing programme aimed to support and enable employee wellness and effectiveness while employees were working remotely 	●			●	●			
	<p>Developing critical and essential skills and talent</p>	<ul style="list-style-type: none"> » Reviewed and approved succession plans ensuring they are tailored to have the right number of quality people to meet current and future business needs » Reviewed progress on managers' leadership development plans 	●			●				

Overseeing our COVID-19 response

THE JSE'S response is underpinned by a focus on the health and safety of our employees, support for our clients and the operational resilience of our platforms and infrastructure.

The scale and the impact of the COVID-19 pandemic have altered the South African economy, the ability of local businesses to operate and liquidity in the market. Significant decisions have had to be made on a daily basis and both responsive and proactive measures put in place to address the challenges of the evolving situation.

The risks, opportunities, our regulatory response and the overall response of the JSE to the COVID-19 pandemic are discussed throughout this report. It provides an overview of the governance behind the JSE's response to the COVID-19 crisis, outlining our response plan and measures across the following key areas: people, operations, third parties, our markets and our socio-economic impact.

Highlights

Responsiveness: The JSE was agile in developing an effective short-term response to the pandemic.

Communication: Stakeholders were provided with clear communication regarding the JSE's pandemic response and impact on operations.

People: Employees were successfully migrated to new ways of working with minimal disruptions.

Focus areas

Business continuity management strategy: Formalise long-term strategy incorporating pandemic lockdown scenarios and socio-economic impacts.

Improve levels of readiness: Continually review and enhance business recovery plans and IT disaster recovery plan (DRP) processes to ensure readiness and response agility to any crisis.

Our response

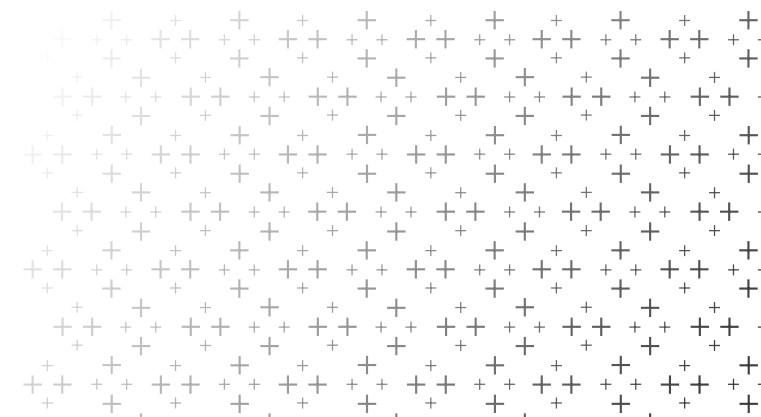
The ERM team was active in managing our response, which entailed an assessment of key impacts of the pandemic and setting up executive-led work streams to ensure that robust response plans were implemented to ensure continuity of service. To maintain effective Board oversight, the GRMC was tasked with evaluating any available preventative and mitigating measures regarding the impact of COVID-19 on the Group's ability to create value.

Response plan

The JSE Response Plan is underpinned by the following key principles:

- » Ensuring the health and safety of JSE employees, clients and visitors;
- » Continued seamless operations of the JSE as an important financial market infrastructure; contributing to government's efforts to mitigate the adverse impacts of the pandemic on the economy and society at large; and
- » Compliance with regulations in giving effect to measures instituted to manage the impact of COVID-19.

“The ERM team was active in managing our COVID-19 response with the assessment of key impacts of the pandemic and setting up the appropriate work streams to ensure robust response plans.”



Overseeing our COVID-19 response continued

Response teams

<p>Board</p>	<p>The JSE's Board has led the business's COVID-19 response – it directed senior leadership to consider all scenarios associated with the pandemic; reviewed and considered potential response options; and set the tone for the JSE's approach with each of its stakeholders and the community at large.</p> <p>The Board requested executive management to review and update it on government's social distancing requirements, business support measures, and directed it on how to respond accordingly. Since government initiated level 5 lockdown, the Board had additional (virtual) meetings in order to effectively monitor the JSE's ongoing response.</p>
<p>Pandemic Monitoring Committee</p>	<p>This committee is composed of the executive management team with the chief risk officer (CRO) as the chairman.</p> <p>The main objective of the committee is to monitor, review and coordinate the pandemic situations or potential pandemics in order to drive prevention activities, minimise impact and respond timeously. Taking a risk-based approach, the committee evaluates the effectiveness of the JSE's COVID-19 Response Plan and takes measures as appropriate to ensure business continuity in the event of a crisis.</p>
<p>Crisis Management Committee</p>	<p>This is cross-functional crisis committee consisting of executive management and the CRO, with CEO as the chairman.</p> <p>The main objective of this committee is to ensure that the business reacts to crisis in a timely manner. The committee is responsible for monitoring, reviewing and coordinating crisis situations in order to drive prevention activities and minimise impact. It is responsible for determining and directing the actions required to minimise impact on the business's operations, and has provided the Board with regular updates on its progress.</p>
<p>Return to Office Working Group</p>	<p>This working group consist of three members from the executive management team.</p> <p>The working group oversees the adherence by the JSE to the COVID-19 standards of hygiene and health protocols at its office and implements the requirements for a phased return of employees to the office.</p>

The Board's role during the COVID-19 pandemic

For the Board, which is charged with overseeing the short-term and long-term sustainability of the JSE and its business prospects, navigating the COVID-19 crisis required careful consideration of a range of issues, including:

- » maintaining effective leadership and oversight by supporting management's efforts to maintain seamless operations of the JSE during the pandemic;
- » prioritising employee health and wellness and empowering management to take the necessary action to protect employees;
- » in line with its stakeholder-inclusive approach to governance, ensured that the JSE, in its response to the pandemic, balanced the needs and interests of its stakeholders and had oversight of the Group's efforts to provide relief measures to clients; and
- » as an integral part of society, ensured that the JSE plays its part and contributes towards alleviating the socio-economic impact of the pandemic.

All decisions were grounded in a broader evaluation of value protection and long-term sustainability, informed by our purpose and core values.

Board effectiveness and performance

Appointment, induction and training

We have a formal and transparent director appointment policy. Non-executive directors are required to sign a letter of appointment, setting out all salient engagement terms. Among others, it includes key responsibilities, time commitment, committee service, outside interests, director evaluation and emoluments.

Board appointment and diversity

Guided by the Board appointment policy, the appointment process is a formal and transparent process which has a particular focus on gender and race diversity.

Board induction

The induction programme is a formal one-year process that enables new non-executive directors to familiarise themselves with the Group's operations, financial affairs and strategic position. The programme requires the new directors to attend GRMC meetings for the first year of appointment.

Board continuity

Focus on succession planning is important as it ensures the effective functioning of the Board over time and appropriate independence of all directors. Board succession planning, including CEO succession, is the responsibility of the GNC while executive talent planning falls within the remit of the GRC.

Changes in Board composition ⁰⁷

During 2020 we announced the following changes to the Board:

Retirements at the AGM

- » David Lawrence (non-executive director) and Michael Jordaan (non-executive director) both retired from the Board at the AGM held on 25 June 2020. Mr Lawrence retired in terms of the Board's tenure policy after having served for the maximum 12 years. Dr Jordaan served for six years on the Board and retired owing to other business commitments.

Resignations

- » Fatima Daniels (independent non-executive director) resigned from the Board effective 8 July 2020 to pursue other interests.

Appointments

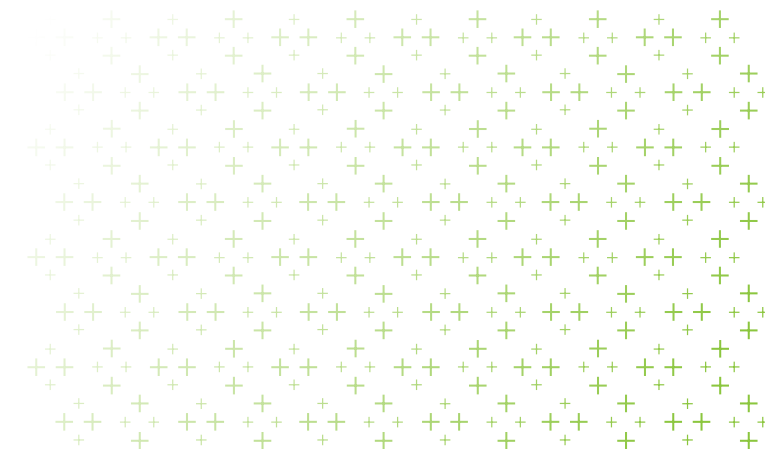
- » Siobhan Cleary was appointed as an independent non-executive director effective 1 February 2020, and this appointment was confirmed by shareholders at the AGM held on 25 June 2020.
- » Ian Kirk was appointed as a non-executive director effective 1 October 2020, and will stand for confirmation by shareholders at the AGM to be held on 3 June 2021.

We are of the view that the Board is well diversified and balanced, with an appropriate mix of skilled and experienced individuals.

Evaluation process ⁰⁹

The annual self-assessment of the Board's performance and effectiveness, as well as that of its governance committees and individual directors (including the Chairman, CFO and Group company secretary), is overseen by the Chairman and the Group company secretary in conjunction with an independent service provider. Individual interviews are held with each Board member and with the Group company secretary.

The Chairman discusses findings from the effectiveness review in one-on-one meetings with the directors, where required. Where gaps in knowledge or skills are identified, directors are developed or new appointments are made. The full report is presented to the GNC for discussion, and is tabled for consideration by the Board.



Board effectiveness and performance continued

Key insights from the 2020 review

The Board undertakes an annual assessment that probes the Board’s impact on critical issues and its dynamics, the workings of the Board committees, as well as the performance of the Group CFO and Group company secretary.

Key insights from the 2020 review include:

- » Board has approved a clear purpose that guides strategy, and the pivot to a growth strategy is appropriate
- » COVID-19 response was effective and well measured, with good oversight exercised by the Board through extensive, additional engagement, particularly in H1 | 2020
- » Risk oversight is extensive, and drives an appropriate risk challenge culture
- » Strong ethical culture, with robust and collaborative Board dynamics
- » Additional attention to be devoted to technology strategy and future roadmap in 2021
- » Board committees and senior officers are highly effective

Succession planning

Board succession planning, including CEO succession, is a responsibility of the GNC, supported by the Group company secretary. Executive talent planning falls within the ambit of the GRC. The CEO, supported by the director: human resources, is responsible for hiring the executive team.

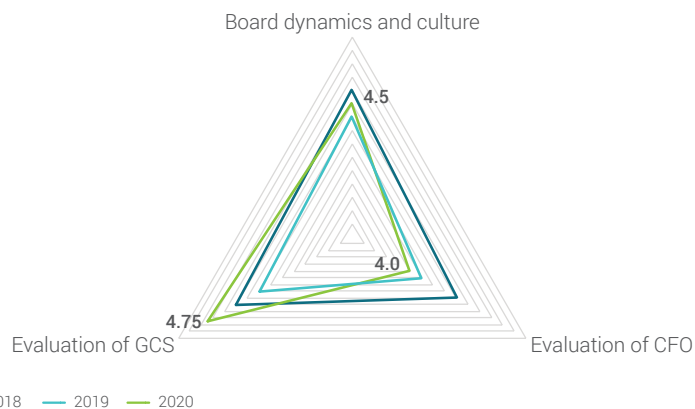
Board renewal remains a standing agenda item for the GNC. The GNC and the Board expect to complete the Chairman succession process in H1 2021 so as to ensure a smooth handover of responsibilities in 2022.

The Board is well balanced in terms of skills, experience and tenure. At the same time the changing business landscape demands continuous renewal of the Board, therefore this will remain a key area of focus in the future.

Impact of the Board on critical issues



Board culture, dynamics and compliance

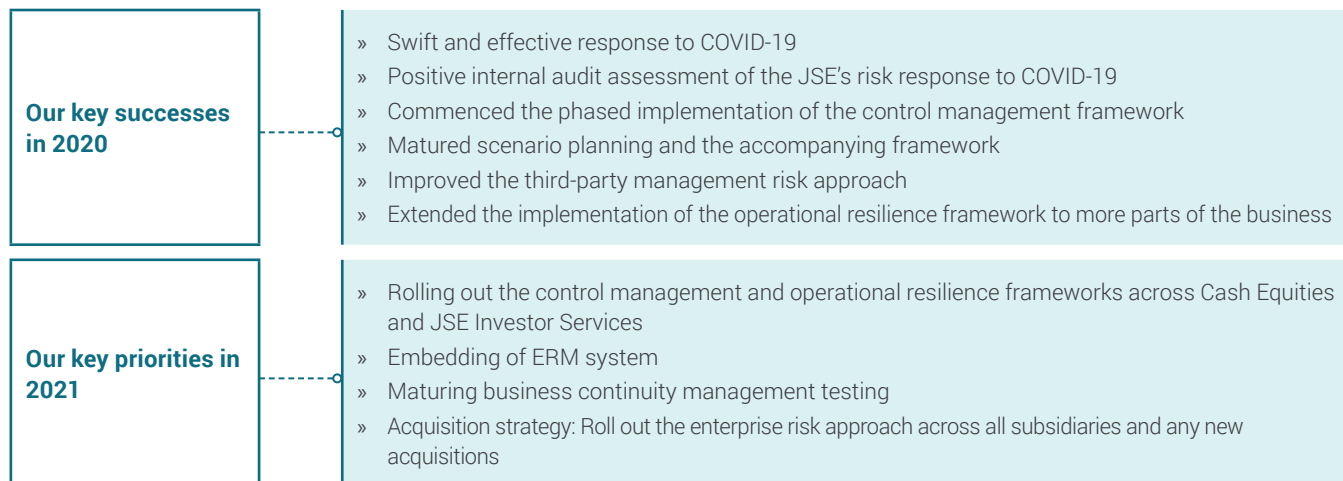


Risk governance and management

The JSE continues to mature and strengthen its risk and resilience framework, ensuring that our risk approach is aligned with the Group’s strategy, and that an effective risk culture is embedded in the organisation.

The challenges presented in 2020 brought our operational resilience into focus, as we responded appropriately to the dynamic operating environment to create, preserve and protect value for our stakeholders.

Strengthening and aligning our risk processes and culture to ISO 31000:2018, IOSCO Principles and the recommendations of King IV remained our key focus areas this year, but we also, of necessity, focused on operational resilience in response to the COVID-19 pandemic.



Risk and resilience framework

The JSE Group manages risks and opportunities through the risk and resilience programme, which is aligned with the international standard ISO 31000:2018 and draws from other standards and guidelines, where applicable. The framework aims to enable the organisation to proactively anticipate risks and opportunities and to ensure that appropriate responses are developed and implemented within our risk appetite; thereby ensuring that we achieve our strategic objectives and the long-term sustainability of the business. The programme has the following key objectives:

- » Embed a risk-aware culture;
- » Implement a dynamic risk and resilience framework;
- » Enhance risk ownership;
- » Integrate risk and resilience activities into business processes; and decision making; and
- » Coordinate best available value adding information.

The JSE seeks to embed a risk culture in which strategy, performance management and risk management are linked, thus ensuring that risks and opportunities are effectively identified and managed appropriately according to the JSE Group risk appetite. Risk management is incorporated into performance measurements, with clear accountability.

Top risks
The JSE’s top risks are reported on page 28.

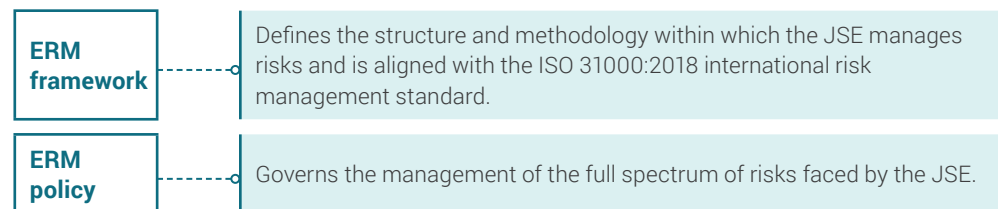
Risk governance and management continued

Our holistic risk and resilience framework encompasses four integrated elements, underpinned by the processes and plans required to ensure that a systematic and structured approach is adopted to proactively:



ERM framework

The JSE ERM framework sets out a standardised approach and methodology for the design, implementation, monitoring, review and continuous improvement of risk and opportunity management. The objective of the ERM framework is to integrate risk management into the organisation’s operations, processes and decision making to ensure compliance and alignment with the JSE ERM policy.



The ERM team provides oversight on strategic and operational risk management (ORM) and business continuity, with specialised risk teams responsible for IT governance, information security and financial risk management.

The team applies industry best practice, which is obtained through interaction with the SARB FSCF, the WFE, Enterprise Risk Working Group (ERWG), the Institute of Risk Management South Africa (IRMSA) working groups and International Organization for Standardization (ISO) committees. The Group’s CRO is a member of the WFE, SARB, IRMSA and ISO committees.

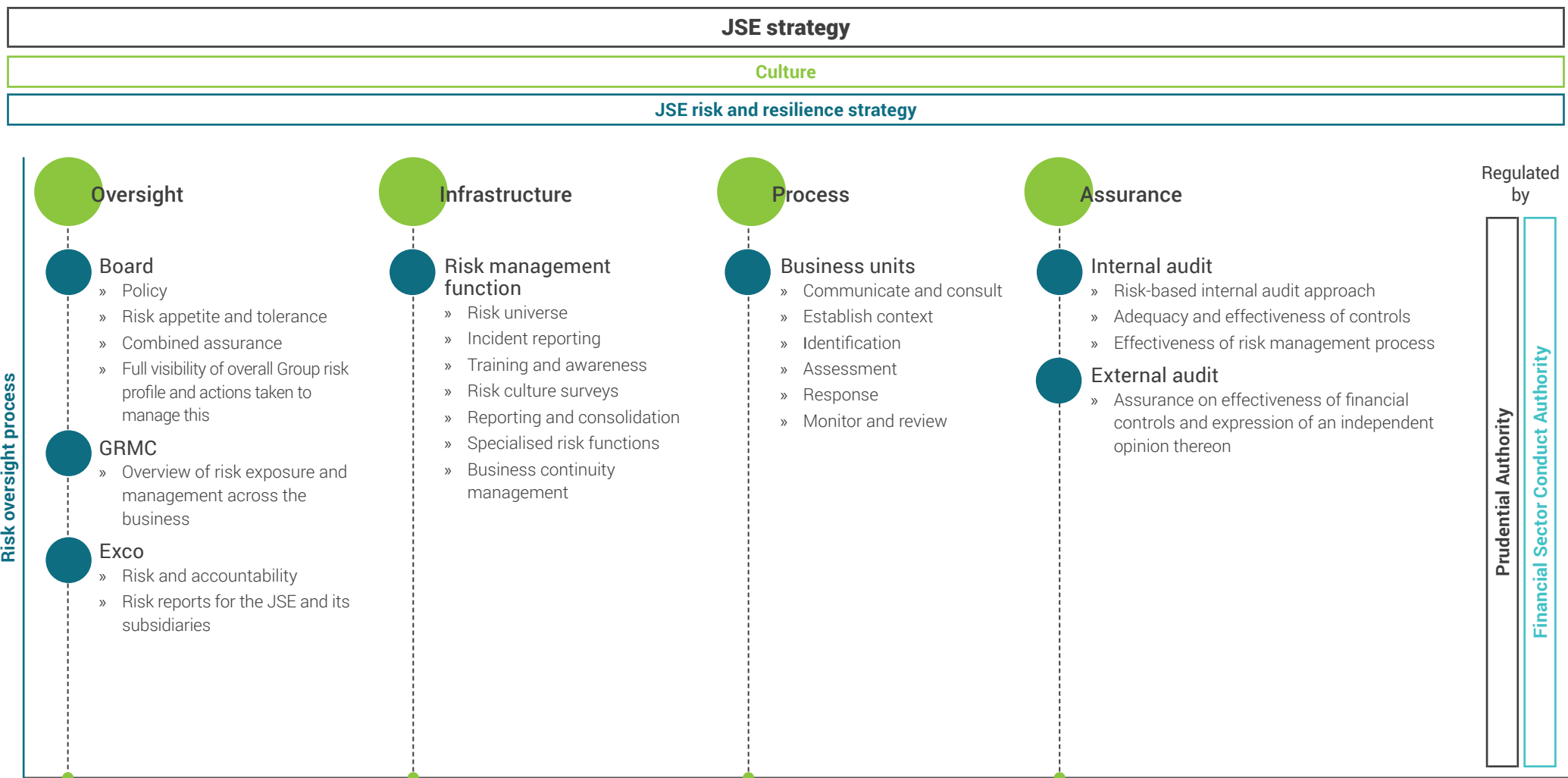
The Group’s chief risk officer (CRO) is a member of the ERWG, the FSCF, the IRMSA and the ISO.

The JSE integrated risk and resilience programme and strategy are based on guidance from King IV principles 11 and 15, ISO 31000:2018 guidance as well as the elements of the Committee of Sponsoring Organizations of the Treadway Commission (COSO) deemed relevant to the JSE (such as key risk indicators), while also ensuring alignment with Basel III, Cobit 5 (previously referred to as Control Objectives for Information and Related Technology) and IOSCO principles on risk management.

Risk governance and management continued

Risk oversight structure

Exco is accountable to the Board for implementing the agreed risk management principles and monitoring the process of ongoing risk management. The executive head of each business unit is accountable to ensure adherence to these principles and for integrating effective risk management practices into day-to-day operations in line with the Group's risk management framework and policies.



As at 31 December 2020, the JSE Board was satisfied that the Group's risk and opportunity management processes were generally operating effectively.

Risk governance and management continued

Risk appetite

In 2020, the JSE reviewed and updated its risk appetite statements to be more comprehensive and to cover all strategic priorities and key risks in order to enable decision making across the Group, based on risk appetite and tolerance thresholds in key risk categories.

The JSE defines its risk appetite as the measure and allocation of the amount of risk that the Group is willing to accept in pursuit of its strategy. The JSE will only tolerate risks that permit us to:

- » achieve our strategic business objectives;
- » comply with all applicable laws and regulations;
- » conduct our business in a safe and sound manner; and
- » protect and/or enhance our value.

Risk appetite statements

Overall risk appetite statement

The Group is committed to delivering on its purpose of being people with passion, powering a trusted marketplace for an inclusive and prosperous future while living our mission to be the best globally connected platform for inclusive and sustainable value creation.

Strategic alignment

Financial	» The Group is committed to maintaining a healthy balance sheet, profitability and cash flow position to ensure sustainable commercial viability of its operations.		
Capital requirements	» The Group is committed to having sufficient eligible capital to cover regulatory and economic capital requirements, including a buffer to accommodate stress events. » The Group is committed to maintaining liquidity sufficient to cover cash equities and/or derivatives market participant(s) default.		
Operational resilience	» The Group's operational losses will be minimised to be within an expected target range. » The Group is committed to providing reliable and accessible markets and services and aims to minimise material business disruption.		
Cybersecurity	» The Group is committed to managing and protecting our digital assets and detecting and isolating significant breaches to minimise business impact.		
Fraud and corruption	» The Group is committed to minimising fraud and corruption and is committed to taking timely action to prevent, detect, investigate and remediate incidents and recover losses arising from such activities.		
Legal and compliance	» The Group is committed to minimising non-compliance with regulatory requirements and constantly enhancing our control environment to mitigate against possible breaches.		
Social	» The Group is committed to contributing to the national agenda and maintaining a BBBEE level score of at least level 4, especially given the impact on our clients for whom we are the largest service provider.		
HR	» The Group is committed to developing, attracting and retaining the necessary relevant skills and will strive to maintain an acceptable staff turnover level. » The Group is committed to minimising inequality, discrimination, unethical behaviour and matters impacting the health and safety of employees and visitors.		
Reputation	» The Group has a low tolerance for any risk that could negatively impact its brand and reputation and is committed to protecting its brand through service delivery, client satisfaction and effective stakeholder management.		

Risk governance and management continued

JSE Clear

The JSE's wholly owned subsidiary is involved in risk-taking activities.

JSE Clear is a licensed clearing house in terms of the FMA and is a CCP for trades executed on the JSE's derivatives markets. JSE Clear manages counterparty credit risk, liquidity risk, operational risk and regulatory compliance risk.

Its governance structures are similar to those of the JSE: ultimate responsibility for the management of risk lies with the board, and the risk committee (RC) assists the board. The board includes executive and independent expert representation. The JSE Clear RC is mandated to:

- » annually review and assess the quality, integrity and effectiveness of risk management plans and systems, and to ensure that the risk policies and strategies are effectively managed and that risks taken are within the agreed tolerance and appetite levels; and
- » define JSE Clear's appetite or tolerance for risk, oversee the implementation of an effective ongoing process to identify and measure risks, and to ensure that these risks are proactively managed.

A framework and process to anticipate risks are also maintained through JSE Clear's risk management framework. Oversight of the degree to which this risk management framework is appropriately maintained and implemented is provided by the JSE Clear audit committee.

JSE Clear has reporting obligations to the JSE Board and the GRMC, allowing for appropriate Group oversight as well as its own, clearly defined JSE Clear risk appetite statement.

Global peer top risks

The WFE, the global industry group for exchanges and CCPs, continued to host focus groups virtually during the course of the year. The group connects ERM and ORM leadership and thinking at the world's financial exchanges and clearing houses. Members have found it important to share experience and perspectives in the interests of developing ERM and ORM that focuses on issues specific to market infrastructure operators.

The focus of the World Economic Forum's (WEF's) top five global risks has shifted from environmental (three) and technology (two) risk in 2019 to predominantly economic (four) risk in 2020, as the world responds to the COVID-19 crisis.

The JSE risks are in line with those identified by our global peers.



Risk response to COVID-19

At the advent of the COVID-19 pandemic, the ERM risk team compiled and led the implementation of the JSE's COVID-19 response plan.

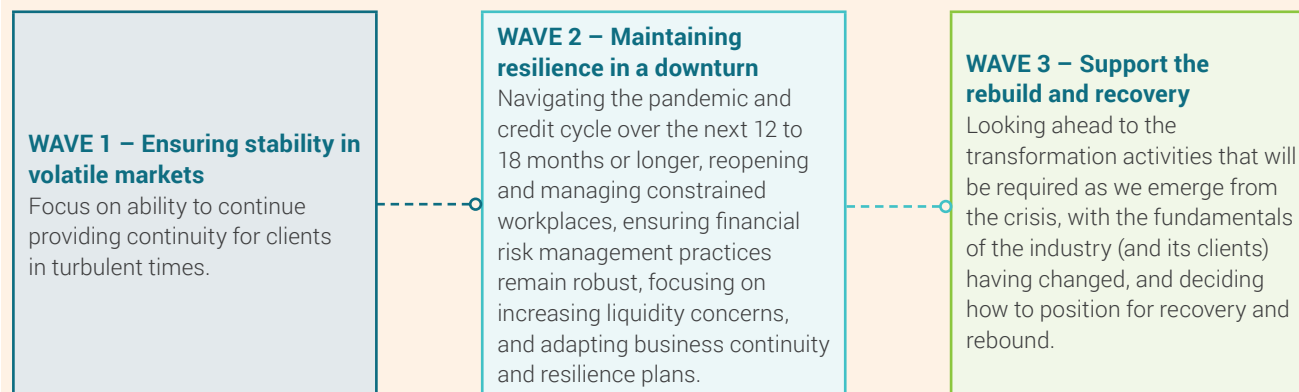
Throughout this crisis, the JSE has remained open for business, and has provided a robust trading, clearing and settlement environment for all asset classes listed on the Exchange.

The ERM team was active in managing our response, which entailed an assessment of key impacts of the pandemic, and setting up executive-led workstreams focusing on ensuring that robust response plans were implemented to ensure continuity of service. These workstreams focused on our people, the JSE building and disaster recovery site, our markets, our third-party suppliers and the socio-economic impact of the crisis.

In addition, a review of our top risks was conducted, taking into account the shifting profile of our risk landscape, as discussed in the next section. The diagram below, adapted from Oliver Wayman, depicts the various waves of impacts of the pandemic on the JSE. Each of these waves necessitated an adaptation of responses to risks presented by the reality of the environment at that time.

Implications for the JSE and other financial market infrastructures

COVID-19 will play a crucial role in defining how financial market infrastructures evolve over the next decade, as capital markets seek greater levels of resilience.



Having transitioned from the first wave, the JSE ended 2020 straddling the second and third waves. A number of risks had been identified and were on the radar, which impacted the overall profile of the top 10 risks, which are discussed in the next section.

Business continuity management (BCM)

Through a robust and relevant BCM programme and embedded business continuity culture, the JSE drives business resilience, innovation and growth, while protecting and enhancing its value.

Introduction

The JSE defines business continuity as the ability to continue to deliver core products and/or services at a predetermined level in the event of a material business incident/disruption, as well as the protection of its employees and reputation.

In line with the ISO 22301 definition, we define BCM as a holistic management process that identifies potential threats to an organisation and the impacts to business operations those threats, if realised, might cause, and which provides a framework for building organisational resilience, with the capability of an effective response that safeguards the interests of its key stakeholders, reputation, brand and value creating activities.



JSE is committed to making use of a standard BCM methodology throughout the organisation.

Governance and management of BCM

The Board is ultimately responsible for BCM and has delegated its authority in this regard to the GRMC. The effectiveness and adequacy of the BCM programme are evaluated by internal audit as part of its internal audit plan. The JSE Exco is responsible for the implementation of the BCM programme. Each Exco member is responsible for the establishment and maintenance of BCM plans relating to their areas of responsibility, and appoints resilience champions per division to support the Exco head; coordinate divisional recovery efforts; ensure the business continuity arrangements in place are appropriate, complete and up to date;

and coordinate BCM activities within the division. BCP teams are appointed and take responsibility for each division in the JSE Group when the divisional BCPs are activated to coordinate recovery efforts. The IT department is responsible for the implementation of IT disaster recovery strategies and plans. The crisis management team (CMT) is led by the recovery director.

The ERM team and Group CRO provide oversight, assurance and measurement of conformance of the various business units with BCM policy and business continuity best practice.



Business continuity response to COVID-19

The JSE's BCM policies, plans and crisis management structures are playing an essential role in responding to the COVID-19 pandemic and will continue to play an important role as the organisation addresses its systemic impacts in the medium to long term.

The JSE has a comprehensive response plan to ensure business continuity in the event of a crisis. This was refined to deal with the COVID-19 pandemic. The plan was rolled out, with three levels of response, on 3 February 2020. The key considerations of safety and wellbeing of employees, visitors and clients and business continuity underpin the plan.

In April and May 2020, GIA conducted a review of the JSE's business continuity practices and enterprise risk response to the COVID-19 pandemic, in terms of:

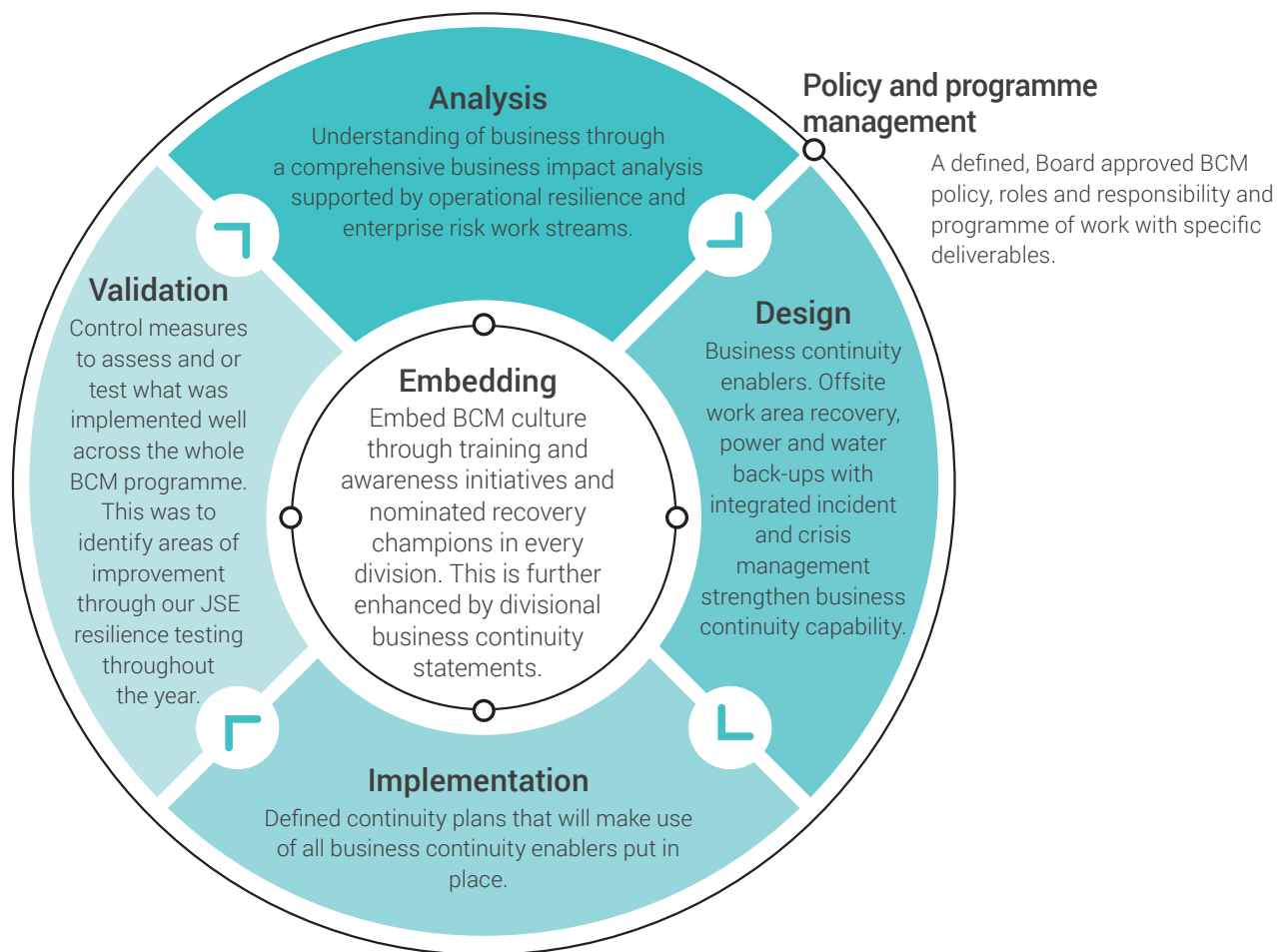
- » **readiness:** Pre-pandemic process and control readiness to respond to a disruption of this nature;
- » **response agility:** Notwithstanding the readiness level, how agile the BCM team was in response to the disruption; and
- » **forward looking:** The initiatives that have strategically been implemented/are being implemented to ensure resilience is embedded in future.

The review rated the BCM response well.

Business continuity management (BCM) continued

Business continuity framework

The following BCM framework was refined in 2020:



Crisis management

The CMT aims to prepare and provide guidance with regard to the processes and procedures for a coordinated response to unexpected circumstances that have negative strategic implications, ensuring that the JSE brand, image credibility and stakeholder confidence are protected and managed.

The JSE's crisis management objectives are to:

- » value and protect people's health and safety above anything else;
- » re-establish continuity of business as quickly as possible;
- » protect and rebuild the JSE's reputation;
- » minimise liabilities; and
- » assess and investigate root causes to prevent reoccurrence.

The main objectives for communication during a crisis include:

- » preserving confidentiality before the incident or crisis becomes public;
- » giving priority to internal communication (in compliance with confidentiality rules, data protection and market regulations); and
- » being honest and transparent.

Future focus

The JSE is committed to developing, implementing and maintaining a robust BCM programme to ensure the recovery of critical services/systems in the event of disruptive events and incidents. One of the key tenets of any operational resilience programme is organisational learning derived from disruptive events. Responding to the COVID-19 pandemic has been valuable in highlighting areas of improvement in parts of our control environment. The lessons learnt have informed work that is currently under way to strengthen controls and to improve policy effectiveness and approaches to the management of some of our key risks.

Stakeholder engagement ¹⁶

In support of the JSE's vision of growing shared prosperity, we continue to work towards improving the quality of our relationships with stakeholders and building long-term, stable and trustworthy relationships that will create shared value for all our stakeholders.



Responsive to our stakeholders' needs during COVID-19

The JSE recognises the substantial impact of the COVID-19 pandemic on our clients, the financial services sector, and our communities and society. Our response and the initiatives we took to support our stakeholders are discussed at length on [page 24](#) (the JSE's COVID-19 response section).



Our key successes in 2020

- » Swift and effective response to COVID-19
- » Improved on our 2019 client engagement NPS score, indicating a notable increase in customer loyalty
- » Our employee engagement tracker shows that we have implemented and improved on most of the gaps raised in the 2018 employee engagement survey



Our key priorities in 2021

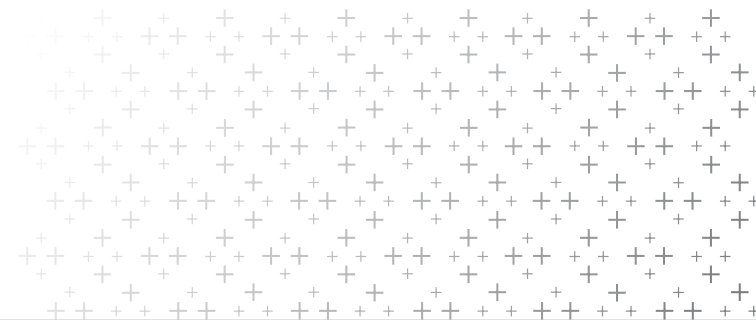
1. Continue to improve customer experience across the value chain
2. Maintain the integrity and trust of our regulatory relationships

Our approach

The Board is responsible for leading stakeholder engagement, ensuring that we fulfil our obligations to those impacted by our business. Central to our strategy is putting our clients at the centre of what we do and aligning business initiatives to expedite those that provide the most value in enhancing stakeholder experience. 2020 has been characterised by much uncertainty and forced the JSE, as well as our stakeholders, to deal with the impacts of the pandemic. Never before has there been a more crucial time to ensure that we align and support our stakeholders who play a fundamental part of moving the Exchange forward.




On these pages, we have grouped our stakeholders into seven key categories and have provided an overview of their concerns, why they matter to us and the ways in which the Board acted with regard to these groups when taking key strategic decisions and shaping our growth strategy throughout the year. These have been provided within the context of our five strategic pillars to present more clearly how our stakeholders are integral to delivering our strategy.

Central to our strategy is putting our clients at the centre of what we do and aligning business initiatives to those that provide the most value in enhancing stakeholder experience.



Stakeholder engagement continued

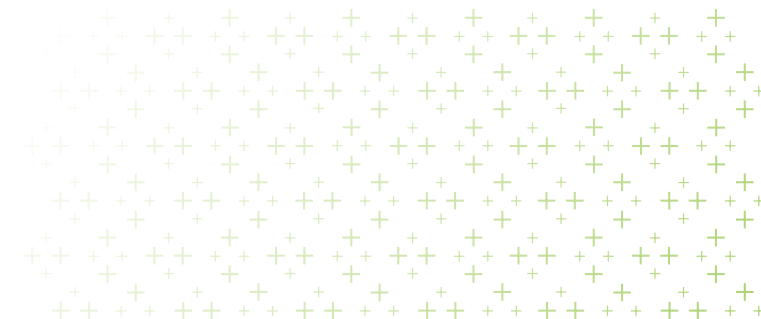
Material stakeholder needs and expectations

Stakeholder group	Stakeholder priorities	Why and how we engage	How we responded to stakeholder needs and expectations
Shareholders	<ul style="list-style-type: none"> » Delivering sustainable, profitable growth over the longer term 	<p>Engagement with our institutional and private shareholders is an ongoing process, occurring through a range of channels including face-to-face meetings at investor days, calls with the management team, private shareholder panels, our AGM and through a range of shareholder-specific communications issued by email.</p> <p>Even though the pandemic changed and limited the manner in which we engaged, the quality of the engagements was not diminished.</p>	<p>The growth strategy has been shaped with the JSE's long-term success and sustainability in mind and for the benefit of our stakeholders as a whole. An example of long-term planning includes revising our strategic direction and aiming to focus more actively on driving revenue, particularly from new lines of business beyond equity market trading.</p> <p>To ensure long-term sustainability our strategy is underpinned by the elements that drive sustainability, including economic, societal, environmental and organisational culture considerations.</p> <p>Refer to  page 20 for our strategy.</p>
Clients (member firms, issuers, buy-side firms, clearing members, market data clients, advisors, and sponsors)	<ul style="list-style-type: none"> » Stable systems and technology » Quality service and support » Fees and costs versus value delivered 	<p>Ensuring that the customer is at the heart of every decision, is crucial to the JSE's strategy.</p> <p>We engage directly with customers through various channels (emails, telephone, live chats). This year we have focused on enhancing the customer experience by being deliberate in our engagement with customers.</p>	<p>Our operational viability and ability to run a trusted marketplace depends on our ability to provide a reliable, stable and secure trading and clearing environment that meets our clients requirements. One of our top 2020 strategic priorities was to improve operational resilience and this entailed making significant investments towards upgrading our systems.</p> <p>Refer to  page 62 of the Technology and information section</p> <p>During 2020 the JSE implemented the Customer First (C1) strategy. This strategy puts the focus on the customer and how everything we do should be from the customer's perspective and is underpinned by our vision and values.</p>
Employees	<ul style="list-style-type: none"> » An inclusive and diverse place of work » Amplifying the employees' voice in Group decision making 	<p>Employees are the heart and soul of our business and are central to our success. Properly incorporating their views into Board decision making is essential to our commitment to create sustainable value.</p> <p>Ongoing communication with employees is across various channels such as senior management engagements and regular employee communications. An employee engagement survey is conducted every second year.</p>	<p>The director: human resources is a standing invitee at the GSC meetings and this enables the Board to gain insight into employee sentiments.</p> <p>One of our 2020 strategic priorities was to adapt and enhance our culture with the purpose of inculcating a more inclusive culture.</p> <p>Refer to  page 68 of the Managing and recognising our employees' contribution section</p>
Government and regulators	<ul style="list-style-type: none"> » Robust regulatory environment which ensures the integrity of the financial market 	<p>We are fully supportive of a robust regulatory environment and we engage with international and local standard setting bodies, policy makers and regulators providing unique insight to policy or regulatory initiatives.</p>	<p>We have been active participants in a number of policy forums and have engaged with all relevant bodies.</p>



Stakeholder engagement continued

Stakeholder group	Stakeholder priorities	Why and how we engage	How we responded to stakeholder needs and expectations
South Africa (business leaders, government, academic institutions, industry bodies, civil society, political organisations)	» Major areas of concern centred around three areas: fiscal debt, SOEs and low growth prospects and how the JSE plans to respond	In order to grow and propel the South African economy forward the JSE recognises that we need to achieve greater cooperation between our social partners.	One of our 2020 strategic objectives is to lead by example on the national agenda with the intention of using our influence to promote (in partnership with various stakeholders) South Africa as an attractive investment destination. Refer to  page 18 of the CEO's review. 
Communities	» Socio-economic development	We are active on the national agenda and focus our efforts on national priority issues as the management of our social licence encompasses the JSE's broader influence and responsibility.	We have strategically aligned causes in areas that relate to the JSE's business, where we can make a meaningful contribution, such as promoting financial literacy and broadening access to financial markets. Refer to  page 63 of the Transformation and socio-economic advancement section. 
Suppliers	» On time payment for product and services as well as business growth	Our long-term supplier partnerships are an important part of being able to innovate and offer trusted value to customers.	In line with government's transformation agenda, the JSE continued with its supplier development programme helps SMEs to expand their customer base, increase their turnover and profitability and scale their operations to be more sustainable. Refer to  page 64 of the Transformation and socio-economic advancement section. 



Compliance ¹³

The JSE subscribes to a compliance philosophy that supports the organisation being an ethical and responsible corporate citizen.

Regulatory oversight

The FSRA established South Africa's twin peaks regulatory regime.

The JSE is regulated as a licensed exchange and licensed clearing house by the FSCA and on a prudential basis by the PA, a division of the SARB.

The JSE recognises the importance of complying with applicable legislation and the standards set by its regulators. The Group's compliance function is responsible for embedding a culture of compliance and providing the Board and senior management with the assurance of regulatory compliance.

While ultimate accountability for regulatory compliance oversight lies with the Board, the responsibility for putting compliance into effect for the JSE is delegated to the director: governance and assurance. The Group compliance function works closely with the ERM function and the Group internal audit function to ensure an aligned approach to monitoring and reporting.

Protection of our licence as an exchange

Maintaining the trusted reputation of the Group is essential to effectively serving the South African market and the primary role of the Group compliance function is to safeguard the licences of the JSE to operate as an exchange and clearing house. The compliance function, in protecting the JSE licences, is responsible for effectively managing compliance risk, through the identification of regulatory compliance obligations, facilitating the implementation of internal controls with business to mitigate the possibility of non-compliance and the assessment of the adequacy and effectiveness of these internal controls.

The Group compliance function maintains the JSE's relationships with the FSCA and PA and is responsible for the submission of the reports, returns and the communications of the JSE required in terms of its regulated functions and services.

Performance

In 2020 the main objective of the compliance function has been to embed a compliance culture within the organisation, with focus on the following areas:

Focus area

Governance

The following compliance documents were reviewed/approved by the Board:

- » Group code of conduct – annual review
- » Group conduct and ethics policy – annual review
- » Group compliance charter – approved
- » Group compliance framework – noted

Training

Employees were trained on their obligations in respect of the JSE Group conduct and ethics policy.

Effective monitoring

The MyDisclosure system was implemented, which is an employee compliance management and attestation portal that houses the compliance policies of the JSE and records the declarations of employees in respect of external interests, gifts and entertainment and conflicts of interest, as well as their attestations of adherence to and understanding of the compliance policies of the JSE.

Group internal audit undertakes reviews of critical JSE functions including reviewing compliance with the:

- » regulatory divisions' conflicts of interest policies;
- » JIBAR code of conduct issued by the SARB; and
- » internal treasury mandates.

There were no regulatory penalties, sanctions or fines for contraventions of, or non-compliance with statutory obligations. No fraud misdemeanours, bribery or corruptive practices were reported during the year.

Compliance continued

Conflicts of interest

Financial market infrastructure

As a financial market infrastructure, the JSE is required to avoid, eliminate, disclose and otherwise manage possible conflicts of interest that may arise between its functions as a regulator of its issuers and markets and its commercial services. This includes taking the steps necessary in the implementation and documentation of appropriate arrangements in accordance with Board Notice 1 of 2015, issued by the FSCA. The conflicts of interest policies, as prescribed by the Board Notice, were in effect during the year and are published on the JSE website.

Directors and employees

Directors are required, at all Board and committee meetings, to table their directorships, if updates are required, and to declare any conflicts of interest that they have encountered or foresee for noting in the corporate register.

Insider trading

The JSE dealing policy prohibits directors and employees from trading in JSE shares during periods when they could be privy to price-sensitive information. Trading in JSE shares is permitted during two limited open periods, these being immediately following the release of the annual financial statements and again after the interim financial statements are released. A director may not trade in JSE shares without obtaining the prior written approval of the Board Chairman and in the event that the Board Chairman wishes to trade, they must obtain the approval of the lead independent director.

The dealing policy also governs the trading by directors and employees in JSE-listed securities, other than those of the JSE, and it is mandatory that the prior approval of the relevant executive head and the director: market regulation is obtained for these transactions. Employees in specific divisions, such as

Market Regulation and Issuer Regulation, are prohibited from trading in any JSE-listed securities, as a result of their ongoing exposure to non-public Company information.

[Refer to the directors' report in the annual financial statements for dealings by directors and prescribed officers.](#)

Anti-bribery and corruption

The JSE has a strict zero-tolerance approach to ethical conduct and we do not engage in, accept or condone any illegal acts. This includes, among others, any form of bribery, facilitation payments, political donations or any corrupt practices in the conduct of our business. The Board's policy is to actively pursue and encourage the prosecution of the perpetrators of fraudulent and other illegal activities, should it become aware of such acts. No fraud, bribery or corrupt practices were reported during the period under review.

Tax compliance

Where complex tax treatment is required as a result of tax law amendments, tax opinions are sought from external experts to ensure correct treatment and compliance.

Ombudsman for JSE complaints and disputes

The JSE Ombud Scheme is recognised in terms of section 194 of the FSRA, as an industry ombud scheme. The rules of the JSE Ombud Scheme, as set out in the rules of the JSE, regulate the resolution of complaints and disputes between authorised users, and between authorised users and their clients. The governing body of the scheme is the JSE Exco.

The scheme allows the JSE to facilitate the resolution of complaints that are made by or against clients and authorised users in a timely and cost-effective way and reduces the need for either party to resort to formal legal proceedings.

Group internal audit (GIA) and combined assurance ¹⁵

The Group's three levels of assurance model, which is aligned to King IV, is designed to effectively address the Group's key risks and material matters through a combination of the following assurance service providers and functions appropriate for the JSE:

First line

Executive management provides assurance by acting timeously on significant escalated issues.

Second line

Specialist functions that facilitate and oversee enterprise risk compliance and financial risk management.

Third line

Assurance provided by internal auditors and external providers such as external auditors and BBBEE verification agency.

During the year, the GAC received regular reports from GIA on any weaknesses in controls that were identified, including financial controls, and considered corrective actions to be implemented by management. The GAC is satisfied with the expertise, effectiveness and adequacy of arrangements in place for combined assurance.

The Group has an independent in-house internal audit function which operates in terms of an approved charter. The GIA charter spans across all JSE Group entities. GIA's purpose is to be a proactive business partner, providing integrated, risk-based and objective assurance, insight and related advisory services.

GIA is headed by the chief audit executive who reports functionally to the GAC chairman and administratively to the Group CEO, and has the mandate to communicate directly and freely on relevant matters. GIA has adopted the in-house platform which maintains a database of audit findings and facilitates tracking and monitoring of remediation efforts.

GIA interrogates the audit findings databases to gain insights on common themes across the business, which in some instances may not be significant individually; however, when considered holistically can point to pervasive control weaknesses which warrant management attention.

The primary objective of combined assurance is to facilitate the integration, coordination and alignment of risk management and assurance activities within the Group to optimise the level of risk, governance and control oversight on the Group's risk landscape. We have established a combined assurance framework which will be embedded across business units in the year ahead.

The Board has mandated the GAC and GRMC with the oversight of risk management.

The key focus areas of our combined assurance activities in key areas are set out in the table below.

Focus areas	2020 reviews	Assurance provider	Board committee oversight
Strategic priorities	Golden source information – an independent assessment to identify potential risks in the technical delivery of the new reference data system within the Bonds Value Stream	GIA	GRMC
	A review of lean portfolio management (LPM) process, a critical enabler for increased business agility	GIA	GRMC
High risk areas	Information security (including cybersecurity) – assess the adequacy of controls to protect the JSE's network of systems	GIA	GRMC
	IT governance – alignment with King IV	GIA, ERM	GRMC, GAC
	Business continuity – evaluated the existing BCM processes and control maturity for dealing with a crisis	GIA, ERM, compliance	GRMC
	MIT upgrade project – undertook a project assurance review of the upgrade project	GIA	GRMC
Additions to the plan, based on change in risk landscape	Disaster recovery – assess the adequacy of the design of the Real Time Objective (RTO) process and controls in place	GIA, ERM, compliance	GRMC
	Data privacy – assess the adequacy of the privacy framework and roadmap in addressing the risk of non-compliance with the PoPIA	GIA, ERM, compliance	GRMC
	Control environment overview – assess the maturity in the design of the JSE's control environment	GIA, ERM, compliance	GRMC, GAC, GSC

INTEGRATED ANNUAL REPORT SCOPE

The integrated reporting process is an ongoing journey. We constantly strive to improve on the quality of the JSE's reporting.

Report objectives

This report is intended for our stakeholders and aims to tell the value creation story of the JSE Limited. This report provides information that also enables all our stakeholders to make an informed assessment of our ability to create sustainable value over time.

This report was compiled with information that the Board and management believe is relevant to stakeholders and provides a comprehensive view of the Group's performance for the financial year ended 31 December 2020.

We welcome feedback from stakeholders on this report and invite you to contact ir@jse.co.za should you have any questions or recommendations.

Scope and boundary

The information presented in this report describes the JSE and the five financial markets operated by the Group, and the investor protection funds¹ associated with its markets. The report excludes details on our associate, Strate, in which the JSE holds 44.55%, as Strate has an independent board and management team. The JSE equity accounts for Strate. The Group legal structure is on [page 12](#). This report outlines the Group's risk management processes and overall risk profile and considers the reasonable and legitimate needs and concerns of our stakeholder groups. The Board approved the material matters for this report ([pages 36 to 38](#)). The JSE's reporting framework for this report is informed by a range of local and international requirements, standards and guidance, including, but not limited to the:

- » International Integrated Reporting Council Integrated Reporting Framework (IIRC <IR> Framework);
- » Companies Act;
- » King IV;
- » Relevant indicators of FTSE Russell's ESG ratings methodology as applied for purposes of the FTSE/JSE Responsible Investment Index Series, of which the JSE is a constituent;

- » UN Global Compact (UNGC);
- » UN Principles for Responsible Investment (PRI);
- » SSEI; and
- » CDP (formerly known as the Carbon Disclosure Project).

Assurance over the report ⁰⁵ ¹⁵

Our reporting suite contains a range of information governed by a diverse set of regulations and frameworks. Management decides and applies significant judgement in deciding what to report, based on principles of materiality and stakeholder inclusiveness.

The Board's responsibilities include oversight of financial and non-financial value drivers against agreed performance measures and the annual corporate scorecard.

The Board, supported by its committees, is ultimately accountable for the JSE's systems of internal control, designed to identify, evaluate, manage and provide reasonable assurance against material misstatement. Executive management and internal audit provide the Board with formal confirmation of the effectiveness of the internal control environment.

Financial information in this report is drawn from the annual financial statements prepared in accordance with the relevant standards. These are audited by the Group's external auditors, Ernst & Young Inc., in accordance with international auditing standards. Non-financial information in this report is reviewed and approved by the relevant Board committee.

AQRate verification service, an accredited BBBEE verification agency, has verified our BBBEE performance. It has confirmed a level 2 rating and the verification certificate is available at <https://www.jse.co.za/investor-relations/jse-bee>.

The Board is satisfied that internal oversight sufficiently ensures the reliability of the information presented in this report, and did not obtain additional external assurance over this report.

¹ These funds consist of the JSE Guarantee Fund Trust, the JSE Derivatives Default Fund Trust and the JSE Debt Guarantee Fund Trust.

Reporting suite

Our full reporting suite is available at

<https://www.jse.co.za/investor-relations/results> and comprises the following reports:

Integrated annual report

Sets out how the JSE creates value in the context of our business model, strategy, operating context, governance and operational performance.

Annual financial statements

Sets out our financial results, with the GAC report, directors' report and annual financial statements prepared in accordance with IFRS.

Remuneration report (rewarding value creation)

Sets out the JSE's remuneration philosophy and policy, and how it was implemented in 2020.

Social value report (reporting on social value creation)

Sets out details of our journey towards delivering on our sustainability mandate and our impact on society, structured according to six areas of value creation and our material inputs.

Notice of AGM and proxy form

Sets out the notice of the JSE's AGM of shareholders to be held on 3 June 2021, together with the summarised report containing the required financial disclosures.

Disclaimer

Many of the statements in this report constitute forward-looking statements. These are not guarantees or predictions of future performance. The information on which forward-looking statements were based was not audited. Like all businesses, the JSE faces risks and other factors outside of its control. This may lead to outcomes unforeseen by the Group. These are not reflected in the report.

Readers are cautioned not to place undue reliance on forward-looking statements.

APPENDICES

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King IV principles

Application of King IV

We are a listed company, listed on our own exchange, and paragraph 3.84 of the Listings Requirements stipulates that issuers must comply with specific requirements concerning corporate governance. The JSE certifies that it complies with all the requirements detailed in paragraph 3.84.

We believe in ensuring these governance outcomes:

- » An ethical culture
- » Good performance
- » Effective control
- » Legitimacy

In our drive to ensure the achievement of these outcomes, we have applied all the principles outlined in King IV adequately during 2020 and on the following page we set out a brief description of the principles and their application within the JSE environment.

King IV principles continued

Desired outcomes	Activities in the year	Key governance policies and procedures
<p>01 Principle 1 Lead ethically and effectively</p>	<ul style="list-style-type: none"> » Satisfactory attendance by directors at Board meetings » Declaration of interest at each Board and Board committee meeting » Director development – information and cybersecurity » Oversight and monitored implementation and execution of policies by management 	<ul style="list-style-type: none"> » Board charter and terms of reference » Declarations of interest » Board assessments
<p>02 Principle 2 Govern the ethics of the organisation to support an ethical culture</p>	<ul style="list-style-type: none"> » Embed a culture of putting people first and taking care of employees by focusing on employee safety and wellness programmes » Employees trained on their obligations in respect of the JSE Group code of conduct and ethics policy 	<ul style="list-style-type: none"> » Whistle-blowing hotline » Group Dealing in Shares policy » Code of conduct and ethics policy » Protected disclosure/whistle-blowing procedures
<p>03 Principle 3 Ensure that the organisation is seen to be a responsible corporate citizen</p>	<p>Oversaw and monitored the Group’s following activities:</p> <ul style="list-style-type: none"> » Implementation of EE plan » Transformation efforts – achievement of level 2 on BBBEE scorecard 	<ul style="list-style-type: none"> » Sustainability strategy » EE plan » BBBEE scorecard
<p>04 Principle 4 The organisation’s core purpose, its risks and opportunities, strategy, business model, performance and sustainable development are inseparable elements of the value creation process</p>	<ul style="list-style-type: none"> » Approved the Group’s growth strategy for 2021 which focuses more actively on pursuing inorganic opportunities and creating new lines of business beyond equity trading » Announced an agreement with Globacap to progress a digital private placements platform and registry services » Integration of JSE Investor Services Proprietary Limited into the Group 	<ul style="list-style-type: none"> » 2020 Group strategy » 2020 CEO and corporate scorecard » 2020 annual budget

King IV principles continued

Desired outcomes	Activities in the year	Key governance policies and procedures
<p>05 Principle 5 Ensure that reports issued by the organisation enable stakeholders to make informed assessments of the organisation's performance and its short, medium and long-term prospects</p>	<ul style="list-style-type: none"> » Timely submissions to the Board and Board committees to better monitor strategic objectives » Reviewed and approved the 2020 integrated annual report, Group consolidated annual financial statements, financial results and results announcements 	<ul style="list-style-type: none"> » Shareholder/investor roadshows » Integrated annual report » Trading statements » Remuneration report » Social value report
<p>06 Principle 6 The Board is the focal point and custodian of corporate governance in the organisation</p>	<ul style="list-style-type: none"> » Newly appointed Board member serves on the GRMC for a period of one year » Reviewed Board charter, Board work plan and Board committees' terms of reference 	<ul style="list-style-type: none"> » Board charter » Board protocol on access to independent, professional advice
<p>07 Principle 7 Appropriate balance of knowledge, skills, experience, diversity and independence to discharge governance role and responsibilities objectively and effectively</p>	<ul style="list-style-type: none"> » Achieved voluntary diversity targets at Board level » Reviewed Board succession plan 	<ul style="list-style-type: none"> » Diversity policy » GNC terms of reference » Chairman is an independent non-executive director » Have a lead independent non-executive director » CEO and CFO are executive directors of the Board
<p>08 Principle 8 Ensure that arrangements for delegation within Board structures promote independent judgement, and assist with the balance of power and the effective discharge of its duties</p>	<ul style="list-style-type: none"> » Reviewed and updated the committee terms of reference to ensure alignment between the committees » Meetings without management 	<ul style="list-style-type: none"> » Board charter » Board committees' terms of reference
<p>09 Principle 9 Ensure that the evaluation of the Board and its committees supports continued improvement</p>	<ul style="list-style-type: none"> » Considered the 2019 independent Board evaluation report and implemented action plans » Performed 2020 independent evaluation of directors, chairs and committees 	<ul style="list-style-type: none"> » Board and committee evaluations

King IV principles continued

Desired outcomes	Activities in the year	Key governance policies and procedures
<p>10 Principle 10 Ensure that the appointment of, and delegation to, management contribute to role clarity and the effective exercise of authority and responsibilities</p>	<ul style="list-style-type: none"> » Implement the Board delegation of authority as a base for the divisional delegations of authority 	<ul style="list-style-type: none"> » Delegation of authority
<p>11 Principle 11 Govern risk in a way that supports the organisation in setting and achieving its strategic objectives</p>	<ul style="list-style-type: none"> » Embed a risk-aware culture by integrating risk and resilience activities into business processes and decision making 	<ul style="list-style-type: none"> » ERM policy » Risk and resilience roadmap » Control management framework » BCM policy » BCM plan
<p>12 Principle 12 Govern technology and information in a way that supports the organisation setting and achieving its strategic objectives</p>	<ul style="list-style-type: none"> » Invested in our operational capabilities, technology upgrade, information security, cybersecurity, technical skills and backup systems to ensure the operational stability of our markets and reduce operational disruption 	<ul style="list-style-type: none"> » IT and associated security policies » Information Services policy » Operational resilience framework » Control management framework
<p>13 Principle 13 Govern compliance with applicable laws and adopted, non-binding rules, codes and standards in way that supports the organisation being ethical and a good corporate citizen</p>	<ul style="list-style-type: none"> » Entrenched legal compliance processes to mitigate the risk of non-compliance » Monitored regulatory compliance to ensure the fulfilment of licence operating conditions 	<ul style="list-style-type: none"> » Group compliance charter » Group compliance framework
<p>14 Principle 14 Ensure that the organisation remunerates fairly, responsibly and transparently so as to promote the achievement of strategic and positive outcomes in the short, medium and long term</p>	<ul style="list-style-type: none"> » Implemented remuneration policy which is aligned with the Group strategy and the principles of King IV » Paid specific attention to the performance measures of the short-term incentive scheme 	<ul style="list-style-type: none"> » Remuneration policy

King IV principles continued

Desired outcomes	Activities in the year	Key governance policies and procedures
<p>15 Principle 15 Ensure that assurance services and functions enable an effective control environment that supports the integrity of information for internal decision making and for external reports</p>	<ul style="list-style-type: none"> » Applied a three levels of combined assurance model that is aligned to King IV and designed to effectively address significant risks and material matters » GAC received regular reports from GIA on any identified weaknesses in controls 	<ul style="list-style-type: none"> » Non-audit services policy » GIA charter » Annual internal audit plan » Control management framework
<p>16 Principle 16 Adopt a stakeholder-inclusive approach that balances the needs, interests and expectations of material stakeholders in the best interests of the organisation</p>	<ul style="list-style-type: none"> » Focused on enhancing customer experience and improving the quality of our engagements » Embarked on a customer experience change management programme with the aim to embed a culture of customer awareness 	<ul style="list-style-type: none"> » Stakeholder engagement framework » Crisis communication standard
<p>17 Principle 17 As an institutional investor organisation, ensure that responsible investment is practised by the organisation to promote the good governance and the creation of value by the companies in which it invests</p>	<p>This principle relates to institutional investors and has no bearing on the JSE.</p>	

Shareholder information

Shareholder diary

Events or reports in relation to the 2020/2021 financial year

Release of summarised annual financial statements with the declaration of a dividend	Thursday, 25 February 2021
Annual results presentation	Friday, 26 February 2021
Record date to determine which shareholders are entitled to receive the AGM notice	Friday, 12 March 2021
Publication of 2020 integrated annual report and posting of AGM notice	Wednesday, 31 March 2021
Last day to trade in order to be eligible to attend and vote at the AGM	Tuesday, 25 May 2021
Record date to determine the registered holders of JSE shares to participate in the AGM	Friday, 28 May 2021
Forms of proxy for the AGM to be lodged by 16:00	Tuesday, 1 June 2021
AGM at 16:00 on	Thursday, 3 June 2021
Release of results of AGM	Friday, 4 June 2021
Release of summarised interim report for the six months ended 30 June 2020	Thursday, 5 August 2021

Share information

The JSE has a primary listing on the Johannesburg Stock Exchange. There are no secondary listings.

Share code:	JSE
ISIN:	ZAE000079711
LEI:	231800MZ1VUQEBWRF039
Sector:	Financial Services
Sub-sector:	Investment Services

	Authorised share capital ¹	Shares in issue	Closing price R	Market capitalisation R billion
31 December 2020	400 000 000	86 877 600	119.52	10.4
30 June 2020	400 000 000	86 877 600	122.0	10.6
31 December 2020	400 000 000	86 877 600	112.5	9.8

¹ Further details of the stated capital for the period under review are disclosed in note 20 of the Company's audited annual financial statements, available at <https://www.jse.co.za/investor-relations/results>.

Ordinary dividend

The ordinary dividend of 725 cents per share for 2020 represents a progressive 5% increase in nominal terms and translates into an ordinary dividend pay-out ratio of 83% (2019: 87%). The Board resolved that the dividend pay-out ratio should be 40% to 95% of current profits. The previous pay-out range was 40% to 67% of current profits, and the widened range reflects the fact that cash generated exceeds NPAT, largely as a consequence of the technology investments in previous years. This trend is expected to continue for the next few years. Refer to our [online annual financial statements](#).

Dividend declaration date	Thursday, 25 February 2021
Last day to trade JSE shares <i>cum</i> dividend	Tuesday, 23 March 2021
JSE share commence trading ex-dividend	Wednesday, 24 March 2021
Record date to participate in the dividend	Friday, 26 March 2021
Payment date of dividend	Monday, 29 March 2021

Share certificates may not be dematerialised or rematerialised from Wednesday, 24 March 2021 to Friday, 26 March 2021, both days inclusive.

Shareholder information continued

Shareholder spread as at 31 December 2020

	Number of shareholders	Shares held	%
Public			
Institutional shareholders		76 890 622	88.50
Non-institutional shareholders		5 681 633	6.54
Total	5 742	82 572 255	95.04
Non-public			
JEF Trust	66	2 129 639	2.45
JSE LTIS Trusts	43	1 577 557	1.82
Directors and company secretary	5	58 624	0.07
Total		3 765 840	4.34
Total identified shares		86 373 270	99.42
Miscellaneous (below threshold)		539 505	0.62
Total share capital	5 856	86 877 600	100.0
Geographic ownership			
South Africa		54 764 582	63.04
United States		15 544 151	17.89
United Kingdom		7 929 252	9.13
Sweden		183 735	0.21
Finland		81 612	0.09
Rest of Europe		5 312 750	6.12
Rest of world		3 061 518	3.52
Total		86 877 600	100.0

Shareholder information continued

The following registered shareholders also indirectly hold shares on behalf of non-public shareholders:

Beneficial shareholdings

Pursuant to the Companies Act, the following beneficial shareholdings equal to or exceeding 4% as at 31 December 2020 were disclosed or established from enquiries:

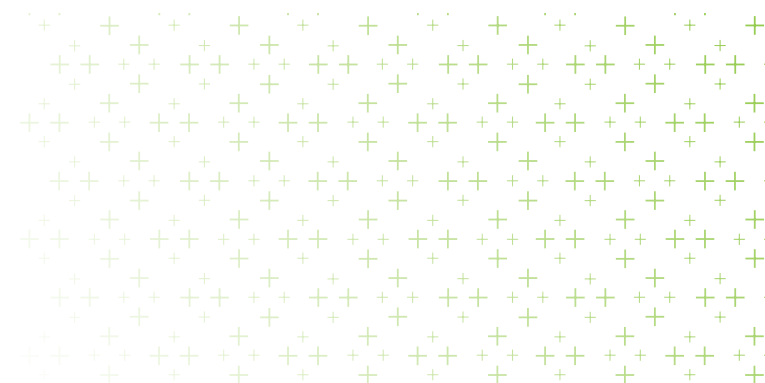
Names	% of total issued ordinary shares	Number of ordinary shares held
Ninety One SA Pty Ltd	12.4	10 797 626
Public Investment Corporation (SOC) Limited	10.5	9 107 685
PSG Asset Management (Pty) Ltd	7.4	6 433 477
Allan Gray Proprietary Limited	6.6	5 744 607
Somerset Capital Management, L.L.P.	4.6	4 038 480
Goldman Sachs Group	4.4	3 833 562

No individual shareholder's beneficial shareholding in any JSE employee incentive scheme is equal to or exceeds 5%.

Fund managers

The directors have ascertained that some of the shares registered in the names of nominee holders are managed by various fund managers. At 31 December 2020, the following fund managers were responsible for managing investments of 2.5% or more of the share capital of the JSE:

Names	% of total issued	Number of ordinary shares held
Ninety One SA Pty Ltd	12.4	10 797 626
Public Investment Corporation (SOC) Limited	10.5	9 107 685
PSG Asset Management (Pty) Ltd	7.4	6 433 477
Allan Gray Proprietary Limited	6.6	5 744 607
Somerset Capital Management, L.L.P.	4.6	4 038 480
Goldman Sachs Group	4.4	3 833 562
J.P. Morgan Chase	3.4	2 963 870
Abax Investments (Pty) Limited	3.3	2 873 497
The Vanguard Group, Inc.	3.2	2 737 939
Oldfield Partners LLP	2.7	2 332 815



Glossary

4IR: fourth industrial revolution

AGM: annual general meeting

AI: artificial intelligence

API: application programme interface

BBBEE: Broad-based Black Economic Empowerment

BCM: business continuity management

BCP: business continuity plan

BDA: broker dealer accounting

BEE: black economic empowerment

BLSA: Business Leadership South Africa

CAPEX: capital expenditure

CCP: central counterparty

CEO: chief executive officer

CIO: chief information officer

CoFI: Conduct of Financial Institutions

CRO: chief risk officer

CSD: central securities depository

CSDP: central securities depository participant

CSI: corporate social investment

DDoS: distributed denial-of-service

DLT: distributed ledger technology

EBIT: earnings before interest and tax

EBITDA: earnings before interest, tax, depreciation and amortisation

ED: enterprise development

EE: employment equity

EME: exempt micro-enterprise

EPS: earnings per share

ERM: enterprise risk management

ERWG: Enterprise Risk Working Group

ESG: environmental, social and governance

ETF: exchange-traded fund

ETN: exchange-traded note

ETP: electronic trading platform

EU: European Union

Exco: Executive Committee

FCA: Financial Conduct Authority

FMA: Financial Markets Act

FSCA: Financial Sector Conduct Authority

FSCF: Financial Sector Contingency Forum

FSCRF: Financial Sector Climate Risk Forum

FSRA: Financial Sector Regulation Act, 9 of 2017

FTSE: Global provider of benchmarks, analytics, and data solutions with multi-asset capabilities. FTSE Russell provides a comprehensive range of indexes

GAC: Group Audit Committee

GIA: Group internal audit

GNC: Group Nominations Committee

GRC: Group Remuneration Committee

GRMC: Group Risk Management Committee

GSC: Group Sustainability Committee

GSROOC: Group SRO Oversight Committee

HEPS: headline earnings per share

HR: human resources

ICH: independent clearing house

IDX: International Derivatives

Glossary continued

IFRS: International Financial Reporting Standards

IFWG: Intergovernmental Fintech Working Group

IPO: initial public offering

IOSCO: International Organization of Securities Commissions

IRMSA: Institute of Risk Management South Africa

ISO: International Organization for Standardization

IT: information technology

ITaC: Integrated Trading and Clearing

JEF: JSE Empowerment Fund

JIBAR: Johannesburg Interbank Average Rate

JSE/the Group: JSE Limited

King IV: King Report on Corporate Governance™ for South Africa, 2016 (copyright and trademarks are owned by the Institute of Directors in South Africa NPC and all of its rights are reserved)

LACE: lean agile centre of excellence

LSE: London Stock Exchange

LTIS: long-term incentive scheme

MIT: MillenniumIT

MOI: memorandum of incorporation

MSCI: MSCI provides index construction and index solutions. It also licenses indexes for exchange-traded funds and exchange-listed futures and options

MTS: MTS is one of Europe's electronic fixed income trading markets. It is wholly owned by the London Stock Exchange Group

NAV: net asset value

NPAT: net profit after tax

NPS: Net Promoter Score

OECD: Organisation for Economic Co-operation and Development

ORM: organisational risk management

OTC trade: over-the-counter trade

PA: Prudential Authority

PoPIA: Protection of Personal Information Act

QSE: qualifying small enterprise

REIT: real estate investment trust

RFSC: revised Financial Sector Charter

SAFe®: Scaled Agile Framework®. Empowers complex organisations to achieve the benefits of lean agile software and systems development at scale

SARB: South African Reserve Bank

SD: supplier development

SDGs: Sustainable Development Goals

SME: small and medium enterprise

SOE: state-owned enterprise

SRO: self-regulatory organisation

SSEI: Sustainable Stock Exchanges Initiative

SSF: single-stock future

TMPS: total measured procurement spend

UN: United Nations

UNGISD: United Nations Global Investors for Sustainable Development

WFE: World Federation of Exchanges

WHO: World Health Organization

YoY: year-on-year

Corporate information and directorate

JSE Limited

(Incorporated in the Republic of South Africa)
 Registration number: 2005/022939/06
 Share code: JSE
 ISIN: ZAE000079711
 LEI: 213800MZ1VUQEBWRF039

Registered office

One Exchange Square
 2 Gwen Lane
 Sandown, 2196

Postal address

Private Bag X991174 Sandton, 2146

Contacts

Telephone: +27 (0) 11 520 7000

Web: www.jse.co.za

Investor relations: ir@jse.co.za

Group company secretary: GroupCompanySecretary@jse.co.za

Directors as at 31 December 2020

N Nyembezi¹ (Chairman)
 Z Bassa¹
 MS Cleary¹
 VN Fakude¹
 Dr SP Kana¹ (Lead Independent Director)
 FN Khanyile¹
 IM Kirk²
 BJ Kruger²
 Dr MA Matooane¹
 Dr L Fourie (Group CEO)³
 A Takoordeen (Group CFO)³

Changes to the Board in 2020

MS Cleary⁴
 IM Kirk⁵
 F Daniels⁶

¹ Independent non-executive director.

² Non-executive director.

³ Executive director.

⁴ Appointed effective 1 February 2020.

⁵ Appointed effective 1 October 2020.

⁶ Resigned effective 8 July 2020.

Group company secretary

GA Brookes

Transfer secretary

JSE Investor Services Proprietary Limited
 19 Ameshoff Street
 Johannesburg, 2001

Sponsor

Rand Merchant Bank (a division of FirstRand Bank Limited)
 1 Merchant Place
 Corner Fredman and Rivonia Road
 Sandton, 2196

AGM scrutineers

The Meeting Specialist Proprietary Limited
 One Exchange Square
 2 Gwen Lane
 Sandown, 2196

Auditors

Ernst & Young Inc.
 102 Rivonia Road
 Sandton, 2196

Bankers

First National Bank of SA Limited Corporate Account Services
 4 First Place
 Bank City
 Simmonds Street
 Johannesburg, 2001

Investor queries should be directed to ir@jse.co.za and will be redirected, where necessary, to the appropriate Board member or executive for a response.

Governance and secretarial queries should be directed to GroupCompanySecretary@jse.co.za

Notes

