

**SCENARIOS FOR
THE ROLE AND FUNCTION OF ACCOUNTANTS
IN SOUTH AFRICA BY 2035**

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SCENARIOS FOR THE ROLE AND FUNCTION OF ACCOUNTANTS IN SOUTH AFRICA BY 2035

I CONTEXT AND SCENE-SETTING

We (André Roux and Gideon Botha) have been commissioned by SAICA to develop a range of alternative scenarios to explore the future role of accountants in South Africa towards 2035. The scenarios should also assist SAICA and its stakeholders to identify the scope and nature of the attributes and competencies that accountants will require to become and stay relevant in the years that lie ahead. The scenarios should also identify opportunities and how they can be leveraged in a practical fashion.

Scenario planning exercises are well-known and recognised tools for gaining foresight and more knowledge about the future. As such, a scenario project should resonate with the fundamental principles and operating philosophies associated with strategic foresight. Included here are the following:

- We cannot predict the future.
- We can gain understanding about how the future could evolve in different ways from the current situation, by analysing trends, and patterns of change.
- There are many alternative futures, some of which are preferred or desired futures.
- Societal change is a holistic and systemic (interdependent and interactive) process. The multiple perspectives that influence societal change as experienced by an entity or organisation include the economic environment, social aspects of society, the political sphere, the institutional realities, and the physical and technological environments.

A scenario planning exercise typically comprises six inter-related phases/ steps:

1. Scoping the issue.
2. Identifying driving forces.
3. Distilling, from the driving forces, the key certainties and key uncertainties.
4. Crafting four scenarios, after deciding upon the two key uncertainties with the biggest impact on the system.
5. Agreeing upon robust strategies.
6. Disseminating the scenario narratives and strategies to the relevant stakeholders.

The scope of the issue is agreed upon by key organisational stakeholders by considering and debating the objectives of the exercise, the context, the time horizon to be considered, and the sectoral scope. Following a virtual meeting of the key stakeholders, facilitated by André Roux and Gideon Botha, the following scope was determined:

THE FUTURE ROLE AND FUNCTION OF ACCOUNTANTS IN SOUTH AFRICA BY 2035

2 ENVIRONMENTAL SCAN: IDENTIFYING THE KEY DRIVERS

The driving forces can be described as those underlying and impacting factors that set the pattern of events and determine outcomes in the business environment and timescale being considered; they are the forces that make things happen. To this end, environmental scanning plays a key role. This is the tracking of trends and occurrences in an organisation's environment (and their relationships) that have a bearing on its performance, currently and in the future. Both qualitative and quantitative changes are considered.

The next part of this document is an environmental scan, which is primarily the result of desk top research conducted by André Roux and Gideon Botha. Moreover, in keeping with the imperative of inclusiveness, key stakeholders had the opportunity, during a facilitated workshop, to provide additional insights and inputs with regard to the content and structure of the environmental scan. During the same workshop, the scenario workshop team agreed upon and consolidated the list of key drivers.

2.1 THE PHYSICAL SPHERE

2.1.1 Preamble

Currently, Planet Earth is the only home that humankind has and it is central to our survival as a species. Humankind and the earth are facing an existential crisis brought on by the damage done to the global biospheres through the removal of resources out of the environment while only putting back large quantities of waste and poison, thus changing the composition of the soil, water and atmosphere. The greatest threat to humankind in general is climate change to which we may be able to adapt to but the process of adaption will come with many casualties. Whether the releasing of carbon dioxide into the atmosphere will create an irreversible cataclysm is unknown, however, scientists estimate that without a significant decrease in the amount of CO₂ being released over the next twenty years, the average temperature on earth will increase by 2 °C. This will bring about the expansion of deserts, the melting of ice caps, rising oceans and more frequent extreme weather events. These climatic changes will disrupt agricultural production, increase urbanisation, make large parts of the earth uninhabitable and create a refugee migration as has never been seen before. The worrying aspect is that we are moving toward a tipping point from which the earth will never recover (Harari, 2018).

2.1.2 Climate change: The reality

Climate change was first brought to the world's attention by scientists in June 1988 at the "World Conference on Changing Atmosphere" that was held in Toronto. The conference focused on the alarming build-up of carbon dioxide, a greenhouse gas. At this conference and in many forums held thereafter, one of the biggest stumbling blocks was to agree on a unified approach to deal with climate change. At the 1988 conference, it was suggested that emissions should be 20% lower by 2005; however, they were 34% higher in 2005 and by 2017 they were 22% higher still (Economist, 2020b).

The risk that climate change poses for human existence is not fully comprehended at present due to the complex nature and functions of the various variables and their impact on one another. However, these complex interactions mean that a gradual change in the climate can lead to unforeseen changes in its impact on human beings once it passes a particular threshold and this threshold will not necessarily be discernible in advance. Many of the difficulties

humans have encountered with the weather and climate related to extremes as a result of small shifts in the weather. These small shifts, in turn, lead to significant shifts in extremes so that today's sporadic extremes become tomorrow's frequent instabilities; tomorrow's extremes are then the new norm (Economist, 2020a).

Changes in sea levels are the most significant result of climate change due to three main factors: the enlargement of the oceans as they soak up more heat, the addition of meltwater from decreasing glaciers on land, and the physical breaking down of ice. The first two factors currently contribute to a rise of about 1 cm in sea level every three years and this increase is anticipated to carry on in the 21st century irrespective of whether global warming is held well below 2°C. The rise in sea level could erode coasts and increase flooding. The stability of the ice sheets holds the biggest uncertainty and it is believed that there are certain points of no return when the ice sheets are destined to gradually collapse, which will increase the sea levels by many metres. These inflection points are not clear and may have been passed already (Economist, 2020a).

There is a high probability that climate change will result in droughts and crop failures and regional climates have the potential to destabilise whole economies. Storms with more damaging winds and rains could occur and seawater could immerse beaches and infiltrate aquifers. The instability of the ice sheets could lead to shifts in the ocean currents and the spreading of deserts (Economist, 2020a).

One study using econometric analyses of interannual differences suggests that higher temperatures could lead to lower labour productivity and more violence. Acute heatwaves becoming a more frequent occurrence, not resultant only from increasing temperatures but also from warming-stimulated changes in the climate system, could destabilise the processes that normally move the weather around the world, subsequently resulting in conditions getting stuck. Warmer summers damage crops that are very sensitive to temperatures above a certain threshold and because of water stress. Milder winters will affect crop yields because certain pests will be able to survive. When extreme hot and dry conditions remove moisture off the land, the ensuing droughts do not just worsen the problems for farmers. They also increase the risk and severity of fires due to the amount of lightning that is expected to occur at higher frequency. These impacts of climate change are of grave concern but even more so, the unknown regarding the impact of climate change (Economist, 2020a).

To keep global warming well below 2°C when compared to the temperature pre-coal requires an energy shift at a much larger scale and at a quicker pace than ever before. This requires that over the next 30–50 years, more than 90% of the energy currently produced by fossil fuels would need to be generated by renewable energy sources, nuclear power or fossil fuel plants that bury their waste rather than exhaling it (Economist, 2020b).

During the 2010s, the average lifetime cost of equipment and per megawatt hour of electricity generated of the sun, offshore wind and onshore wind fell by 87%, 62% and 56%, respectively. This is increasing the ability to invest in more and more renewable projects as around two-thirds of the world's population lives in countries where renewables represent the cheapest source of new power generation (Economist, 2020b). There are, however, some challenges faced by renewable energy in that neither the sun nor the wind produces energy consistently. This problem can be addressed as long transmission lines that keep losses low by working at very high voltages can move electricity from oversupplied areas to those where demand is surging and lithium-ion batteries can store extra energy and release it as needed. The

International Renewable Energy Agency, an advisory group, estimates that \$800bn of investment in renewables is needed each year until 2050 for the world to be on course for less than 2 °C of warming, with more than twice that needed for electric infrastructure and efficiency. In 2019, investment in renewables was \$250bn. The big oil and gas firms invested twice as much in fossil fuel extraction (Economist, 2020b).

In 2015, the Paris Accord set out specific global targets for the reduction of greenhouse gases if the atmospheric greenhouse gas levels were to stabilise during the second half of this century at a level that would see an increase of the average global temperature over its preindustrial level well below 2 °C, with strenuous efforts made to keep it down to 1.5 °C. All the countries, developed and developing, that signed the accord were required to commit to domestic actions towards meeting this target (Economist, 2020b).

The impact of climate change is expected to be the most severe in developing nations such as places in Africa that already struggle to feed their growing populations with poor crop yields. Food and water insecurity will lead to large-scale famines, social uprising, refugee migration and increased urbanisation (Harari, 2018). Climate change will affect every sphere of life, especially the physical and social spheres of life. This will, of course, also affect the environment in which accountants live and work and who may decide to leave South Africa and rather relocate to geographical areas where the impact of climate change is less severe or where the government has the ability to negate the impact of climate change.

2.1.3 Adoption of a broader purpose for business, driven by climate change

The impact of climate change and the unsustainable use of resources has significantly shifted the view that “corporations exist principally to serve their shareholders”. This shift occurred in August 2019 when Business Roundtable, the influential US business group, amended its two-decade-old declaration as follows: “While each of our companies serves its corporate purpose, we share a fundamental commitment to all of our stakeholders” — customers, employees, suppliers, communities and last on the list, shareholders (Hill, 2019). The purpose of business was broadened due to pressure over the past decade to include environmental, social and governance (ESG) criteria in allocating financial investments – businesses should pursue a purpose as well as, or beyond, pure profits (Economist, 2019b).

The adoption of a broader purpose for business has been welcomed but it also causes immediate problems that need to be addressed. Pension funds on which the elderly rely for income are dependent on dividend income and thus target companies such as Shell in their pension portfolios. Shell faces the conundrum of how to preserve their dividend-paying capacity while, at the same time, change the make-up of the company to be less dependent on profits from fossil fuel activities. If the company moves away from oil and gas, it faces the risk of losing its ability to pay a dividend and being saddled with uneconomic assets. Failing to prepare for an oil price collapse or being held legally responsible for the physical damage to property and coastlines as temperatures and sea levels rise would be at the top of any list of potential regrets (Raval, 2019). The broadening of the purpose of business could negatively affect the dividend return and profits of companies that are included in the portfolios of pension funds. Consequently, the older population will have to live off lower monthly pensions, which will negatively affect the quality of their lives and could force them to seek to work for longer periods of their lives.

The broadening of the purpose of business will have a far-reaching impact on the accountant of the future in South Africa. It will require accountants to have an in-depth knowledge of ESG in order to measure, evaluate and report on ESG performance for their company. Furthermore, accountants will have to be pragmatic when advising on the implementation of ESG at their workplace or advising clients as they will have to take into account the South African context and address the trade-off similar to that faced by Shell regarding the rate of adoption of renewable energies while still keeping its dividend payment ability.

Since 2016, the total investment in financial products stating compliance with the environmental, social and governance (ESG) rules has increased from \$23trn to \$35trn and Bloomberg expects this value to exceed \$50trn by 2025. ESG funds usually claim that they are committed to addressing climate change when they invest in publicly listed companies. Based on these claims, numerous investors invest in these funds. The investors' belief in these claims are well placed but in the absence of accurate measurement, many of the claims may be greenwashed. Many funds claim that there is no trade-off between maximising profits and green investing. This is, however, doubtful for as long as the externalities created by polluting firms are legal and untaxed (Economist, 2020a).

The increase in ESG investment and the stigma faced by publicly listed energy firms are having an inadvertent side effect. Energy firms and large listed mining outfits are selling their highest polluting assets to please ESG investors and meet their carbon-reduction targets. Yet, the underlying oil wells and coal mines are not being shut down but rather are being purchased by private companies and funds that have alternative sources of capital and stay out of the limelight. Private equity firms have purchased up to \$60bn worth of fossil-fuel-linked assets in the past two years alone, from shale fields to pipelines, and the hunger for more of these assets is likely to grow as the war in the Ukraine has sent oil prices back up over \$90 a barrel. The purchase of dirty assets by private equity firms brings about two problems: Firstly, it does not reduce emissions if the asset continues to pump oil or dig up coal and secondly, it makes it harder to identify the owners of the polluting assets and to understand whether they plan to reduce their output over time, or expand it. This creates a system of arbitrage in which dirty assets change hands to misplaced applause (Economist, 2020a). Private equity managers have hidden the dirty assets by no longer promoting energy funds other than those that focus exclusively on renewables. They are now lumping the dirty assets under funds that are identified as growth or opportunistic that cover a host of industries and the funding for the purchase of these assets (Economist, 2022).

By branding investment funds as green or ethical, private equity managers can access a massive investor market with high demand and it makes it easier to justify the fees that they charge for selecting specific stocks. Investors globally poured \$142.5bn into sustainable funds in the fourth quarter of last year, which was 12% up on the previous quarter. This took the total worldwide sustainable assets to \$2.7tn across more than 5 900 funds, three-quarters of which were in Europe. A considerable portion of the investments was made by retail investors who want to make a positive impact on the planet or by society who usually made these investments in their pensions or savings accounts based at least in part on the claims made in a fund's documentation or adverts. In August 2021, InfluenceMap, a climate change think tank, found that 421 out of the 593 ESG equity funds it assessed had portfolios that were not aligned with the Paris climate targets. Using the Paris Agreement Capital Transition Assessment methodology to determine alignment, the think tank further found that 72 out of 130 climate-themed funds were not in line with the Paris goals, although three out of four funds were marketed as "Paris-aligned" (Fletcher & Oliver, 2022).

To effectively deal with the greenwashing problem requires higher carbon taxes or carbon prices to be imposed. These tools will align the profit motive with the imperative to reduce emissions and in so doing, allow the power of markets to reallocate capital quickly and efficiently. An alternative way of dealing with the problem lies with institutional investors that are beneficiaries of ESG funds that are dumping dirty assets, yet they are also the partners of private equity funds that are purchasing these assets. Institutional investors should consider the entire carbon footprint of their portfolios to avoid double counting (Economist, 2020a).

Investors should also question the presumption that ditching the polluters share is the most effective way to reduce their pollution. It is argued that ditching their shares would raise the cost of capital for polluters and therefore hinder new investment by them. However, this is not the case as there is plenty of private cash willing to buy up those shares. Investors should rather retain their dirty shares and work with managers to reduce emissions (Economist, 2020a).

The increase in the investment in ESG financial products brings with it the incentive for firms to greenwash and will require accountants to ensure that the accuracy around ESG compliance is above board. The risk is the complexity and difficulty in measuring and accurately reporting of ESG progress when stating compliance with ESG regulations. The potential fines or reputational damage if it is found that the claim of being ESG complaint is false could have devastating consequences for firms and the individual accountants.

Executive pay is starting to include environmental and social targets to bonus packages. For example, Kevin Johnson, chief executive of Starbucks, earned a slice of his 2021 bonus by slashing plastic straws and methane emissions. For Johnson, 10% of his annual bonus was tied to environmental provisions, including efforts to “eliminate plastic straws” and “farm-level methane reduction” among other things, and another 10% of his pay was tied to retaining minority workers and other workplace goals. Pay tied to corporate social responsibility has jumped above 20% at Russell 3000 companies, up from 7% in 2018, according to Institutional Shareholder Services ESG, the proxy adviser’s responsible investment arm. Pay provisions tied to workplace diversity hit 11% in 2021, from 2.5% in 2018, the proxy adviser said. As bonuses tied to environmental, social and governance (ESG) issues increase, shareholders are sceptical. Investors have grown frustrated with big bonuses awarded with little accountability. A record number of S&P 500 companies failed to win investor support for bonuses in 2021 (Temple-West, 2022).

ESG pay provisions tend to be unclear, with asset managers voicing their concern that if ESG pay replaces bonus targets tied to share price performance, then executives could be protecting bonuses during a turbulent stock market this year. Long-term investors likewise expressed concern that the ESG metrics in play are either incredibly broad, high level, more qualitative in nature and almost always forming part of short-term performance scheme (Temple-West, 2022).

2.1.4 South African perspective on climate change

South Africa has been subjected to frequent episodes of load-shedding that is planned to affect different areas at various times in an attempt to avoid a complete failure of the national grid. Load-shedding has been happening intermittently for over a decade when Eskom cannot keep up with demand because of a substantial proportion of its energy capacity often being out of service. Eskom’s severe debt, delays to critical maintenance, fraud and corruption, diesel shortages, and design flaws at two major new coal-fired power plants, Medupi and Kusile, led

to Eskom's energy availability factor being at an average of 67.75% for the year-to-year (Doyle, 2019).

South Africa is currently the world's 15th largest carbon dioxide emitter, relying heavily on coal that supplies 87% of the nation's electricity. The South African government has committed to reduce its overall carbon dioxide emissions between now and 2030 in the global effort to tackle climate change but is facing massive hurdles in doing so. Eskom is saddled with more than \$27 billion in debt, a portion of which is due to its investment in Kusile and Medupi that have significantly overspent against budget and are unable to supply reliable power to meet the demand. Furthermore, a large number of jobs are dependent on coal, affecting more than 120 000 people working at power plants and mines (Plumer, 2021).

Eskom, the state-owned electricity utility that provides 95% of the country's power, was granted a five-year postponement on air-quality compliance as required by the Minimum Emission Standards (MES) in 2014. The cost to meet the MES is a major problem in retrofitting plants, with many unable to afford upgrades such as flue-gas desulphurisation. The risk to stable energy has further increased with the decision by government to refuse Eskom's application for the deferral of the implementation of some of the air-quality compliance timelines set in legislation. This will result in the instant shutting of 16 000 MW of capacity, which will have a significant impact on Eskom's ability to provide electricity. It is currently proposing an engagement with stakeholders on the "way forward" (Creamer, 2021). The cost of government's decision would be in excess of R300bn and will not add any additional capacity to the national grid. Furthermore, it would require an additional 10% to be added to the existing electricity tariff (Bega, 2022).

Eskom also warned that the government's decision not to allow the postponement of meeting the MES will lead to an increase of 20% in the water consumption should it install desulphurisation technology at Medupi, which remains a requirement of a World Bank loan. As an alternative, it suggested an emission-reduction plan involves investing in technology retrofits to reduce emissions, together with the progressive closure of older stations and the introduction of cleaner generation technologies. This "phased approach" to achieve compliance would cost approximately R67 billion and would prioritise the reduction of particulate matter emissions (Creamer, 2021).

The South African Department of Mineral Resources and Energy (DMRE) has updated its Integrated Resource Plan (IRP) on the country's energy generation up to 2030. The IRP aims to expand the energy mix while endeavouring to address the serious problem of insufficient energy capacity. The IRP notes that there is an immediate risk of huge power shortages due to inadequate capacity reserves in the event of emergency plant breakdowns and this situation would worsen if all plants that are non-compliant with the MES are shut down. The continued underperformance of Medupi and Kusile will also increase the risk, along with the potential closure of Koeberg in 2024. However, there is insufficient infrastructure for high volumes of diesel and the cost is prohibitive (Doyle, 2019).

According to Carbon Brief, coal made up 88% of the country's energy needs in 2017 and renewables contributed 3,4%. Under IRP 2019, coal's contribution is projected to drop to 58,8% in 2030, with renewables rising to 24,7%. The energy sector currently is responsible for almost 80% of South Africa's greenhouse gas emissions, with 50% of this coming from electricity generation and liquid fuel production. IRP 2019 states that old coal plants will gradually be retired, with 10 500 MW expected to be decommissioned by 2030. However,

two new plants of 750 MW capacity each will be added. The plan notes that no new plants will be built after 2030, unless affordable cleaner forms of coal are available. South Africa's only nuclear power station, Koeberg, will reach the end of its life in 2024. The IRP proposes extending its lifetime to 2044, and the government is currently in talks with Eskom to achieve this. Although no new nuclear capacity is planned before 2030, the report says that consideration must be given to developing a future nuclear programme (Doyle, 2019).

The IRP also considers other forms of electricity generation and notes that generation of electricity and heat from biomass and biogas holds huge potential. It highlighted that Eskom is already planning a battery energy storage pilot to assess the technological and regulatory matters relating to utility-scale energy storage (Doyle, 2019).

The South African government has indicated that it is imperative for the country to expand its renewable energy resources and has set itself a target of generating 20 000 MWh of renewable energy by 2030 (National Planning Commission, 2012).

South Africa has been lauded for its renewable power programme by way of an innovative auction system that has attracted over \$14bn of private capital to produce 6 400 MW of renewable energy. Currently, around 3 800 MW is operational, which is less than 5% of the total supply. The auction system asks for bid prices to be submitted by independent power producers, enabling government to then select the producer with the lowest tariff. This has led to a decrease in the price of renewable energy from the average agreed price of R2,79 per kilowatt hour in 2011 to below R1 per kilowatt hour in 2015, which is also below the price of energy provided by the coal-powered Kusile. However, the improved 2015 prices did not benefit Eskom as President Zuma preferred to procure Russian nuclear reactors at R1 tn to be funded by debt. Subsequent to Mr Zuma's removal, the Energy Ministry has been seeking to revive the renewables programme and increase the target for capacity outside of coal to more than 24 000 MW by 2030, including gas (Cotterill, 2019).

Developing nations have stated on numerous occasions that they require financial assistance from wealthy countries to shift to renewable energy. South Africa received a financial commitment of \$8,5 billion over the next five years from Britain, France, Germany, the United States and the European Union to help install more clean energy and fast-track the country's move away from coal power while softening the blow for workers who may be affected by the shift (Plumer, 2021).

The inability of Eskom to provide reliable energy has the potential to severely hamstring South Africa's economic growth in the coming years. The limited growth could restrain growth in the job market for accountants and also direct investments. This may lead to an oversupply of accountants and could result in future accountants to rather study toward other fields with more job opportunities or accountants may seek remote employment or employment in other countries.

2.1.5 THE TECHNOLOGY SPHERE

2.1.5.1 Preamble

The accounting profession is facing significant challenges that have arisen from globalisation and changes in business operating models, technology, societal values and norms that are reforming the world. If these challenges are not embraced, the profession is running the risk of being left behind and losing its relevance with users, constituencies and future talent, and being replaced by competing professions. One of the reasons why the profession finds it difficult to embrace these challenges is because its current structures have been created to meet the needs of the industrial age (CPA Canada, 2019b).

According to Frey and Osborne (2013), there is a 0,94 probability that there will be job losses for accountants and auditors over the next two decades due to automation. History shows that most new technologies take time to increase productivity and wages. Although technology ultimately increases the general size of the economic pie, automation will in all probability increase inequality in the short run by forcing certain people into lower-paid jobs. The concern raised by the authors is that automation will leave countless people worse off in the short term, which could result in unrest and opposition and, in turn, inhibit the speed of automation and productivity growth. This would result in everyone being worse off in the long run, which is often referred to as the technology trap (Economist, 2019a).

Technological trends are forecasted to lead to a 40% net reduction in staffing levels in finance by 2025 (Accenture, 2019). This will be driven by numerous tasks formerly performed by entry-level accountants that are automated and thus create flatter organisation structures with less staff undertaking lower level activities (CPA Australia, 2019). Accountants are increasingly working in cross-functional teams and are expected to be tech-savvy to be effective in their roles and within these cross-functional teams. Auditors, as an example, may manage and supervise functions in a private blockchain and also be required to adjudicate between the various blockchain users should disputes arise. They might confirm the activation of smart contracts or evaluate the robustness of the blockchain platform (Jackson, Michelson & Munir, 2020).

More than 75% of accountants hold the view that their required skills and qualifications are changing (CPA Canada, 2019a). This phenomenon is not limited to accountants as the desired skill sets of more than one third of all occupations are expected to be different by 2025 (World Economic Forum, 2018). This creates a concern across the accounting profession whether graduate talent will have the right mix of skills to adapt to the new requirements for accountants (CPA Australia, 2019).

2.1.5.2 The Information Age

Technological development has brought with it the accumulation of global information flows at a rapid pace that resulted in a massive surge in data. No clear approaches exist to assist with the management of this data surge, nor how it will be commoditised, standardised or verified in the future. If information is power, then the accounting profession's livelihood hinges on its capability to define the role it will play in classifying, evaluating and crafting value from this proliferation of data (CPA Canada, 2019a).

The speed with which transactions are being digitised is transforming both the landscape and the nature of work for accountants and also requires a shift in their focus from hindsight to foresight. Furthermore, the speed and scope of digitisation require the accounting profession to become more adaptable and agile to the adoption of technologies such as AI and blockchain. These technologies eliminate the transactional layer from accounting and will dramatically reshape the services that accountants and auditors are expected to provide (CPA Canada, 2019b).

As the increase in digital and big data continues to upset established business models, the profession's success will be dependent on its ability to move away from its conventional role of measuring value to its ability to navigate the sea of data by interpreting the patterns and following the flow of information. Furthermore, its ability to provide assurance in a digital world made up of non-financial information will be critical for the profession to create trust in a society where it is rapidly dissipating (CPA Canada, 2019a).

Accounting firms have experienced changes in the demand for their services, with more value placed on specialist knowledge such as environmental, social and governance issues and business advisory services. Many accountants in the accounting firms now act as virtual CFOs, making use of benchmarking data and business planning tools to oversee the organisation's competitive position (CPA Australia, 2019). To remain competitive, accounting firms need to remain agile to market needs, growing into new areas to attract, service and retain clients. The nature of accountants' roles has evolved from bean counter to strategic counsel and requires an understanding of the entire business and provision of strategic advice based on analytics, forecasting and informed decision making (Jackson, Michelson & Munir, 2020). Accounting technology also helps accounting firms gain a competitive edge and levels the playing field to make it possible for smaller firms to compete against industry giants. By digitising business procedures and how one processes and stores data, accountants have greater bandwidth to focus on areas where they can add the most value, increase profitability and deliver best-in-class services (Countingup, 2021).

Users are progressively using real-time information to inform business decisions. Both users and investors are increasingly relying less on traditional financial data when contemplating a decision and rather rely on other markers of value such as social and environmental information. These markers tend to be easily accessible through structured and unstructured means and third-party sources. In this data-driven era, the excess of real-time information is making financial statements and IFRS measures less and less applicable as measures of historical, present or future value. Many large investors are using big data to forecast earnings prior to companies announcing them and occasionally before management themselves know. Over the next few years, these models will be enhanced and refined, which could result in financial statements becoming redundant (CPA Canada, 2019a).

An example of real-time decision making is a company that uses more than 2 000 data points from 100 real-time data sources to make lending decisions. This renders the lending decision so quick that the company has to intentionally slow down the model so as not to alarm customers and create the perception that the decision is made too fast. This real-time decisioning world could lead to traditional quarterly financial statements becoming increasingly irrelevant (CPA Canada 2019b).

The globalisation of data is happening at breakneck speed, but sadly the governance around the data is severely lagging. There seems to be no obvious or attractive approaches that highlight rules or restrictions around who can gain access to data and whether decision making ought to be done by humans or machines. Although AI has the capability to make decisions quickly, it still requires humans to place rules around the use of data to ensure that AI algorithms construct accurate and predictive information that is free of bias. The globalisation of data requires the creation of both new standards and real-time KPIs to truly understand and govern data. Accountants have the opportunity to play a central role in creating these standards to inform processes. The profession will be required to alter its business model dramatically as it presently does not have a real-time assurance ability or ability to assess the future economy, and its practices for providing audited data are too slow (CPA Canada, 2019a).

Should accountants take the lead on data governance, their future skill set will have to include a strong grounding in data governance. The profession will need to have a common language and taxonomy for data. Through using its fundamental characteristics of trust and integrity and its responsibility to act in the public interest, the profession will be able to provide both the rules for data governance and the assurance that decisions are being made based on the value the data bring (CPA Canada, 2019a).

Value is progressively more intangible in nature, which necessitates changes to the approaches used to assess value, with social and environmental factors carrying more weight when decisions are made by users and the investment community. This requires that the profession considers these intangibles and alters its approach to identifying, measuring, reporting and creating value if it is to continue to be sustainable. This is demonstrated by tangible assets today making up only 16% of the S&P's market value as opposed to the 83% of 40 years ago. Thus, the profession needs to think long and hard about new approaches to attribute and quantify value in ways that integrate both financial and non-financial information. The profession will need to understand the marketplace and identify how users and investors determine value and also to measure intangibles such as brand value, environmental responsibility and social capital (CPA Canada, 2019a).

The increasing occurrence of fake news and the rising trust deficit between organisations and society highlight the challenge facing society in understanding issued information and determining whether it can be relied on. This is aggravated by the fact that people are increasingly placing their trust in technology rather than in one another (CPA Canada, 2019a).

Integrity and trust have been the two foundational characteristics of the accounting profession since its inception. The recent corporate scandals, however, have negatively affected the trust of investors and the public at large and damaged the profession's reputation. Overlapping with the damage to the profession's reputation, technologies such as blockchain and automation are taking over some of the foundational skills of the profession, for example, validating trusted processes (CPA Canada, 2019a).

To create trust in the information age, the profession needs to change its role from mitigating and avoiding risk to becoming more intentional in developing new approaches to measure value in a fair, comprehensive and accurate way. To remain relevant, the profession will need to retain ethical standards and its reputation as stewards of the public interest (CPA Canada, 2019a).

The definitions of performance and value are highly integrated. Value is the measure of worth at a particular time, while performance is the consequence that an organisation's collective achievements create. Performance drives value from one point in time to another. One of the key roles of an accountant is to assess and approximate value. In today's (and tomorrow's) economy, assessing and approximating value are becoming more difficult as assets are becoming progressively intangible (such as brands, relationships or data) and/or non-financial (representing social or environmental value). And the real or apparent presence of future risks inhibits value. In today's framework, such assets and risks are simply considered as hard to measure. However, the importance that these assets and their associated risks hold for our economy and society at large offers future accountants a critical duty to develop approaches that can recognise and assess these new non-traditional sources of value (CPA Canada, 2019a).

Information is central to flourishing economies as it allows companies to evaluate their performance while also functioning and serving customers in new and more effective ways. In the current digital age, information progressively takes the form of digital data and new and evolving technology allows data to proliferate rapidly. Reliable data exist on a very broad spectrum that include but are not limited to operating, financial and environmental dimensions, with information itself becoming more and more valuable and being seen as a distinctly identifiable asset (CPA Canada, 2019a).

In the digital age, data are more prevalent and have become more valuable intrinsically. Data being so essential for both business success and societal advances emphasises the global absence of standards and frameworks to govern the integrity, security and application of such data. Based on the accounting legacy in assurance and standard setting, the accounting profession is well placed to contribute to a much-needed set of initiatives around data governance. Regardless, issues such as data residency, uniformity of data format, privacy and national IP strategies must eventually be addressed at a policy level. In a world of fake news, there is no more valuable work than to ensure that decision makers can trust data (CPA Canada, 2019a).

The accounting professionals should not fear this new digital world but rather embrace it as it will provide them with the opportunity to be more strategic in the application of the profession. The only way that accounting professionals will be able to capitalise on this new world is by staying abreast through professional development, continued education, collaboration with others in the sector and joining industry bodies that offer opportunities for upskilling to remain relevant (Du Chenne, 2019).

Accountants will eventually be required to become adapt in a data-rich, data-intense and data-driven world with unique problems that will have to be solved differently. In this new data world, accountants will have to be able to analyse continuous information flows and assess the integrity of real-time data. This requires accountants' skills to be retooled and the profession to attract new entrants that see the profession as a means to success in a data-driven world. Reskilling the entire profession and rebuilding training programmes to equip accountants as data masters are among the most significant challenges facing the profession (CPA Canada, 2019a).

2.2 TECHNOLOGY REVOLUTION

The accounting profession has experienced substantial technological transformations that have affected how accountants gain, examine and explain data to inform organisational decision making. Technology changes have resulted in tasks traditionally performed by junior accountants often being automated, which creates the expectation that accountants should use their expertise and skills to leverage technology to complete tasks and make decisions far earlier in their careers than before; thus, technology should be seen as a dynamic rather than static factor in contemporary accounting work (Deloitte, 2017). Automation has created more highly skilled roles such as optimising capital, improving processes and controlling costs that entail analysis, problem solving and decision making (Jackson, Michelson & Munir, 2020).

Of the numerous drivers of change in the accounting profession, technology is biggest force of change that the profession is facing (CPA Australia, 2019). While technology changes have been a source of concern for job losses in the accounting profession, it is also acknowledged as an essential part of innovation (Sage, 2019). Rather than diminishing the role of accountants, technology should be viewed as empowering. Machines can now undertake monotonous, recurring tasks while accountants perform higher level duties (Goh et al., 2019), which creates the opportunity for the profession to be more cost effective and efficient (Forbes, 2017).

According to Countingup (2021), accounting firms are investing in technology such advanced and predictive analytics (21%), automation including Robotic Process Automation (20%), and Artificial Intelligence (20%). The decision as to which technology is a suitable fit for the accounting firm could be a challenge given the numerous options available.

Some of the key technology trends affecting the accounting profession are explained below:

a Intelligent automation

- Robotic Process Automation – the use of robots to do well-defined and recurring tasks affects how accountants source and process data and report information to others (Davern et al., 2019). It is possible to have numerous robots, each performing different tasks, and this supports automated data entry that is consistent and reliable and increases the speed at which data can be imported into reports, enhancing efficiency and accuracy (Forbes, 2017). When surveyed, over 50% of C-level executives reported that they expected automated accounting systems to become the norm in the accounting industry (Countingup, 2021).
- Vision, sound, text scanning of visual objects to uncover words in spoken phrases, analysing text and using virtual agents (chatbots) for the purposes of digital chat support, helpdesks, social media and compliance (Goh et al., 2019) – these services are consistent and can be provided 24/7 in response to peaks and troughs in the business cycle, with no interruptions such as employee sick leave or holidays (Jackson, Michelson & Munir, 2020).

b Blockchain

- Blockchain uses peer-to-peer technology to create joint, secure digital ledgers such as contracts and asset registers that can be constantly updated and tracked (CAANZ, 2017). This supports shared users, unknown to each other, to conduct safe, real-time transactions without an intermediary such as a bank to reduce time and costs. The shared data entries enable consistency, confirmation and responsibility, permitting for easy verification of digital documents and improved data privacy through encryption. Blockchain may be public, available to all those who can access the internet, or set up as private where access is restricted to those with permission (Deloitte, 2017).
- Capital investment on blockchain is increasing with the Big Four accounting firms leading the way in researching and trialling its use in the industry (Jackson, Michelson & Munir, 2020). Blockchain has the capability to transform financial reporting and auditing processes, and other businesses (Deloitte, 2017).

c Big data and data analytics

- Advanced data analytics and big data enable accountants to obtain in-depth insights into their organisation and clients' performance to envisage forthcoming challenges and opportunities and reflect on past decisions. Data analytics supports accountants to obtain granular data on their organisation or clients' overall status, which enables them to review financial performance with a new lens and obtain new insights, resulting in better decision making by both decision makers within their organisation and clients (Countingup, 2021).
- Machine learning is used to examine and sort data through logical reasoning using algorithms and copying the human cognitive processes. This enables computers to forecast, calculate estimates, conduct risk evaluations and run numerous simulations to inform decision making (Goh et al., 2019). Data analytics provides rich insights for formulating client advice and strategy (Jackson, Michelson & Munir, 2020).
- Artificial intelligence (AI) is also becoming increasingly popular among accountancy firms to optimise processes for bookkeeping, invoicing, tax management and more. Research from the Journal of Accountancy shows that 80% of executives believe that AI gives them a competitive advantage, while 79% say that AI improves their firm's productivity (Countingup, 2021). However, AI currently does not have the cognitive learning ability of humans as AI must be trained to perform certain tasks by analysing data within particular boundaries and has to be configured to know once a task has been completed. In the training environment, the AI algorithm learns by trial and error until it has perfected the task and can be put to use within a business environment. Training the AI algorithms takes months and incorrect training could lead to recurring mistakes that in isolation may not be discovered immediately but will create a compound effect of inaccuracies that will only be noticed once it is too late. AI algorithms cannot sign off reports or audits, which remains a human function. This creates the opportunity for those professionals who are willing to upskill to have an ongoing, more strategic role in terms of the innovative application of AI (Du Chenne, 2019).

d Technology enabling remote work

- The COVID-19 pandemic has significantly disrupted conventional ways of working and opened new opportunities for digital transformation. While many firms were aware of the advantages of digital solutions pre-pandemic, today, there is a significant cultural shift towards embracing innovative technology. The pandemic has accelerated the adoption of technologies with an increased demand for remote working and flexible procedures that champion collaboration from any location (Countingup, 2021).
- Technology offers many advantages to accounting firms, especially in a post-pandemic world. With most accounting firms working remotely over the last year, it will be challenging to return to an office-only mentality. Nearly all of the UK's top-50 accounting firms plan to offer hybrid working in the future, with employees spending half their week at home and half in the office. Accounting technology enables this approach by helping accountants collaborate remotely and flexibly. Eliminating the office commute means that accountants can work more efficiently and tailor their working patterns to their clients' needs (Countingup, 2021).
- In South Africa, Sapro and Makosi have revolutionised the accounting profession by providing accountants secondment opportunities in auditing and a host of advisory services based on the requirements of local and overseas clients. This enables accountants to obtain international experience while based in South Africa and earning very competitive salaries (Sapro, 2022 & Makosi, 2022).

Local SMEs employ 47% of the country's workforce and contribute over 20% to GDP. Thus, for accountants and businesses to succeed in South Africa, they need the correct mix of the right tools, the right applications and the right app integrators (Barnardt, 2019). The accounting profession not only contributes to the economy, it also supports all other businesses in the economy that could not operate if they did not have an accurate record of the financial position of their business. Therefore, the profession underpins the business fabric of all business activities by supporting the management of risk (Browning, 2019).

It is no secret that South Africa's businesses face many challenges: a declining economy, a changing – and volatile – political landscape, and digital disruption, among other things. One of the key questions is where accountants should start. Research conducted by Xero indicates that 23% of all small businesses are still doing their books manually, for example. If this process was automated, businesses could focus more of their energy on strengthening the company – and driving it forward (Barnardt, 2019).

According to Barnardt (2019), accountants can act as app integrators whereby different applications can be integrated to automate processes, streamline business operations and generally make things better. App integration can enable businesses to create an enterprise ecosystem, one where each tool complements every other tool in ways that boost efficiency and effectiveness.

Accountants can be key app integrators as the profession is changing at a rapid pace. According to research conducted by Xero, 92% of respondents believed that their role has changed significantly, and 42% of South African professionals think that they will need management consultancy skills to be successful by 2025. Digital tools are indispensable for businesses, accountants and the country's growth (Barnardt, 2019).

Automation, Artificial Intelligence (AI), the Internet of Things (IoT) and Industry 4.0 are loaded with complexity and jargon that create uncertainty what the future will hold for society and various professions, including the accounting profession that will not be immune to their impact. Accounting professionals in South Africa are starting to question their future roles in this new, digitised climate and whether they will, in fact, even have a role to play at all. The agreement in the accounting industry in South Africa is that the job of the accounting professional will remain safe but it will be somewhat different to the way it has been practised in the past. This digital world with new technologies requires a paradigm shift for those within the profession and they will have to learn how to operate within it. These changes hold challenges but they can also be a source of excitement and an opportunity to revolutionise and disrupt the profession, allowing it to emerge stronger and more relevant than ever before (Du Chenne, 2019).

Technology will add immense value to both organisations and clients. It will also create the opportunity for the accountant professional to take the lead as the driver of business automation and look into a whole new range of services, including AI assurance and innovative accounting for the future, which will enhance the standing of the accounting professional as a business advisor. Although technology may streamline the process of producing automated financial statements and other repetitive tasks, the accounting professional still has a pivotal role to play in the analysis of that information and the application of the data to sustain and grow the businesses of customers. As such, problem solving and analysis have become critical skills in the field (Du Chenne, 2019).

Risk analysis is an additional area of responsibility in which the accountant can take the lead. The new digital world running off connected devices inevitably contains an element of vulnerability and the accounting professional has an advisory role to play here. Accountants can support their organisation or client to forecast the profitability as well as the ROI on investments in technology. Other areas in which the accountant's expertise could greatly assist include pricing and cost-saving analyses where production has become more efficient and effective, as well as contract management regarding the terms and conditions of contracts to ensure the commercial aspects of the contract are favourable for their organisation or clients (Du Chenne, 2019).

BDO has concluded a deal to make the 4th Industrial Revolution a reality for the profession by hiring Alice, the worker of the future, the great disruptor and one of the world's first digital employees. Alice is a platform supported with intelligent automation allowing a complete digital auditing solution to be delivered that aims to change the traditional audit approaches to professional services. BDO is one of the first professional services firms in South Africa to take the leap into the robotic realm and believes that this courageous move will reshape the services it delivers and thus how the profession is perceived (Moodley, 2021).

Alice provides those charged with governance with maximum assurance throughout all facets of their control environments and financial statements of the company as it is tested at a much higher level of efficiency and quality than traditional sample-based approaches. Alice managed to conduct an analysis of the entire balances of one of BDO's clients in under 15 minutes while also providing the client with key insights. This is real and has been delivered on South African and global audits and assurance engagements (Moodley, 2021).

Alice was created by Bidvest and is currently in a mutual agreement with BDO to use Alice which enables them to employ Alice capabilities to create real use-cases on both South African and global clients within the BDO network. BDO mapped some of the trends that affect professional services globally and discovered that conventional approaches are becoming irrelevant to organisations that are facing changing risk landscapes and complexities. As organisations transform digitally at speed, auditing and advisory services have to be one step ahead to be relevant to their clients. Armed with intelligent automation, cognitive capabilities, secure digital services, and an API-enabled and industry-agnostic platform, Alice is your solution finder, digital accelerator, audit and advisory disruptor and data collaborator. And, as another incredibly talented BDO employee, Alice is ready to transform the way you do business (Moodley, 2021).

Africa is a unique market that requires technologies to be fit-for-purpose, thus many global technology solutions have failed in this market. Africa's unique problems and African clients require African solutions (Moodley, 2021).

2.3 THE REGULATORY ENVIRONMENT

2.3.1 Preamble

There are noticeable differences around the world regarding regulations that have only become prominent since 2019 as politics and geography started to affect accounting professionals and their clients. Many organisations that have global interests are already experiencing the burden of complex and ever-amending regulations issued at both a domestic and international level (Lavis, 2019).

The accounting profession is viewed as the gatekeepers of public interest when it comes to financial statements and the compliance with regulations, especially from an audit perspective. The profession's ability to comply with regulations thus has a direct impact on its reputation as the gatekeepers of public trust. The recent corporate scandals both abroad and in South Africa have damaged the profession's reputation. It is therefore of paramount importance for members to do everything in their power to adhere to regulations and for the audit firms to ensure that instances of non-compliance are unearthed and reported. This will be increasingly difficult given the globalisation of information, the evolution of technology that changes business models, growth in the digital economy that enables businesses to expand their footprint across numerous jurisdictions and the removal of boundaries between industries.

The ever-changing regulations place, both domestically and abroad, a significant burden on accountants and auditors. Audit firms experience the difficulty of balancing resources with quality control while attempting to do more with less and still delivering audit quality. In-house accounting departments are required to remain up to date with changing and complex rules and regulations (Hughes, 2021).

The new digital economy and technology advancements have resulted in the continual evolution of business models that allow for the muddling of boundaries between industries. This creates a regulatory quagmire as accountants and auditing firms have to ensure adherence to regulations across geographical and legal jurisdictions while also having the difficulty in dealing with regulations across industries.

2.3.2 Regulatory differences across sovereign states

The different regions of the world have varying levels of regulation that depends on numerous factors including the focus of these regulations. This is illustrated by the perpetual fight about the payment of tax by digital organisations. In Europe, there are mounting calls for more regulation in finance and fairness in tax, especially when it comes to taxing digital organisations. In the US, things are moving in the opposite direction, with less regulation to encourage growth. In the Asian region, banking and corporate regulation are becoming more rigorous and the expectations of revenue authorities around issues such as transfer pricing documentation are increasing. Differences in how regulation is implemented geographically could pose a significant challenge for accounting firms with clients operating in different jurisdictions and also for the accountants working in these organisations that operate in multiple geographical areas (Lavis, 2019).

Often regulation is driven by a response to a corporate failure or market meltdown as seen in 2008/2009 in the US. The focus, currently, in the US is to lighten the regulation burden on organisations, which could be a risk in itself due to the importance of controls to protect against bad practice (Lavis, 2019).

At the global level, the Association of Chartered Certified Accountants (ACCA) expects greater regulation will affect all accounting professionals in the coming years and that it will be one of the biggest factors shaping the profession in the years to 2025. Some of the key regulations that ACCA has identified are that of intergovernmental tax action to limit base erosion and profit shifting, which will affect all members of the profession while fairness in tax will continue to rise in prominence around the globe. The association also points to greater emphasis on tax transparency and greater government tax action and information sharing (Lavis, 2019).

Adding to ACCA's expectations, Meilke (2021) provided three additional regulatory trends in the future:

- Managing financial disclosures and tax policy, for both public and large private companies
- Coming changes to disclosure requirements for Environmental, Social, and Corporate Governance (ESG)
- Data protection due to the globalisation of information.

All three of these trends will demand attention going forward, adding another aspect of the continually shifting regulatory landscape that must be effectively managed.

The various regulatory trends will be discussed individually to provide context to the individual trend and illustrate its impact on the accounting profession.

2.3.3 Data protection

Data protection regulations have been a growing trend across the world and are not limited to one jurisdiction or geographical area. In the US, California has passed a consumer protection act and other states are likely to follow suit, while in Europe, the EU's General Data Protection Regulation (GDPR) is already having a big impact (Lavis, 2019).

Data protection regulations affect accountants as additional controls will have to be implemented similar to those protecting financial information and the independent auditors will have to examine these internal controls over data security (Hughes, 2021).

With increased public pressure and stakeholder expectations, cybersecurity has also received significant focus from the accounting profession. Recent cyber hacks of big companies like Colonial Pipeline and the software company, Kaseya have brought to light the need for robust information systems and controls to prevent companies having to pay hefty ransoms to get back online. These ransomware attacks have emerged as a significant national security issue in 2021 (Hughes, 2021).

2.3.4 Environmental, social, and corporate governance (ESG)

Lavis (2019) states that the regulatory concern relating to different social and environmental issues, along with its associated measurement and reporting complexities, has made the accounting profession realise that it has the ability to change. This holds significant implications for accountants as they will be required look beyond the numbers, which will, in turn, enhance collaborations among members of multiple professions, including accountants, doctors, lawyers and environmental scientists. Regulation in itself is hard to deal with but it also creates opportunities. Regulation has the ability to identify areas that require additional levels of assurance, for example, if regulation was introduced that an attestation was required relating to cybersecurity protocols, it would provide an opportunity to expand existing service offerings (Lavis, 2019).

America's main financial regulator, the Securities and Exchange Commission (SEC), has established a task force to examine environmental, social and corporate governance (ESG) issues to improve focus on climate-related disclosures for listed firms. It seems that it is poised to introduce rules compelling firms to disclose how climate change or efforts to fight it may affect their business. Since September 2021, regulators in Britain, New Zealand and Switzerland have also stated that they plan to make such climate-related disclosures mandatory (Economist, 2021a).

The Reporting Exchange, a website that helps corporations disclose sustainability data, tracks various ESG-related guidelines such as regulations and standards. Across the world, the number of ESG regulations and standards grew from around 700 in 2009 to more than 1 700 in 2019. That includes more than 360 different ESG accounting standards (Economist, 2020c).

ESG-reporting regulations has increasingly come to the forefront given the material impact of climate change on society and the environment in which humans live and organisations operate. In order for ESG regulation to be meaningful and drive uniformity, a common framework for climate accounting needs to be developed to put pressure on top executives. In 2020 at the Economic Forum, representatives of the Big Four accounting firms met with the chief executive of the Bank of America, Brian Moynihan, and other corporate leaders to thrash out green audit standards. Commitment to the reduction of fossil fuels cannot be

effective unless we put in place a commonly agreed system to track corporate exposures to climate risk. The reason for a common framework is because none currently exists and there are numerous matrices. The Amsterdam-based Global Reporting Initiative has been in existence for two decades and measure companies' external impact on society, the broader economy and the environment. The Sustainability Accounting Standards Board (SASB) emerged more recently in San Francisco to track the impact of environmental issues on company accounts for 77 industry matrices. Mark Carney, the outgoing BoE governor, has launched the Task Force on Climate-related Financial Disclosure system for banks. Private entities such as the MSCI index group offer more standards. This alphabet soup of standards is so complex and the standards occasionally contradict each other, which leaves investors confused. Corporate adoption has also been limited with only about 120 companies using the SASB system (Tett, 2020).

A review of 107 global companies in carbon-intensive industries discovered that more than 70% did not disclose whether they had considered climate when preparing their 2020 financial statements. Often climate-related risks and net zero emission plans were included in the commentary in the front half of annual accounts, however, they were not reflected in the financial statements, according to research conducted by the Carbon Tracker Initiative and the Climate Accounting Project. Auditors seldom noted these discrepancies, even in cases of considerably apparent inconsistencies. The gaps found in the climate risk reporting create risk for investors that cannot make effective capital allocations due to the insufficient disclosure of the impact that climate change will have on the company (Hodgson, 2021).

Companies are increasingly under pressure to provide credible and detailed plans for decarbonisation. During 2020, a group of investors with \$100tn in assets under management endorsed guidance from the International Accounting Standards Board that said material climate-related matters had to be incorporated in IFRS financial reporting. This could include evaluating what impact the move away from energy originating from fossil fuels may have on future commodity prices and the valuation of assets, as well as the assumptions behind the calculations; however, the enforcement of these standards falls to national regulators. The research found that many of the financial statements stating that they had taken climate-related matters into account did not clarify what assumptions had been used. For nearly three quarters of the companies reviewed, the consideration of climate issues within financial statements seemed to be conflicting, with such disclosures made elsewhere by the companies – this also took place when companies stated that climate risks were financially material (Hodgson, 2021).

Another problem is that auditors treated climate-related information differently. For example, BP's auditor, Deloitte, said that the company's commodity price assumptions were "broadly in line with a range of transition paths consistent with the goals of the Paris climate change agreement". But their rival, Shell's auditor, EY, said that "it is not within our professional remit, responsibility or expertise to disclose in our audit opinion what we would consider to be reasonable [Paris-alignment] assumptions" (Hodgson, 2021).

UK's Financial Reporting Council (FRC) that regulates auditors, accountants and actuaries found that during 2020, many auditors had not considered climate change when identifying and evaluating the risks of material misstatement in the financial statements. Although the FRC's acts have been concentrated on improved climate reporting, over time we will have to consider harder regulatory interventions. The IASB stated that, should climate change affect

the entity, the auditor needs to consider whether the financial statements appropriately reflect this in accordance with the applicable financial reporting regulations (Hodgson, 2021).

Many watchdogs across the world are hoping that the Task Force on Climate-Related Financial Disclosures (TCFD), set up in 2015 by the Financial Stability Board (FSB, a global group of regulators) will assist in providing a uniform basis for ESG reporting. The TCFD has put forward a reporting standard made up of 11 broad categories, from carbon footprints to climate-risk management. Regulators are supportive of the regulations because they concentrate on material risks rather than environmental impacts and ask for information about firms' future plans. These plans must include a scenario analysis that requires the company's strategy to be tested against different probable futures such as a hotter world or higher carbon prices. Financial firms make up almost half of the 1 800 or so companies that back the TCFD's recommendations and have assets worth over \$150tn, including the world's ten biggest asset managers and eight of its ten biggest banks. Their clients and regulators are egging them on to adopt the standard and therefore the financial firms, in turn, are prodding companies to do so too, causing an uptick in its use (Economist, 2021a).

Many companies do not support the TCFD's standard because it results in compliance with one more ESG measure and they lack the know-how of how to do a climate-based scenario analysis. Only 7% of big firms disclose such exercises, according to a review of 1 700-odd companies by the TCFD. Another difficulty is that the standard scares off investors, as evidenced in France that made climate-risk disclosures obligatory for asset managers, insurers and pension funds in 2016. A study by its central bank compared those firms with French banks and non-French financial firms. It found that the firms that had to disclose climate risks held 40% fewer bonds, stocks and other securities in fossil-fuel firms by value than those that did not have to disclose risks (Economist, 2021a).

ESG funds normally claim that they are committed to addressing climate change when they invest in publicly listed companies. Based on these claims, numerous investors invest in these funds. The investors believe these claims are well placed but the absence of accurate measurement results in greenwashing, with many of the claims not being tested. Many funds claim that there is no trade-off between maximising profits and green investing; however, this is doubtful for as long as the externalities created by polluting firms are legal and untaxed (Economist, 2020c).

Unfortunately the boom in ESG investment has also been accompanied by rampant "greenwashing". The Economist found that each of the world's 20 biggest ESG funds on average hold investments in 17 fossil-fuel producers. Six funds have invested in ExxonMobil, America's biggest oil firm. Two funds own stakes in Saudi Aramco, the world's biggest oil producer. One fund holds a Chinese coal-mining company (Economist, 2021b).

2.3.5 Taxation

In a global economy, international cooperation to create a level playing field for all companies and governments will be the focus now and in the near future. With leaks of financial documents via the Panama Papers and Paradise Papers, jurisdictions are taking a closer look at off-shoring (Hughes, 2021).

Off-shoring is the complicated loop of cooperation that allows companies and wealthy individuals to move their profits to a no- or low-tax locale. Off-shoring is legal if done correctly. However, the moral or ethical arguments for avoiding taxes are unsettled (Hughes, 2021).

The COVID-19 pandemic left many countries strapped for cash. Some are taking another look at their tax laws, with many looking for ways to reduce base erosion and profit shifting (BEPS). Base erosion occurs when a country's tax base is reduced or completely removed in favour of another country's more favourable tax rules (Hughes, 2021). According to the Organisation for Economic Co-operation and Development (OECD), the global non-profit organisation tackling BEPS, multinational enterprises exploiting gaps and mismatches between different countries' tax systems costs \$100–\$240 billion in lost tax revenue annually (Hughes, 2021).

In Europe, new regulation under discussion includes a turnover-dependent income tax for internet companies and tighter restrictions on money laundering. A form of digital tax is fraught with difficulty due to the question of which tax authorities should be entitled to the potential income on the taxes – the country of origin in which concepts are developed and data servers operate or the recipient country in which users are located? The EU Commission believes the recipient country should have a tax share. It proposes a temporary interim tax of 3% on the digital revenues generated by companies like Google and Amazon with a global turnover of more than EUR 750 million in the respective countries (Lavis, 2019).

In South Africa, the King IV report states that a company's governing body should be responsible for a tax policy that is compliant with the applicable laws but is also consistent with responsible corporate citizenship and takes account of reputational repercussions. A responsible and transparent tax policy is put forward as a corporate citizenship consideration. PWC states that, due to the progressively active regulators and other stakeholders who hold organisations accountable, it is imperative for these organisations to have a clear tax strategy that the board has discussed and is prepared to explain to the public, if necessary (PWC, 2016).

2.3.6 Potential sanctions

With the onset of the war in Ukraine and as the battery of sanctions levelled at Russia increases, accountants and accounting firms are required to correctly interpret the sanctions. Accountants and auditors need to apply all their professional skills to make these measures effective and help companies cope with the disruption they will bring. Strict know-your-client (KYC) and AML provisions and risk management will help ensure that sanctions are properly considered. Failure to interpret sanctions correctly and report breaches can result in material fines being issued (Accountancy Europe, 2022).

2.3.7 The role of accountancy bodies

The regulation of individual professional accountants is primarily conducted at a national level, with professional accountancy organisations playing an important role in working with governments to ensure that such regulation is effective, efficient and in the public interest. Accounting professionals are thus required to keep abreast of updates from the relevant regulatory bodies and to adhere to government regulations as well as domestic and international accounting standards (Lavis, 2019).

Most countries have accountancy bodies that regulate the rules that accountants have to follow for financial reports. These standard setters are responsible for setting the generally accepted accounting principles (GAAP) used to prepare financial statements. It is important to specify which accounting rules were used to create financial statements because they are not all the same. In addition to these basic sets of reporting standards, specialised groups can provide regulatory requirements to specific industries (Hughes, 2021).

The Financial Accounting Standards Board (FASB) updates accounting standards with changes that can affect financial statements and how to keep them GAAP (Generally Accepted Accounting Principle) compliant. It is key for accountants to keep any changes from FASB front and centre in their practices because failure to do so could have negative consequences for professionals and their clients. Although the phased implementation of standards has been delayed because of Covid-19, these changes will be implemented more rapidly in the future, especially once the worst of the pandemic is behind us (Meilke, 2021).

Whatever the level of compliance required in different parts of the world, it is probable that accountants will progressively require education in areas most likely to be regulated in the coming years such as digital technology, tax regulation, new forms of corporate reporting and integrated reporting. There is also a real need to educate clients about the changing global regulatory landscape, including why countries continue to act contradictorily regarding common issues like profit shifting. Understanding the factors underlying the approaches taken in different countries can be key to managing tax and regulatory risks effectively (Lavis, 2019).

Even the more common accounting and auditing areas are not exempt from training updates such as (Hughes, 2021):

- Auditing and accounting review standards
- Financial accounting standard setting
- Audit committee presentations
- Corporate governance best practices
- Internal audit procedures
- Financial reporting requirements
- Tax updates.

2.3.8 The impact of regulations on audit firms

Audit firms exist to assign a level of trust in financial statements and investors look to audit firms to provide a level of assurance that the financial performance is a true reflection of the underlying operations of an entity. Unfortunately, recent corporate scandals have damaged this trust in audit firms and auditors (Economist, 2018).

The need for auditors is cosy in that listed companies must, by law, be audited, and the auditors are paid by the companies whose books they review. The audit market is dominated by four major players, namely Deloitte, PWC, EY and KPMG, which earn most of their revenue from consultancy. They are barred from providing many consulting services to audit clients (Economist, 2018).

Regulators have tried to inject competition and enforce independence. The EU rules require companies to tender for a new auditor every ten years, and to switch after 20. Although the rotation of firms has increased, the Big Four have become more dominant, as evidenced by the fact that during 2016–17 they audited 97% of the FTSE 350 (Economist, 2018).

The Competition and Markets Authority (CMA), Britain's antitrust agency, has suggested three changes to the audit landscape (Economist, 2018):

- To force the Big Four to separate their auditing and consulting arms. This will decrease the conflicts of interest and could increase choice because accounting firms would not be allowed to tender to audit a company they are consulting for, but it would make for weaker firms as auditing is a low-margin business.
- To introduce a cap auditors' market share. This would ensure that smaller firms gain much-needed experience and over time, increase the number of serious players. It is not clear whether multinationals, in particular, could be properly scrutinised by an auditor with limited global coverage.
- To change the process by which auditors are hired. If an independent body is created to match auditors and companies, it could stop the phenomenon where auditors are accommodating in order to be reappointed.

The Financial Reporting Council (FRC), the independent regulator in the UK and Ireland responsible for regulating auditors, accountants and actuaries, has given the UK's Auditing Big Four accounting firms until 2024 to separate their audit practices. The firms must outline how they will implement this change by the end of October but will have four years to put it into effect. The FRC's plan seeks to ensure that the firms pay auditors in line with the profits of their audits, ringfence the finances of the audit division with a separate profit and loss account and introduce an independent audit board to oversee the practice. The Big Four generate about a fifth of their revenues from their audit practices, which have been exceeded by the rapid growth of their advisory divisions in recent years (Kinder, 2020).

The requirements are designed to improve audit quality and audit market resilience by ensuring that no material, structural cross subsidy persists between the audit practice and the rest of the firm. Critics wanted the FRC to insist that auditors should not be paid from the same profits as a firm's consultants. The FRC decided, however, to rather state that profit payments distributed to audit partners should not persistently exceed the contribution to the profits of the audit practice. It added that auditors should work for the benefit of shareholders of audited entities and the wider society and not be accountable to audited entities' executive management. Furthermore, the regulator wants to increase penalties to £10m or more for audits that do not meet the regulators standards (Kinder, 2020).

The FRC was not the only regulator that decided to shake up the audit industry. In June 2017, the Independent Regulatory Board for Auditors (IRBA) issued a rule prescribing that auditors of public interest entities in South Africa must comply with mandatory audit firm rotation with effect from 1 April 2023. The new rule on rotation requires that all SA public interest entities must rotate their audit firms after a period of maximum audit tenure. This tenure is set at ten consecutive financial years, after which an audit firm will only be eligible for reappointment after the expiry of at least five financial years (PWC, 2017).

To enhance the integrity of the audit process and financial reporting, the Companies Act requires audit partner rotation to be mandatory every 5 years. Credible financial statements can only be achieved if auditors are independent and unbiased in business relationships (Companies Act 71, 2008).

2.4 THE SOCIO-ECONOMIC AND POLITICAL ENVIRONMENT

2.4.1 Preamble

The first 22 years of the 21st century have been tempestuous and disconcerting to say the least. The Y2K “crisis” turned out to be a non-event. The attack on the Twin Trade Towers (9/11) was anything but – the USA, and everything it stood for, was not invincible. Symbolically, 9/11 ushered in the gradual ending of the *Pax Americana*.

Less than a decade later the Great Recession exposed the consequences of the excesses of capitalism. Indiscriminate and, at times, unscrupulous lending practices brought into disrepute the financial sector in the USA and Europe, and triggered a financial collapse, which was soon followed by a real economic slump throughout the world. Governments responded by pursuing aggressive fiscal stimulation policies, which soon translated into uncomfortably high levels of public debt. The ensuing recovery was pedestrian and hesitant.

The pandemic-induced recession since 2020 has once again highlighted the vulnerability of human beings, and the fragility and interdependence of economic and societal structures. Governments are contending with the “no-win” implications of dealing with the trade-off between “lives” and “livelihoods”. These forces are exacerbated by the added disruption created by the Ukraine-Russia conflict, and the associated pressures on energy, feedstock, and food prices.

Few will dispute the fact that the Covid-19 pandemic will leave in its wake a permanent legacy – across the globe, and across various settings. It will probably also co-create a number of bifurcations. We might, for instance, see dislocating shifts in the global power balance. Countries that emerge stronger (in the realms of health, economy and politics), after the pandemic, will move up in the power ranks. Questions will be asked about the relative merits and demerits of functional autocracies versus dysfunctional democracies. Will governments step back from being heavily involved in business, or will that become a more permanent fixture? Will we see a high road of greater connectedness, trust and cooperation; or will we embark upon a low road where international institutions are undermined, and countries become isolationist, protectionist, populist and nationalist?

The Covid-19 pandemic is also expected to have a significant and long-lasting effect on global supply chains, which in turn will have a huge impact on the global economy, businesses and consumers alike. The eventual structural impact on the world of work, on transport requirements, on the demand for office space is, as yet, unknown. It does seem, however, that running a business from home virtually is fairly easy (and sometimes even more efficient); the creative process is not.

In the foreseeable future, the pandemic will undoubtedly also have implications for leadership, and strategy (especially as the pandemic-induced global recession comes barely a decade after the Great Recession). For instance, leaders should express realistic, yet bounded, optimism. Efficiency goals should be tempered by resilience. It is time for leaders to display candour, as

opposed to hyperbolic charisma. Strategy will remain important, but it needs to be flexible and agile. The most important lesson, however, is probably that the culture of organisations defines who will be successful in the future.

The main purpose of this section is to reflect upon the condition of South Africa's economy, socio-economy, and political disposition by 2030. To this end, two key assumptions are made. The first is that by 2023/24 most societies and economies will have recovered from most of the worst ravages of the Covid-19 pandemic. This does not imply "business as usual"; it does, however, assume that societies will by then have recalibrated their goals, expectations, modes of work and transport, etc. in a fairly realistic and seamless fashion.

The second assumption is that as an upper-middle income, open economy, South Africa will not be immune to the effects (both positive and negative) of global trends. For the purposes of this analysis a trend is taken to describe a prevailing tendency or inclination; a change or development towards something new or different. From this it follows that a global trend is a general development or change in a situation that affects many countries of the world. Moreover, knowledge of trends is also a key ingredient in developing and acquiring foresight - the ability to judge correctly how different futures may unfold, and to plan your actions based on this knowledge.

2.4.2 Nine global trends

This section explores nine global trends, listed in accordance with the acrostic FORESIGHT. This spells out the following:

Fourth Industrial Revolution

Oriental

Rethinking economics

Empowered

Saturated

Inequitable

Grey

Hotter and drier

Tele-everything

a Fourth Industrial Revolution

As has been the case for all previous industrial revolutions, the Fourth Industrial Revolution (4IR) will, of necessity, result in technological, economic, social, political, business, moral, and even aesthetic disruption. The perceived impact of this disruption ranges from the dystopian to the enlightening. Commenting on the First Industrial Revolution, Henry David Thoreau, lamented the fact that "Men have become the tools of their tools." In a similar Dickensian tone John Boyd Orr states that "When the Industrial Revolution of the nineteenth century brought a rapid increase in wealth, the demand of workers for a share of the wealth they were creating was conceded only after riots and strikes." Two and a half centuries later,

Stowe Boyd claims that the central question of 2025 will be: “What are people for in a world that does not need their labour, and where only a minority are needed to guide the ‘bot-based’ economy?”

A more sanguine view is expressed by Stephen Gardiner: “The Industrial Revolution was another of those extraordinary jumps forward in the story of civilization.” Vinnie Merchandani welcomes the advent of advanced robots and artificial intelligence (AI) by stating that “Machines will become more of our colleagues, and we should not be so worried about their increased presence in the future ...if anything, they will take our outstanding workers and make them even better.” Deborah Lupton is even more reassuring: “Humans will always have the need for affective and embodied interactions with other humans, which can never be replaced by robots.”

The ambivalence towards the 4IR is perhaps best captured by Geoff Livingston: “I see the movement towards AI and robotics as evolutionary, in large part because it is such a sociological leap. The technology may be ready, but we are not – at least, not yet.”

The dichotomous nature of the expected impact of the 4IR is co-created by a broad spectrum of vectors, including hyperbole, superstition, ignorance, propaganda, ideology, resistance to change, lack of foresight, ethics, prejudice, and historical misinterpretation. These sentiments and views are magnified in South Africa where poverty, unemployment, and inequality add further layers of complexity to the issue.

The world of work is expected to unfold in accordance with the combination of empowerment in the work place, and the rate of technology uptake. At the one extreme the kind of work will be largely similar to the 20th century norm of full-time employment, with goods and services being produced and delivered in traditional ways. At the other end of the spectrum the mode of work will be via platforms, projects, gigs, and tours of duty, with goods and services being produced and delivered by new technologies such as artificial intelligence and personal devices.

Regardless of the work-mode scenario that materialises, in order to become and remain relevant, workers will need a higher quality education that integrates general knowledge in both the arts and sciences with emerging technologies. Competencies in creativity, tolerance, appreciation of diversity and social skills will also form part of a high quality education system. The interaction between human capital and technology is crucial as improvements in productivity are achieved by combining technology and human capital, especially skilled labour. These thoughts are particularly relevant for most African countries where the skills sets that drive global competitiveness (viz., functional scientific and technical knowledge, and managerial skills) are often neglected in favour of nominal scientific and technical knowledge, which is “... purposeless; an end in itself; with no instrumental value beyond scientific curiosity.” (Onyeiwu, 2015).

Turning to an industry/ sector focus there is a better than even chance that the business services sector will grow faster than the overall economy. Should sustainability concerns start to dominate the global and national discourse, along with the need to mitigate the effects of climate change, a revolution with regard to energy technology will lead to a low-carbon, green economy. In this case the mining and quarrying, and defence sectors would be relative losers, while the business services and communications sectors would benefit. However, within these broad sectors specific industries could suffer or benefit. Opportunities could, for instance,

open up in corporate responsibility reporting services, sellers of electric cars, trading of carbon permits, sustainable forestry, and companies specialising in energy efficient buildings and retrofitting. Losing industries could include paper-based media, the aviation industry, restaurants, foreign tourism, meat and poultry farming, oil equipment and mining.

b Oriental

As has been the case since the beginning of the 20th century, economic power continues to gravitate towards a number of developing/ emerging economies outside the northern hemisphere. The East Asia and Pacific region (which includes China) accounts for 31% of the world's population, and one-third of global output, making it the largest economic region in the world.

The 30 largest (not necessarily wealthiest) economies by PPP GNI account for 83% of global output of goods and services, which means that the remaining 188 countries produce only 17% of the world economy – a smaller proportion than that of China. Between them, the two largest economies – China and the USA – have a larger PPP GNI (33.8%) than the next eight largest economies (27.4%). The combined production (34.2%) of the five largest emerging economies (China, India, Russia, Brazil, and Indonesia) exceeds that of the combined production (27.3%) of the five largest advanced economies (USA, Japan, Germany, France, and the UK). All in all, 17 of the 30 largest economies are not high income nations (all figures computed from World Bank, 2021).

Along with the shift in production, the number of middle-income consumers in the developing world could reach 3.9 bn in 2030, from 840m in 2009. In the developed world, by contrast, the number will remain constant over this period at just over 1bn (Oxford Martin School, 2013).

c Rethinking economics

The legacies of the Great Recession have been profound and manifold, often transcending mere economics. These effects have been compounded by the severe recessionary conditions imposed in most countries by the Covid-19 pandemic. Not only have many economies failed to restore their growth paths to the pre-2008 levels, but we have also seen a profound re-appraisal of the role and credibility of financial institutions, as well as governments. In many ways the economic narrative is being rewritten, and conventional wisdom is being turned on its head. Growing scepticism about figures of leadership, and mounting sentiments of anti-establishmentarianism have spawned a surge in populism. Politics is now less about “left” or “right”, and more about “opening up” or “looking inward.” Nationalism, and even ethnicism, are making a comeback. Meanwhile, the ever-more powerful China illustrates that economies can thrive under dictatorship.

d Empowerment

A day-to-day monitoring of statistical releases, media reports, and societal conversations suggests that very little progress is being made in the human condition. In actual fact, most of the inhabitants of the planet are more empowered than ever before in history – through (now) almost universal primary education, marked progress in adult literacy, much improved health care, global access to social networks, and mobile money. The generation popularly known as Millennials is a prime illustration of the behavioural attitude displayed by empowered individuals. They are far more skeptical and cynical, they take little at face value, they are easily

bored, they embrace change, they are techno-savvy, and they seek a balance between work and leisure. For them a career is but one ingredient of an envelope of experiences they wish to test and enjoy.

At the same time, a more enlightened and empowered population is less acquiescent, and less tolerant of persistent inequalities, indignities, and inequities.

e Saturation

There is a growing generalised awareness of the challenge humans are facing to survive prosperity. Concerns about sustainability are no longer on the fringe of mainstream thinking as the number of middle-income consumers – with middle-income appetites and buying power – grows exponentially, especially in developing nations. Special care will have to be taken to ensure that sufficient and affordable food, potable water, and energy are provided in a sustainable fashion, without bankrupting future generations.

f Inequitable

Despite the unprecedented progress made in the last two decades at a global level with regard to education, health, and poverty, inequalities persist. Less than 0.5% of the world's adult population controls some 40% of the world's entire wealth, while the share of wealth accruing to 3.2 billion (almost 70% of the total) amounts to less than 3.5%. Thus, although most people are better off than, in say, 2000, some are much better off than the rest. The same applies at a country level, with the income gap in the advanced nations expected to widen more rapidly than in the past. Pre-existing inequalities are likely to be exacerbated by the Fourth Industrial Revolution, as well as by the constrained access to education and health care due to the reduced mobility induced by Covid-19 lockdown measures.

g Grey

The rapid ageing (greying) of populations (notably in Japan, Western Europe, the USA, Australasia, and China), along with sharp declines in total fertility, result in increased economic pressure to sustain older generations. This is because of decreased labour force participation rates (the growth in the number of people of working age lags the growth in the number of elderly); increased dependency rates (more and more elderly people dependent upon younger people); and an increased fiscal gap (larger and larger amounts of tax revenue channelled towards caring for the elderly).

h Hotter and drier

Global climate change is no longer a figment of our imagination. The potentially destabilising effects of higher surface temperatures – crop losses, drought, demographic shifts, hunger, and rising sea-levels – are becoming apparent, more rapidly than previously thought, notably in Africa.

i Tele-everything

In the past two decades ubiquitous computing has granted hundreds of millions of people (including, notably, in Africa) access to the Internet. This, in turn, unlocks the potential for the widespread use of tele-education and tele-medicine. Moreover, the use of smart cell-phones as a platform for mobile money has brought millions of Africans into the formal financial sector – a crucial lubricant in a modern economy.

While the scope and velocity of the nine trends reviewed above are bound to change in the months and years that lie ahead, they nonetheless give us a sense of pending change. The exact ways in which they may unfold – individually, collectively, and systemically – cannot be predicted. However, whatever our understanding of all these trends and forces might be, there can be little doubt that the world economic architecture of today and tomorrow (as well as those factors that influence and are influenced by the changing economy) is and will be vastly different from that of but a few years ago. Furthermore, as mentioned earlier, no country – including South Africa – can be impervious to this change. For better or for worse, South Africa’s future will be shaped by the way in which the country mitigates the concomitant risks and exploits the emerging opportunities.

2.4.3 South Africa

2.4.3.1 Background

In some ways the state of the world economy in 2022 was less hostile than a year earlier. Global economic growth rebounded significantly in 2021 after the decimation brought about by the Covid-19 induced recession in 2020. One of the outcomes of this was a sharp recovery in commodity prices, which has resulted in much higher-than-expected mining tax revenue in South Africa. This, in turn, has provided some welcome – albeit limited - breathing space on the fiscal front. The local economy is thought to have grown by more than 4.5% in 2021 - the highest annual increase in more than a decade.

However, it would be premature and foolhardy to interpret the 2021 growth performance as a preamble to better times. Already, growth forecasts for this year and next suggest a slowing in the rate of expansion. Locally, a resumption of a low growth trajectory (2% or lower) is projected for 2022 and 2023. Indeed, the SA economy might only recover to its pre-pandemic GDP per capita - and that was when the economy was already in the earlier stages of a recession - by the end of 2024.

Evidence is also emerging of a two-speed global recovery, partly based on the dichotomy between countries with comprehensive and effective vaccination campaigns (the “jabbed”) and those without (the “jabbed-nots”). It is also unfortunate that pent-up demand (following enforced spending restraint in 2020) is being stymied by supply chain disruptions across the globe. Compounding the fragility of the recovery is the expectation that the aggressive fiscal and monetary stimulus packages, introduced to counter the effects of the 2020 recession, have run their course. For the first time in over a decade inflation rates in some of the major developed economies have burst through the 2% level to reach 6-8%. The UK and the USA, amongst others, have already heralded a tightening of monetary policy as interest rates are set to rise from historically low levels. This pre-existing state of affairs is set to become even more problematic in the wake of the Russian-Ukraine conflict.

Here at home, economic, financial, and fiscal conditions remain stressed. The growth recovery is tepid and way below the pathway required to make meaningful inroads into the triple challenge of poverty, inequality and unemployment. The latter, which has been chronically high for the best part of two decades, has reached a record high rate of 35% (excluding discouraged work-seekers). Periodic and intrusive power shortages weigh heavily on the production capacity of all sectors of the formal and informal economy. Moreover, as is the case internationally, inflationary pressures are mounting, prompting three recent increases in the policy interest rate, with more on the cards.

2.4.3.2 A surplus of deficits

Fundamentally, the country's economy is staggering under the weight of a variety of deficits. From a financial and economic point of view, deficits need to be financed, thereby placing the deficit unit (debtor) in a position of indebtedness towards one or more surplus units (creditors). The existence of deficits and debt is, therefore, often perceived to be undesirable and even odious, conjuring up images of being eternally beholden to the goodwill and tolerance of others, while attempting to acquire assets or accumulate wealth on a flimsy house of cards.

Not all deficits (and debt) are, however, pernicious. For instance, when used for the right reasons (such as financing economic infrastructure) government (public) debt can improve the standard of living and development in a country. By building new roads, railway lines, bridges, and dams, and by improving education and providing pensions, the future potential output of the economy is enhanced. Similarly, if households incur debt to acquire housing stock or transport goods, they are earning a long-term yield in the form of accommodation and transport.

In addition to this, the paradox of thrift (savings) tells us that an increase in total saving leads to a decrease in total demand, and a corresponding slowdown in production. Thus, while individual saving is deemed to be a virtue, collective saving (by all households) may be harmful to the economy. In fact, in the event of the latter, debt countervails saving by recycling unspent funds into the circular flow of income.

However, repeated deficits can indeed be harmful. Governments, for instance, may be tempted to assume more and more debt because in the short term it may make them popular with voters – especially as it means that they do not have to raise tax. This kind of thinking is flawed on a number of levels. If the level of debt consistently rises at a faster rate than the GDP, the ratio of public debt-to-GDP could reach a critical level where investors in government bonds (creditors) will demand a higher interest rate to compensate for higher risk. As interest rates rise, it becomes more expensive to refinance existing debt and to finance new debt. Moreover, since more government revenue has to be allocated to the servicing of debt, less is available for crucial government services. If, in addition, government debt is incurred to finance mainly current expenditure (and, at critical levels, debt servicing costs), the burden of the debt is exacerbated since it is not making any meaningful contribution to the future production capacity of the economy. In an extreme situation, a sovereign debt crisis may arise, with the risk of a lower credit risk rating.

The same basic concerns apply to household debt. The higher the ratio of household debt to disposable household income, the greater the risk of default – especially if the debt is used to acquire non-durable goods and services.

The arithmetic of macro-economic deficits

Economic theory shows us that

$$(M - X) = (I - S) + (G - T)$$

where M = imports of goods and services

X = exports of goods and services

I = gross capital formation (investment spending)

S = total savings

G = government consumption expenditure

T = total government tax revenue

Further,

- a current account deficit is recorded if $M > X$
- a savings deficit is recorded if $I > S$, and
- a budget deficit is recorded if $G > T$

South Africa has, for close to two decades, been running fairly significant - and at times widening - savings, government and current account deficits. Conventionally, a current account deficit will be financed through net financial inflows. By implication, therefore, a country's savings and government deficit needs to be financed through net financial inflows. To add to the challenge, there is general consensus that South Africa requires a sustainable and inclusive economic growth path of 6% to reach the country's unemployment and poverty goals. One of the prerequisites for this is a GCF-to-GDP (i.e., fixed investment as a share of GDP) ratio of approximately 30%. Currently, the latter is languishing at barely 20%, with the savings rate much lower at 15% of GDP. To elevate the investment rate by some 10 percentage points one or more of the following has to occur:

- *A substantial decline in consumption expenditure by government.* This is problematic. For instance, while a reduction of the civil servant wage bill and/or expenditure on social grants is economically and financially justifiable, it is politically and even morally more difficult to defend.
- *An increase in the tax burden.* Whilst this may make sense from an arithmetic point of view, the negative multiplier effect on the economy, given an already overburdened tax-paying nation, could be self-defeating.
- *A profound swing on the current account of the balance of payments.* A current account surplus may be recorded sporadically on the back of transient surges in commodity prices. However, current account deficits are more likely to persist, given the structural obstacles to South Africa's competitiveness, such as high labour costs and infrastructure/logistical constraints.
- *A significant decline in the share of consumption spending.* This is an imperative, but clearly an unpalatable one, since it implies a short-term sacrifice for the sake of longer term dividends.

That leaves movements on the financial account. Financial account flows are essentially a function of the relative attractiveness to foreign investors of a country's investment climate. To paraphrase an old adage: 'Capital moves to those places where it is well-rewarded and well-treated'. Thus, if – as was the case until 2010 – interest rates are significantly higher than in the advanced economies (and are expected to remain high in the foreseeable future), while economic growth appears to be robust, investment will flow into South Africa, especially when the political situation is seen to be stable and the macro-economic fundamentals are sound. The concomitant inflow of foreign currency results in a stronger domestic currency.

If, however, there is a sense of incremental instability, while the interest rate gap is narrowing, risk-averse investors will tend to take flight, thereby reducing the supply of foreign currency and/or raising the demand – hence, a weaker exchange rate. The reality is that a considerable proportion of South Africa's financial account is comprised of portfolio and other flows, which are particularly susceptible to the vicissitudes and vagaries of foreign investors' decisions, based, at times, on perceptions and whims. That said, there is a fundamental, structural truth for 'SA (Pty) Ltd': As long as the country spends more than it produces and earns, it will continue to rely on foreign capital to bridge the gap. And that is what ultimately makes the exchange rate vulnerable to changes in investors' views and actions.

2.4.3.3 The implications of being a deficit country

A concern regarding the nature of growth in South Africa over the last 25 years is the fact that it has been largely underpinned by consumption expenditure (both private and public). Moreover, the growth in private consumption expenditure has been largely financed by credit. This is reflected in the increase in the ratio of household debt to disposable income from 55% in 2001 to almost 80% in recent years. The implication is that South Africa's economic growth path is debt-driven, and therefore not sustainable. In fact, as households attempt to 'fix' their balance sheets (through a deceleration in the demand for credit) economic growth will lose momentum.

It can be argued that South Africa is teetering on the edge of a fiscal cliff. The decade-long accumulation of government debt has elevated the government debt to GDP ratio to unprecedented levels. There is now a very real risk that in the years ahead social grants, civil service wages, and debt servicing costs will absorb the bulk of government revenue (tax). An immediate impact of this state of affairs is that government is simply not in a position to embark upon the expected policy approach, viz a programme of fiscal expansion to counteract recessionary conditions. In the longer term, capital expenditure by government (especially on much-needed economic infrastructure) will be crowded out by far less productive current expenditure.

The balance of payments has often been described as South Africa's achilles heel. The current account of the balance of payments reflects the country's exports and imports of goods and services, while the financial account shows the inflow and outflow of various kinds of financial investments. Together, these transactions determine whether a country's holdings of foreign exchange reserves will expand or contract in any given period. In the period leading up to 1994, South Africa maintained, of necessity, a current account surplus to countervail the net financial outflows that accompanied the international community's ostracisation of the country. Monetary policy was tightened considerably in this period in order to curb import growth. Meanwhile, South Africa's gross foreign exchange reserves moved sideways at a dangerously low level (between 4 and 10 weeks of import cover).

After 1994 a more 'normal' state of affairs appeared to emerge. Current account deficits (at times, fairly substantial ones), which became the rule, not the exception, became possible in the light of even larger annual net inflows on the financial account. As a result, the gross gold and foreign exchange reserves increased from less than \$5bn (and fewer than 7 weeks of import cover) in the mid-1990s to some \$55bn (and 21 weeks of import cover) by the end of 2021.

On the face of it, therefore, the balance of payments is in a healthier condition. However, a more refined analysis reveals a number of deficiencies or underlying concerns. Foremost among these are the following:

- The ratio of exports of goods and services to GDP is disappointingly low. While the decline in this ratio since 2008 is understandable in the light of the global economic slowdown, it also highlights the country's reliance on Western Europe, the USA, China, and Japan as its major trading partners. South Africa's low export penetration is also the result of country-specific constraints, such as an over-reliance on the extractive industry as a source of export revenue. In addition, high wages (relative to productivity), and infrastructural and logistical bottlenecks compromise South Africa's ability to compete against both low-wage, low-income countries, and against high value-adding, high-income countries.
- Although total net financial inflows since 1994 have well exceeded R2.0 trillion, only some 25% of that amount has in the form of net direct investment. Net direct investment tends to be sporadic and opportunistic. Most of the rest of the inflows is in a form – portfolio investment – which, by its very nature, tends to be far more volatile and easily reversible.

Regarding the last point (heavy reliance on portfolio investment): Unfortunately, in recent years, investors have become more reluctant to divert their surpluses to South Africa. This can be attributed to the general lethargy of the global economy, as well as a number of self-inflicted hazards, for which we are being 'punished'. These include the unfortunate and uncomfortable combination of torpid economic growth, labour unrest, demands for steep pay rises, a polarised jobs market (protected vs excluded workers), burdensome regulations, and the ongoing indebtedness of most stakeholders in the economy.

This also has a major bearing on the exchange rate of the Rand. A striking feature of the rand exchange rate since 2000 has been its volatility (see Table I). As long as the country spends more than it produces and imports more than it saves, exchange rate volatility is likely to persist in accordance with the willingness (or lack thereof) of foreign investors to apportion some of their savings to South Africa.

TABLE I: THE VOLATILE RAND EXCHANGE RATE (US \$ PER ZAR)

Period	Duration (months)	Appreciation (+)/ Depreciation (-)
Nov 98-Dec 01	25	-51.0
Dec 01-Dec 04	36	+101
Dec 04-Dec 08	48	-43
Dec 08-Apr 11	28	+49
Apr 11-Jan 16	57	-59
Jan 16-Mar 18	26	+39
Mar 18-Apr 20	25	-36
Apr 20-Jun 21	14	+34
Jun 21 – Dec 21	6	-10

Source: Own calculations from SA Reserve Bank historical series.

The fact that South Africa is living chronically beyond its means implies fundamentally that the aggregate (total) demand for goods and services exceeds the aggregate supply. This is an underlying driver of inflationary pressures. Given the SA Reserve Bank's constitutional mandate, this implies the maintenance of relatively high interest rates, even when economic activity is listless.

2.4.3.4 Is a failed state part of South Africa's destiny?

The analysis thus far has focused on a number of conventional macro-economic deficits. We can also highlight several more figurative, abstract deficits. Some of these are reviewed below.

Jobs and skills deficit. Over 7 million members of the economically active population (supply of labour) are officially unemployed, while many more are probably under-employed. At the same time there is a significant shortage of appropriately skilled workers (more than 50% of adults have fewer than 12 years of education). This structural mismatch not only creates frustration, anger, and misery; it also compromises productivity growth, and is a direct cause of poverty and inequality.

Institutional deficit. Together, institutions are those legal and administrative organisations that underpin every society, thereby form an “enabling environment” for the creation of wealth. They play a particularly important role in facilitating collaboration between the public and private sectors, which is crucial for boosting productivity. However, when they fail, trust is eroded and economies can become damaged. There are no poor countries with good institutions; and there are no rich countries with poor institutions. Over the past decade or so a number of South Africa's democratic institutions have become victims of state capture, leading to underperformance as a result of a deterioration in leadership competence and/ or integrity. In so doing, economic growth and development have been compromised.

Development deficit. The progress made on the socio-economic and human developmental front in South Africa, relative to the strides made with regard to democracy, is underwhelming. The country can lay claim to being a true (albeit flawed) democracy, with a progressive constitution and widely-praised bill of rights. Regular elections are held, which are largely free and fair, and politically-induced isolation has come to an end. Unfortunately, these virtues have failed to translate into a better overall condition for the majority of citizens – unemployment is chronically high, high rates of poverty persist, and South Africa records the widest income and wealth inequality gaps in the world.

Additional deficits that need mentioning – and that are largely the result of infrastructural neglect and mismanagement – include an energy deficit, a potable water deficit, at times a food deficit, a transport deficit, and a health care deficit.

In light of the apparent inability of the government to meet many of the promises made by democracy, it is inevitable that the possibility is mooted in various circles that that South Africa will be a “failed state” by the end of this decade. This description conjures up dystopian images of Afghanistan, Somalia, Liberia, and Yemen – countries that appear to be unsalvageable, without redemption, where societies are mired in poverty, hopelessness, and depression.

The purpose of this section is to first explore the meaning and dimensions of a “failed nation/state” as a prelude to assessing whether South Africa is deserving of this description.

What is a failed state?

Intuitively, a failed state is taken to refer to a political authority that has regressed to such an extent that the basic conditions and responsibilities of a sovereign government no longer function properly (Nay, 2013). The Fund for Peace proposes that a failed state displays the following characteristics:

- Loss of control of its territory, and/or loss of the monopoly on the legitimate use of physical force therein.
- The erosion of legitimate authority to make collective decisions.
- The inability to provide public services.
- The inability to interact with other states as a full member of the international community.

When these characteristics become entrenched, widespread corruption and criminality, and draconian intervention of both state and non-state actors occurs, populations move involuntarily, there is a sharp economic decline, and the possibility of foreign military intervention is heightened.

In recent years, however, there has been fairly widespread criticism of and reservations about the way in the concept of the “failed state” has been defined, measured, interpreted, and operationalised.

In at least partly addressing these concerns, the Fragile States Index (FSI) has gained more cachet since its first publication in 2005. The FSI is prepared by the Fund for Peace and published by *Foreign Policy Magazine*. Initially (2005) only 75 countries were ranked; today 178 countries are assessed. Four groupings of indicators are considered - social, economic, political, and cohesion - with overall twelve indicators (**see Table 2**). The indicators each count for 10, adding up to a total of 120. The higher the score, the more fragile the country.

TABLE 2: INDICATORS ASSESSED IN THE FRAGILE STATES INDEX, WITH ILLUSTRATIVE QUESTIONS

Cohesion indicators	Political indicators	Economic indicators	Social (and cross-cutting) indicators
<ul style="list-style-type: none"> • CI: Security apparatus • Is the military under civilian control? Do private militias exist against the state? Is there paramilitary activity? Do private armies exist to protect assets? Are there guerilla forces operating in the state? • Are the police considered to be professional? Is violence often state-sponsored and politically motivated? Is the government dealing well with any insurgency or security situation? • Does the military and police maintain proper use of force? Are there accusations of police brutality? • Is there a high availability of weapons? 	<p>PI: State legitimacy</p> <p>Does the government have the confidence of the people? Have peaceful demonstrations occurred? Have riots occurred?</p> <p>Is there evidence of corruption on the part of federal officials? Are federal and/or local officials considered to be corrupt?</p> <p>Do political rights for all parties exist? Is the government representative of the population?</p> <p>Have there been recent peaceful transitions of power?</p> <p>Are elections perceived to be free and fair? Have elections been monitored and reported as free and fair?</p> <p>Are there reports of politically motivated attacks and assassinations? Are there reports of armed insurgents and attacks? Have there been terrorist attacks and how likely are they?</p>	<p>EI: Economic decline</p> <p>What is the government debt? How are the interest rates – actual and projected? How is the inflation rate – actual and projected? What is the productivity? What is the GDP – actual and projected? How is the unemployment – current and rate of unemployment?</p> <p>How do people view the economy? How do experts view the economy? Is the business climate attractive to FDI? Do the laws and access to capital allow for internal entrepreneurship?</p> <p>Does one product make up the majority of the economy?</p>	<p>SI: Demographics</p> <p>Is the population growth rate sustainable? Is the current and projected distribution reasonable? Is population density putting pressure on areas of the state? What is the infant mortality rate – actual and projected? Is there a high orphan population?</p> <p>Is there a system for controlling spreading of diseases or pandemics? Is there a high likelihood or existence of diseases of epidemics? What is the rate of spread of HIV Aids cases - most recent and projected?</p> <p>Is the food supply adequate to deal with potential interruption?</p> <p>Is there are high likelihood of droughts or is there currently a drought? Is there a short-term food shortage that needs to be alleviated? Are there long-term food shortages affecting health?</p> <p>Do sound environmental policies exist and are the current practices sustainable? Is a natural disaster likely, recurring? If a natural disaster occurs, is there an adequate response plan? Has deforestation</p>

Cohesion indicators	Political indicators	Economic indicators	Social (and cross-cutting) indicators
			<p>taken place or are there laws to protect forests?</p> <p>Does resource competition exist and are there laws to arbitrate disputes?</p> <p>Is there access to an adequate potable water supply?</p>
<p>C2: Factionalised elites</p> <p>Is leadership fairly elected? Is leadership representative of the population? Are there factionalized elites, tribal elites and/or fringe groups, and how powerful are they? Is there a political reconciliation process? Is the military representative of the population? Is there a sense of national identity? Are there strong feelings of nationalism? Or are there calls for separatism? Does hate radio and media exist?</p> <p>Is religious, ethnic, or other stereotyping prevalent and is there scape-goating? Does cross-cultural respect exist? Is wealth concentrated in the hands of a few? Is there a burgeoning middle class?</p> <p>Does any one group control the majority of resources? Are resources fairly distributed? Does the government adequately distribute wealth through its tax system and taxes? Are the laws democratic or extreme?</p>	<p>P2: Public services</p> <p>Is there equal access to public services? What are the general conditions of public services? Do people have adequate access to medicines? Are there an adequate number of medical facilities for the population? Is there an adequate number of medical professionals for the population? What is the infant mortality rate – actual and projected?</p> <p>Is there access to an adequate potable water supply? Is sanitation system adequate? What is the level of school enrollment? Is it different for boys versus girls? What are the literacy rates? Is it different for boys versus girls?</p> <p>Do the poor have access to adequate housing? Are housing costs in line with the general economy?</p> <p>Are roads adequate and safe? Are there adequate airports for sustainable development? Are there adequate railroads for sustainable development? Is there an adequate supply of fuel?</p>	<p>E2: Uneven development</p> <p>Is there a large economic gap? Is the economic system discriminatory? Does economic justice exist? Are hiring practices generally fair – legally and the perception of others? Do equal rights exist in the society? Are there laws protecting equal rights?</p> <p>Does free education exist and if so, to which grade? Is the education provided relatively equal? Is there a housing system for the poor? Do programmes for job training exist? Do people know about the job training and is it available based on qualification and need?</p> <p>Do ghettos and slums exist?</p>	<p>S2: Refugees and Internally displaced persons (IDPs)</p> <p>Are refugees likely to come from neighbouring countries? Are there resources to provide for projected and actual refugees? Are there sufficient refugee camps or are refugees integrated into communities? Are there reports of violence against refugees? Are conditions safe in refugee camps</p> <p>How many IDPs are there in relation to population? Are IDPs likely to increase in the near future? Are there resources to provide for projected and actual IDPs? Is there access to additional resources from international community for refugees and/or IDPs? Are there plans for relocation and settlement of current IDPs and/or refugees?</p>

Cohesion indicators	Political indicators	Economic indicators	Social (and cross-cutting) indicators
<p>C3: Group grievance</p> <p>Does a Truth & Reconciliation process exist or is one planned, needed?</p> <p>Is there a plan for reconstruction and development? Are victims of past atrocities compensated or is there a plan to compensate them?</p> <p>Has amnesty been granted?</p> <p>Are there feelings of or reports of ethnic and/or religious intolerance and/or violence? Are groups oppressed or do they feel oppressed? Is there a history of violence against a group or group grievance? How are intertribal and/or interethnic relations? Is there freedom of religion according to laws and practiced by society? Are there reports of violence that is religiously motivated? Are there reports of vigilant justice? Are the reports of mass violence and/or killings? Are there reports of violence that is racially motivated?</p>	<p>P3: Human rights</p> <ul style="list-style-type: none"> • Do communal, labour, political, and/or minority rights exist and are they protected? Are there civil rights laws and are civil rights protected? Is the right to life protected for all citizens? • Are there laws protecting freedom of speech? Is there freedom of movement? Does religious freedom exist? Does religious extremism exist? • Is there a history of systemic violation of rights by the government or entity therein? • Are there reports of state- or group-sponsored torture? Are there labour laws or reports of forced labour? Are there child labour laws or reports of child labour? • Are groups forced to relocate? If relocation occurs, is there a system ensuring proper compensation? • Is the media independent? Do reporters feel free to publish accusations against those in power? Is there equal access to information? 	<p>E3: Human flight</p> <p>Are professionals leaving the country? Are politicians leaving the country? Is there a relatively high proportion of higher educated people leaving the country? Is the middle class beginning to return to the country?</p> <p>Are there a large amount of remittances coming to families from relatives overseas?</p>	<p>X1: External intervention</p> <p>Is there external support for factions opposed to the government? Are foreign troops present? Are military attacks from other countries occurring? Is there external military assistance? Are there military training exercises with other nations or support of military training from other states?</p> <p>Is there a peacekeeping operation on the ground? Is there external support for police training?</p> <p>Are covert operations taking place?</p> <p>Is the country receiving economic aid? Is the country dependent on economic aid?</p>

Cohesion indicators	Political indicators	Economic indicators	Social (and cross-cutting) indicators
	<ul style="list-style-type: none"> • If rights are not protected, is there a legal system in which that can be addressed? Do accused receive a fair and timely trial? Is this equal for all? • Are there accusations or reports of arbitrary arrests? Are these state-sponsored? • Are there accusations or reports of illegal detention? Are these state-sponsored? How are the prison conditions? • Is there a process and system that encourages political power sharing? 		

Source: Compiled from The Fund for Peace (2021a). *Fragile States Index*. Available at: <https://fragilestatesindex.org/indicators/>

The Index categorises states in four categories, with variations in each category.

The **Alert** category is in dark red, **Warning** in orange, **Stable** in yellow and **Sustainable** in green.

Table 3 provides a more granular review of the FSI. Finland and Norway register the best scores, along with Switzerland, and New Zealand. Perhaps somewhat surprisingly, well-established democracies, such as France, Japan, the UK, and the USA are ranked not as sustainable, but in a lower category, viz. stable. Mauritius (very stable) fares best among African countries, followed by Botswana, Ghana, and Namibia. The most fragile countries are Syria, Somalia, and Yemen.

TABLE 3: DETAILED FSI CATEGORIES, WITH SELECTED EXAMPLES IN EACH CATEGORY

Sustainable (17 countries)	Stable (45 countries)	Warning (87 countries)	Alert (30 countries)
Very sustainable (6 countries)	Very stable (11 countries)	Warning (28 countries)	Alert (21 countries)
Finland (179) ¹⁾ Norway (178) Switzerland (174) New Zealand (176)	Japan (161) France (159) Mauritius (156)	Ghana (113) Namibia (109) China (95) Mexico (90)	North Korea (30) Pakistan (29) Nigeria (12) Ethiopia (11) Zimbabwe (10)
Sustainable (11 countries)	More stable (34 countries)	Elevated warning (33 countries)	High alert (6 countries)
Australia (170) Netherlands (168) Germany (167) Singapore (165)	UAE (151) UK (150) USA (143) Spain (142) Qatar (138) Botswana (122)	South Africa (89) Thailand (87) India (86) Russia (74) Brazil (70)	Sudan (8) Chad (7) DRC (5)
		High warning (26 countries)	Very high alert (3 countries)
		Sri Lanka (55) Malawi (46) Zambia (42) Egypt (39) Rwanda (39) Angola (34)	Syria (3) Somalia (2) Yemen (1)

Note: 1) Number in brackets indicates the country's ranking. 179 is the highest (best) ranking; 1 is the lowest (worst) ranking.

Source: Compiled from The Fund for Peace (2021b). *Fragile States Index*. Available at: <https://fragilestatesindex.org/>

In 2021 the South African state was categorised in the *elevated warning* category, virtually on par with China, and marginally less fragile than the other three BRICS nations, viz. Russia, Brazil, and India. However, although South Africa's fragile nation status is far from being catastrophic, at the country's overall ranking has fallen by more than 40 positions since 2007. The country's decline in economic performance has been particularly disconcerting. South Africa's scores for human rights, uneven development, demographics, and refugees and IDPs either improved or remained constant between 2006 and 2021, but a particularly sharp economic decline was recorded.

The verdict?

The FSI is certainly not unflawed. It does not, for instance, include the Human Development Index (HDI) to calculate the final score. It also seems to assume that state fragility is directly linked to underdevelopment; ergo, if a state is developed it is, of necessity, stable or sustainable.

On the credit side, data is collected from three main streams — pre-existing quantitative data sets, content analysis, and qualitative expert analysis — all of which is triangulated and subjected to critical review to obtain final scores for the Index. In this way, the strength of the FSI is its ability to distill millions of pieces of information into a form that is relevant as well as easily digestible and informative. At the same time, the FSI does not profess to predict the future of states — it presents a diagnosis of the problem, which is the first step in devising strategies for strengthening weak and failing states. It serves, therefore, as a critical tool in highlighting not only the normal pressures that all states experience, but also in identifying when those pressures are outweighing a states' capacity to manage those pressures. By highlighting pertinent vulnerabilities which contribute to the risk of state fragility, the FSI makes political risk assessment and early warning of conflict accessible to policy-makers and the public at large (The Fund for Peace (2021). *Fragile States Index Annual Report 2021*).

All of this brings us back to the initial issue: ***Will South Africa have a failed state within the next decade?*** If a failed state is one characterised by a wholesale loss of control, and/or total erosion of legitimacy, and/or complete inability to provide public services, then the answer is probably “No.” Moreover, it is difficult to contemplate a South Africa that displays the pathological obstructions and deficiencies found in those nations put on alert in the FSI model.

However, South Africa's FSI performance over the last 16 years is worrisome. In terms of resilience we are “punching below our weight” and the warning signs are flickering. Once again, the message is clear. Policy makers must focus on strengthening the state's resiliency by focussing on (re)building the country's institutional capacity; in particular core institutions such as the military, the police, the civil service, the justice system, and leadership.

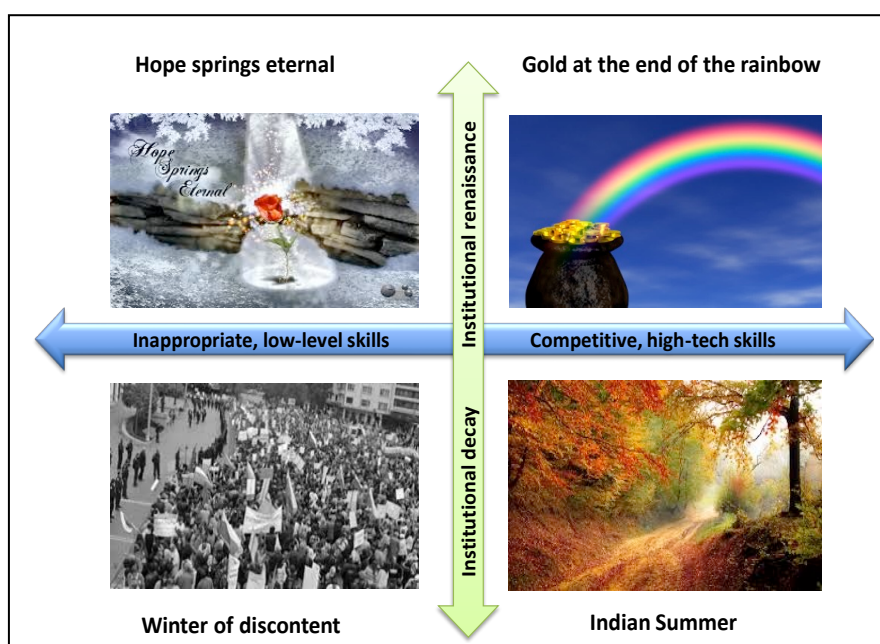
2.4.3.5 SCENARIOS – REHEARSING FOR THE FUTURE

From the multi-dimensional analysis conducted thus far, a number of crucial issues emerge, that will have a major bearing on the way in which the South African landscape unfolds. Foremost among these are:

- The ability to compete in the global economy
- Dealing with the democratic surplus.
- Improving the stock of social capital.
- Generating sufficient appropriate skills.
- Generating sufficient savings.
- Restoring and preserving the autonomy, competence, and integrity of our democratic institutions.

Bearing in mind that all the forces and trends that drive socio-economic success are inter- and co-dependent, it can be argued that the two key uncertainties – the “make or break” issues that will determine the country’s future, are

- ***Whether we will we manage to generate sufficient appropriate skills to match the demands of employers?*** The OECD stated recently that the biggest challenge in South Africa is the unequal quality of school education, its low average level and the high drop-out rates.
- ***Institutions matter a lot.*** Generally, the prosperity of a country is closely correlated with its institutional quality. When institutions fail, trust is eroded and the stock of social capital depreciates, thereby compromising economic growth and development. Moreover, collaboration between the public and private sectors is a crucial co-creator of productivity growth; in the absence of strong institutions, however, the collaboration between the public and private sectors may become dysfunctional, with both sectors colluding in the pursuit of personal gain at the expense of consumers and taxpayers. Unfortunately, there is large body of both anecdotal and documented evidence suggesting that some of South Africa’s once-proud institutions and institutional values were dealt a cataclysmic blow during the almost decade-long leadership of former President Jacob Zuma. This was also accompanied by a warped allocation of financial and human resources. This is the legacy that President Ramaphosa has to contend with and repair. The crucial question in this regard is whether we will be able to ***restore and preserve the integrity, autonomy, and competence of our democratic institutions.*** Institutions establish constraints – both legal and informal (norms of behavior) - thereby determining the context in which individuals organise themselves and their economic activity. Moreover, institutions influence productivity, mainly through providing incentives and reducing uncertainties.

FIGURE 1: GENERIC SCENARIOS FOR SOUTH AFRICA

These two driving forces can be used to craft four scenarios of South Africa in, say, 2030, as depicted below.

The basic narratives of the “best case” (*Gold at the end of the rainbow*) and “worst case” (*Winter of discontent*) scenarios are presented in Table 4.

TABLE 4: BEST CASE AND WORST CASE SCENARIOS

Winter of discontent	Gold at the end of the rainbow
<ul style="list-style-type: none"> • Rent-seeking behavior • Enclaves of prosperity • Vigilantes/warlords • 80/20 society • High import propensity • Elitist growth path • Skills divide • Digital divide • Uncontrollable state debt • Tax evasion • State loses control 	<ul style="list-style-type: none"> • Social pact (capital, labour, govt, civil society) • No tolerance for crime • Jealous protection of democratic institutions • Tolerance and goodwill • Accountability • Leveraging of natural resources • Appropriate skills • Competitive exports (tradeables) • Entrepreneurial spirit • Broader tax base (through organic growth) • Sensible govt spending

It is rather unlikely that either of these extreme outcomes will transpire in exactly the way described above. The real, current question, therefore, is whether the future of South Africa will tilt towards the first, sanguine set of outcomes; or will we experience the tragic denouement portrayed in the second narrative.

3 DISTILLING THE DRIVING FORCES

During a workshop held on 6 May 2022, twelve (12) online workshop participants decided on forty-five key factors through debate and discussion based on the trends that they believed will shape the role and function of the accountants in South Africa by 2035. As a point of departure, the participants used the environmental scanning inputs provided thus far in Section 2. (These were circulated to the participants prior to the workshop).

The different sphere headings included in the Multiple Perspective of Societal Change Model were the environmental sphere (five factors), the technology sphere (twelve factors), the legal and regulatory sphere (six factors), the political sphere (four factors) and the socio-economic sphere (eighteen factors). The driving forces are listed below.

Environment (5)

- Climate change impact and the world's response to it
- The purpose of business being broadened
- Shift to renewable energy and the implications thereof (green energy vs energy risk)
- Growing impact of ESG regulations, compliance and reporting thereof
- Expensive and unreliable power provision in SA

Technology (12)

- Speed and scope of digitisation leading to the accumulation of global information
- Data and technology changing established business models and enabling the merging of industries
- User decision making using real-time data versus historical data
- Governance framework around data ownership, use and protection evolving
- The increasing trust deficit between the public and business
- Value becoming more intangible and difficult to measure
- Requirement to measure and report on non-financial data
- Use of advanced data analytics and big data in business
- The rise in the use of machine learning/artificial intelligence
- The use of blockchain to create joint, secure digital ledgers
- Cybersecurity risk (eg POPI Act and GDPR)
- Dissemination of information and its impact

Legal/ Regulatory (6)

- Conflicting views regarding regulations across the world
- The profession's ability to comply with increasing regulations/enforceability
- The increasing focus on tax regulation to stop off-shoring and tax avoidance
- In South Africa, the risk of increased tax to address the government's debt-to-GDP ratio
- Increased scrutiny of auditors as gate keepers of public trust in the financial integrity of companies' financials
- The need for accounting professional bodies to support their membership in staying abreast of the latest developments and having future-fit skills

Political (4)

- Democratic surplus
- Trust deficit
- Restoration of the integrity and competence of [democratic] institutions
- Weakening state resilience

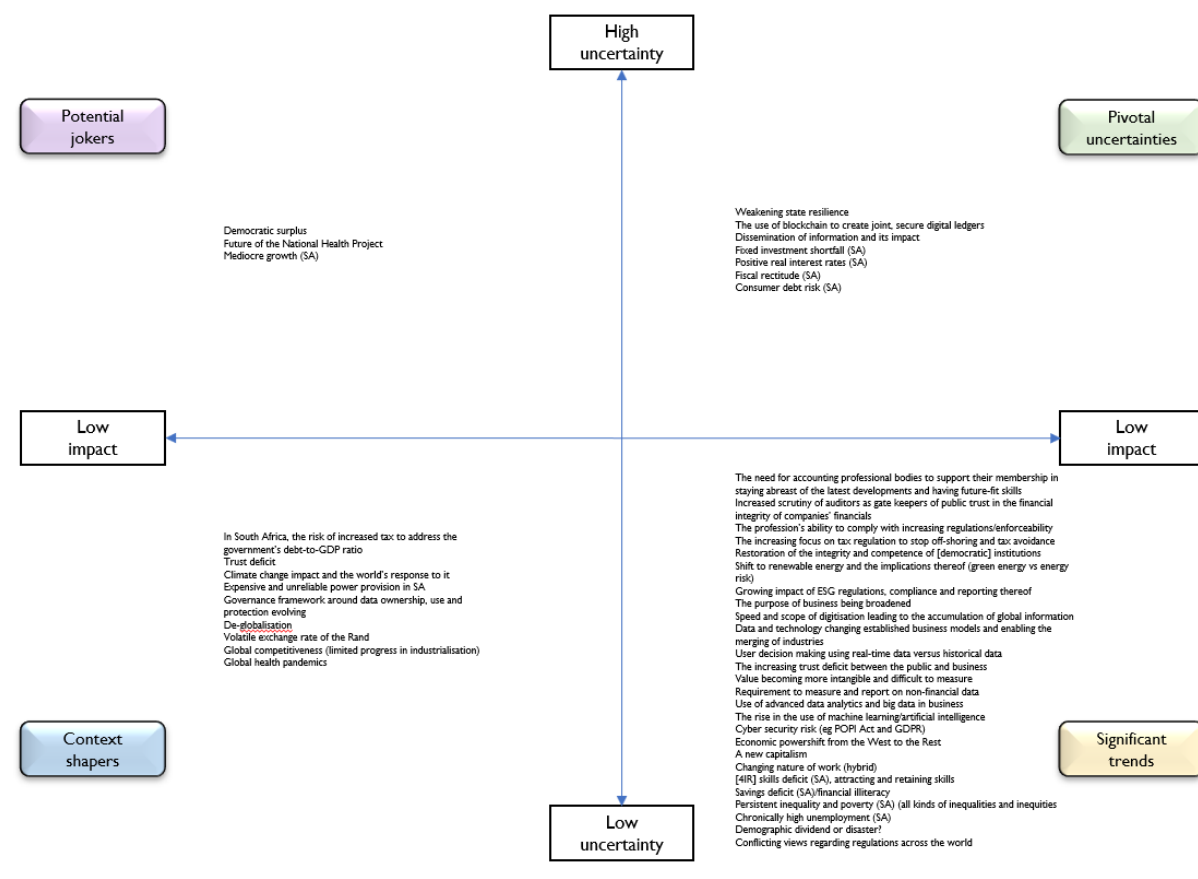
Socio-economic (18)

- De-globalisation
- Economic powershift from the West to the Rest
- A new capitalism
- Changing nature of work (hybrid)
- Mediocre growth (SA)
- [4IR] skills deficit (SA), attracting and retaining skills
- Savings deficit (SA)/financial illiteracy
- Fixed investment shortfall (SA)
- Volatile exchange rate of the Rand
- Positive real interest rates (SA)
- Fiscal rectitude (SA)
- Chronically high unemployment (SA)
- Persistent inequality and poverty (SA) (all kinds of inequalities and inequities)
- Global competitiveness (limited progress in industrialisation)
- Demographic dividend or disaster?
- Global health pandemics
- Consumer debt risk (SA)
- Future of the National Health Project

4 KEY CERTAINTIES AND PIVOTAL UNCERTAINTIES

During the second part of the first workshop (16 May 2022), workshop participants were divided into three groups and were requested to plot the forty-five factors onto a two-by-two pane that indicated the associated impact and uncertainty of each factor using the intuitive logic approach (see Figure 2).

FIGURE 2: FACTORS PLOTTED USING INTUITIVE LOGIC APPROACH



Seven pivotal uncertainties, that is, factors deemed to have a significant impact on the future role of accountants, but with a high degree of uncertainty, were identified, viz:

- Weakening state resilience
- The use of blockchain to create joint, secure digital ledgers
- Dissemination of information and its impact
- Real investment shortfall in SA
- Positive real interest rates in SA
- Fiscal rectitude in SA
- Consumer debt risk in SA

5 CROSS-IMPACT ANALYSIS

On 20 June 2022, the second online workshop was held where participants were asked to use the cross-impact analysis method to analyse the pivotal uncertainties. The purpose of a cross-impact analysis is to establish the impact that the pivotal factors have on one another, and how they are influenced by each other. The participants were divided into three groups and the average score of the three groups' impact analyses was used to determine the final rating.

The scores thus obtained provide an active and a passive score for each factor. The active score shows the extent to which an individual factor influences the others, while the passive score indicates the impact that other factors have on an individual factor (Roux & Viljoen, 2019).

- Factors that have both a high active and a high passive score are classified as critical factors. Critical factors strongly influence other factors and are strongly influenced by other factors. Often these factors are used as axes to generate scenarios.
- Factors that have high active scores and low passive scores are known as active factors. These factors strongly influence other factors but are weakly influenced by other factors.
- Factors that have low active scores and high passive scores are classified as reactive or passive factors. Reactive or passive factors have a weak impact on other factors but are strongly influenced by other factors.
- Buffering or lazy factors have both a low active and a low passive score. This means that these factors have a weak impact on other factors and are also weakly influenced by other factors.

Figure 3 illustrates the combined average score given by the three groups. The scores used the following rating scale: 0 (no impact), 1 (low impact), 2 (medium impact), 3 (high impact), 4 (very high impact).

FIGURE 3: COMBINED AVERAGE IMPACT ANALYSIS SCORE

Combined average impact analysis score	Weakening state resilience	The use of blockchain to create joint, secure digital ledgers	Dissemination of information and its impact	Fixed investment shortfall (SA)	Positive real interest rates (SA)	Fiscal rectitude (SA)	Consumer debt risk (SA)	Active score
Weakening state resilience	4	3	2	4	4	4	4	21
The use of blockchain to create joint, secure digital ledgers	2	4	2	2	1	2	1	10
Dissemination of information and its impact	3	3	4	3	2	3	2	15
Fixed investment shortfall (SA)	4	1	2	4	3	3	3	14
Positive real interest rates (SA)	2	-	1	3	4	3	3	12
Fiscal rectitude (SA)	4	1	2	4	4	4	3	18
Consumer debt risk (SA)	3	1	1	3	1	3	4	12
Passive score	18	10	10	18	14	17	16	

Figure 4 summarises the active and passive scores of the seven pivotal uncertainties.

FIGURE 4: ACTIVE AND PASSIVE SCORES

Pivotal uncertainties	Active scores	Passive scores	
Weakening state resilience	21	18	Critical factor
The use of blockchain to create joint, secure digital ledgers	10	10	Buffer factor
Dissemination of information and its impact	15	10	Active factor
Fixed investment shortfall (SA)	14	18	Reactive factor
Positive real interest rates (SA)	12	14	Buffer factor
Fiscal rectitude (SA)	18	17	Critical factor
Consumer debt risk (SA)	12	16	Reactive factor

Two critical factors were identified, namely weakening state resilience and fiscal rectitude. However, after some debate it was felt that these two are very closely linked, and could be grouped together under the broad heading of weakening state resilience. The factor *dissemination of information and its impact* was deemed to be the second key scenario-shaping variable.

6 CRAFTING THE SCENARIOS

The third workshop on 2 August 2022 was devoted to the crafting of four scenarios.

6.1 Clarification of terms

The previous workshop identified weakening **state resilience**, and **dissemination of information and its impact** as the two scenario-shaping considerations. In this workshop participants were split into two groups to discuss and describe and asked to describe the exact meaning of meant by state resilience and dissemination of information respectively; and to specify the two polar outcomes of the two.

State resilience was described as the ability of the state to respond to any stressors that may arise. A broader description included functional state institutions, a robust fiscal collection and monetary policy, a robust legal system, the agile creation of legislation, tackling corruption, fostering new partnerships with private institutions, and risk mitigation that protects people and corporates from a health, livelihood, cultural heritage and socio-economic asset standpoint. There are functional state institutions that operate within robust legal and ethical frameworks and are agile in their response to any action that affects the well-being of individuals, companies and the environment

In terms of South Africa, an allegory for a functional state was that the country had sufficient and constant electricity supply, in which case it would be a partially functional state by 2035, with an implemented plan for a fully functional state (limited functioning state). This plan would have safeguards in place against corruption and systems with resources to get on the way to an effective state. The worst case described South Africa as a failed state with internal political party fights affecting the state (factionalism gets worse) and failed state institutions/SOEs due to corruption/state capture, the worst being Eskom that had failed completely.

The distinction between the dissemination of credible information and non-credible information is outlined in Table 5.

TABLE 5: DESCRIPTION OF DISSEMINATION OF CREDIBLE AND NON-CREDIBLE INFORMATION

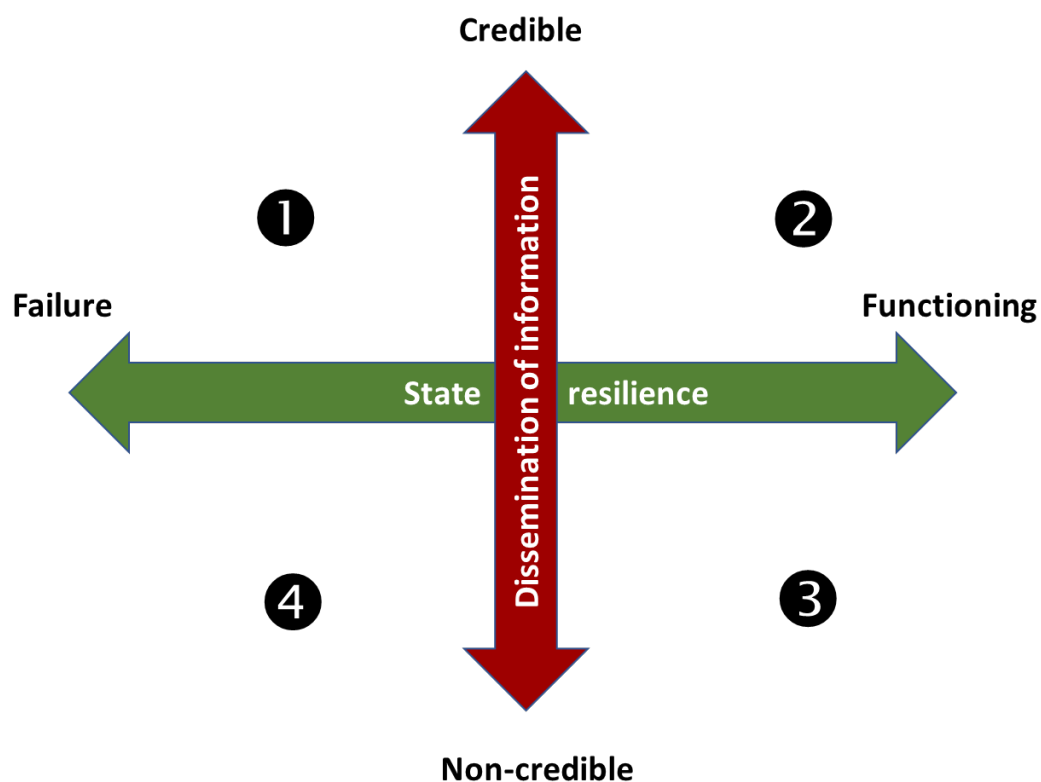
Dissemination of credible information (Relevant, available and trustworthy)	Dissemination of non-credible information
Transparency – Information is readily available to all and is uncensored (Thus, how and what information is disseminated and whether it is disseminated to the right people. Information is easy to find by those who need access to it.)	Information is not readily available, is censored and only accessible to some people
Information is consistent and unbiased (includes multiple perspectives)	Information is inconsistent and biased
Information is user-friendly and easily understandable	Information is complex and difficult to understand
Information is highly relevant	Information is irrelevant and misleading
Verified information that comes from a trusted source, which affects the reliability of information	Information is unreliable and from dubious sources and there is limited control of information (anyone can say anything irrespective) much of which is from non-trusted sources/fake news

For the purposes of this exercise it is assumed that data refers to individual units that do not carry any particular meaning, while information is a collection of contextualised of data that collectively carries a logical meaning (Mensah & Goderre, 2014).

6.2 The scenario story board

The scenario story board, which emerged form the identification and shared meaning of the scenario-shaping factors is shown in Figure 5.

FIGURE 5 : THE SCENARIO STORY BOARD



The workshop participants were divided into four groups, with each group being requested to describe one of the four scenarios in more detail. This included describing the outcomes of all the pivotal uncertainties; as well as reflecting upon the professional values and attitudes, enabling competencies and technical competencies that accountants would require to survive and thrive in each scenario.

The feedback received from the groups is collated in Table 6.

TABLE 6: THE CONSOLIDATED SCENARIO FEATURES RECEIVED FROM THE WORKSHOP PARTICIPANTS

	1	1	2	2	3	3	4	4
	Dissemination of credible information State failure	Professional attitudes and skills	Dissemination of credible information Functioning state	Professional attitudes and skills	Dissemination of non-credible information Functioning state	Professional attitudes and skills	Dissemination of non-credible information State failure	Professional attitudes and skills
Weakening state resilience	Title: Data verification specialist Data sourcing and analytics Relevant technical skills Risk, compliance and assurance	Required: Ethical acumen Storytelling and interpretation skills Problem solving Resilience Adaptability Thought leadership	N/A	Analytical skills Digital skills, e.g. data analysis, cybersecurity and data privacy Understand the impact of various legislations, e.g. POPIA, GDPR Soft skills, e.g. communication, leadership, negotiation	Implications: fact checking, increased due diligence, confirmation of sources, increased need of number of credible information sources, adoption of stricter processes	Due diligence, analytical skills, increased ethics/corporate governance	N/A	To be at the forefront of technologies that enable the secure and accurate dissemination of information Ability to determine which information is credible or not Build skills and controls around sharing of secure information
Blockchain to create joint, secure digital ledgers	Title: Blockchain accountant Financial reporting Internal controls and audit Blockchain analysis and interpretation Communication/storytelling Scenario planning and scoping of blockchain applications	Pioneering mindset Digital acumen In-depth technical knowledge and application Advisory skills Entrepreneurial skills No longer required:	Provide accurate data for digital ledgers	Advisory skills (e.g. strategy, information) Stakeholder management	Greater credibility of information, decentralised finance, increased adoption of blockchain tech, changing regulation	Greater understanding of the technology, in-depth knowledge of IT audit/CAATs, detailed understanding of changing regulations, developing an IT professional with accounting/audit competencies instead of the other way around	Implementation and advocacy of secure forms of information collection and dissemination, which is accurate and accessible (all scenarios) Decipher and distil information that is credible Ability to determine which information is credible or not	No longer required to have high levels of IFRS technical skills (to be done by systems in the future) Ability to implement good governance around structures and processes (private and public sector)

	1	1	2	2	3	3	4	4
	Dissemination of credible information State failure	Professional attitudes and skills	Dissemination of credible information Functioning state	Professional attitudes and skills	Dissemination of non-credible information Functioning state	Professional attitudes and skills	Dissemination of non-credible information State failure	Professional attitudes and skills
Dissemination of information and its impact	<p>Title: Data verification specialist</p> <p>Data sourcing and analytics</p> <p>Relevant technical skills</p> <p>Risk, compliance and assurance</p> <p>Communication/story-telling</p> <p>Information relevance discernment</p> <p>Objectivity</p> <p>Interpretation of applicable regulatory body standards</p>	Doing routine and repetitive tasks	<p>Cognisant of multiple sources of data</p> <p>Interpret economic impact of various sources of data, e.g. Covid</p> <p>Reliability and assurance of information</p>		<p>Implications: fact checking, increased due diligence, confirmation of sources, need increased number of credible sources</p>	Due diligence, analytical skills, increased ethics/corporate governance	N/A	<p>Core competency to fix distressed business</p> <p>Entrepreneurial skills will need greater focus. More practical skills to be developed (rather than theoretical)</p> <p>Selling/working capital/use of technology (what is required)/ raising capital</p> <p>Reputation for being able to execute</p>
Fixed investment shortfall (SA)	<p>Title: Investment advisor</p> <p>Investment assurance</p> <p>Due diligence</p> <p>Sales and business development</p> <p>Business acumen</p> <p>Financial markets analysis</p>		<p>Produce, interpret and advise on relevant information</p> <p>Consult on impact to the business, employees, shareholders, leadership and other stakeholders</p> <p>Accurate forecasting</p>		<p>Implications: Potential positive international investment, greater need for credible information, reliability of sources, publication of reliable information, greater need for ethics, stricter state regulation and internal controls, tighter governance processes</p>	Stakeholder engagement/communication, governance, investor relations, analytical skills, financial modelling	Build quality SMEs and create platforms to be able to invest in SMEs (given that state is not a reliable investment) Ground up	<p>Forward looking vs current historical reporting skills</p> <p>ESG focused – particularly in failed state</p> <p>Importance of growing a contributing society</p>

	1	1	2	2	3	3	4	4
	Dissemination of credible information State failure	Professional attitudes and skills	Dissemination of credible information Functioning state	Professional attitudes and skills	Dissemination of non-credible information Functioning state	Professional attitudes and skills	Dissemination of non-credible information State failure	Professional attitudes and skills
			Relevant data dissemination for effective business decision making					
Positive real interest rates (SA)	Title: Investment advisor Investment assurance Due diligence Sales and business development Macro-economic acumen Financial markets analysis		Produce, interpret and advise on relevant information Consult on impact to the business, employees, shareholders, leadership and other stakeholders Accurate forecasting Relevant data dissemination for effective business decision making		Implications: attract international investment, reduced return on local cash markets, decreased inflation	Stakeholder engagement/communication, governance, investor relations, analytical skills, financial modelling, international tax		
Fiscal rectitude (SA)	Title: Investment advisor/Public sector advisor/Socio-economic activist Investment assurance Due diligence Macro-economic acumen		Produce, interpret and advise on relevant information Consult on impact to the business, employees, shareholders, leadership and		Implications: Increased economic growth, increased investment opportunities, more public/private partnerships, less corruption,	Entrepreneurial skills (create forward thinkers, marketers, industry changers, thought leaders), search for/spot opportunities and not risk (mindset shift), retrain SMPs to be business advisors and not just accountants	Advocate for CAs to occupy influential positions to influence decisions that have a financial impact on the greater economy (public participation)	

	1	1	2	2	3	3	4	4
	Dissemination of credible information State failure	Professional attitudes and skills	Dissemination of credible information Functioning state	Professional attitudes and skills	Dissemination of non-credible information Functioning state	Professional attitudes and skills	Dissemination of non-credible information State failure	Professional attitudes and skills
	Financial markets analysis		<p>other stakeholders</p> <p>Stay up to date with the latest legislation to ensure compliance of the business</p> <p>Accurate forecasting</p> <p>Relevant data dissemination for effective business decision making</p>		improved standard of living			
Consumer debt risk (SA)	<p>Title: Investment advisor</p> <p>Investment assurance</p> <p>Due diligence</p> <p>Macro-economic acumen</p> <p>Financial markets analysis</p> <p>Business rescue practice</p> <p>Debt rehabilitation</p>		<p>Produce, interpret and advise on relevant information</p> <p>Consult on impact to the business, employees, shareholders, leadership and other stakeholders</p> <p>Stay up to date with the latest legislation to ensure compliance of the business</p>		<p>Implications: South Africans need to move away from expensive, short-term debt, greater education of consumers, matching debt to asset life, less disposable income, positive gearing</p>	<p>CAs should have the skillset to address this with the current competencies; personal financial management</p>	<p>Ability to contribute to financial literacy skills within society</p> <p>Advocate for CAs to occupy influential positions to influence decisions that have a financial impact on the greater economy (public participation)</p> <p>Creative ways to evaluate opportunities – move away from</p>	

	1	1	2	2	3	3	4	4
	Dissemination of credible information State failure	Professional attitudes and skills	Dissemination of credible information Functioning state	Professional attitudes and skills	Dissemination of non-credible information Functioning state	Professional attitudes and skills	Dissemination of non-credible information State failure	Professional attitudes and skills
			Accurate forecasting Relevant data dissemination for effective business decision making				traditional credit-scoring models Promote growth	

7 THE SCENARIO NARRATIVES

7.1 FRAMEWORK OF REFERENCE

The Fragile States Index (FSI) is prepared by the Fund for Peace and has been published since 2005 by *Foreign Policy Magazine*. It ranks 178 countries over four groupings – social, economic, political, and cohesion – with twelve indicators overall. Each indicator counts out of 10, adding up to a total of 120. The higher the score, the more fragile the country.

The Index categorises states in four categories, with variations in each category. The **Alert** category is in dark red, **Warning** in orange, **Stable** in yellow and **Sustainable** in green. The FSI has been referenced in the scenarios as an indication of the state of fragility of South Africa.

7.2 SCENARIO 1: DISSEMINATION OF CREDIBLE INFORMATION AND FAILED STATE

For the first time, South Africa was downgraded to “alert status” when the 2035 Fragile States Index (FSI) was published, which is equivalent to a failed state. This outcome has been expected due to the inability of the government to respond to the numerous stressors that are affecting the stability of the country, including the provision of basic services at local municipality, provincial and national levels. The country is politically paralysed due to the ruling coalition’s inability to devise and execute policy driven by constant factionalism across the political spectrum.

The failure of the state has led to state-owned institutions being captured, which resulted in mass looting at these SOEs, crippling debt burdens being amassed, poor performance in terms of their mandate and weak leadership.

South Africa being classified as a failed state increases the risk of misinformation. This necessitated organisations within South Africa and organisations abroad dealing with South African organisations putting stringent measures in place to verify the creditability of information. The private sector has created the Independent South African Information Consortium (ISAIC) that provides digital verification that data sources are credible and ethical using advanced analytics.

ISAIC was the brainchild of the Institute of South African Chartered Accountants (SAICA) who played a leading role in its establishment. SAICA is still one of the few professional bodies in South Africa that has the public’s trust at large. The rules of ISAIC are those put forward by the International Auditing, Assurance and Information Standards Board (IAAFSB) covering issues such as data residency, uniformity of data format, privacy and national IP strategies, which must eventually be addressed at a policy level. In a world full of fake news, there is no work more valuable than to ensure that decision makers can trust information. This greatly supports transparency and the availability of uncensored information. The rules of the dissemination of information ensure that information is saved in a consistent format, free from bias, user friendly, easily understandable and reliable.

Controls around the creditability of information have also been strengthened by organisations by firming up their risk, compliance and assurance function, especially around information, to limit the spread and use of misinformation as the current situation has created a conducive

environment for misinformation to flourish. The use of new technologies such as blockchain has also greatly enhanced the ability to differentiate between credible information and misinformation.

The dire straits that South Africa finds itself in has led to a significant shortfall in fixed investments. The current interest rates are extremely high, which makes it very difficult for the majority of the population that suffers from an immense debt burden. The poor use of public funds has led to South Africa struggling with one of the highest debt-to-GDP ratios in Africa.

SAICA did one of the most comprehensive surveys among its members to determine the professional values and attitudes, enabling competencies and technical competencies that members felt CAs in South Africa had to develop to survive in this challenging environment in which South Africa finds itself. The survey found that the most important attributes to develop are ethical acumen, the ability to be story tellers using information and strong interpersonal skills. Resilience and adaptability are non-negotiable in the unpredictability of the country, together with the cultivation of thought leadership, a pioneering mindset, digital acumen, advisory skills and entrepreneurial skills with in-depth technical knowledge.

7.3 SCENARIO 2: DISSEMINATION OF CREDIBLE INFORMATION AND FUNCTIONING STATE

In a national address, the president of South Africa announced that South Africa has moved from “warning” to “stable” in the Fragile State Index and secured the lowest ranking of any country on the continent. This is testament to reaping the reward of implementing the updated National Planning Document for 2035, which has greatly assisted the country in improving its ability to be anti-fragile. It has led to functional state institutions, the adoption of a robust fiscal collection and monetary policy, the creation of a robust legal system, the agile creation of legislation, the tackling of corruption, the fostering of new partnerships with private institutions, and risk mitigation that protects people and corporates from a health, livelihood, cultural heritage and socio-economic asset standpoint.

The improvement in the country cannot be better exemplified than Eskom that is currently running at an energy load factor of 95%. The debt burden that crippled Eskom during the period 2015–2025 has been wiped out and it now has one of the lowest debt ratios in the world for a public energy company. Currently, it generates 45% of its energy from renewable sources, which far exceeds the target in the National Planning Document for 2035. South Africa has also updated the National Planning Commission Document until 2045 with the hope to be the first African country to be classified as sustainable.

One of the major reasons for the transformation from “warning” to “stable” in the Fragile State Index and now being the lowest rated African country is the relevant availability and trustworthiness of data. This is largely due to a concerted effort by the government and the National Planning Commission’s foresight to identify the use of blockchain, a key technology to create a secure digital ledger and improve the trustworthiness of information. However, the biggest contributing factor to the trustworthiness of information was the formation of the Consortium (ISAIC) created by the private sector to digitally verify that data sources are credible and ethical by using advanced analytics.

ISAIC was the brainchild of the Institute of South African Chartered Accountants (SAICA) that also played a leading role in its establishment. SAICA is still one of the few professional bodies in South Africa that has the public's trust at large. The rules of ISAIC are those put forward by the International Auditing, Assurance and Information Standards Board (IAAFSB) covering issues such as data residency, uniformity of data format, privacy and national IP strategies, which must eventually be addressed at a policy level. In a world full of fake news, there is no work more valuable than to ensure that decision makers can trust information. This greatly supports transparency and the availability of uncensored data. The rules of the dissemination of information ensure that information is saved in a consistent format, free from bias, user friendly, easily understandable and also reliable. These rules also greatly assisted with the interpretation of the economic impact of various sources of data.

The work of ISAIC had such a positive effect on the trustworthiness of information that the South African government made it mandatory in terms of the Companies Act and the Public Financial Management Act (PFMA) for entities to be registered and work with ISAIC.

Another key support for the move to “stable” in terms of the Fragile State Index was the improvement in fixed investments, low real interest rates, fiscal rectitude and the reduction in consumer debt risk. This was largely driven by the SA government producing, interpreting and basing both national and customer-level advice on relevant information, supported by relevant data dissemination for effective business decision making. Furthermore, the government has consulted with business, the general South African population, civil services and numerous stakeholders prior to making key policy or legislative decisions that were also backed by detailed impact assessment forecasts.

SAICA has embarked on an extensive survey every five years among its members to obtain their views on the professional values and attitudes, enabling competencies and technical competencies that members felt CAs need to thrive in the coming five years. The survey results highlighted the need for analytical skills, digital skills that include data analysis, cybersecurity and data privacy skills. They need to be aware of various South African as well as international legislations that relate to data collection and use. They would also need to develop soft skills such as communication, leadership and negotiation, and require advisory skills that cover both strategy and information management as well as stakeholder management.

7.4 SCENARIO 3: DISSEMINATION OF NON-CREDIBLE INFORMATION AND FUNCTIONING STATE

In a national address, the president of South Africa announced that South Africa has moved from “warning” to “stable” in the Fragile State Index and secured the lowest ranking of any country on the continent. This is testament to reaping the reward of implementing the updated National Planning Document for 2035, which has greatly assisted the country in improving its ability to be anti-fragile. It has led to functional state institutions, the adoption of a robust fiscal collection and monetary policy, the creation of a robust legal system, the agile creation of legislation, the tackling of corruption, the fostering of new partnerships with private institutions, and risk mitigation that protects people and corporates from a health, livelihood, cultural heritage and socio-economic asset standpoint.

The improvement in the country cannot be better exemplified than Eskom that is currently running at an energy load factor of 95%. The debt burden that crippled Eskom during the period 2015–2025 has been wiped out and it now has one of the lowest debt ratios in the world for a public energy company. Currently, it generates 45% of its energy from renewable sources, which far exceeds the target in the National Planning Document for 2035. South Africa has also updated the National Planning Commission Document until 2045 with the hope to be the first African country to be classified as sustainable.

The only worrying factor that the Fragile State Index highlighted as a risk to being classified as “stable” was the risk of misinformation. This risk was raised due to information increasingly not being readily available, being censored and accessible only to certain individuals. Information is also inconsistent, contains bias, is recorded in a complex and difficult-to-understand format and is irrelevant and misleading. Information has also been found to be unreliable and from dubious sources with limited control over information from non-trusted sources (fake news). This has necessitated increased fact checking and confirmation of sources, intensified due diligences, the adoption of stricter processes and a need for a greater number of credible sources of information. Another technology that the SA government is looking to roll out was to increase the use of blockchain that would exponentially increase the creation of joint, secure digital ledgers and so improve the credibility of information, decentralised finance and materially change regulations.

The increase in misinformation has also resulted in a fall in fixed investment. Foreign investors have advised the South African government that they require more credible information, reliable sources and the publication of reliable information. There is a need for ethics, stricter state regulation and internal controls as well as tighter governance processes to increase fixed investment in South Africa.

The increased positive real interest rates in South Africa have attracted international investment, reduced returns on local cash markets and decreased inflation. The fiscal rectitude that the South African government implemented has led to greater economic growth, increased investment opportunities, more public/private partnerships, less corruption and an improved standard of living.

As many South Africans had a high debt burden, consumers needed to move away from expensive, short-term debt. Greater education of consumers is needed while matching debt-to-asset life, which means that consumers have less disposable income but are positively geared.

SAICA has embarked on an extensive survey every five years among its members to obtain their views of the professional values and attitudes, enabling competencies and technical competencies that members felt CAs need to thrive in the coming five years. Below are the outcomes from the survey:

- Over the next five years, CAs will require due diligence, enhanced analytic skills and a greater understanding of ethics and corporate governance. They will also require a deeper understanding of technologies including an in-depth knowledge of IT audit/CAATs and a detailed understanding of changing regulations. The development path of IT professionals with accounting and audit competencies needs to be mapped.

- Other aspects that were highlighted by the survey were improved stakeholder engagement and communication, governance, investor relations, financial modelling and a deep understanding of global tax rules.
- Lastly, the survey highlighted the need for developing entrepreneurial skills (create forward thinkers, marketers, industry changers, thought leaders). This will enable CAs to search for and spot opportunities and not risk (mindset shift), retrain SMPs to be business advisors and not just accountants. CAs should have the skill set to address personal financial management.

7.5 SCENARIO 4: DISSEMINATION OF NON-CREDIBLE INFORMATION AND STATE FAILURE

For the first time, South Africa has been downgraded to “alert status” when the 2035 Fragile States Index (FSI) was published, which is equivalent to a failed state. This outcome has been expected due to the inability of the government to respond to the numerous stressors that are affecting the stability of the country, including the provision of basic services at local municipality, provincial and national levels. The country is politically paralysed due to the ruling coalition’s inability to devise and execute policy driven by constant factionalism.

The failure of the state has led to state-owned institutions being captured, which resulted in mass looting at these SOEs, crippling debt burdens being amassed, poor performance in terms of their mandate and weak leadership. Another key reason for being downgraded is the increase in misinformation. This is due to information increasingly not being readily available, being censored and accessible only to certain individuals. Information is also inconsistent, contains bias, is recorded in a complex and difficult-to-understand format and is irrelevant and misleading. Information has also been found to be unreliable and from dubious sources with limited control over information from non-trusted sources (fake news).

The increase in misinformation being spread has led to government putting in place draft legislation that supported the use of blockchain to create joint, secure digital ledgers. The implementation and advocacy of this technology will enable secure forms of information collection and dissemination which is accurate and accessible. This technology will also assist in deciphering information and distilling information that is credible and will create the ability for organisations, the government and citizens to determine whether information is credible or not. Unfortunately, due to the situation the country finds itself in, there is no commitment to sign into law the draft legislation relating to the adoption and use of blockchain as this will stop constant feed on misinformation that is being pushed by government and will show up and reveal the extent of government’s failure to both the public in general and also to the outside world.

The fixed investment shortfall in South Africa due to the poor governance and performance of the country has led to the building of numerous quality SMEs and the creation of platforms to facilitate investment in these SMEs from the ground up. The failure of government to provide for the needs of its people allows SMEs to provide services such as water, food and electricity.

South Africa's debt defaults and the IMF's step-in decimated the credibility of South African bonds in the view of world investors. This has increased the borrowing costs of the government and resulted in the real interest rates rising sharply to some of the highest in the world. Given the dire straits that the country finds itself in, the Institute of Chartered Accountants (SAICA), one of the only professional bodies whose creditability and support by the general public are still intact, has started engaging with and putting pressure on government to get its house in order. SAICA has been at the forefront bringing together business and civil society to force government to legislate the adoption and use of blockchain to counteract the rise of misinformation.

The need for fiscal rectitude by treasury has led to SAICA advocating for CAs to occupy influential positions to influence the decisions that have a financial impact on the greater economy (public participation). The increasingly high consumer debt burden that South Africans find themselves with is in the top ten highest in the world. This has led to SAICA members writing and providing advice to improve financial literacy skills within society and in so doing, decrease the debt burden on South Africans. SAICA has also found other creative ways to evaluate opportunities for credit that promotes growth such as financing and developing Growth Credit Pty (Ltd). Even though this company does not use the traditional credit scoring models to determine customers' creditworthiness, their success is astounding given that their credit loss ratio of loans provided to start SMEs is the lowest in the market, even lower than that of the commercial banks.

SAICA has driven the discussion to move South Africa from its "alert status", which is effectively a failed state in the 2035 Fragile States Index (FSI), to a "stable outlook" over the course of the next ten years. One of the key initiatives that SAICA embarked on was to survey its members to determine the professional values and attitudes, enabling competencies and technical competencies that they need to cultivate over the next five years in order to thrive in South Africa. Below are some of the key insights that emerged from the survey:

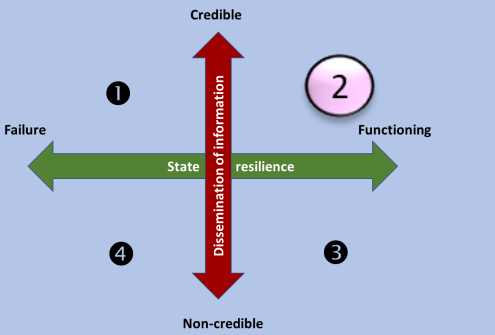
- The membership said that at the forefront is the use of technologies that enable the secure and accurate dissemination of information to provide organisations, the general public and government the ability to determine whether information is credible or not. Furthermore, government should build skills and controls around the sharing of secure information.
- The membership stated that high levels of IFRS technical skills will no longer be relevant because these functions will be done by systems in the future, and that the focus should shift to their ability to implement good governance around structures and processes (private and public sector).
- To address the poor growth issues and the greater macro-economic problems facing the country, the membership proposed the development of core competencies to fix distressed businesses. Furthermore, they stated that greater focus is needed on entrepreneurial skills and that more practical skills should be developed (rather than theoretical) such as the ability to sell, raise working capital through the use of technology.
- Lastly, they stated that government and the profession need to develop the reputation for being able to execute, and should be more forward-looking vs the current historical reporting skills and ESG focus. The government also needs to have a vision and roadmap for growing an inclusive contributing society.

7.6 IMPLICATIONS FOR ACCOUNTANTS, FOR TRAINING AND DEVELOPMENT, AND FOR SAICA

On 23 November 2022, the four scenarios were presented to a small group of staff at SAICA for review and comment. Once the scenarios were accepted the group considered the implications of each scenario for the profession, for training and development, and for SAICA. The outcomes of this discussion are synthesised in Table 7.

TABLE 7: IMPLICATIONS OF SCENARIOS FOR THE PROFESSION, FOR TRAINING AND DEVELOPMENT, AND FOR SAICA

	<p>Implications for profession</p>	<p>Implications for training and Development *pre (initial professional development) and post qualification (continuing professional development)</p>	<p>Now what, SAICA?</p>
<p style="text-align: center;"> I Dissemination of credible information AND failed state resilience </p>	<ul style="list-style-type: none"> • Ambiguous legislation, uncertainty as to interpretation, who is right, costs of defending • Ongoing fraud and corruption, pressure on CAs to behave ethically, increased number of members misconduct being reported • Profession as advisors on credible information in a failed state (more in demand to provide advice, driving economic growth) • Influencers, more prominent role on dissemination of credible information • Lobbying / influential use of creditable information / share with failed state to promote the truth • High debt and interest rates 	<ul style="list-style-type: none"> • Better and more understanding of the law (language used in law) • Better and more understanding of governance processes (best practice and standards) • Help line for dealing with unethical practices • Further training on NOCLAR and code of conduct • Development of Advisory skills (including advice on high debt, business rescue, foreign capital investments, risk analysis and risk mitigation) • Support AGSA findings broader than just SAICA membership base • Promotion of tech to verify data in the “failed state” • Digital acumen (including Blockchain training, RPA, etc) 	<ul style="list-style-type: none"> • Review of the CA Pathways to relevance framework in both pre (from tertiary) and post qualification • Continuous review and analysis of SAICA offerings (aligned to the above development needs) • Development of a centralised source / agency for verified and credible information (run by the profession) • Guidelines established by the profession • Ongoing support of and influence over the professionalisation of the public sector • Review and have a more efficient and well resourced disciplinary process • Advocacy role played by the professional body • Thought leadership / courageous conversations • Support for our members • Develop a robust strategy • Share summary scenario planning document with members (broad dissemination of research and scenario planning done) – input into the open strategy approach to be followed by SAICA

	<p>Implications for profession</p>	<p>Implications for training and Development *pre (initial professional development) and post qualification (continuing professional development)</p>	<p>Now what, SAICA?</p>
<p style="text-align: center;">2</p> <p style="text-align: center;">Dissemination of credible information</p> <p style="text-align: center;">AND</p> <p style="text-align: center;">functioning state (resilience)</p>	<ul style="list-style-type: none"> • Profession as advisors on credible information (ongoing under more stable circumstances) • Influencers, more prominent role on dissemination of credible information • Collaboration with regulators and other stakeholders • New partnerships, support for state entities • Bigger focus on sustainability between government and public as well as private sector co-operation (bigger focus on ESG) • Information used is credible to make key strategic decisions for strong economic growth • Use of blockchain / advanced analytics 	<ul style="list-style-type: none"> • Digital acumen (including Blockchain training, RPA, etc) • Advanced data analytics training • Ethics and ethical use of data • Advisory skills (see 1) • Non financial reporting (ESG / other non-financial reporting) 	<ul style="list-style-type: none"> • Review of the CA Pathways to relevance framework in both pre (from tertiary) and post qualification • Continuous review and analysis of SAICA offerings (aligned to the above development needs) • Develop a robust strategy • Share summary scenario planning document with members

	<p>Implications for profession</p>	<p>Implications for training and Development *pre (initial professional development) and post qualification (continuing professional development)</p>	<p>Now what, SAICA?</p>
<p style="text-align: center;">3</p> <p style="text-align: center;">Dissemination of non-credible information</p> <p style="text-align: center;">AND</p> <p style="text-align: center;">functioning state (resilience)</p>	<ul style="list-style-type: none"> • Profession to play a more prominent role iro credible information (more in demand to provide advice) • More prominent role on dissemination of information that is credible (standards) • Building a reputation for providers of creditable information • Go-to source for foreign investors for credible information • New partnerships, establishment of partnerships to promote credible information dissemination (financial and non-financial) • Build public trust in being the body that provides credible information through its members 	<ul style="list-style-type: none"> • Assurance training (on credibility of information) • Governance and risk management training • Digital acumen (including Blockchain training, RPA, and cyber security etc) • Due diligence training • Advanced data analytics training 	<ul style="list-style-type: none"> • Review of the CA Pathways to relevance framework in both pre (from tertiary) and post qualification • Continuous review and analysis of SAICA offerings (aligned to the above development needs) • Standards and guidance on how to prepare credible information • Develop a robust strategy • Share summary scenario planning document with members

	<p>Implications for profession</p>	<p>Implications for training and Development *pre (initial professional development) and post qualification (continuing professional development)</p>	<p>Now what, SAICA?</p>
<p style="text-align: center;">4</p> <p style="text-align: center;">Dissemination of non-credible information</p> <p style="text-align: center;">AND</p> <p style="text-align: center;">failed state resilience</p>	<ul style="list-style-type: none"> • Loss of skills from the country • High cost of investing • Sustainability of the profession (reputation, declining pipeline) 	<ul style="list-style-type: none"> • Innovative and other useful sources of information • More understanding of the law (language used in law) • More understanding of governance processes (best practice and standards) • Help line for dealing with unethical practices • Further training on NOCLAR and code of conduct • Development of Advisory skills (including advice on high debt, business rescue, foreign capital investments, risk analysis and risk mitigation) • Support AGSA findings broader than just SAICA membership base • Promotion of tech to verify data in the “failed state” • Digital acumen (including Blockchain training, RPA, etc) 	<ul style="list-style-type: none"> • Review of the CA Pathways to relevance framework in both pre (from tertiary) and post qualification • Continuous review and analysis of SAICA offerings (aligned to the above development needs) • Advocacy role played by the professional body • Develop a robust strategy • Thought leadership / courageous conversations • Support for our members • Share summary scenario planning document with members

8 FINAL COMMENTS

Scenarios reveal our expectations about how existing trends could evolve, how critical uncertainties could play out and what new factors could come into play. A set of scenarios will never offer a complete representation of the future because it is not the only probable construct of uncertainties and is not based on exact or the only assumptions about driving forces or how trends could evolve. But, they hold the promise of 'rehearsing' plausible futures, presenting opportunities to deepen insight, enrich debate and advance a collective understanding of where and how stakeholders can influence the future.

The authors would like to conclude by offering a selection of proposals:

- That the scenarios be used as an input in the forthcoming SAICA Board strategy session.
- That the scenarios be presented to all stakeholders in the form of a webinar.
- That SAICA members be invited to use the scenarios to co-create strategy
- That a synopsis of the exercise be included on SAICA website
- That the authors of this report be encouraged to publish 2-3 articles on the research in appropriate journals

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