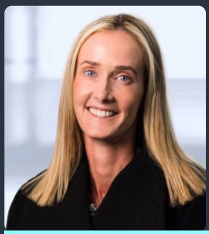
STANLIB

STAND POINT

Q2 | July 2023

Expert insights & fresh perspectives

In this issue



From our STANDPOINT

A note from our Head of Institutional Distribution

Tracy Coetzer

Heavy weather ahead

The skies are darkening over the global economy as we reach the halfway point of the year. Although there are signs that inflation is cooling, the stress in the banking sector has increased the risk of a US recession, the war in Ukraine still threatens broader geopolitical tensions and China's post-reopening economic surge in Q1 is already losing momentum.

Locally, the rand has plumbed new lows against the dollar. The markets' confidence in SA, already corroded by the self-evident indictment of load-shedding, has been further affected by the apparent change in SA's neutral stance, to be more allied with Russia. Aside from the risk of international sanctions, it is worth considering that the African Growth and Opportunities Act, under which SA's citrus farmers export 100,000 tonnes of fruit every year to the US, is due to expire in 2025 and will be discussed in US Congress over the next 18 months. Presumably acolytes of Vladimir Putin need not apply. If the bears needed yet another reason to sell the rand, slowing Chinese growth inevitably casts a long shadow over global commodity prices and South Africa's trade balance. Forecasts of SA's GDP growth are being revised downwards and unemployment is creeping up once again.

This all sounds like one-way traffic; precisely the environment in which experienced portfolio managers with a strong grasp of fundamentals and a long view can be contrarian and make great returns for their investors. With that in mind, in this edition of STANDPOINT we have gathered the thoughts of some of our leading managers and analysts to feed our clients' thinking above and beyond the daily headlines.

Rademeyer Vermaak, Head of Systematic Solutions, blows away some of the misconceptions surrounding style investing; he explains that it is an active, smart and consistent way to build portfolios. His team combines multiple styles (value, quality and growth) simultaneously to generate superior returns: STANLIB's multi-style approach has outperformed any single-style approach since 2016, with lower volatility.

Kevin Lings, STANLIB's well-known Chief Economist, discusses why the price of food, which is the single largest component of SA's Consumer Price Index, continues to rise in SA while it is decreasing in the rest of the world. He expects SA's food prices to trend lower in late 2023-2024, if a few conditions are in place.

Kholofelo Molewa, Portfolio Manager of the STANLIB Khanyisa Impact Investment Fund, delves into the complexity of SA's electricity supply crisis. Whatever solution is found must 'thread the needle' of simultaneous challenges: to keep the nation's lights on while bringing on the Just Energy Transition, all the while protecting South Africa's many communities who depend on the coal economy. It will demand leadership and joined-up thinking by government.

South African Government Bonds (SAGBs) present a compelling investment case, argues STANLIB's highly-respected Head of Fixed Income, Victor Mphaphuli. They are currently offering a real yield of at least 5% (as at 31 May 2023), and while we are braced for heightened volatility in the next two quarters as central banks continue reacting to the data, Victor believes that SAGBs are now priced for a lot of bad news. On a 12-month view, Victor says, bonds will again prove their worth as a diversifier in equity-centric multi-asset portfolios.

We trust you will find this edition of STANDPOINT thought-provoking. To continue the nautical metaphor above, we look forward to helping you ride out any storms that may come and to be ready to hoist your sails when the mercury rises.

Kind regards,
Tracy Coetzer

In conversation with Rademeyer Vermaak: A masterclass on multi-style investing

By Rademeyer Vermaak, Head of Systematic Solutions

AT A GLANCE

- *Style investing means the investment strategy of seeking out stocks with specific fundamental characteristics, e.g. value or growth. It requires active investing, but does so in a disciplined, consistent and systematic way, which eliminates behavioural biases.*
- *The optimal time horizon for this blended approach is 12 months, so different segments of the portfolio are rebalanced once a year.*
- *STANLIB Systematic Solutions has found that combining three different investment strategies (value, quality and growth) produces superior portfolio performance and removes the need to "call the cycle".*
- *Deploying this strategy, the STANLIB Enhanced Multi Style Equity Fund has outperformed its FTSE/JSE Capped Swix All-Share benchmark over three, five and seven years.*

Since 2016, STANLIB's Enhanced Multi Style Equity Fund has combined human ingenuity and world-class data analytics to deliver consistent, market-beating returns at low cost. Citywire rates Rademeyer Vermaak, the Head of STANLIB Systematic Solutions, as one of the top equity portfolio managers in SA. We find out how he and his team approach investing.

After graduating with a Masters in Electronic Engineering from the University of Pretoria, Rademeyer worked as an electronic engineer before transitioning to the financial services sector. He worked in quantitative analysis and fund management in London before returning to SA in 2012 to join Fairtree Asset Management as Head of Quantitative Research and portfolio manager of the multi-factor product suite. At Fairtree, Rademeyer successfully developed and managed equity, hedge, and multi-asset funds, and built up a team of quantitative analysts. In 2019 he joined STANLIB. Today he is the portfolio manager responsible for the multi-style equity funds, multi-asset funds within the Systematic Solutions team, index tracking and completion strategies.

1. How would you explain style investing?

There are many strategies to invest in equities, and each one offers investors a different set of risks and rewards. A concentrated, unconstrained active portfolio, which relies on the daily thought processes of an individual manager, is a different proposition from an index tracking fund, which simply delivers the performance of the market. Between these two points lies a curve of investing philosophies, from active to passive and from entirely human to strictly systematic.

> "**Style investing cuts across this active-passive duality by strategically seeking out stocks with specific fundamental characteristics (value, growth, quality, etc.).**"

Data shows that investors consistently reward this approach. The nuances of how a fund invests in a given strategy, or combination of strategies, is down to the manager.

This approach is active, fundamental investing but achieves this in a disciplined, consistent, and systematic way, which eliminates behavioural bias.

I believe style investing is the most rational way to invest in markets. Ben Graham, the grandfather of value investing, observed that markets may behave like voting machines for periods of time (irrational) but perform as weighing machines in the long run (rational). This gives style managers the confidence to persist through periods when their chosen strategy is out of favour.

The world is an uncertain place, of course styles can underperform for years, and not every investor has infinite patience. As John Maynard Keynes famously said, 'Markets can remain irrational for longer than you can remain solvent'.

There are many ways to 'do' style investing. One value fund manager may simply buy the stocks with the lowest price/earnings ratios, while another may trade less frequently or apply other qualitative or quantitative filters to a simple value metric.

Given the abundance of data available from decades of daily stock moves and affordable computing power, perhaps data scientists should have arrived at a single 'super style'. But there are endless ways to express the concept of style investing.

2. When did you first become interested in style investing?

After I joined Fairtree, a client sent me a fascinating paper by Haugen and Baker about investing in low-volatility stocks. This introduced me to the idea of simultaneously evaluating multiple stocks based on a specific characteristic. I ran the strategy in Excel as a bit of an experiment, and the results blew my mind.

The alpha that it generated was on a different planet to the macro timing and Commodity Trading Adviser (CTA) strategies that I had been researching until then. That's when my fascination and obsession with style investing began.

3. How would you describe your multi-style investing methodology?

Style investing began with single-style strategies. This is intellectually 'pure', but our research suggests (and our performance confirms) that combining a number of strategies produces superior portfolio performance. We use three investment strategies: value, quality, and growth. To be clear, we do not put the portfolio into three buckets, each of which separately buys cheap stocks, growth stocks and quality stocks. We invest at the intersection of quality, value and growth, which means that we analyse every stock in our universe and judge its attractiveness based on all three strategies at the same time, so we are effectively looking through three different lenses simultaneously. We then judge the stock's attractiveness based on its overall score, which is the average of its score for each of the individual styles.

The following chart shows how our multi-style approach has outperformed any single style since 2016, with much lower volatility.

No Style Bias: A diversified style approach removes the need to call the cycle.
Over time, blending styles outperforms any single factor. Bottom up > Top down

Rank	2016	2017	2018	2019	2020	2021	2022	2023 (March '22)	Cumulative
Best	Quality	STANLIB Enhanced Multi Style Equity Fund	STANLIB Enhanced Multi Style Equity Fund	Growth	Growth	Value	STANLIB Enhanced Multi Style Equity Fund	Market	STANLIB Enhanced Multi Style Equity Fund
	STANLIB Enhanced Multi Style Equity Fund	Market	Quality	Style EW	STANLIB Enhanced Multi Style Equity Fund	STANLIB Enhanced Multi Style Equity Fund	Growth	STANLIB Enhanced Multi Style Equity Fund	Growth
	Market	Growth	Market	Value	Market	Style EW	Market	Growth	Market
	Style EW	Style EW	Style EW	Market	Quality	Market	Style EW	Value	Style EW
	Value	Quality	Value	STANLIB Enhanced Multi Style Equity Fund	Style EW	Quality	Quality	Style EW	Quality
Worst	Growth	Value	Growth	Quality	Value	Growth	Value	Quality	Value

Source: Peresec Bloomberg

4. *How would you characterise the portfolios that your methodology produces?*

The practical result of our approach is that our portfolio is simultaneously cheaper, better quality and higher growth than its benchmark. We achieve this by excluding stocks in the index which we find unattractive. These would include popular stocks which are too expensive for what they offer and unpopular ones which are not cheap enough, given their poor underlying characteristics. This sounds straightforward but it is not – the magic lies in the unlocking of mispriced securities at the intersection of quality, value and growth. The underlying signals we use within each strategy, and the complex way in which we blend them, are the products of deep research. That is part of our secret sauce.

To use a rugby analogy: by picking stocks that score well across all our styles we are like a team with a strong kicking backline that can play the whole game in the opposition 22, where we have a greater chance of scoring. The odds are in our favour. Our sensible approach also gives us a good chance of outperforming our benchmark because our methodology produces a portfolio which is "better than the benchmark" across most fundamental metrics, as well as very different from the index.

This table shows our top holdings in the left-hand column. The columns on the right show the top holdings of the benchmark and five leading active equity funds. Our stocks are in purple, and blue stocks are the ones we do not own. Statistically our portfolio averages an 'active share' against its benchmark of 54%, which is pretty high in a South African context.

Differentiated: We look different, but not for the sake of looking different

*STANLIB Enhanced Multi Style Equity Fund	Capped SWIX Index	Fund A	Fund C	*Fund N	*Fund T	Fund I
Glencore	Naspers	British American Tobacco	Prosus	Prosus	Naspers	Naspers
Exxaro	FirstRand	Naspers	Standard Bank	ABSA Group	ABSA Group	FirstRand
Investec PLC	Anglo American	Glencore	Anglo American	Anglo American	British American Tobacco	ABSA Group
Naspers	MTN	AB InBev	Nedbank	FirstRand	Glencore	MTN
FirstRand	Prosus	Woolworths	Impala Platinum	Glencore	Impala Platinum	Richemont
ABSA Group	Standard Bank	Nedbank	Momentum Metropolitan	Sasol	Sasol	Impala Platinum
Richemont	British American Tobacco	Mondi PLC	MTN	British American Tobacco	FirstRand	Prosus
Thungela Resources	Impala Platinum	Standard Bank	AB InBev	Momentum Metropolitan	Investec PLC	Standard Bank
BHP	Richemont	Sibanye Stilwater	Richemont	Naspers	AB InBev	BHP
MTN	ABSA Group	Sasol	Sasol	Sanlam	Anglo American	Glencore

Source: Fund Factsheets

*Holdings as at end of Dec 2022

5. *By tradition, styles are defined by historical data. Do critics of this approach say that you are driving in the rear-view mirror?*

Our methodology deliberately looks forward, as we take into account a stock's projected earnings growth and the rate of change in the consensus earnings forecasts, among other things. Of course, it is true that we built our stock-selection strategy based on information contained in the data, but so does every investor. No matter what the strategy, predicting the market's behaviour in the future depends on an understanding of how it behaves. In the simplest terms, stock-pickers who buy a stock because they think an earnings surprise is coming up, do so because in their experience stocks tend to pop when good fundamental news hits the tape. We put a robust and formal framework around this experience.

6. *You are doing research all the time to improve your methodology. What is a good example of a new insight which you built into your approach?*

One of the research insights we have incorporated relates to how frequently we rebalance the portfolio. This is a particularly important aspect of any style strategy. In theory, we could rebalance every day to reflect moves in market prices, but over-trading damages performance through transaction costs. On the other hand, by just buying and holding for years, we could miss opportunities to take profits on stocks that perform and add stocks that have become attractive. We have done a lot of research (and recently published a peer-reviewed paper in the Journal of Portfolio Management) on how long it typically takes for styles to 'work'. We found that 12 months is the optimal practical time horizon for our selection of investment strategies.

There are many ways to 'do' style investing. One value fund manager may simply buy the stocks with the lowest price/earnings ratios, while another may trade less frequently or apply other qualitative or quantitative filters to a simple value metric. Given the abundance of data available from decades of daily stock moves and affordable computing power, perhaps data scientists should have arrived at a single 'super style'. But there are endless ways to express the concept of style investing.

7. *What is the best way to understand how your strategy sensibly combines human ingenuity and consistent, systematic principles?*

We like to say that we are systematically applying the fundamental principles of active stock investing. This means that

> **"our investors benefit from a deep understanding of how the market works without being exposed to the behavioural flaws which affect all human decision-making."**

Every finance professional uses some form of technology, from a simple Excel spreadsheet on a laptop with a Bloomberg screen, to multi-dimensional databases in the cloud. We use our proprietary technology to find and verify the deep but intuitive drivers of the stock market and then sensibly fine-tune our methodology accordingly.

> **"Technology is a force-multiplier for our human thinking."**

Our brand of style investing demands technology. The human mind is brilliant but, unassisted, cannot crunch enough data to arrive at the insights that drive systematic investment returns.

A useful analogy would be to think of a classic active equity manager as an old-fashioned treasure hunter armed with a shovel, digging holes on a beach. Our investing methodology is like a team of thousands of treasure-hunters armed with metal detectors who only stop to dig when they hear a 'beep' on their headphones. In this metaphor, our portfolio managers direct the treasure-hunting team, seeing where they are having success and then telling the rest of the team where to focus their efforts. I use that metaphor because it paints a picture of how much more 'ground' we can cover than traditional operators. Stopping to dig a hole is a good analogy of the time-consuming reality of old-fashioned bottom-up stock selection.

8. *How do you think investors should deploy your fund within their overall portfolio?*

Consider a portfolio of equity funds as a soccer team. Each player has a specific task, and the team would fail dismally if it consisted of 11 goalkeepers. A successful team needs strikers who are capable of moments of genius, defenders who are tireless rather than creative, and an agile goalkeeper. Our fund is the dependable midfielder who connects defense with attack and gives the other players the freedom to shine.

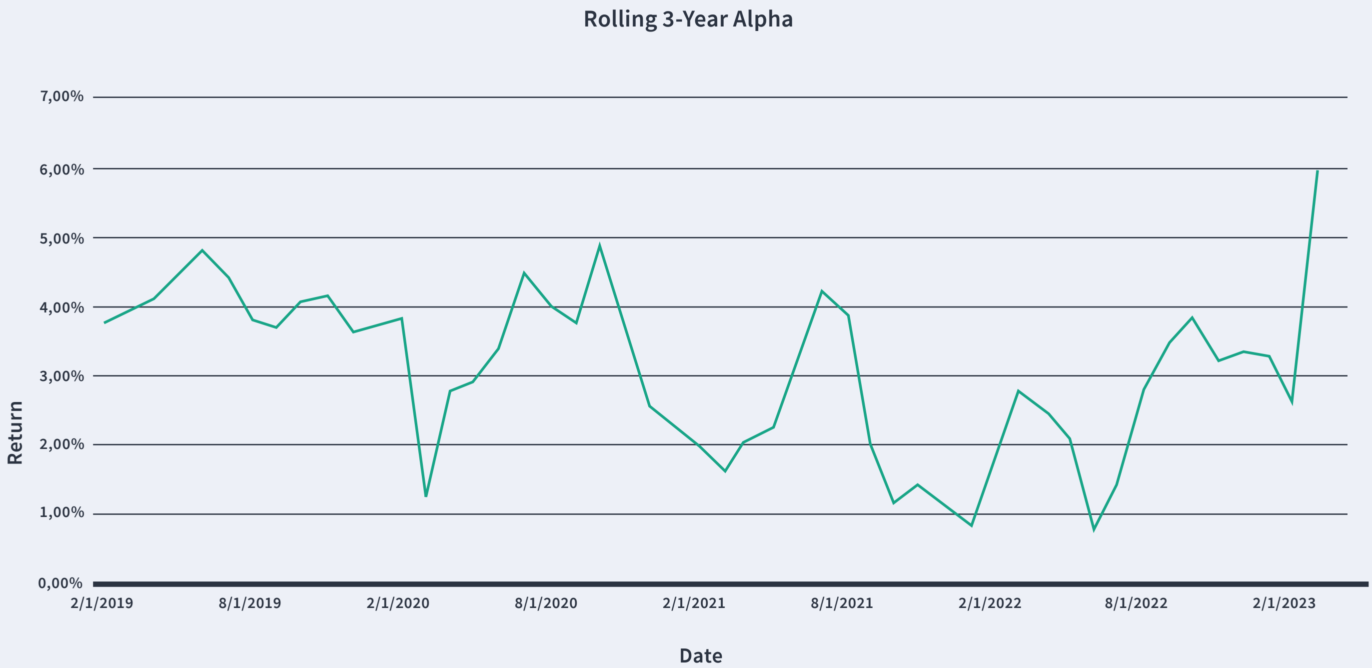
We think that our fund provides the perfect core for an investor's equity exposure. Firstly, because our approach is well-balanced rather than focused on a single style which can fall out of favour for a long time. Secondly, we generate persistent alpha with little if any correlation to most other active strategies. Thirdly, our fees are much lower than most active strategies, despite consistently delivering an exceptional active process.

Finally, our investors know we apply our process consistently. Our goal is to deliver 'top quartile performance at bottom quartile cost' and the data is clear. We have outperformed our benchmark over any rolling three-year period since inception - that's a 100% hit-rate.

9. *At the end of the day investing is about returns. What has the fund historically delivered for investors?*

You're right – as they say, the proof of the pudding is in the eating. We are happy to talk about our numbers. The fund has outperformed its FTSE/JSE Capped SWIX All-Share benchmark over the last three, five and seven years. Since inception it has outperformed by 230 bps per annum, placing us comfortably in the top quartile amongst peers over that time. We think that is a really solid performance, particularly given the various market cycles and volatility we have experienced over the last seven years.

Persistent Alpha Through the Cycle
Over rolling three years, the fund has never disappointed: **100% Hit Rate**



Source: Bloomberg, as at 31 March 2023

Global food price inflation is easing, but South Africa is lagging

Kevin Lings, Chief Economist, STANLIB

AT A GLANCE

- *SA's food prices were up 14.4% year on year in March 2023, the highest rate of food inflation since March 2009. Food inflation has since eased to 12%, but this is still well above target. Food is the biggest single component of the CPI, accounting for over 15% of the basket.*
- *The main factors influencing domestic food prices are a weaker rand, load shedding, the need for producers and retailers to restore profit margins, and the deterioration of infrastructure, especially in rural areas.*
- *Global food prices retraced from their highs in the first half of 2022 but SA's food inflation has remained stubbornly high.*
- *SA's food inflation is expected to moderate to an average of 5.5% in 2024, assuming a continued slowing in global food inflation, an easing of electricity outages, an improvement in summer crop production, a stable rand and a stabilisation of margins in the food supply chain.*

South African mobsters seem to want to get their hands on a new category of valuables: cooking oil. Willowton Group, the maker of Sunfoil cooking oil, suffered several robberies in October 2022. Gunmen stormed a facility in Durban and three loaded trucks were stolen from a warehouse in Kempton Park.

The idea that gangsters would risk their liberty for a few gallons of liquid gold reflects an underlying reality that is no joke for South African consumers. According to the Competition Commission, in the first six months of 2022 the price of cooking oil rose by 72% due to a shortage of supply, rising input costs and producers chasing wider margins.

> **"Consumer price index (CPI) data shows overall food prices in SA were up 14.4% year-on-year in March, the highest rate of inflation since March 2009. Food inflation has since eased to 12% in May but remain stubbornly high."**

The prices of bread and cereals rose 20.3%, while maize meal, the staple diet for many South Africans, was around 35% more expensive than it was in the same month in 2022. Food is the single largest component of SA's CPI, accounting for over 15% of the basket.

Impact of global events

In February 2022, almost two years after the beginning of the Covid-19 pandemic, global food inflation was finally starting to slow when Russia invaded Ukraine, plunging one of the world's great agricultural exporters into a war of survival. Ukraine accounts for at least 10% of the world's wheat supply, 15% of its maize and around 50% of its sunflower oil. Meanwhile sanctions against Russia significantly tightened the supply of crude oil; in the weeks following the invasion, the price of crude oil surged from $79 per barrel at the end of 2021 to a high of $124 per barrel in early March 2022.

The prices of these commodities naturally spiked, reflecting not only the threat of reduced supply but also the impact of higher oil prices on the cost of producing and transporting fertiliser and food itself.
Consequently, global food inflation re-accelerated, averaging 25.2% in the first half of 2022, as global markets digested the prospect of food insecurity. There was hoarding at all levels of the system, further exacerbating upward pressure on prices. Subsequently, global food inflation has plunged to -20.9% year-on-year in June 2023, averaging -15.8% in the first half of 2023.

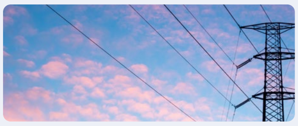
This welcome retreat in global food prices reflects a combination of factors:

- the elimination of almost all Covid lockdown measures around the world
- the easing of the blockade by Russia on Ukrainian ports in August 2022
- a statistically high base effect given the prior surge in prices
- the drop in international oil prices (Brent crude is down around 4% in the past four months to around $82 per barrel), and
- a better-than-expected wheat harvest in Ukraine in 2022.

SA's food inflation is hit by other events

SA's consumer food inflation has remained extremely high in 2023, for several reasons. There is typically a lag of about three to six months before a fall-off in international commodity food prices reflects fully in SA's consumer food inflation. However, a number of factors have combined to keep food inflation trending higher:

While a relatively small portion of SA's food consumption is imported, most domestic agricultural commodities track global prices. International food prices have softened, but the rand has weakened by around 13% against the dollar during the past year to end June, so the rand equivalent of those international prices remains high.



SA has experienced more than 250 days of load shedding since October 2022, disrupting food production and increasing costs significantly for a wide range of manufacturers, including food retailers who need to keep fridges running 24 hours a day. Higher operating costs, greater wastage and supply disruptions have undoubtedly contributed to the continued acceleration of domestic food inflation.

During the 2020/21 surge in international food prices, many South African food producers and retailers tried to absorb the bulk of additional cost pressures, hoping that this would be short-lived. They were concerned that households would be unable to afford a substantial increase in prices. However, the persistence of a range of cost pressures has forced most producers and retailers to raise prices in an effort to restore profit margins.

The ongoing deterioration of SA's infrastructure, especially in rural areas, has compromised the efficiency of the agricultural supply chain, including crop irrigation, food storage and export capacity at the ports. This has added a layer of costs which has made its way into higher end-prices for food.

> **More positively, SA's food inflation is expected to moderate to below 10% by the end of 2023 and fall further to an average of 5.5% in 2024.**

This projected slowing in domestic food price inflation assumes:

- *the sustainability of low global food inflation*
- *some easing of SA's electricity outages in late 2023 and early 2024*
- *an improvement in SA's agricultural season for 2023/2024*
- *a stable rand*
- *a stabilisation of profit margins in the food supply chain*

There are various risks to this forecast. These include sustained high fertiliser prices, a worsening of electricity outages during the unforeseen breakdowns, and the impact of climate change on domestic food production. SA has experienced four years of above-average rainfall, which is unlikely to persist.

Fortunately, SA's agricultural output remains encouraging, while the domestic food supply chain is in the process of adjusting to the various pressures in the system. This should allow domestic food inflation to moderate significantly over the next 12 to 18 months, bringing some welcome relief to households across South Africa.

How the electricity crisis is posing a threat to the country’s economic growth

Kholofelo Molewa, Credit Alternatives Portfolio Manager

AT A GLANCE

- *SA’s electricity crisis poses a threat to economic growth, government’s credibility and the daily lives of its citizens. The obvious solution is to invest in more renewable generation, but the realities of the situation are complex.*
- *The Energy Minister is determined to extend the life of the coal-fired plants, but this should have a hard deadline and be handled by external contractors with strict KPIs.*
- *Policy makers face a delicate balancing act: SA needs to stabilise existing coal-fired generation while moving to a low-carbon future, but without destroying jobs in the coal sector.*

We are just over six months into the year, but very soon Eskom’s load shedding in 2023 will exceed the 11.8 GWh that it failed to supply over the whole of 2022.

SA’s electricity crisis poses an existential threat to the country’s economic growth, government’s credibility and the daily lives of its citizens. The obvious solution might seem to be to encourage the private sector to invest in more renewable capacity, which will meet both SA’s energy needs and its climate goals. However, the reality is more complex.

Policy makers must ‘thread the needle’, simultaneously stabilising existing coal-fired generation and driving forward the country’s transition to a low-carbon future, but without destroying the millions of South African livelihoods that depend on coal. The hard reality is that load shedding will persist as long as the coal fleet continues to operate at dismally sub-optimal levels. So we have to ask: what are the short-, medium- and long-term trade-offs?

In his State of the Nation address in February 2023, President Ramaphosa announced that he would create a new cabinet post, the Minister of Electricity, to co-ordinate the State’s response to the ongoing energy crisis.

In March he confirmed that Dr Kgosientsho Ramokgopa would take on this responsibility. Dr Ramokgopa has proposed a two-pronged approach: fixing the existing fleet of coal-powered assets while bringing on new private-sector capacity.

So far so sensible, but successful execution of this plan will depend on a variety of factors. The most important will be government's ability to satisfy its partners in the labour movement that the transition away from coal to renewables will indeed be 'just'. It will also depend on the new minister having the authority to decide the fate of Eskom's coal-fired fleet, a prerogative which Section 34 of the Electricity Regulation Act currently bestows on the Department of Mineral Resources and Energy (DMRE), headed by Minister Gwede Mantashe.

During the course of writing this article President Ramaphosa has devolved certain powers to Dr Ramokgopa including the prerogative to:

- determine that new generation capacity is needed to ensure the continued uninterrupted supply of electricity
- decide from which energy sources electricity must be generated, and each source's share of generation
- set out how and to whom the new generation may be sold
- require that new generation capacity must be established via a tendering procedure which is fair, equitable, transparent, competitive and cost-effective
- provide for private sector participation – across the board, including ramping up efficiencies in Eskom itself
- oversee all aspects of the electricity crisis response, including the work of the National Energy Crisis Committee (Necom)
- work full-time with the Eskom board and management to end load-shedding and ensure that the Energy Action Plan announced by the President is implemented without delay.

These powers were officially transferred to Dr Ramokgopa by President Cyril Ramaphosa on 27 May 2023 in terms of Section 97 of the Constitution and Section 34 of the Electricity Regulation Act. Other powers and functions contained in the Electricity Regulation Act – including those related to the implementation of determinations made in terms of Section 34 – will remain with the Minister of Mineral Resources and Energy, Gwede Mantashe. So effectively the two ministers must still work together; we must hope that they can collaborate in a way that removes bureaucratic friction rather than adds to it.

Much of the detail has still to be worked out, but the clarification of Dr Ramokgopa's powers is a welcome turn of events.

President Ramaphosa signalled his government's support for the private sector in July 2022 with a raft of measures, including a doubling of Bid Window 6 from 2.6GW to 5.2GW, rooftop feed-in tariffs and the removal of licensing thresholds to facilitate private investment in utility-scale generation projects. According to Eskom, IPPs have applied for grid access for projects representing 20GW of capacity, which is equal to six load-shedding stages. This number does not even include the projects under the government's Renewable Energy Independent Power Producer Procurement Programme (REIPPPP), which have already contracted 6.4GW of capacity.

To put these numbers in context, the government's 2019 Integrated Resource Plan (IRP) – the long-term roadmap which guides investments in new capacity – envisaged total installed renewable (wind and solar) capacity of 15.6GW by 2025 and coal-fired generation in that year of 39.4GW (after decommissioning some plants). Four years later the prospects for private sector renewable capacity has ramped up significantly. In two years' time, renewables' share of SA's power generation will be at the level which the IRP envisaged would only be reached in 2040 – that is, renewable capacity is developing 15 years faster than expected.

Article 4.5 of the Paris Agreement enshrines the principle that the developed world has an obligation to support the developing world's efforts to combat climate change. Under the Just Energy Transition Partnership (JETP), the US, UK, France, Germany and the EU are committed not only to helping SA to achieve its emission reduction targets, but to do so in a way that 'recognises the direct and indirect impact that the energy transition has on livelihoods, workers and communities'.

As ever, policy objectives are just words until the money is found to pay for them. In this case, the objectives of the JETP will be realised on the ground through the Just Energy Transition Investment Programme (JET-IP) announced in October 2022. Under JET-IP, these international partners have committed US$8.5 billion as seed funding for a R1.5 trillion investment programme designed to transform SA's energy sector between 2023 and 2027.

If the IPP roll-out takes place as expected, will it give Dr Ramokgopa and his colleagues in cabinet, the fiscal and political space to consider extending the life of coal-fired power plants? The government has to juggle the imperative to keep SA's lights on with its obligations under the JETP. These obligations are contained in the sustainable development plan (SDP) framework, under which the South African government is committed to achieving net zero emissions by 2050.

Under the JET-IP framework, three of Eskom's 15 coal-powered plants will be decommissioned: Komati (under way), Hendrina and Camden. But to avoid the catastrophic costs of load shedding, government has to ensure the remaining 12 power stations keep performing.

> “To put this in context, the Council for Scientific and Industrial Research **estimated load shedding costs about R91/kWh, versus a levellised cost of electricity for wind of R0.46/kWh** or Eskom's average tariff for large industrial users of R1.15/kWh in 2019/20.”

The largest item on the JET-IP investment plan is the cost of decommissioning and repurposing coal plants. Given the size of the Eskom workforce at these plants, the social impact of a low-carbon future is obvious. It is hard to see a political future for any transition away from coal if it does not address the interests of labour and local communities. The support of the unions is essential to the political sustainability of both Eskom's and the government's attempts to realise the JET-IP's objectives.

The Congress of South African Trade Unions (COSATU) has been publicly supportive of the JETP, calling it a 'historic breakthrough' and a 'game-changer' for SA's developmental and climate goals. COSATU has also been involved in developing a social compact with the government and other stakeholders to ensure that workers' rights and livelihoods are protected in the transition.

COSATU's leadership might be singing from the government's hymn sheet, but within its membership there are differing views. The National Union of Mineworkers (NUM) is more sceptical of the JETP, as it is unconvinced by promises to cushion the impact on workers and their communities of closing coal mines and power stations.

The National Union of Metalworkers of South Africa (NUMSA) is even less on board. Its leadership has opposed the JETP, calling it a 'neocolonial project' that undermines SA's sovereignty and democracy. NUMSA has also accused the JETP of being a bailout for Eskom.

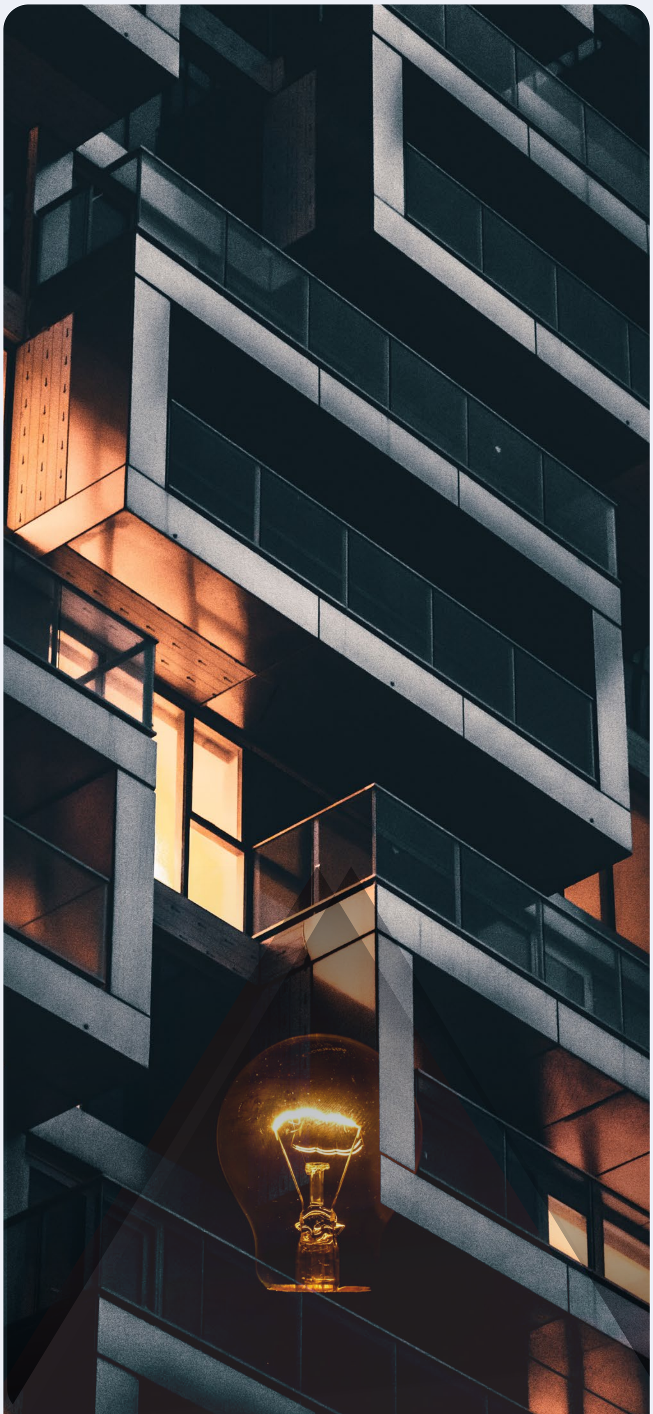
It believes that the JETP will not address the root causes of Eskom's crisis, such as corruption, mismanagement, and privatisation.

Dr Ramokgopa has argued that one of the ways to reconcile all interests would be to agree to a finite extension plan for Eskom's coal plants. This would need to have a hard deadline, explicitly informed by detailed costing and technical assessments.

Given that one of the conditions of National Treasury's bail-out of Eskom is no new capex related to the existing generation fleet, the life extension of these plants (and ultimately their redirection away from coal) would mainly be handled by external Operations and Maintenance (O&M) and Engineering, Procurement and Construction (EPC) contractors. These O&M and EPC contractors could be set up as new stand-alone entities in which labour would be a shareholder. These entities would have contractual obligations to transfer skills and deliver economic benefits to workers and communities.

For example, the O&M contractor's obligations would include decommissioning and would be costed upfront. The O&M contract would specify detailed service levels and KPIs, including the Energy Availability Factor (i.e. percentage of uptime). The contractor would only be paid when performance criteria were met. If performance failed to reach minimum service levels, the contractor would be fined in cash. KPIs could also include climate and ESG criteria.

> "Under these arrangements, labour would have an opportunity to secure its future well beyond the life-cycles of these coal plants, which must be decommissioned sooner rather than later."

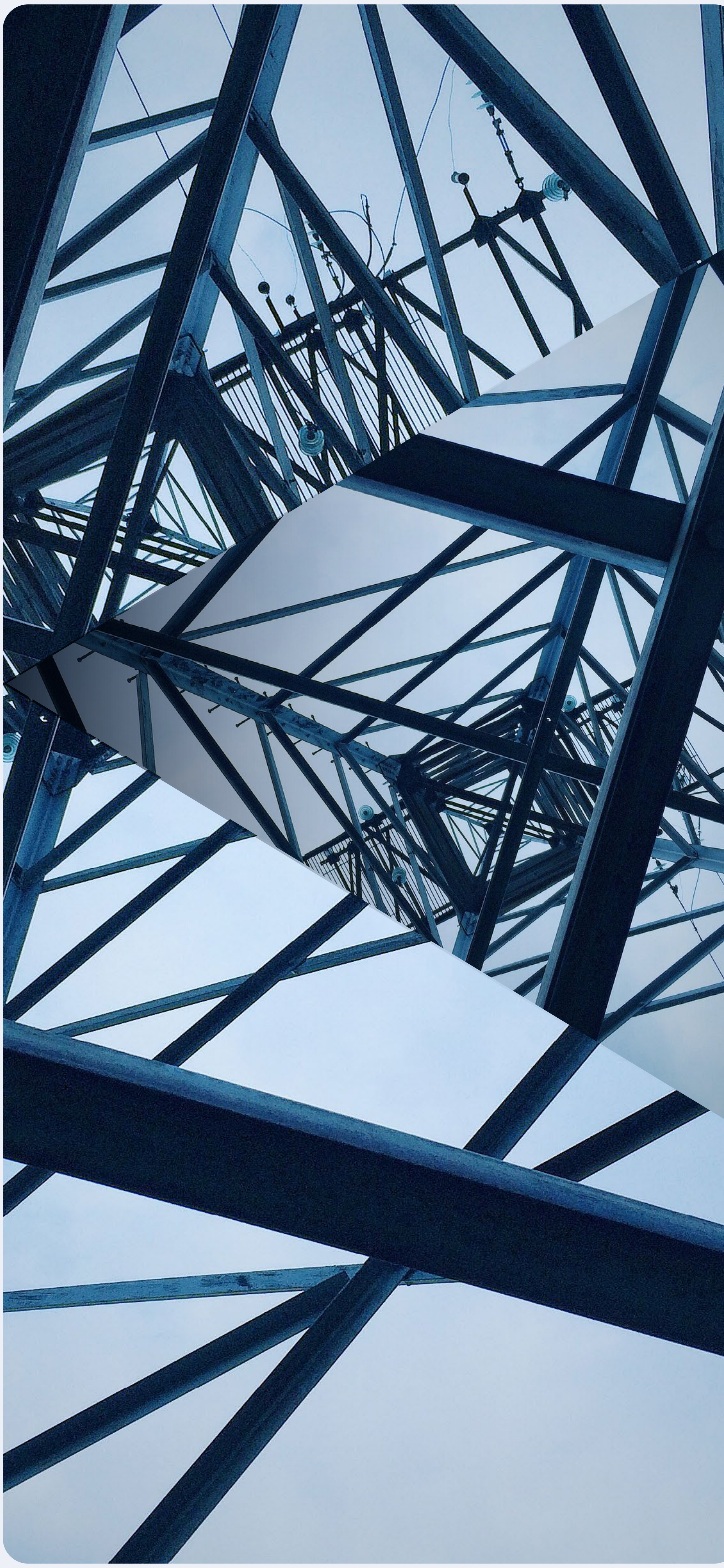


SA's energy crisis is a complex problem. Any politically-sustainable solution must reconcile the competing interests of stakeholders, who include labour, business, civil society and the international partners supporting JETP. The government must craft this solution while respecting its fiscal constraints, its environmental commitments and its social obligations. Encouragingly, the bail-out announced in the National Budget Speech has given the government important leverage over Eskom.

The Minister of Electricity's proposal to extend the life of some existing coal plants makes sense. Renewable capacity cannot ramp up fast enough to replace Eskom's coal fleet, even in the medium-term, and it will take time to implement the industrial strategy that will provide new forms of employment for the coal-dependent workforce.

> "To extend the life of those plants while encouraging private sector renewable capacity seems a practical way forward that should satisfy most of these interests."

However, this proposal would need to be carefully designed and implemented, with clear and transparent rules and incentives for all parties. It would need to be aligned with the broader vision and strategy for the country's energy transition, as outlined in the IRP and the SDP frameworks. Ultimately, the energy crisis is not only a technical and financial challenge, but also a political and ethical one. It requires leadership, collaboration and innovation from all sectors of society. Dr. Ramokgopa has his hands full.



SAGBs are priced for stormy waters but Minister Godongwana has a strong hand on the tiller

Victor Mphaphuli - Head of Fixed Income

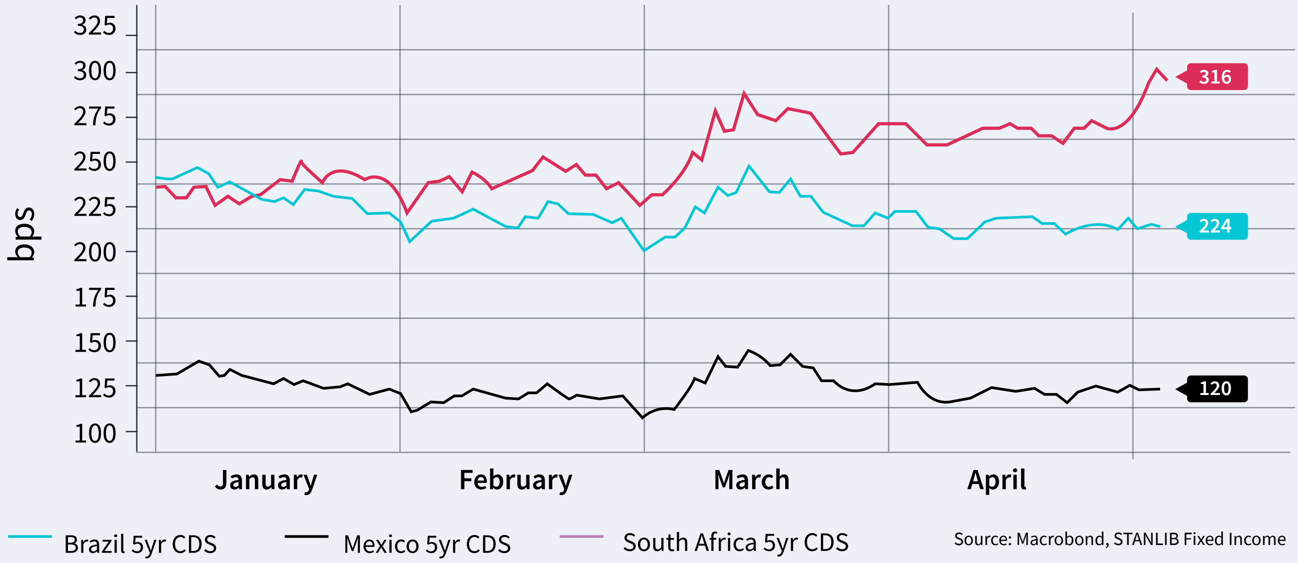
AT A GLANCE

- *We believe South African Government Bonds (SAGBs) offer compelling value at present, despite short-term headwinds. They are currently delivering a real yield of over 5% and National Treasury has demonstrated its commitment to fiscal discipline.*
- *Wage hikes for SA's public servants will be offset by job cuts, while bail-outs for SOEs come with conditions that will impose longer-term discipline.*
- *A significant tightening of bank lending standards is likely to follow the US banking crisis, leading to global recession which will harm other emerging market commodity exporters. However, this risk is already priced into SAGBs.*
- *The rand is now massively undervalued.*

2022 was the worst year in memory for bond markets. In 2023, despite short-term macro headwinds at both a global and local level, the recent large local cash bonds sell-off is making valuations attractive over the tactical horizon. After recent weakness, reflecting intensified load shedding and geopolitical tensions, the long end of the South African Government Bonds (SAGB) curve is now yielding over 12%, which means real yields are over 5%. These valuations are in 'compelling' territory for us and should be on the radar of tactical asset allocators. This is not to say that the next few months will be plain sailing, but taking a 12-month view, we are convinced that bonds will once again prove to be a valuable diversifier in multi-asset portfolios.

In the previous edition of STANDPOINT, we identified fiscal consolidation as an important component in determining fair value on SAGBs, given the plethora of challenges the government faced over recent years. What cannot be argued away is that the outlook for government's finances has improved dramatically since the dark days of the Covid-19 pandemic, when some market commentators were projecting that debt levels would approach 100% of GDP (which the market priced in). We can infer from the recent credit default swap market that traders have taken a dimmer view of SA's creditworthiness over the last few weeks but today we think that SA's sovereign credit story remains under-appreciated. Given the country's macro challenges, we do not rule out some fiscal slippage over the coming months, but we think that the 'meltdown scenario' of fiscal collapse is wildly unlikely.

Comparison of 5 year CDS spreads across EMs



Source: Macrobond, STANLIB Fixed Income
2023/05/15

Trouble for the banks

The US banking sector has been rocked by multiple fallouts, triggered by the secondary effects of higher interest rates. The Federal Reserve's steepest hiking cycle in living memory has simultaneously raised the banks' cost of funds, slashed the value of their bond portfolios and sowed fear among depositors. The Federal Deposit Insurance Corporation (FDIC) officially insures deposits up to $250 000, and stepped up to guarantee all of Silicon Valley Bank's deposits, but risk-averse depositors are still moving their money to bigger banks that are more likely to be seen by the Fed as systemically important. This funding instability could not have come at a worse time for the smaller regional banks that are heavily exposed to commercial real estate, since $270 billion of commercial mortgages will need to be refinanced this year at much higher rates and lower loan to value ratio (LTV)s.

A bank's risk appetite is unlikely to survive this confluence of events. A significant tightening of financial conditions is at hand which ordinarily should hasten the recession, although tighter labour markets have much to do with the delayed response. Outside of labour markets, all other indicators are pointing to a downward trend.

The US and other DM yield curves remain deeply inverted thereby calling for a recession.

Many emerging market (EM) economies are commodity exporters, so the prospect of a global recession casts a long shadow across the market's view of their export revenues, current account balances and the valuation of their sovereign debt. EM yield curves have steepened accordingly. However, we think that SAGBs are fully priced for idiosyncratic risk while giving National Treasury no credit for its increasingly assured performance. In the last twelve months the 10-year SAGB has sold off, SA's yield curve is the steepest among EMs and SA's credit default swap (CDS) spread has widened more than any other EM country of comparable stature.

We are braced for heightened volatility in the next two quarters as central banks continue reacting to the data, but we still think this is a great starting point for bonds within a tactical asset allocation framework.

> “In the coming recession we expect bonds will deliver outsized returns for fixed income investors and strong diversification benefits for equity-centric multi-asset portfolios.”

SA's growing fiscal sustainability

Our optimistic view of the South African government's finances is largely based on the discipline being demonstrated by National Treasury. We think despite a very challenging environment, some of which is out of their control, their intentions of meeting fiscal sustainability still hold. The current National Treasury team has clawed back much of the credibility lost during state capture. We think that SAGB valuations today reflect an excessively gloomy view of SA's fiscal trajectory, and offer value over the typical horizon for tactical asset allocation.

Almost two years in the job, we think that SA's Minister of Finance, Enoch Godongwana, has established his credentials by juggling competing priorities within a sensible framework. Markets have relatively low expectations of fiscal discipline in EMs, particularly when an election is on the horizon. So when South African government revenues were boosted by a R45 billion commodity windfall in 2021 and 2022, with the 2024 general election within sight, it was widely expected that National Treasury would open its purse strings.

As it was, the Minister held his ground, presumably spending personal political capital to do so, and reducing bond issuance instead. However, his good intentions are often challenged by other areas of government, which leads to a deterioration of confidence for the country.

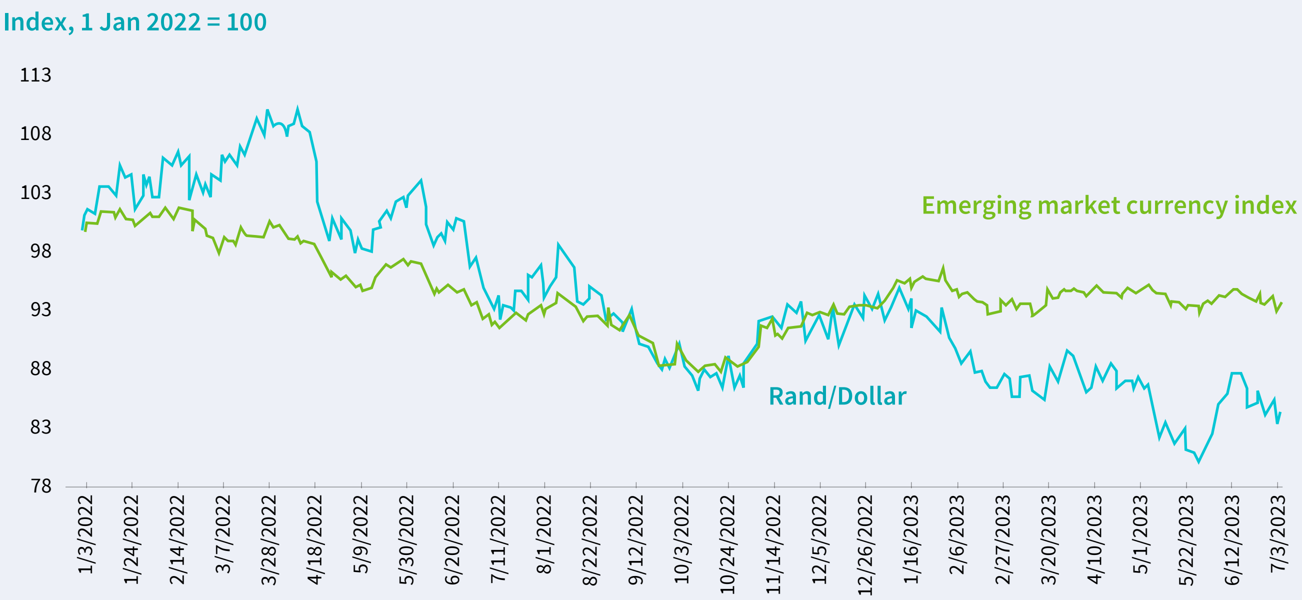
It is better to have the Minister in an environment like this, rather than one that can easily be swayed by political populist postulations meant to appease the voters. Countries where rhetoric is too loose usually suffer the consequences when capital leaves the country with no prospect of returning, e.g., Turkey and Argentina.

As he explained in his Medium-Term Budget Statement in October 2022, the country's debt burden has increased sevenfold since 2008, but on an annual basis the government's operating cashflow is about to 'break even'. He said, 'Yet by the end of 2023/24, revenue will exceed non-interest spending for the first time in 15 years. Net government debt will stabilize at 69 percent of GDP in 2024/25.'

This 'primary surplus' projection has come sooner than many expected but it may have to weather domestic challenges, including the impact of load shedding on GDP. Recently National Treasury narrowed the projected primary surplus to a wafer-thin 0.02% (and more revisions may still come if the economy sheds more growth) but the Minister's intentions are clear: he understands the profound consequences of losing the confidence of the markets and is prepared to make the necessary choices now to maintain it.

The short-term risks introduced by these challenges are still enormous as the currency and bond markets have reflected despite other EMs faring better. This year, the rand has underperformed EM currencies by a big margin because of local issues. The aftermath of the geo-political risks globally also led to a response from SA that led the global community's confidence dwindling, evidenced by foreigners selling our bonds and the currency weakening substantially. SA's response to the Russia/International Criminal Court issue, the threat of sanctions etc., has been quite negative and isolated the country in repricing these risks. Most of this is already reflected in the price of bonds.

Rand/US Dollar vs Emerging Market Currencies



Source: Analytics Consulting, Macrobond, 7 July 2023

In late February, the 2023 National Budget took a positive direction. STANLIB's Chief Economist, Kevin Lings, described it as a sensible Budget which 'read the room'. The Minister of Finance recognised that households are under pressure and made good on his promise to support Eskom while demonstrating a level of fiscal discipline that bond investors and ratings agencies will appreciate.

STANLIB's Fixed Income team agrees with Kevin's positive analysis of the Budget and are similarly encouraged by the desire to achieve primary balances over the next few years, although current challenges are throwing cold water on this. To achieve these primary balances, it is imperative that reforms that can lead to mitigating the challenges on growth, continue.

Public sector wages

The wage bill remains a bone of contention in the objective to achieve credible fiscal consolidation. Given the dramatic increase in South Africans' cost of living and the obvious opportunity that creates for the unions to prove their worth, we always suspected that the public sector wage hike would exceed the 3.3% that the Minister put in the Budget. The 7.5% hike that he declared may increase the Budget deficit a little but it came as no surprise. We think it is affordable and has been priced into SAGBs, although we accept that it did not improve the picture for the ratings agencies.

Confirming his commendable appetite for unpopular decisions, the Minister made it clear that public sector job losses are coming and that the wage increase will partly be funded by spending cuts in various departments.

> "The steepness of SA's yield curve demonstrates that the market is not willing to give the Finance Minister credit yet, but that creates an opportunity for the bond bulls."

No more free lunches: Eskom and the SOEs

The announcement in the February Budget that National Treasury would assume R254 billion of Eskom's debts over the next three years was not a complete surprise. However, at first glance it still appeared to confirm the widespread belief that the SOEs are irredeemably incompetent, and government lacks the will to hold them to account.

This perception ignores the fact that this debt relief comes with conditions which not only impose fiscal discipline on Eskom but also expose the organisation to independent scrutiny, while preparing the ground for increasing private sector involvement in SA's energy infrastructure. Seen in this light, despite the current optics of load shedding, time may prove that this bail-out was actually good value for money for the people of SA.

First of all, Eskom must submit to an independent review of its coal-fired capacity by an international consultant appointed by National Treasury. Then Eskom must implement the operational recommendations of that review. The consultants will also determine whether any of the existing power stations can be 'resuscitated to original equipment manufacturers' standards' and those that qualify will be concessioned to the private sector, with clear targets for energy availability and operations. Additional conditions include that:

- Eskom may only borrow to fund investment in transmission and distribution. No new generation projects may be funded.
- Any funds raised from the sale of non-core assets must be put towards debt relief.
- The debt relief can only be used for debt repayments and interest.
- Eskom may not make any adjustments to remuneration that will negatively affect its financial position.

Eskom is the highest-profile problem in the SOE stable, but we think that Minister Godongwana is also sending SANRAL, Transnet and the others a clear message that they can no longer expect the indulgence shown by his predecessors.

These bail-outs have naturally increased government's debt burden. The projected peak in the debt to GDP ratio has been pushed up and back, from 71.4% in 2023/24 to 73.6% in 2025/26. The unexpected severity of load shedding will inevitably push this peak higher, but we think it can still be accommodated although it is unlikely to be smooth sailing. In the short-term, the long end of the yield will still experience some challenges, but compared to peer countries, it sticks out. The most important point from our perspective is that the shape of the curve is intact: we are within sight of a peak in the ratio of government's borrowing to GDP from which it harvests its revenues.

Source: STANLIB, Bloomberg

Conclusion

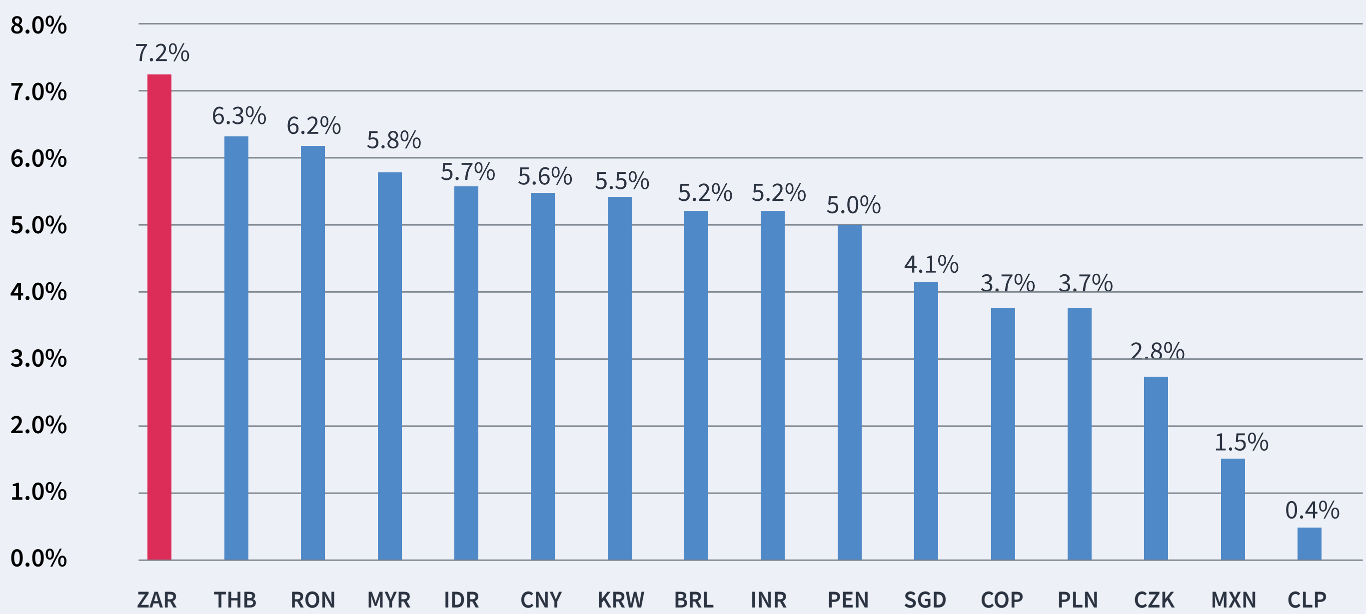
It should be clear that we strongly disagree with the prophets of doom who are writing off SA as a failed state and who consider its government's liabilities to be uninvestible. We think that investors who allow their heads to be turned by the current wave of sensationalist pessimism will miss a great opportunity to earn good returns on bonds, the pricing of which now reflects a significant amount of bad news.

The currency has been one of the main release valves for pressure. It has been crushed in recent weeks and we believe strongly that it is massively undervalued, as the graph below indicates against our EM peers.

At the same time, we are not blind to the challenges that SA faces. The yield gap between SA and US for benchmark 10-year bonds implies a bond risk premium of 730 basis points which in line with the median over the last 12 months, which were volatile. We recognise that a risk premium is justified to reflect our sub-investment grade rating, recent grey listing, load shedding and other headwinds to economic growth. But these are well-established challenges which the market has long since discounted. To assume that they must be discounted again makes no sense to us.

The long-term trajectory for SA's government finances will be decided by political events far beyond our expertise, but, over a tactical horizon, valuations matter (unless we are entering a failed state scenario, which is not our base case). We are convinced that SAGBs are cheap in absolute terms and relative to their peers. As the following chart illustrates, the markets have singled out SA as the least-attractive issuer in the EM group. This feels undeserved. SA has had no IMF bail-out, South African pension funds are not obliged to prescriptively buy government bonds (as they are in other EM countries) and SA's hard currency debt position is smaller and more serviceable than that of its EM peers.

ZAR Offers Highest Hedged Annualised Returns in EM (%)



Source: Morgan Stanley

The chart not only illustrates SAGBs' cheapness relative to their EM peer group, but also the absolute value that they offer on a currency-hedged basis. Investors can effectively earn a 7.2% 10-year yield in US Dollars while the US Treasury curve is offering 3.6%. We regard that spread as a handsome reward for the idiosyncratic risks that investors assume by lending money to the South African government. With markets having discounted heavy headwinds, including rand weakness, stickier inflation, grey listing, load shedding, low demand from foreign investors in particular, long end supply with new 2053 maturity bond and National Treasury revising growth prospects lower, cheap valuations are now justified. It is backed by an attractive double digit carry relative to EM peers, making the asset class a great diversifier.

Five reasons why sustainability matters even more in 2023

Jennifer Wu - Global Head of Sustainable Investing, J.P. Morgan Asset Management

STANLIB Asset Management is a proud partner with J.P. Morgan Asset Management, which offers South African investors an opportunity to gain access to significant global reach and depth of expertise.

AT A GLANCE

- *In the year ahead, sustainable investing will continue to grow, despite market volatility, encouraged by recent policy measures to encourage companies and investors to redirect capital to greener businesses.*
- *Investors will increasingly differentiate between ESG investing approaches, which range from targeting innovative solutions to excluding companies based on values or political views.*
- *The clean energy transition requires consumption of resources from countries or producers which present investment managers with additional sustainability challenges.*
- *Achieving net zero is not enough – investors are actively looking at ways to achieve negative portfolio emissions. There are efforts under way to standardise carbon offset accounting for investment portfolios.*
- *The transition to a greener global economy is intensifying inflation pressures but failing to adapt could be even more inflationary in the long-term.*

Welcome to the second year of the era of chaos, where interest rates are no longer negative and inflation is no longer a textbook concept. In this brave new world, there continues to be a growing appetite for investing in a more sustainable future. However, sustainable investing has – for the first time – begun to come under extensive scrutiny from not only investors and activists, but also from regulators and policy makers.

The debate around what sustainable investing is, and particularly around what it isn't, is expected to continue into 2023. There is no doubt that sustainable investing is here to stay, but the question is what it will look like after a decade long bull market, attacks from anti-ESG (environmental, social and governance) movements, and greenwashing allegations. Amid all the chaos, the key is to focus on the signals, not the noise. Here are the five sustainable investing themes that we believe will matter most to investors in the year ahead:

1. Growth in sustainable investing will continue despite market volatility

Global ESG equity funds enjoyed net inflows in the year to November 2022, contrasting with outflows from non-ESG funds over the same period. Europe dominated, receiving more than 90% of global net ESG fund flows.[1] A noticeable influence on demand over the last 12 months was the growing importance of ESG-related regulations, such as the European Union's Sustainable Finance Disclosure Regulation and Taxonomy Regulation. We expect regulations to continue to be a key demand driver in 2023.

As well as capital flows, the alignment of the broader economy – including corporate activity – to green and sustainable-focused policies is already a key development in Europe. We expect to see a similar alignment in the major Asian markets, which will serve as a critical catalyst in driving the growth of the sustainable investing market in the region. In the US, the political and regulatory landscape is on a different course. However, recent policy measures, such as the Inflation Reduction Act, mean that tangible and attractive investment opportunities can be expected to encourage companies and investors to redirect capital to greener and more sustainable businesses.

2. Understanding the different shades of sustainable investing will matter

ESG is, at its core, about data and information. How this data and information is used, and for what objective, can differ widely, as there isn't a universally defined set of sustainability criteria. However, a failure to differentiate has led to some misconceptions – for example, that ESG integration is about saving the world, or that exclusionary investing is the only way to deliver sustainable outcomes. The upshot has been to fuel some of the anti-ESG movements and greenwashing allegations that we've seen emerge over the last year.

Investors are now beginning to understand that there is a difference between ESG strategies targeting innovative solutions with the potential to benefit from the transition to a more sustainable future, and those strategies that exclude companies purely based on values or political views. In addition, there is a greater recognition that investing in the low-carbon transition does not mean having zero exposure to fossil fuels. We believe that investors' understanding of these concepts will become clearer in 2023.

3. Credible sustainable solutions can have a real-world impact

Reaching Net Zero requires a significant reduction in global greenhouse gas emissions. But that alone is not enough: it will also require massive investment in carbon offsetting and removal. As the world approaches 2030 (the critical year by which a 50% reduction in global emissions is required, according to the Intergovernmental Panel on Climate Change) the need for action is growing.

As a result, investors are actively looking at ways to achieve negative portfolio emissions, through either mechanical carbon removal technologies, such as carbon capture and storage, or – increasingly – through nature-based carbon offsetting solutions, such as forestry.

There is an ongoing and important debate around how carbon offsets should be accounted for when calculating an investment portfolio's alignment to Net Zero emissions; international efforts are ongoing to standardise carbon offset accounting and traceability, as well as to promote the integrity of nature-based carbon offset projects. At the end of the day, however, a tree is still a tree. No-one should disregard the many environmental (and social) benefits that trees provide.

1. Morningstar, year to November 2022

4. *The energy transition will continue to have an impact on inflation, but failing to adapt to the climate crisis will be even more inflationary*

We need to acknowledge that the transition to an economy powered by clean energy is likely to have some inflationary impact, given robust fiscal support and the high level of new investment flowing into technologies such as wind, solar and electric vehicles. But it's also crucial to recognise that if the world fails to act on adapting to climate change, the effects could ultimately be even more inflationary.

Extreme weather events, such as the European heatwave in the summer of 2022, place multiple extra stresses on the economy, squeezing the supply side through their impact on labour markets and natural ecosystems, as well as disrupting core infrastructure. The result is that operating costs in many sectors, including construction, real estate and agriculture, will increase as companies look to enhance climate resilience and, in cases where the level of climate adaptation is low, compensate for labour losses or damage to assets. For example, the International Labour Organization projects that total working hours worldwide could be reduced by 2.2% and global GDP by $2.4 trillion by 2030 as a result of heat stress alone.[2]

Cities, because of the risk from the urban heat island effect, are expected to be among the worst hit in a warming world, with the resulting increased use of air conditioners and cooling equipment boosting electricity usage and putting further stress on the energy market. It's not just extreme heat, however, that is having an economic cost. Increased drought, flooding and periods of extreme cold can also have a significant impact on crop yields and drive up food and commodity prices. At the same time, existing infrastructure will need to be retrofitted or replaced in order to build climate resilience.

2. ILO, 'Working on a warmer planet: The impact of heat stress on labour productivity and decent work' 2019

There is no silver bullet solution to these challenges, but policy makers have an important role to play in encouraging investment and providing finance to climate adaptation projects. For investors, gaining exposure to the adaptation theme will be crucial, not only from a risk management standpoint, but also because of the opportunities it provides for investing in new climate-resilient solutions.

5. *The human cost of going green will need to be confronted*

> **The clean energy transition is crucial to reaching Net Zero goals. But many of the new greener technologies being developed require substantial inputs of a variety of minerals which are often found in only a few places around the world. As a result, investors in the energy transition face additional sustainability challenges that also need to be addressed.**

A good example is cobalt, which is a core input for battery production for electric vehicles, but which can only be sourced from a handful of countries. The Democratic Republic of Congo (DRC) accounts for over 70% of global cobalt production [3], and is increasing its market share as it seeks to replace Russian supply following the war in Ukraine. Given the human rights and child labour issues that are rampant in the cobalt supply chain, investors are increasingly demanding that companies conduct rigorous due diligence on DRC suppliers, including regular audits.

However, this intervention on its own is not sufficient to eradicate child labour from cobalt production, especially in light of the growing number of informal, small-scale mines that many families rely on. There is, so far, no realistic timeline for these issues to be resolved. Meanwhile, demand for batteries is expected to grow by as much as 30% a year through to 2030, as the energy transition accelerates.[4]

At J.P. Morgan Asset Management, we will stay focused on engaging with individual companies on these important issues. However, finding a broad solution will require a joint effort by the international community, which is why we will also continue to partner with our peers, policy makers and the broader financial industry to determine the full costs and implications of the energy transition.

3. Cobalt Institute, Cobalt Market Report, 2021
4. McKinsey: Battery 2030: Resilient, sustainable, and circular, January 2023

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STAND POINT

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