The South African Treasurer

NEXT GENERATION TREASURY

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From the Chair

It is with great pleasure that I introduce the 2022 issue of *The South African Treasurer*, which focuses on the 'Next Generation Treasury'. The modern treasurer lives in a connected world, having to deal with real-time market information and often having to make immediate decisions. The new generation of treasury is a strategic adviser, closely integrated with the organisation's other business units. Technology has been an enabler, supporting the new environment in which treasuries now operate.

By **Jolandi Marais**, ACTSA Chair

'Real-time connectivity' is the buzzword of the next generation of treasurers. But is it evolving fast enough?

We need explanations of how technology and payment infrastructures must be agile because real-time treasury means speed and precision. A technology platform that manages bank formats and connectivity is among the most important tools for a treasurer to effectively manage a company's liquidity, and to optimise cash and control risk , in order to be able to make quick decisions.

We all wish for more time in the day, especially when working on multiple projects and platforms. Treasurers must adapt to the world of API technology in order to remove the barriers, reduce multiple platforms and deliver more flexibility, agility and give the treasurer greater control.

South Africa has had to weather several volatile events the past few months. These include the war in Ukraine, rising inflation, shortages of key commodities, load-shedding and the recent floods in KwaZulu Natal. So it's safe to say that South African treasurers are a resilient lot. It is important to note what every treasurer's toolbox should include in order to stay on top of this ever-changing world and be able to tackle market swings.

Sustainable finance continues to expand, and treasurers increasingly have a role to play in this area, to create tangible and sustained outcomes that drive value and growth, whilst strengthening our environment and communities. There are the relatively new concepts in the Voluntary Carbon Market (VCM) which is fast developing around the world with its impact now starting to be felt in South Africa. The VCM is a decentralised market in which the private sector voluntarily buys and sells carbon credits that represent certified removals or reductions of greenhouse gases (GHGs) from the atmosphere. This new market is extremely important and will start to take centre stage more and more.

Living in a connected world as we do, one absolute that can't be ignored is change. The pandemic proved that humans can and do adapt to change, but it is how we embrace it that is a prerequisite for a resilient treasury. One of these articles which provides a great read is on risk management and how we need to understand the good and the bad and be able to act against unwanted risk.

One of the core purposes of our Association is to facilitate the exchange of information beneficial to the management of corporate treasury operations, as well as those in allied financial disciplines. We were pleased to continue to provide a platform for the development of the treasury profession in South Africa. This magazine, published in association with *Treasury Management International*, forms one of a wide and varied spectrum of events organised by ACTSA on issues pertinent to treasurers, with a primary aim to educate, inform and grow our profession and its profile within our companies.

I would like to thank all our contributors most sincerely. Thank you also to the board members who voluntarily offer their time to spearhead the Association and to the ACTSA team for their continued contribution in making our organisation both active and relevant.

We hope you enjoy this year's edition. ■

Application Programming Interfaces' Treasury Reboot

Application programming interfaces (APIs) provide a cost-effective, frictionless experience that delivers real-time connectivity between bank and business. What's driving demand for the technology, and how could it transform the global treasury landscape?

By **Paul Fenwick**, Head: Foreign Exchange Business Bank Sales, Absa CIB

With cash flow constraints, operating challenges and the tough economy, a corporate treasurer's world is complicated enough as it is. Now add the complexity of dealing with multiple banks, each using multiple systems, and it's a wonder those treasurers get anything done at all. APIs aim to change that, solving common pain points, removing barriers to automation and delivering undreamed-of levels of flexibility, agility and scalability.

"There's a big drive to simplify the treasurer's world," says Paul Fenwick, Head of Foreign Exchange Business Bank Sales at Absa CIB. "APIs offer them a lot more efficiency through end-to-end visibility on their liquidity, FX conversions, hedging policies, hedge ratios and so on."

The key to it, though, is integration. APIs sit between various parties' cloud applications, enabling them to interact and share data with one another without the need for repetitive (and potentially error-prone) human commands.

Seeking standardisation

APIs themselves are not new. "The technology has been on the global banking radar for some time," Fenwick says. "In South Africa, we've started investing heavily in APIs since Covid-19. The pandemic accelerated the need for tighter controls and better management within treasurers' system structures, and it's going to be a focus area going forward. APIs are certainly replacing your internally built or single-dealer platforms."

Previously, costs and cost-effectiveness were a major hurdle to companies implementing API systems. Now, as the technology has matured, costs have come down, but challenges still remain. "We're still very far from having a standardised API world, where everyone works off the same metrics," Fenwick explains.

While SWIFT (Society for Worldwide Interbank Financial Telecommunications) already exists within the international banking framework, the differences between SWIFT and APIs is subtle yet significant. While SWIFT is a centralised messaging system that banks and other financial institutions use to send information quickly and securely; an API is a software platform that allows several different system to interact and communicate with each other.

"SWIFT is a very mature system with a standardised way of engaging," says Fenwick. "If you want to engage in SWIFT you have to build your systems to have certain structures, with tags and fields in a certain format, whereas with APIs everyone has been building their systems in different ways, so there's no formal, standardised market. Everyone's trying to execute according to best practice, but you still have a lot of discretion being played out at the moment, which makes it tricky for corporates that are multi-banked."

While the intricacies and nuances of API standardisation will take time, Fenwick believes that it will be worth the wait for corporate treasurers. "They'll have more robust access to much more real-time, consolidated information," he says. "Ultimately, the treasurer's responsibility is managing the liquidity within the organisation and making sure that the organisation is funded across all its business arms. Currently, if the business is multi-banked or multi-jurisdictional the treasurer might have to access 10 or 15 different services to obtain the information they need. Once we get to the point of API conformity, it will change the landscape completely. Treasurers will have all the information they need on hand to make quick decisions on transactions."

Shaped by treasurers

Ultimately, client demand will drive the technology as it rolls out. As a result, Fenwick says, Absa's clients will play a central role in shaping API technology. "It's about us fitting into their world, not them fitting into ours," he says. "That's the big change in how banks will interact with corporate treasurers in the future: fitting into your world and making your lives easier, as opposed to you having to interact within our systems and our various platforms."

Before the pandemic – and the massive digital revolution it catalysed – if clients wanted to use a bank's full proposition, their treasurers would have had to contend with four or five platforms with just one bank.

"We've done a lot of work to simplify that and bring everything onto one platform," says Fenwick. "That takes away the need to execute and interact on multiple platforms, while at the same time giving treasurers greater control."

Minimising risk

For now, the demand for treasury APIs is being driven by fintechs and large global corporates. Some only want a rate streaming service for indicative or hedge accounting purposes, while others need a full suite of products.

"The dynamic of the clients is quite different," says Fenwick. "At Absa we're dealing with fintechs that are very strong in the remittances space and that are looking for more efficient ways to manage their treasuries; and then we're also dealing with very mature, large global corporates, which want to minimise their operational or human error risk. That means moving away from confirming FX trades manually to using an automated system. Global corporates – which often deal with hundreds of banks across multiple jurisdictions – also want to minimise the number of systems they use. APIs enable that."

But while the demand is particularly strong among large corporates and fintechs, Fenwick believes that will feed down to the mid-corps as API technology matures and becomes more accessible.

"We're looking at the partnerships we can establish to make this information available to those smaller or mid-sized corporates," he concludes. "They'll still use our platforms, but it's about making those services available in a cost-effective way. And I think we're seeing that in the eurozone's open banking framework. The technology is driving us in that direction, where we'll start sharing services – whether with clients or across industries – and the accessibility of those services will be a lot broader than it was previously." ■

Absa's clients will play a central role in shaping API technology.

PAUL FENWICK

Head: Foreign Exchange Business Bank Sales, Absa CIB

Paul Fenwick is currently head of the FX team at Absa CIB, covering the Retail and Business Bank client base in South Africa for the past three years. Prior to that, he was the head of Digital Market Sales for Africa for four years, focusing on rolling out and developing platforms for clients across the 10 countries where Absa has a presence. He started his career at Absa as the Head of Digital Market Sales for South Africa for five years, focusing on building and increasing digital adoption.

API Technology in Corporate Banking

What Treasurers Need to Know

By **Morne Klynsmith**, Head of Treasury Technology, TreasuryONE

Real-time treasury means speed and precision. Getting data from all sources in real time reduces manual labour, decreases errors, and improves the decision-making abilities of a treasury department and those who depend on it for forecasting and other crucial operations. TreasuryONE combines multi-bank connectivity and ERP integration to help forward-thinking treasury leaders make the shift to real- time, accurate and effortless communication with banks using best-in-class treasury technology solutions.

MORNE KLYNSMITH

Head of Treasury Technology, TreasuryONE

Morne is a leading expert in treasury technology with in-depth knowledge of best-practice treasury set-up and treasury outsourcing models, as well as integration with banks, ERP systems and other financial institutions. He has been involved in treasury management system projects for the past 11 years and has completed more than 80 treasury implementations across Southern Africa, Europe and the Middle East.

As Head of Treasury Technology at TreasuryONE, he designs and delivers system demonstrations, performs needs analysis and solution design exercises, scopes and manages implementation projects, and is responsible for client relationship management. He regularly attends international treasury conferences to ensure that he stays up to date with technology enhancements in the treasury space.

Logging on to a multitude of banking portals to gain a view of an organisation's cash position, or how to centralise payments in order to optimise working capital, are just some of the headaches that a treasurer can do without. A technology platform that manages bank formats and connectivity is the most important tool for a treasurer to effectively manage a company's liquidity, to optimise cash and control risk.

In South Africa, treasurers typically use either one or more of the following methods to access their cash balances or for processing of payments:

- Manual access via the bank's online platform
- Direct Host-to-Host connection through an SFTP (Secure File Transfer Protocol) connection. This requires a direct connection to each bank within the corporate's banking landscape. These connections are mostly used to connect a corporate's ERP (enterprise resource planning) and TMS (treasury management system) to the banks for the automated retrieval of bank account statements and the processing of payments and debit order collections.
- SWIFT connectivity allows for a single point of entry to the SWIFT network which automatically connects corporates to more than 10,000 banks across the globe. The SWIFT network provides a corporate with additional functionality currently available over a Host-to Host connection which includes real-time instruction matching for treasury and forex transactions, banking market infrastructure for processing payment instructions between banks, and securities market infrastructure for processing clearing and settlement instructions for payments, securities, forex, and derivatives transactions.

Economic complexity, corporate growth and new banking relationships mean that treasury technology and payment infrastructures need to be agile.

While each of these options has its place, we will explore some of the disadvantages of these platforms in the next section.

Online banking platform access

Treasurers and financial departments generally make use of online banking at the various banks to conduct banking. However, there are some challenges that this process poses:

- the headache of managing user access for each user at each bank. It is a time-consuming and often document-intensive process to manage user access and login tokens.
- each bank has its own look and feel and functionality on its platform, and there are various formats for file integration that differ per bank.
- organisations making use of multiple banks are therefore unable to retrieve reports at company level and usually have to resort to excel to get a complete view of their cash position.
- resource intensive due to duplication of effort on various platforms and systems

Direct Host-to-Host connection

- connection is required per banking partner
- some banks do not support this functionality
- lengthy and labour-intensive process in setting up the connectivity with each bank, especially within the Afra-Asia region where many South African corporates operate and manage bank accounts
- each bank can have its own specific technical requirements and format, and as a result, many points-of-contact need to be managed
- file formats and technical requirements can differ from bank to bank, as well as country to country
- resources are required to monitor and manage the servers, the various connections and file exchange processes

SWIFT Connection

- high cost of subscription to the service, and thus only viable for very large corporates
- high cost per message or transaction
- lengthy joining and implementation procedure

Bank connectivity in corporate treasury

Despite the hurdles that existing bank connectivity provide, real-time visibility of accounts is crucial. Treasurers and organisations need to make liquidity and cash flow decisions based on real-time data, rather than prior days' data. With the re-emphasis on cash forecasting and liquidity management with the current economic turmoil worldwide, real-time data is key in informing the treasury department. The faster an organisation can access its cash balances around the world, the faster it can react.

Unfortunately, a common complaint among corporate treasurers has been the lack of real-time visibility into cash and treasury management platforms. In fact, according to the PWC 2019 Global Treasury Benchmarking Survey, more than a quarter of global cash is not visible to the corporate treasury on a daily basis.

Treasury of the future - with API technology

Economic complexity, corporate growth and new banking relationships mean that treasury technology and payment infrastructures need to be agile. They must scale, consolidate fragmented data sources and present information in real time in order to drive the most appropriate and timely action for optimising working capital, and most importantly must be API-enabled to deal with the future of connectivity.

APIs (application programming interfaces) are simply communication tools for software applications. Put simply, this technology allows two systems to communicate in real time. In short, APIs are designed to help build better applications. This means that banks can use APIs to facilitate faster connectivity than what has been used in legacy environments. In Europe and the US, some banks are starting to offer premium API packages to corporates, and the corporates are already taking advantage of the benefits.

The fast-tracking of the development of API functionality by South African banks will be a game changer for treasury teams. The potential that APIs offer to automate treasury tasks is substantial and can assist treasurers in optimising their cash and payment management functionality by having access to 'real-time' data in its truest form. APIs will provide real-time data to guide and enhance more immediate decision-making on liquidity and investments, retrieve live bank balances and transactions, payment initialisation, payment status acknowledgements, account entitlements, account verification, shareholding balances and more.

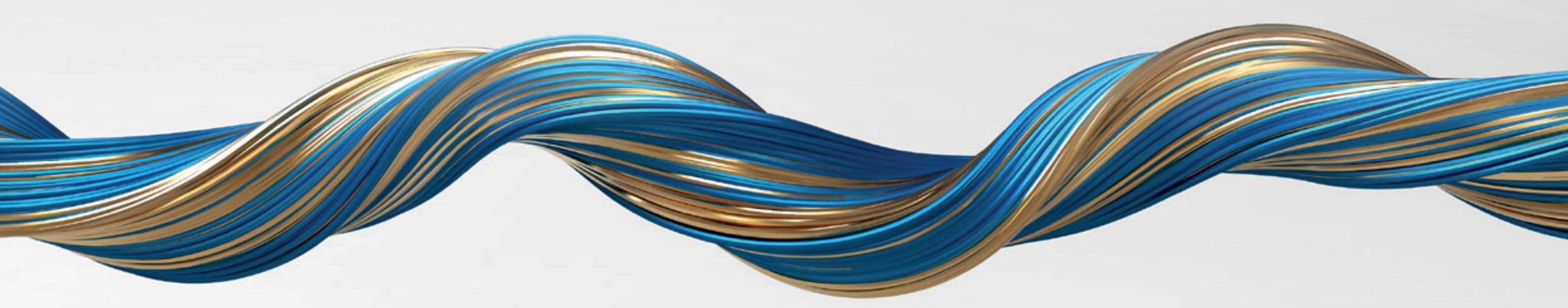
API technology in corporate banking

API technology makes it possible for organisations of all sizes to have access to real-time financial data. A secure cloud-based platform connected to the organisation's banking footprint offers 100% cash visibility of global banking operations through a secure centralised platform.

Using APIs for bank connectivity, organisations will be able to take advantage by using technology that provides access to a one-portal banking platform to execute payments and obtain cash visibility in real time, to any bank account, in any currency, and in any country. Once implemented, it will also remove the burden on organisations of managing users across multiple banking portals, by allowing for digitised and standardised payment policies and user administration on a single platform.

In today's economic climate, where corporate South Africa grapples with a host of challenges, the need for quick decision-making is more important than ever. This is what the new way of corporate banking will provide. ■

A secure cloud-based platform connected to the organisation's banking footprint offers 100% cash visibility of global banking operations through a secure centralised platform.



ESG Financing for Corporates

By **Lindy Schmaman**, Associate Director, Financial Services Advisory, Deloitte Africa, and

Steve Farrell, Partner, Financial Services, Deloitte UK

Interest in Environmental, Social and Governance (ESG) financing, including green bonds and sustainability-linked financing facilities, is growing significantly. The green bond market is estimated to be around $1trn[1] with growth fuelled not just by business need but also by political will for a 'green recovery'.

There's still much confusion among stakeholders: What are the different types of ESG financing? How can corporates raise ESG financing? Are there specific requirements related to ESG financing?

What are green bonds?

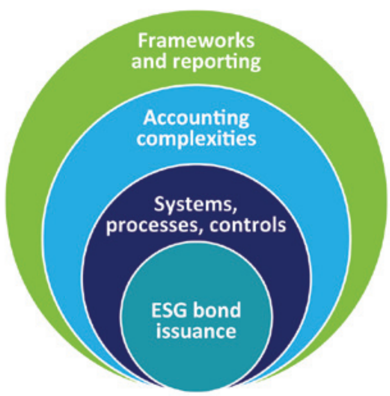
Green bonds function the same way as any other bonds, i.e., they are a fixed income debt issuance financial products. However, unlike traditional bonds, green bond proceeds (i.e., the cash received by issuer, from the investor in the bond) are intended to be allocated to financing new or existing projects with specified climate and environment-related objectives.

What is sustainability-linked financing?

Sustainability-linked financing is any form of funding arrangement, for instance a bond or loan, which incorporates specific features related to a set of ESG Key Performance Indicators (KPIs). For example, a sustainability-linked bond would have many of the typical features of a conventional bond, but the coupon payable by the issuer could vary depending on whether the issuer achieves predefined ESG objectives agreed at pre-issuance, such as reducing greenhouse gas emissions or achieving diversity targets on board committees.

Why is the market growing?
ESG financing can provide specific funding to support a firm's strategic ESG objectives. Both issuers and investors have recognised the importance that green bonds and sustainability-linked financing play in reaching these objectives.

Commercially, ESG financing can also attract improved financing terms, a pricing premium or 'greenium' in comparison to conventional financing.



Do issuers need to do anything differently?
Yes. While many of the features of ESG financing are similar to those used on conventional bonds, the ESG related element of ESG financing introduces specific requirements on the issuer.

In particular, there is an increased focus on external reporting, as issuers will be required to demonstrate how funds have been used or whether ESG related KPIs have been met. In addition, the issuer may need to adapt or establish a new suite of internal controls relating to ESG financing, as well as considering the accounting complexities and new financial reporting disclosure requirements.

Key considerations for corporates

Key considerations for corporates and ESG financing
ESG financing can affect a wide range of business activities. It is important that corporates give careful consideration to the far-reaching implications, both pre- and post-issuance, to ensure success.

Can any firm use ESG financing?
The broad nature of the ESG financing market means that a wide range of firms can access it, regardless of the size and nature of the underlying business, firms have sought to use ESG financing as a tool to support their progress towards meeting ESG objectives.

How does an issuer define their approach to ESG financing?
Issuers often publish an ESG financing framework. The framework tends to describe the nature of the issuer's ESG financing strategy and how that relates to their corporate sustainability goals. In sustainability-linked financing, the framework may describe the ESG metrics that will determine the coupon level and the system, processes and controls that have been established to govern performance. Many issuers also publish an annual statement covering the use of proceeds and key ESG metrics associated with their financing.

Are there specific accounting considerations, including hedge accounting?
Yes. The nature of ESG financing can result in accounting complexities. Sustainability-linked financing can cause variability in the cash flows of issued debt and the financial statements, for example it may change the interest rate profile depending on whether the issuer meets ESG related targets. Issuers need to assess whether such features represent embedded derivatives that have to be separated from the debt host contract and accounted for as standalone derivatives.

In addition, the impact of features such as step-up coupons need to be taken into consideration when developing an appropriate hedging strategy. Should an issuer wish to hedge its debt, for example for interest rate risk or foreign currency risk, step-up features present in the bond may not be present in the hedging instrument, which may lead to hedge ineffectiveness and financial statement volatility. As such, careful designation of the hedged risk is required.

SA Green Taxonomy

On 1 April 2022, South Africa's first Green Finance Taxonomy was published by the Taxonomy Working Group chaired by National Treasury, as part of South Africa's Sustainable Finance Initiative.

What is the Green Finance Taxonomy?
The Sustainable Finance Initiative[2] defines the SA Green Taxonomy as: "an official classification or catalogue that defines a minimum set of assets, projects, and sectors that are eligible to be defined as 'green' or environmentally friendly. It supports emerging national policy and voluntary

LINDY SCHMAMAN

Associate Director, Financial Services Advisory, Deloitte Africa

Lindy is an Associate Director and Consulting Actuary in the Financial Services Advisory division of Deloitte. She has been extensively involved in the development, implementation and review of risk and capital management frameworks at a number of financial services institutions in South Africa.

Lindy has a keen focus on sustainable finance and on the integration of climate risk within organisations' enterprise-wide risk management frameworks. She has worked closely with key subject matter experts in the UK, US and Europe in obtaining insight into global best practice and regulatory developments.

The lifecycle of a green bond

Market exploration

- The green bond market is emerging rapidly and before entering, issuers should make sure they understand the market, undertake appropriate research and preparation and consider how green bonds will fit with their business profile and wider strategy.
- Consideration as to whether the issuance of a green bond would be appropriate is important before undertaking any work on a specific programme. If a green bond is considered a strategically and commercially attractive route to market, then preparation will be key to ensuring issuance is effective.

Pre-issuance

- There are a number of green bond standards/principles already in place in the market. Issuers may want to consider aligning their green bonds with those standards. Those most commonly used include the International Capital Market Association (ICMA) Green Bond Principles, the Climate Bond Initiative (CBI) or the emerging EU Green Bond Standards.
- Green bond frameworks are an essential step in that process, setting out a clear plan for engagement in how the firm will approach its issuance of green bonds, the use of proceeds and reporting.

Issuance

- The issuance process for a green bond is similar to that for a conventional bond, but will incorporate a number of elements specific to the bond being considered as green, for example – the publication of a green framework.
- In addition to the regular assurance applicable to a bond issuance, to support the green credentials of a bond the associated green bond framework can require third party assurance (provided against a set of criteria), or second party opinions (an independent view on the green credentials).

Post-issuance

- The issuance of green bonds requires ongoing management by the issuer to ensure the green objectives are realised though the allocation and monitoring of bond proceeds.
- Issuers often commit to periodic reporting of use-of-proceeds and environmental-KPIs associated with green bonds. Preparations for reporting should include the scope of data requirements, reporting format and assurance options.

private sector initiatives toward sustainable finance by reducing costs and uncertainty in classifying a core set of green activities."

The Green Finance Taxonomy can also provide a uniform framework against which to assess assets and activities. The Taxonomy is based on three key principles[3]:

- **Principle 1:** Substantially contribute to at least one of the six objectives of the taxonomy
- **Principle 2:** Do no significant harm to any of the other objectives
- **Principle 3:** Comply with minimum social safeguards

The taxonomy sets out six key objectives (as defined under Section 2.4 of the taxonomy), and the 1st edition focuses on two key objectives, namely:

- Climate Change Mitigation
- Climate Change Adaption

These objectives are further categorised according to various macro sector and economic activities. The classification of activities as well as the abovementioned principles are used to assess the alignment of different activities to the taxonomy. ■

Notes

1 *Forbes 'Green Bond Market Will Reach $1 Trillion With German New Issuance' https://www.forbes.com/sites/emanuelabarbiroglio/2020/09/02/green-bond-market-will-reach-1-trillion-with-german-new-issuance/#379cbd4e2e97.*
2 *https://sustainablefinanceinitiative.org.za/wp-content/downloads/SA-Green-Finance-Taxonomy-1st-Edition-Final-01-04-2022.pdf*
3 *http://www.treasury.gov.za/comm_media/press/2022/SA%20Green%20Finance%20Taxonomy%20-%201st%20Edition.pdf*

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Steve is the Head of Deloitte's ESG Audit & Assurance Group in the Audit and Assurance practice for Deloitte's UK and North and South Europe partnership. He also chairs the working group at the ICAEW focused on the future of ESG Assurance Reporting. Steve is a chartered accountant and has extensive experience in audit, internal audit and regulatory implementation programs. He has worked with a wide range of companies, having developed a thorough technical understanding of products and control practices for non-financial risk management.

Steve has significant experience in partnering engagements for the provision of ISAE 3000 independent assurance over sustainability information and in relation to the sufficiency of design and operating effectiveness of processes and controls to report on non-financial information. His clients include a wide variety of listed and non-listed clients, across a wide range of industries, including energy and utility companies, financial services companies and other corporates.

A Toolkit for the Next Generation Treasurer

South African corporate treasurers are a resilient lot. Going back a few decades, they've endured events such as the Russian debt crisis of the late 1990s, the rand selloff of 2001, the global financial crisis of 2008, the Covid-19 pandemic lockdowns of 2020 and 2021, and a number of other volatile episodes in between.

By **Peter Rattey**, Head of Treasury Sales and Structuring, Investec

Many of today's top treasurers cut their teeth managing the falls in the rand or spikes in interest rates that were common during many of those periods.

This institutional memory has stood the South African corporate treasurer in good stead during more recent volatility events. These include the war in Ukraine, lockdowns in China, rising inflation and shortages of key commodities and components on the global front; and load shedding, transport infrastructure problems and the recent floods in KwaZulu Natal, on the local front.

In short, the South African corporate treasurer understands that market swings are part of life and has many of the tools needed to tackle them – including the skills, experience and temperament to manage risk.

A new toolset for a changing world

However, we perhaps need to ask if this set of tools is enough for an increasingly complex world. Looking more closely at recent events, some common threads emerge that reveal the extent of this complexity. From a geopolitical perspective, a global realignment appears to be taking place, from the unipolar, US-dominated world that characterised the world in previous decades, to a multipolar world in which China stakes its claim as a world power and other regional powers flex their muscles. At the same time, the previous paradigm of globalisation is coming under threat, as nations look to protect their own interests, driven in turn by the populist agendas of their leaders.

Meanwhile central banks across the developed and emerging world are acting to bring inflation under control, but the big unknown is the extent to which they are prepared to act and what this means for longer-term inflation.

Overlay this with the ongoing threat posed by climate change and the efforts by governments and businesses to address this threat. Climate change is already leading to extreme weather events that in turn threaten regional and global stability.

This increasingly complex world will have many knock-on effects, some of which we are already seeing played out in our daily lives. Supply chain disruptions and rising inflation are just two of the effects that spring to mind.

Whereas in the past a corporate treasurer could focus on a few macroeconomic and cyclical variables in managing currency, interest rate or commodity price risk, a more nuanced and agile approach will be required in the years ahead. It's not enough to simply secure a rate or price, corporate treasurers now have to think more holistically, understanding the different moving parts that contribute to the risks that make up their universe.

What then will the corporate treasurers of the future need in their toolbox to stay on top of this ever-changing world?

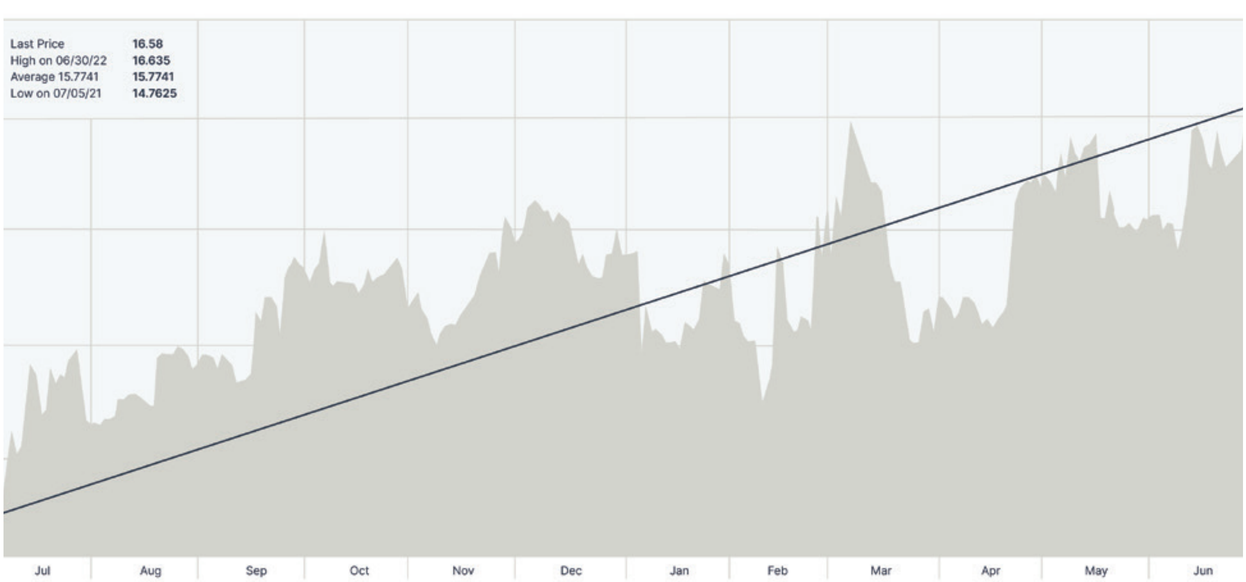
To answer this question, let's have a closer look at where these complexities are likely to manifest themselves in the coming years:

Volatility. As alluded to above, from equity markets to bonds and foreign exchange, we've seen volatility on the rise in the first half of this year. Given the uncertainties around inflation, supply shortages and tensions between leading global economies, it's a reasonable assumption to make that bursts of volatility will become the norm.

Figure 1 shows an average band of volatility of the Cboe Volatility Index (VIX) pre-Covid-19 and a higher band post-Covid, which reflects the increased levels of uncertainty and the general change in

Climate change is already leading to extreme weather events that in turn threaten regional and global stability.

Fig 1 **Pre- and post- Covid volatility of the Cboe Volatility Index**



Source: Bloomberg, ICIB, July 2022

market sentiment after the initial impact of the Covid-19 pandemic.

Rising inflation. High inflation in the world's leading economies is not something that businesses have had to deal with for years. While some of the inflation of the last month can be attributed to supply-side shocks, there's a risk of inflation expectations becoming baked into consumer and business behaviour, which would make the current inflationary phase more persistent. Inflation in the high single digits or even in double digits however has major implications for forward planning, especially if the business is not able to pass these rising costs onto customers.

The working capital cycle. Inflation also has an impact on working capital management, as have uncertainties about supplies of key commodities or other inputs that are crucial for any business. To manage these, businesses are looking increasingly at 'just in case' strategies rather than 'just in time' and corporate treasurers will often need to rethink their strategies. Again, these come at a cost.

ESG (environment, social, governance). These three words are on almost everyone's lips these days and stakeholders – including investors, suppliers and customers – are increasingly asking companies pointed questions about carbon footprints, impact on society and so on. As managers of risk, the corporate treasurer increasingly needs to understand the impact of the business's activities beyond its shareholders and customers, while scrutinising not only their own activities but also those of their counterparties in transactions.

Technology, data, artificial intelligence. Once again, these are terms that are regularly mentioned, but what do they mean for the corporate treasurer? How well does the corporate treasurer understand the vast array of data available to the business, or how to harness it? Can technology be harnessed to manage working capital better? Can it also be used as a way to finance and support a business's ecosystem of suppliers and buyers?

Regulation. On top of all the above complexities, companies are increasingly having to work under more onerous regulation, including stricter reporting and compliance standards. While these are designed to create a more robust business operating environment, corporate treasurers need to find ways to fulfil their legal obligations, while remaining nimble.

Other challenges are likely to emerge in the coming years, but they all require a similar sort of skillset, of which we can highlight the following:

- An ability to look at risks holistically, beyond the simple silos of currency, interest rates and commodity prices. Understanding the dynamics of supply chains and other operational risks that affect their businesses.
- A willingness to access new skills – and 'unlearn' others – whether through directly recruiting those skills or working through a trusted partner. This is particularly the case when it comes to the growing world of data science, machine learning and other related skills.
- An ability to understand and exploit opportunity – in a risk-conscious way. Periods of volatility and market displacement have historically created opportunities and there's no reason to believe that this time will be different.
- Similarly, there's an opportunity for corporate treasurers to 'embed' themselves in the strategic management of their business.

Corporate treasurers need to find ways to fulfil their legal obligations, while remaining nimble.

The good news is that access to these next generation skills should not be a bridge too far for South Africa's corporate treasurers. As noted above, there's a core of knowledge, experience and resilience that underpins corporate treasuries of South Africa. By partnering with the best providers of the services and products that are available, the corporate treasurer can look to the future with confidence rather than trepidation. ■

PETER RATTEY

Head of Treasury Sales and Structuring, Investec

Peter Rattey is the head of Treasury Sales at Investec, a position he assumed in 2010. Peter has had a long career at Investec, having previously been involved in corporate foreign exchange and sales. With over 30 years of experience in financial markets, his diverse knowledge and experience in forex pricing and working capital solutions means he has proven success in fast-paced environments.

Peter manages a team of 18 highly skilled money market and forex corporate dealers who work closely with treasurers, dealers, FDs and financial managers at prestigious companies and institutions – providing tailored solutions which enable them to participate in favourable market conditions and extract maximum value.

The Urgent Call to Bank the Underbanked

The banking and finance sector needs to urgently address unbanked and underbanked business owners in order to jump-start the South African economy.

By **Dhesegan Govender**, Head, Group Treasury and Debt Capital Markets, Sasfin Holdings

South Africa has a unique banking structure. On the one hand, its highly regulated and compliant environment ensured that the country was largely protected from the 2008 financial crash. However, these same regulations and compliance environments make it commercially unviable to service smaller clients with little or no track records and insufficient assets such as fixed property that can be leveraged as collateral. This means that currently, the banking sector is not structurally suited to service the poorer, remote and rural areas of the country. High fee structures, lack of financial education, and an aversion by banks to retail credit, which is considered higher risk, are also contributing to the fact that so many entrepreneurs and small businesses in our country – and most developing economies – are still unbanked or underbanked.

The challenge is that these businesses are the catalyst in any economy for job creation and with limited access to banking and financing, these job opportunities are not realised, which has a further negative impact on the GDP and the economy. This makes it all the more important to start addressing the fact that many entrepreneurs cannot access the banking products and funds they need to launch and grow their businesses.

Entering the formal economy brings dignity to the previously disadvantaged.

DHESEGAN GOVENDER

Head, Group Treasury and Debt Capital Markets, Sasfin Holdings

Dhesegan Govender, CA (SA) is Group Treasurer, Member of the Executive Committee and Member of the CEO's Strategic Office at Sasfin Holdings. He has over 15 years' experience in Banking and Financial Markets. He oversees all funding, liquidity and capital planning at Sasfin. His responsibilities include Treasury, Debt Capital Markets (DCM), Private Equity and Strategic opportunities.

Dhesegan recently concluded a Guarantee Facility (NASIRA) with the Dutch Development Bank (FMO) to extend funding to small and medium-sized enterprises (SMEs), female and youth entrepreneurs and secured an additional Liquidity Facility with the FMO for COVID-impacted clients.

However, consider how this impacts not only the business, but business owners as well. When an individual enters the formal economy, they have access to resources, skills and information that was previously beyond reach. Banking the unbanked and underbanked is not only an economic imperative, it is a social imperative as well. Entering the formal economy brings dignity to the previously disadvantaged.

Finding a solution is imperative

As financial institutions, we need to understand that traditional banking products are not working for large segments of society, and yet we need to find a way to start supporting the unbanked and underbanked market. Technology and digital solutions are a great equaliser. Physical infrastructures that are far from remote and rural business owners become irrelevant and everyone can access the banking products they need. Similarly, digital solutions are far more cost-effective because there are no overheads associated with infrastructure. Without branches, solutions can be far more affordable and therefore accessible.

A great banking platform cannot support business owners if it does not support the entire journey, particularly for start-ups who need foundational business and financial support. Particularly for individuals who have not been exposed to financial literacy or small business basics, the ability to track income, expected income, outstanding invoices and cashflow through one dashboard is key.

Next, we need to look at dynamic and bespoke products to meet customer needs. We're all fond of saying that one size does not fit all, but what does that actually mean? Through collaboration between central banks, development finance institutions, foreign sponsors, and local commercial banks, we can financially enable the underbanked and extend credit facilities to SMEs (small and medium-sized enterprises) that are based on their specific needs and the realities of what it means to operate a small to mid-sized business in South Africa.

We cannot stop with products and access to funding, however. Financial literacy and business acumen are also key to success.

Why is this important? Many small business owners recognise that they have gaps in their business acumen, but they don't know how to access the information they need. To address this, it's important for business owners to have access to high quality, free content that offers real-world business lessons and value. In other words, we all need to share what we've learnt.

The benefits of banking the underbanked

The ability for small businesses across our economy and regional centres to flourish are myriad. A healthy economy built on small businesses drives job creation. Job creation alleviates poverty and gives people access to resources, more formalised living arrangements and food security, as well as giving children access to better education. More money circulating through the economy supports GDP growth as well.

Ultimately, a healthy and inclusive economy supports positive social outcomes, gives communities dignity and most importantly, has positive social outcomes. Consider how crime rates would fall, gender equality would rise, women would be more empowered, curtailing GBV (gender-based violence), and the overall desire to contribute positively to society grows when people feel valued, seen and able to support themselves. And all of this is possible through supporting and enabling the creation and growth of small businesses.

When we collectively support these entrepreneurs, we will see new market opportunities emerging for the private sector, fintech start-ups flourishing and productivity support to larger organisations, enabling their growth as well.

Yes, there are many reasons why this sector remains underbanked. We have red tape, regulations, legacy systems, compliance issues and risk factors to consider. But these issues can and should be addressed.

We can no longer afford to ignore the unbanked and underbanked. Bringing these businesses into the formal economy through becoming long-term financial partners and by providing solutions and not just products is a good start on a path to resolution. ■

A New Market for a New Dawn

By **Craig Williamson**, Founder and Director, Bastion Advisory (Pty) Ltd

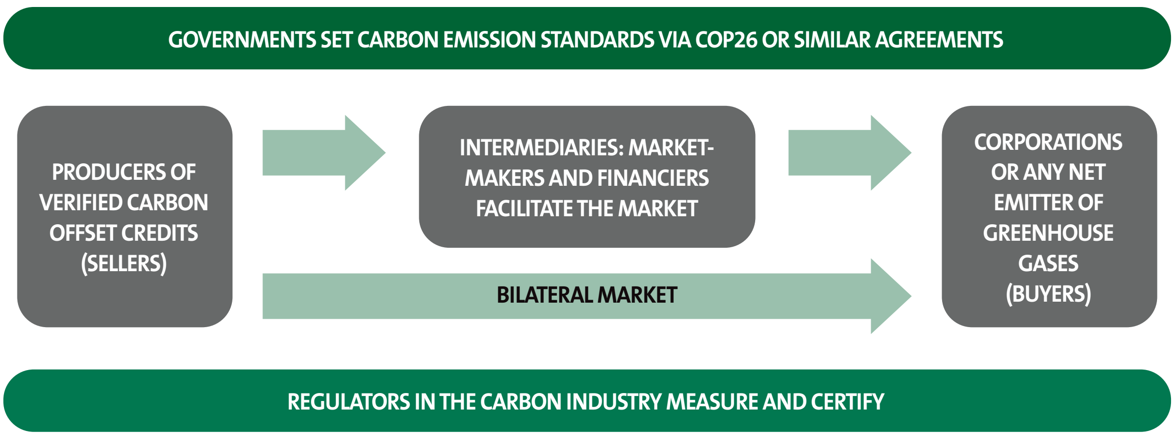
The voluntary carbon market (VCM) is developing around the world with its impact starting to be felt in South Africa. The voluntary carbon market is a decentralised market where the private sector voluntarily buy and sell carbon credits that represent certified removals or reductions of greenhouse gases (GHGs) from the atmosphere. Every market has four participants in common, namely buyers, sellers, intermediaries (market-makers and financiers) and regulators. Carbon emissions and credits are measured in USD/tonne of carbon dioxide equivalent (CO2e) introduced or extracted from the atmosphere.

Corporate treasurers and finance executives need to be acutely aware of these developments, as they can have a significant financial risk impact on a company. It is not an issue to cast solely at the feet of ESG (environmental, social and governance) or Corporate Social Investments (CSI) teams. A diagrammatic summary of the participants in this voluntary carbon market is as follows:

Purchasers of carbon credits – the buyers

Corporations that are net carbon polluters have set ambitious goals towards achieving carbon neutrality within certain

Fig 1 The Participants in the Voluntary Carbon Credit Market



time frames between now and 2050. Governments have committed to ambitious carbon neutral goals and through carbon taxes force corporations to pay a carbon tax if carbon emissions exceed certain measured thresholds. There is a carrot and stick approach. A corporation that meets the carbon emission goals may find that their cost of capital is reduced as investors and lenders are being incentivised to focus on companies that are meeting carbon offset targets. The stick is in the form of carbon taxes which add to companies' cost bases should they exceed government set emission targets for their industry.

Among the early buyers of carbon credits were tech companies such as Apple and Google, airlines, and oil and gas majors (including Sasol domestically), but more industry sectors, including finance, are joining the market as they set their own net-zero targets or look for a way to hedge against the financial risks posed by the energy transition.

Producers of carbon credits – the sellers

A carbon credit (one tonne of CO2e) is generated where the producer can show that his or her activity has resulted in either:

1. A certain measure of carbon being removed from the atmosphere on a permanent basis. Examples are reforestation, the introduction of kelp into oceans, the rehabilitation of wetlands. Any activity that facilitates the sequestration of carbon helps the reduction of GHGs in our atmosphere. These fall under the forestry and conservation banner; or
2. The generation of carbon credits where the operator of a project can demonstrate that the activity that they are promoting reduces the amount of carbon emissions that would have been emitted without their intervention. This includes renewable energy projects that are displacing coal and gas power and heat retention cooking solutions that reduce the reliance on electricity, gas, coal and wood. Globally, heat required for cooking is one of the single biggest users of energy.

Many sellers of carbon credits are environmental or charitable organisations that are finding ways to save the planet and humanity. As such they are poorly funded, relying on government, large corporate or individual donations to keep operating. The ability to sell the carbon credits that are generated revolutionises the funding of these essential humanitarian and environmentally focused organisations.

The regulators

Every market requires regulation in order to standardise measurements and ensure compliance. This gives the buyers and sellers confidence that they are getting what they pay for. Corporations want certainty that their carbon emissions are accurately calculated so that they can measure improvement and accurately calculate any carbon taxes payable. The corporations that are purchasers of carbon credits also require absolute certainty that the credits that they purchase for offset have been reliably measured and verified. Regulators in the carbon emission and offset environment take two forms:

1. The agencies that help a corporation to measure their emissions. They consider:
   a. Direct emissions from company operations.
   b. Indirect emissions from company operations such as electricity purchased, staff travel both to and from work and for company purposes.
   c. Indirect emissions from supply chain and raw material extraction.

2. The agencies that measure and approve the carbon offset i.e., the amount of GHGs that have either been removed from the atmosphere by the forestry type projects or the amount of GHGs that have been prevented from entering the environment through energy efficiency projects. This measure and verification process is extremely onerous and costly for the producer, adding another layer costs to the production of the carbon credits.

Carbon credits are not represented in value by a physical asset or liability such as any financial instrument or commodity. As a result, the detailed regulation of this aspect of industry is crucial to its success and building trust between buyers and sellers. It is not dissimilar to a corporation's audit by an audit practice. The audit gives the shareholders confidence in the value of the shares that they own.

The intermediaries

Any active market needs market-makers and financiers to bridge the gap between the buyers and sellers. The intermediary market is currently performed by a range of independent brokers, banks and independent finance houses. This is not dissimilar to any market that operates globally.

1. The market-makers are actively looking to match buyers and sellers of verified carbon credits. They are typically brokerages, banks and often the trading arms of large emitters internationally. They may purchase 'stock' of carbon credits from the producers at agreed prices with the view of on selling them later when prices have risen.
2. The financing activity is nascent but is happening in three predominant ways:
   a. The buyer agrees with the seller (via an intermediary) to pre-pay for a guaranteed offtake of carbon credits over a three- to five-year period. The pre-payment of the carbon credits is at an agreed and set price, which removes delivery and price risk on carbon credits from the buyer. This upfront payment allows the producer of the credits to invest sufficiently in one of the activities described above to meet the buyer's requirements to harvest carbon credits.
   b. A carbon producer may enter into a long-term off-take arrangement with a buyer of carbon credits for agreed volume at an agreed price. A bank or other financial institution would effectively discount this off-take contract and provide the producer with a percentage of the off-take agreement. Again, this funding would facilitate investment into one of the activities above.
   c. Direct environmental and carbon focused investment issues in two manners: firstly via funds with mandates to invest directly in carbon offset projects and companies that are beginning to show an interest in this sector. Secondly, providers of capital are offering cheaper capital to corporations that can demonstrate a commitment to zero emission policies.

The working capital cycle for the ultimate production of verified carbon credits is extremely long. This makes its financing extremely important. The reader will recognise that environmental projects will take 5 – 10 years to demonstrate the effective carbon removal from the atmosphere. The projects that reduce the reliance on fossil fuels for energy can show benefits in 18-24 months. These both represent long periods of time for the producer of carbon credits to operate without sufficient funding, especially for those projects that are driven by NGOs (non-governmental organisations). This area remains one of the greatest challenges to the industry.

Conclusion

This new market is extremely important and will start taking centre stage more and more. It may be natural for corporate treasurers and finance executives to pass these responsibilities on to ESG and CSI teams within their organisations. However, this article should demonstrate that this is in fact a new financial market where the risks, costs and rewards need to be accurately measured and managed. ■

This new market is extremely important and will start taking centre stage more and more.

CRAIG WILLIAMSON

Founder and Director, Bastion Advisory (Pty) Ltd

Craig Williamson is a founder and director of Bastion Advisory (Pty) Ltd. (www.bastionadvisory.co.za) Bastion is an independent treasury and financial markets advisory firm supporting South African corporations. He is a chartered accountant by profession and has worked in the African financial markets industry for more than 25 years. He has worked with corporations, advisors and banks during this time.

Craig was previously head of the RMB Fixed Income, Currency and Commodity Corporate Solutions desk from 2008 to 2015. Until the end of 2018 he was the Head of Financial Markets for Southern Africa at Standard Chartered Bank.

Early-Stage Investing – A Driver to Solve South Africa's Employment Crisis

By **Amrish Narrandes**, Head: Private Equity & Venture Capital, Futuregrowth Asset Management

Early-stage investment has long offered excellent growth potential to investors who are prepared to manage the higher risks associated with companies in the early stages of their journey. Not only are these entrepreneurial ventures essential engines of growth, but their disruptive business propositions provide healthy competition to the more established players in their industries - to the benefit of all the customers they serve.

Now more than ever, the South African economy needs the dynamism these companies have to offer. Numerous studies have shown that job creation and higher incomes are associated with investing in early-stage businesses. On average, these businesses spend over half of their budgets on their staff contingent. In addition, over a 10-year horizon these types of businesses will see a 5x increase in their employee base, which bodes well for job creation in South Africa.

The country still faces fundamental challenges, in particular unemployment, which currently sits at 33.9%. It is these types of fast-growing companies that will help provide the impetus needed to emerge from this unemployment crisis.

Early-stage investment – how it's done

Investment teams spend considerable time and effort identifying suitable companies and making investments where they believe they can propel the company's growth to new heights and expand its reach beyond its existing footprint. For every 100 potential investments, perhaps only two or three companies receive the necessary funding. Yoco is a perfect example of an early-stage company that had a unique product offering and the right partners, which has seen the company flourish since its inception.

When analysing a potential early-stage investment opportunity, these are some of the questions that should be asked:

- Is there a large addressable market for what the company has to offer?
- What is the developmental impact of the business?
- Is the company in a high-growth market?
- What does the company offer that others don't? Does the company have a durable competitive advantage?
- Is the business proposition groundbreaking and an agent of change in its industry? How does it compare to its competitors?
- What is the revenue potential, is the business proposition scalable, and are there barriers to entry?
- Does the business have a great management team?
- Does the management team have an appropriate mix of technical and business skills?
- Has the company gained traction in the market and is there proven demand for what it has to offer?
- Are the company's forecasts achievable (realistic)?
- What could cause the business to fail?

Mobiz – ticking all the boxes

Investment date: November 2021
One company that has far exceeded these criteria is Mobiz, a promising marketing technology business based in Cape Town. Mobiz was an attractive investment because it has taken a unique skill - marketing - and used technology to allow companies of all sizes to run effective, customised marketing campaigns, positively impacting these companies' bottom lines.

Mobiz makes quality digital SMS marketing tools accessible to all types of companies, from small businesses to large enterprises. The Mobiz digital SMS marketing tool is characterised by an easy-to-use platform that anyone, at any skill level, can use to send professional yet impactful digital marketing campaigns to thousands of customers at scale.

Using the Mobiz SMS digital marketing platform, companies can offer hyper-personalised mobile landing pages to their customers. The key element of the platform is that the messages sent from the platform are dynamic and unique to that customer. The relevance of the message to a particular customer further enhances the business's engagement with its customers and, ultimately, its sales conversion rates.

Most importantly, Mobiz is backed by an impressive management team who have all the attributes of the type of entrepreneur you would like to back. In addition, the management team have deep industry knowledge of the marketing sector and their target market.

Mobiz more than meets the requirements as an agent for change in the digital marketing sector, and the traction it has achieved to date is testament to the quality of the management team and the product. It is now attempting to raise the South African flag high through expanding into the very large US market.

Numerous studies have shown that job creation and higher incomes are associated with investing in early-stage businesses.

AMRISH NARRANDES,
Head, Private Equity & Venture Capital, Futuregrowth Asset Management

Amrish is a qualified Chartered Accountant with more than nine years of private equity experience. He is head of Private Equity & Venture Capital at Futuregrowth Asset Management, overseeing the origination and exiting of investments across a wide range of industries. He also serves on various portfolio company boards.

Inseco – contributing to the sustainable production of food

Investment date: March 2022
Inseco was created to improve the sustainability of the global food production system through the sale of nutritious insect protein products, and to address the challenges that countries face with regards to sustainable food production. Current food production systems will soon be unable to meet the growing demand, and over 35% of food produced globally is wasted and emits greenhouse gases.

Inseco's capabilities include using black soldier flies to convert low-value organic by-products into high quality protein, oils, and fertiliser. Its products are then sold to the local aquaculture, pet food and poultry industries.

Currently servicing the already large local market, the team has plans to expand into the US, Europe, and the rest of Africa. The heightened awareness of food security concerns is one of the many growth drivers of the large insect protein market.

The business, which went through almost seven years of research and development, has developed a large yet state-of-the-art processing capability which places it ahead of its competitors. Even more, Inseco is the only company in South Africa that can produce defatted insect meal and oil - reinforcing its attractiveness over its rivals.

Inseco is backed by a great management team who demonstrate innovation, deep understanding of the market and strategic insight. The team has a good mix of both technical and commercial expertise.

Ozow – improving financial inclusion

Investment date: April 2022
Recognised as one of the leading instant-EFT providers in South Africa, Ozow has enabled millions of South African consumers and merchants to transact online by making easy, convenient yet safe payments.

Ozow's disruptive business model automates the manual EFT process, which is known for being time-consuming, prone to human error and inefficient. In addition, the company is working with industry and government to roll out the Rapid Payment Programme to create an instant payment ecosystem for the underbanked, using simple identifiers.

As responsible investors, Futuregrowth backed Ozow, in order to support the team in its drive to transform the banking industry. For many reasons, a large portion of the under-banked population do not have access to a credit card. Ozow has set out to provide digital and financial inclusion to South African consumers who do not have access to a credit card, to make instant EFT payments using a basic bank account.

The management team includes members who had entrepreneurial experience prior to founding Ozow and are highly ambitious, driven, and innovative. In addition, the company is backed by well-capitalised shareholders such as Tencent and Endeavour Catalyst (whose Investment Committee is chaired by the co-founder of LinkedIn).

Ozow is in the process of building an omni-channel platform to capture the fast-growing EFT market.

Continued high-impact investing

Early-stage investments add an entirely new dimension to the existing pool of assets within institutional portfolios. These companies have the potential to yield optimal financial returns (commensurate with the risk) for investors and, as can be seen from the investments mentioned above, also make tangible contributions to society and the environment through their ground-breaking offerings. ■

> *Mobiz is backed by an impressive management team who have all the attributes of the type of entrepreneur you would like to back.*

Futuregrowth Asset Management is a licensed financial services provider.

The Importance of Moving Treasury Operations from Servers to the Cloud

By **Kelle Gagné**, Counsel, Banking Department, Allen & Overy

There was a time when companies were reluctant to store their data and run their processes electronically, preferring instead the solidity of paper files stored in endless filing cabinets. These days, most companies have become comfortable with their data and processes being stored at their premises in a small, air-conditioned but windowless room full of humming and blinking servers. The servers are not concrete in the way that the filing cabinets once were, but have nevertheless become a tangible representation of the data and processes stored there.

Large cloud providers invest enormous amounts of resources in cybersecurity.

KELLE GAGNÉ

Counsel, Banking Department, Allen & Overy

Kelle Gagné is a counsel in the banking department of Allen & Overy, Johannesburg, and has been practising law in the areas of financial services regulation and structured finance for 20 years. Her skills lie primarily in the derivatives, securities lending and repo markets and regulations, but she also has an interest in fintech, the emerging regulation of cryptocurrency and emerging financial services regulation in Africa.

Over the last decade, companies have again been asked to trade something physical for something less tangible – a server for a cloud[1]. And companies are heeding this request - business services, software, platforms and even infrastructure are moving out of companies' premises and out to the cloud.

Of course there are many aspects to consider before any company, including in relation to its treasury function, decides to move its business services, software, platforms and infrastructure to the cloud. These aspects include cost, flexibility, availability, complexity, control and dependence (lock-in). Another aspect to consider is risk. The Bank of England, for example, has expressed concern about 'concentration risk' of cloud computing and questioned the transparency and resiliency of cloud providers. If too many entities use the same cloud provider, what would be the result if the cloud provider went down? Nevertheless, the trend is moving towards the cloud, rather than away from it.

Cybersecurity

There are long lists of pros and cons of cloud computing, all of which are discussed at length in the press. One aspect however that should be at the top of the list of any company's consideration is cybersecurity. How will the company deal with cybercriminals that launch denial of service attacks, employees that accidentally deploy malware, or phishing? Does cybersecurity fit into the 'pro' column or the 'con' column when accessing a move to the cloud? Are a company's data and processes safer in a localised server environment where the company itself has greater control, or in the cloud?

The answers to these questions seem more and more to favour a move to cloud computing. Firstly, larger cloud providers are able to and do in fact invest enormous amounts of resources in cybersecurity. Although a company ultimately carries its own responsibility for ensuring the security of its own data, the larger cloud providers are working on and providing services that help companies uphold their ends of cybersecurity responsibility. These services include platforms, which integrate into a cloud provider's overall cloud computing services, and help companies automate and continually scan cloud assets for vulnerabilities, threats and compliance, giving greater visibility into a company's segment of security and risk management.

However, notwithstanding these efforts by cloud providers, the security of a company's data in the cloud also depends massively on the company itself. The company must ensure that it has in place rigorous policies and processes to secure local storage (e.g., employees' laptops and smart phones) and control access to the system or cloud (e.g., employees' passwords and other authentication methods).

New security vulnerabilities are springing up regularly as we adopt what is termed the Internet of Things – the use of seemingly innocuous technology like smart light bulbs and thermostats, and wireless speakers and home security systems. Where such items are connected to a company's own IT systems the link may be obvious, but it may be less obvious where, for example, a home security system is connected to a smart phone, which an employee also uses to connect to her employer's IT system. It may be difficult for companies to quickly identity these vulnerabilities given the speed at which they appear. Again, larger cloud providers are more likely to be on top of these vulnerabilities given their large investment in cybersecurity.

Cybersecurity specialists

Cloud providers also direct large budgets to employ talented cybersecurity specialists who focus exclusively on cybersecurity, unlike IT department employees at many companies who are also tasked with acting as document production help-desks, hardware installers and printer technicians. By contrast, cybersecurity specialists spend their days continually testing for and finding security weaknesses, monitoring for breaches or malware and fixing and strengthening gaps or attack sites.

In addition, large cloud providers are able to deal effectively with international laws and regulations that local companies may not even be aware of. A good example of this is the General Data Protection Regulation (GDPR), which is a European regulation that applies to and protects the private data of residents of the European Union and European Economic Area (European residents). The GDPR applies to such data even if European residents are transacting or doing business with

In the future staying out of the cloud may be perceived as a risk in itself.

companies outside these areas. Many South African companies regularly transact with European residents that own property in South Africa, or that spend a few northern hemisphere winter months in South Africa. Such companies may not be aware of the applicability of the GDPR, or have the internal technology resources to ensure that personal data storage complies with the GDPR. For a company to consult counsel and employ the technological resources necessary to comply with the GDPR on an individual basis is likely to be costly. Other types of regulation that may require cybersecurity capabilities are payment processing, audit confidentiality and financial data reporting. By selecting the right cloud provider, a company will be able to draw on the expertise and experience that the cloud provider has in complying with international laws and regulations for its other customers.

Scale and expertise can tip the balance

These areas are where the scale of cloud providers and the expertise they employ can push cybersecurity into the 'pro' column in any evaluation of whether a company should keep its data and processes on servers in house or move them to the cloud.

It remains imperative that in implementing and overseeing a cloud computing solution, a company's governance structure needs to be on top of the company's cybersecurity strategies and the laws with which the company must comply. Those responsible for ensuring compliance with the policies and strategies of the company, as well as the laws to which the company is subject, play an important role in directing and overseeing the company's cloud providers' services. Additionally, any applicable regulation pertaining to what may be outsourced to a cloud provider must always be observed.

As technology advances, regulation gets more complex and cybercriminals get more sophisticated, it is becoming more difficult to see how a company's isolated IT function will be able to keep up with the constantly changing landscape. If cloud providers are able to keep pace with the changes, in the future we may see not only that cybersecurity is a reason to move to the cloud, but also that staying out of the cloud becomes perceived as a risk in itself. ■

Notes

1 *"The cloud" refers to servers that are accessed over the Internet, and the software and databases that run on those servers. Cloud servers are located in data centres situated all over the globe. By using cloud computing, companies do not manage physical servers themselves or run software applications on their own machines.*

Cleansing Flames or Destructive Fire?

By **Eben Maré**, Absa Asset Management and Associate Professor, Mathematics and Applied Mathematics, University of Pretoria and **Leon Sanderson**, Founder, Wazo Waza Capital

We didn't start the fire. It was always burning, since the world's been turning
We didn't start the fire. No, we didn't light it, but we tried to fight it
Billy Joel

It has often been said that the only certainties in life are death and taxes. There is another absolute certainty, often ignored: Change!

Some change might be glacial – every-day we wake up, we are slightly different from the day before; this is mostly an afterthought, until one day you notice 'these changes'. Then, there are the epic, ground-moving, earth-shattering changes to our lifestyle or general well-being; the Covid-19 pandemic, and its general repercussions, is one such example.

The well-known investment commentator, Mohamed El-Erian, wrote in the *Journal of Portfolio Management*, July 2020: "Powered by three drivers, the world is on course to emerge from the tragic Covid-19 crisis in a 'New Normal 2.0'— a world of even lower growth, even higher inequality, even more tenuous financial stability, and greater pressures on institutional integrity and bipartisan politics." We gain insights on the nature and effects of change by looking at the individual components of this statement.

The initial economic effects of the pandemic were dizzying – economies were literally stopped in their tracks, followed by mass lay-offs and markets spinning out of control. Massive central bank intervention and fiscal helicopter money drops reversed the situation. The aftermath of this is inflation at a scale not witnessed in roughly four decades. Asset bubbles and rampant inflation serve to create huge societal inequality. As the fiscal stimulus unwinds, we find ourselves in a lower growth environment amidst a higher inflation regime – an uncomfortable economic environment with inequitable societal impacts. Unwinding monetary stimulus created through central bank balance sheet intervention leads to illiquidity that potentially serves as a precursor to financial instability. Another cause of concern is the increased fragmentation of political systems and leadership.

Herewith the punchline – significant efforts were extended during the pandemic in the pursuit of minimising its impact everywhere, but at what cost? The aftermath will be costly, but have we in effect fuelled an all-consuming fire?

Collective adaptation to change

The pandemic provides an excellent example of collective human adaption to change. From our own experience, we know change creates uncertainty, complexity, ambiguity and volatile emotions and reactions. (We normally associate these experiences under a common understanding of 'risk'). On a collective basis, these effects may become multiplied. Think about the globe's collective response to climate change if you want to have some sleepless nights.

Change also brings opportunity, growth, and disruption, however. Innovations in politics, healthcare, and technology have delivered enormous value to society. Consider a world without democracy, the internet, or vaccinations, for example.

Change is neither uniformly good nor bad. How can we therefore assess this ephemeral constant? One answer lies in the concept of risk homeostasis. Our bodies have a self-regulating process, namely homeostasis, which serves to maintain our overall stability while adjusting to conditions appropriate for our survival. Consider a thermostat that regulates room temperature as an example of a mechanical system. To be clear, homeostasis does not mean we settle at an equilibrium and are stuck there, rather it is about our response to change, both internally and externally. We are therefore forever in motion, evolving and exploring, adapting to changes.

On a similar basis, given that the concept of 'risk' is generally fairly nebulous, we adjust our perceptions thereof. Frequently, we will adjust to market conditions, or a new system, believing it reduces overall risk. What if we are merely shifting our perceptions and are taking more risk, albeit inadvertently? An example of destructive risk homeostasis in action is a fleet of taxi drivers newly fitted with ABS-brakes, which leads to more collisions as the drivers believe they are now 'safe' and can, therefore, drive faster. In the example above, given that roads were less congested during the Covid-19 lockdowns, drivers responded by taking more risk. In market parlance, the perceived safety enhancements enabled by the ABS 'HEDGE' encouraged the drivers to add leverage. In practice, this probably reduced the number of bumper bashings but increased the chances of a write-off. Alternatively, what actions would maintain the risk of bumper bashings but mitigate the odds of a write-off? Now if you had to choose which of these two outcomes enhanced the long-term sustainability of the industry, we suspect the latter would win hands down.

How dynamic systems respond to change

Static systems and processes are generally doomed to extinction in an evolutionary sense. Dynamic systems respond to change and evolve accordingly. In a biological context, variability drives evolution through natural selection. Life is constantly responding to changes in conditions to deliver adaptation and, occasionally, to suffer extinction. Some, perhaps most, change is either constructive or immaterial. Failure lies in the so-called 'tails' – the events that are hard to quantify and seldom seen or experienced. Failure is typically a function of the volatility, uncertainty, complexity, and ambiguity surrounding

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Dynamic systems respond to change and evolve accordingly.

such events. The concept of equilibrium, a key assumption in our mechanistic models of finance does not sit comfortably in a world that is evolving. Rather, a model consistent with Schumpeter's creative destruction offers a better starting point, i.e., the constant product and process innovation that sees the replacement of the old with the new is an essential fact about our system of commerce. Change is a constant! Which events warrant action? The constructive and immaterial, or the destructive? Which events are you currently hedging?

You can only prepare for change if you have a consistent process! At a company level, our function is to protect ourselves against the effects of destructive change to our business. We need to understand the good and the bad and be able to act against unwanted risk(s), (or change, synonymously). This process constitutes a risk management programme, typically entailing the following steps:

1. Risk identification – this aspect requires a thorough understanding of our business and proper examination of our income statement and balance sheet to understand what variables cause variability (positive or negative). Do we really understand our revenue streams and which event(s) could bereave us of them? Do we understand the difference between variation and risk?

2. Measurement metrics – having identified sources of risk, it becomes crucial to quantify the extent of such risk(s). This is usually done through several risk measurement metrics ranging from simple spot equivalent positions to value-at-risk, capital-at-risk, earnings-at-risk, for example, and stress testing, depending on the sophistication of the company involved with the analysis. Risk quantification leads to a deeper understanding of exposures.

3. Monitoring and control – if we can attach a metric to an identified risk, it means that we have a sense of the economic damage that could be caused as a result of that risk or change. We should judge this against the benefit of having the risk, such as the amount of profit or other advantage that we would derive from retaining the risk exposure. Typically, we would not want to have unbounded amounts of any risk and would impose limits to control these risks. It is important, therefore, to ensure that we set our controls (limits) to be reflective of the identified risks and that these accurately control the exposure that will ultimately feed through to our income statement. Our process is, therefore, to monitor the measured risks against limits on a periodic basis and to ensure the correct level of control of our risks. This includes testing exposures against limits and taking actions to rectify excesses. The blind reduction of variation may play well to a chosen metric, but the false confidence afforded by an increase in certainty when it does not matter may not offer any protection against the fire when it does.

4. Manage and challenge – risk management is most successful in an environment where the risks are transparently discussed and understood. It is of the utmost importance to dissect the risks and to understand whether our understanding of its impact to the balance sheet and income statement is correct; whether our measurement is correct; and if we are adequately compensated for the risk. Part of the process of challenging and testing risk measurements would be to ensure that we have captured all our risks. Throughout the whole process we need to continually revisit all our assumptions and revisit our risk appetite and business understanding given market changes – this step is vital and often neglected in practice.

We cannot escape risk, but we can manage it.

We need to embrace and understand our relationship with risk – this is a prerequisite for a resilient treasury environment. It is vital that we recognise variation is inevitable and, in many respects, healthy and necessary. We cannot escape risk, but we can manage it. Target the pain NOT the gain!

In the words of Billy Joel:

We didn't start the fire
It was always burning,
since the world's been turning
We didn't start the fire
But when we are gone
It will still burn on, and on, and on, and on,
and on, and on, and on, and on

Change will endure; on, and on, and on …
Are we ready to manage it?

LEON SANDERSON

Founder, Wazo Waza Capital

Leon is the founder of Wazo Waza Capital, a consulting business that focuses on capital management and financial risk management across industry. His career, over 25 years, has spanned Risk Management and Markets Trading with his most recent corporate posting being Head of Equity Trading, Structured Trading and Quantitative Analytics at Absa Capital. He holds a PhD in Risk Finance and is a CFA Charterholder.

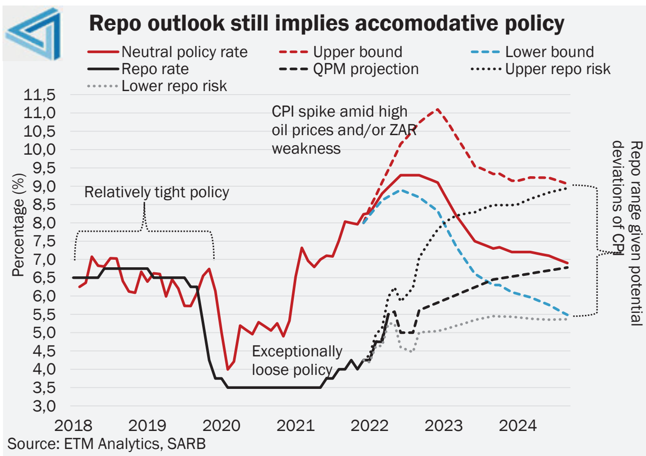
Dealing with Interest Rate Risk

By **Kieran Siney** and **Lloyd Miller**, Co-Heads, ETM Analytics (Pty) Ltd

A significant pain point for many corporates is rapidly rising interest rates, raising the question of whether they should be fixing rates at these levels or whether the opportunity has passed given how muh rate hike risk is priced into the market. We acknowledge that both the risk and hedging solutions are different in most instances and, as such, aim to unpack and discuss the broader market conditions and possible solutions to limit interest rate risk or take advantage of the rapidly changing market conditions.

The accompanying chart shows that even though the SARB has front-loaded its hiking cycle and monetary conditions have tightened interest rates are still accomodative. The current inflation rate puts the real interest rate, when calculated as the current policy rate less CPI, at

Fig 1



-1.55%, which compares with a SARB neutral real rate estimation of 2.3-2.4% over the next few years. Inflation pressures will ease and the neutral rate estimation will be lowered as a result. However, this suggests that, for now, current rates are still well below what the SARB would consider 'growth neutral.'

While this highlights the fact that monetary conditions are still accommodative, given that inflation is likely peaking, the implied level of accommodation is exaggerated. Taking into consideration ETM's proprietary models, our base case is for the Repo Rate to top out at 7.00% in the current tightening cycle. For the purpose of this study, we have included two other scenarios where rates peak at 6.25% (lower risk) and 12.00% (extreme upper risk), an event where the currency suffers sharp depreciation and SA slips into a stagflation crisis.

Fig 2 Scenario 1

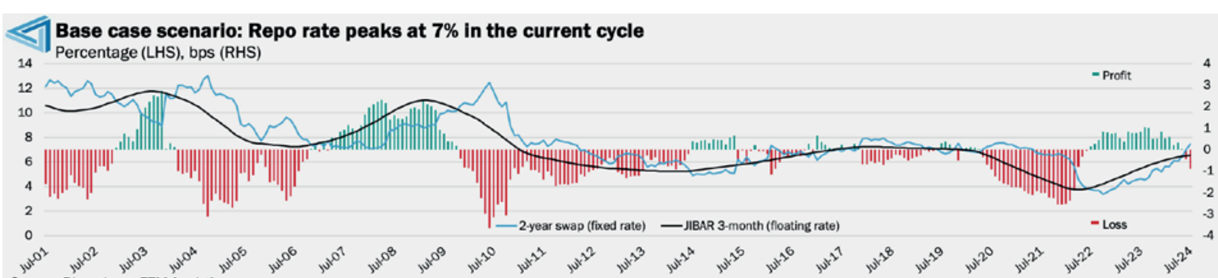


Fig 3 Scenario 2

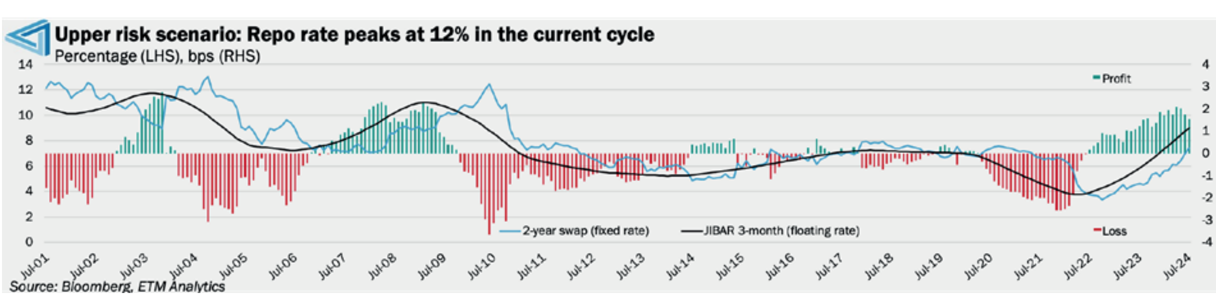
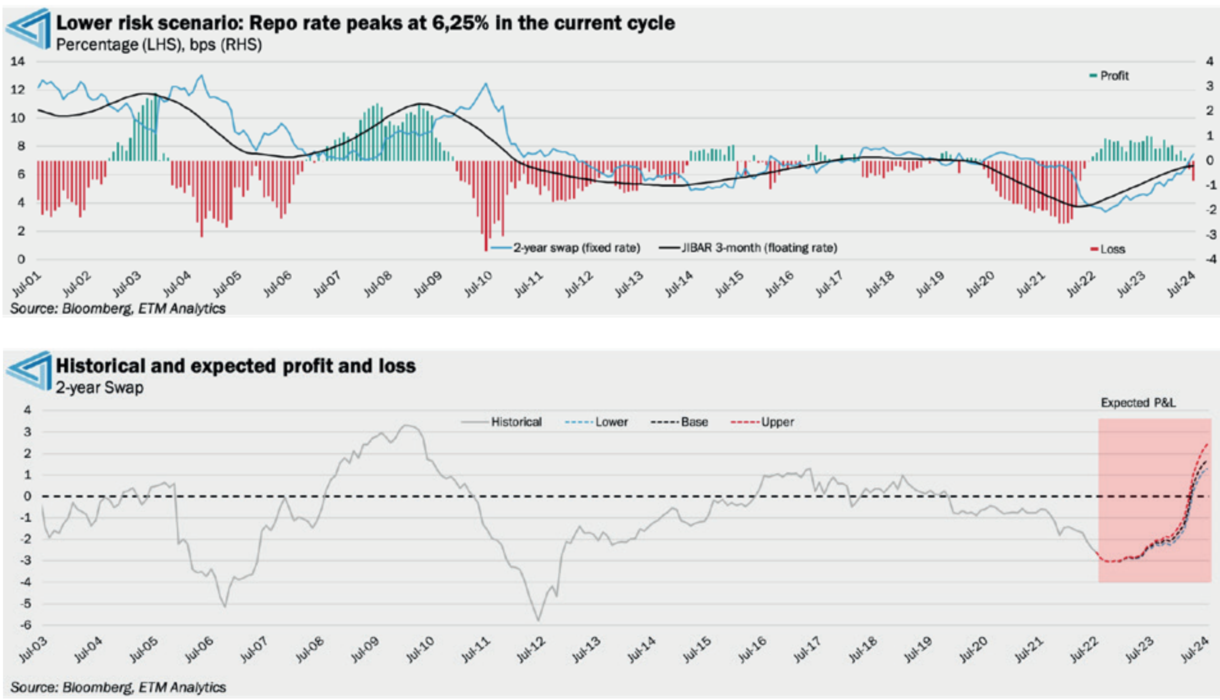


Fig 4 Profit and loss simulation



Interest rate swaps as a hedge against interest rate risk

To hedge against the interest rate risk, companies have several tools at their disposal. The most widely used hedging tool is interest rate swaps (IRS), which effectively allow companies to exchange interest payments on an agreed notional amount for an agreed period of time. IRSs are also used to achieve the desired balance between fixed and variable rate debt.

While IRSs are a great tool to hedge against interest rate risk, if implemented at the incorrect time, they can be very costly. It is therefore imperative to have a firm grasp on the outlook for interest rates when locking in an IRS. ETM uses several quantitative models to assess the current economic backdrop while comparing these to current market pricing to understand the potential opportunities or risks effectively.

It is therefore imperative to have a firm grasp on the outlook for interest rates when locking in an IRS.

It is worth doing some historical analysis of the problem to understand the question of whether to fix or not. ETM constructed a timeseries of the profit and loss one would have achieved when entering into an IRS contract over the last 20+ years to determine at which point of the interest rate cycle would be most beneficial.

Our findings show that the most opportune time to lock in rates is at the start of a rate hiking cycle. However, even then, the trade does not remain profitable for very long when comparing the fixed rate paid over the contract term against the average floating rate for that period.

This results from the market pricing in a much steeper rate hiking cycle early on, compared to what typically ends up occurring, owing to the economic impact these higher rates have. When looking at a 2-year swap, our analysis shows that since the early 2000s, entering into such a contract has only been profitable for roughly 30% of the time, with the periods of profitability occurring at the beginning of a rate hiking cycle. Longer-dated contracts, such as a 5-year swap, have lower profit-to-loss ratios.

Should corporates look to hedge now?

Our three scenarios for interest rates in the future are set out here. The floating rate is graphed against the 2-year swap, which has been offset by 24 months to indicate potentially profitable pay-off periods.

Scenario 1: In scenario one, our base case, inflation risks are skewed to the topside and Repo is peaking at 7%. A fully hedged position may not be advantageous given that the spread between the implied Repo Rate and the 2-year swap rate is expected to turn negative in the second half of 2024.

Scenario 2: We took an extreme case where the Repo Rate rises more than twofold to peak at 12%. As seen in Figure 3, if South Africa faces an inflation crisis and the central bank is forced to raise rates into double-digit territory, interest rate risk would be acute, and a fixing interest rate risk would be profitable.

Scenario 3: In this scenario, the SARB concludes its hiking cycle with one last 50bps hike or even two 25bps hikes as growth risks intensify. Figure 4 shows that over the two-year time horizon, the floating rate would average 12bps less than the average fixed rate resulting in a cost to the fixer.

Conclusion

ETM models and analysis suggest that entering into an IRS contract to hedge 100% interest rate exposure is not entirely beneficial. There are opportune moments early in the cycle where such a hedge could lead to profit, but these periods are often short-lived. The current interest rate cycle is already beyond this point if rates are to follow either our base case or the lower risk scenarios. Only if interest rates rise in line with our worst-case scenario would entering into a 2-year swap now effectively hedge against upcoming interest rate risk.

All of that said, each corporate has a unique set of circumstances. We acknowledge that this report has not taken into account the need to create certainty as part of a broader shareholder mandate, nor have we stress-tested the balance sheet to consider other factors that may require a more aggressive hedging mandate. These issues, albeit part of the collective solution, are separate, requiring analysis to create the best mix between risk mitigation and product cost. ■

Each corporate has a unique set of circumstances.

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Kieran is the Co-Head of Financial Markets at ETM Analytics and is responsible for leading a team in identifying market dislocations and providing solutions for traders, treasury professionals and corporate executives. In addition to this role, Kieran heads up the Africa desk and has extensive experience in numerous markets, including Latin America, CEE and G10. He has a strong grasp of FX, commodities, interest rates and derivatives and developing hedging strategies for these risks. Kieran is driven by solving real-world issues using financial markets and creating profitable opportunities for clients.

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