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# Financial Service Advisory

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MAKING AN IMPACT THAT MATTERS since 1845

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# Financial Reporting Advisory & Assurance

We assist clients in financial and non-financial sectors confidently navigate the complexity of existing and forthcoming accounting standards, such as IFRS 17 Insurance Contracts. Our clients gain a clear understanding of the strategic, operational and financial impacts which these standards can have on their businesses.

Our guidance starts with the adequate interpretation of IFRS principles and requirements. We develop solutions and frameworks for a successful implementation of new IFRS standards. This entails the development and validation of quantitative models and tools for the accurate measurement of financial risks and instruments to which an entity has exposure. Our areas of expertise include IFRS 9 impairments, IFRS 2 Share-based options and IFRS 13 Fair Value Measurement.

Our team of experts is seasoned on leading market practices across the globe with regards to sound financial risk reporting, measurement and management. This includes advising you on sound economic hedging and hedge accounting, thereby providing more stability to the financial performance of your business.

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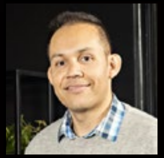

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## Credit Impairments

### IFRS 9 Credit Impairments

Credit risk is at the heart of risk management for all lending institutions. Its effective quantification is the first step towards its successful management.

Financial Services Advisory has extensive experience in credit risk modelling. We provide our expertise to banks and other lending institutions towards the development, validation and implementation of credit risk models based on robust methodologies and in line with global leading market practice.

**Our skillset spans retail, SME and corporate portfolios. We provide expertise in:**

- IFRS 9 expected credit loss (ECL) models which include probability of default (PD), exposure at default (EAD) and loss given default (LGD) modelling;
- Assessments for significant increase in credit risk (SICR);
- Assessment of macroeconomic forecasting models for the incorporation of forward-looking information (FLI);
- Validation and performance monitoring of credit risk models.

### Credit Financial Due Diligence

Large corporate transactions entail valuations which generally involve areas of significant uncertainty. This is even more relevant when the transfer of significant loans or debtors' portfolios is at stake. Financial Services Advisory provides vendor and buy-side due diligence services. This offering provides bottom-up financial due diligence analysis on the credit quality of the book, portfolio maturity and IFRS 9 reporting.

We support our clients in gaining greater assurance regarding the appropriate level of capital requirements and impairments a portfolio of loans should attract in a corporate transaction based on the portfolio's credit risk profile.

## Valuations

### IFRS 2 Share-based Payments

We provide services relating to the valuations of share-based payments including, but not limited to, Long-term Incentive Plans ("LTIP"), Conditional Share Plans ("CSP"), Share-Option Schemes ("SOS") and Share Appreciation Rights ("SAR") by carefully following the guidance outlined in IFRS 2, along with market-accepted pricing principles and valuation methodologies. Careful consideration is given to the underlying performance condition(s) of the relevant scheme(s) and appropriate market data and related economics are independently sourced and implemented in our valuations. Furthermore, our services extend to calculating the relevant IFRS 2 expenses relating to Black Economic Empowerment ("BEE") and Broad-based Black Economic Empowerment ("B-BBEE") transactions.

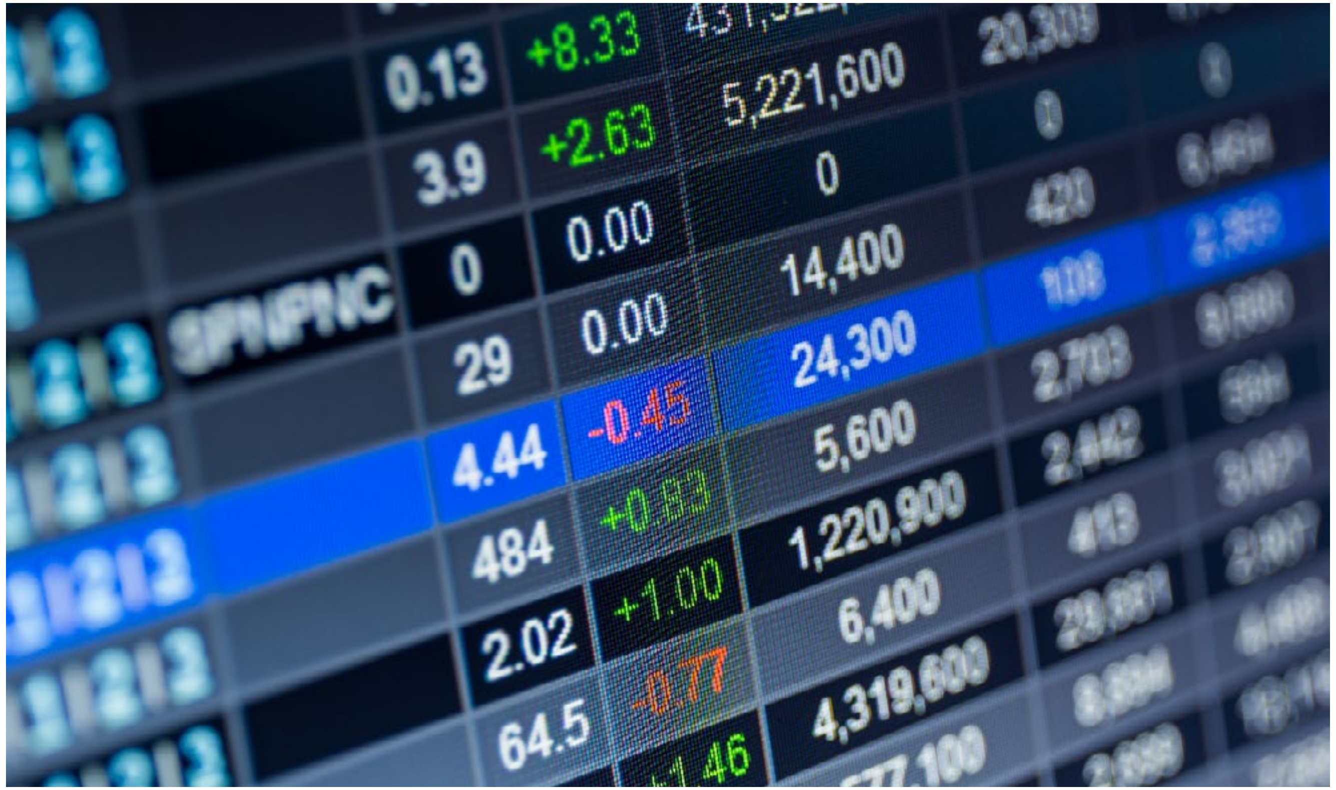
### IFRS 13 Financial Instruments

We perform fair valuations of financial instruments and derivatives held by entities for investment or hedging purposes. Under IFRS 13, the fair value of a financial instrument is the price that will be paid to buy an asset, or received to sell a liability, by a market participant. IFRS 13 requires valuation adjustments (xVAs) of the fair value of financial instruments. These include credit and debit valuation adjustment calculations as well as other notable valuation adjustments.

Our team consists of leading industry experts that utilise robust financial models, tools and accelerators as well as up-to-date market data provided by leading independent market data providers to perform these valuations and adjustments.

### IFRS 7 Disclosures

We provide services relating to the fair valuation of financial instruments for disclosure purposes as is required under IFRS 7 Financial Instruments: Disclosures. This includes determining the fair value of corporate bonds, floating-rate notes and loans, as well as other instruments that are not recognised at fair value, but for which fair value disclosure is required. In performing our valuations, careful consideration is given to the principles outlined in IFRS 13 for determining the fair value of the relevant financial instruments, along with relevant market data and market economics.



## Hedging

### IFRS 9 Hedge Accounting

We provide end-to-end services assisting entities adopt and apply the hedge accounting requirements of IFRS 9. Our experienced team of specialists support in the eligibility assessment of hedge accounting adoption, meeting the pre-requisites stipulated by the accounting standard and in the practical implementation of hedge accounting in the financial reporting process.

### Economic Hedging

Business entities are exposed to multiple economic risks such as but not limited to interest rate, currency, equity and commodity risks. These risks can impact the financial state of a business entity. We consult and advise on how these risks can be neutralised or reduced through the use of financial instruments and derivatives.

## Insurance Reporting

### IFRS 17 Implementation and Advisory

IFRS 17 is considered the most significant regulatory change in the history of the industry. The standard not only presents highly complex technical requirements but imposes fundamental changes on all facets of an insurer's business model. Financial Services Advisory comprises of insurance, financial reporting and technical IFRS 17 subject matter experts, with backgrounds in technical accounting, audit and actuarial science. We support clients on their journey to implement the new standard, transform their financial reporting process, and ensure that the appropriate controls and governance processes are in place.

**We are in a position to enhance our clients' implementation projects by:**

- Understanding the practical implications of IFRS 17 and identifying the opportunities for change by converting complex theoretical training into a practical demonstration of the impact on finance's data, systems and processes.
- Delivering IFRS 17 projects that add value beyond compliance using our suite of "accelerator" tools.
- Optimising our multi-disciplinary model to support the insurance value chain.
- Enabling clients to stay abreast of governance by identifying their key operating and financial reporting risks and building controls to address these risks.

### Financial Reporting Remediation and Transformation

This service offering assists insurers to stay ahead of governance standards with our comprehensive financial reporting solutions. We identify organisations' inherent risks and redesign their finance function using cutting-edge technologies, providing a transformative advantage. By leveraging our expertise, insurers can rapidly evolve their finance capabilities, adapting strategically to the fast-paced global business landscape.

### Results as a Service

Through our Results as a Service (RaaS), we deliver IFRS 17 projects that go beyond the basics, utilising our suite of accelerator tools. We add significant value to clients' compliance efforts, enhancing their overall financial strategy.

# Prudential and Financial Services Compliance

The Basel III reforms will have a significant impact on banking institutions, their risk management frameworks and capital requirements. The changes will lead to reorganisation across the financial industry as the deadline draws closer. Our chartered accountants and quantitative analysts specialise in the development and validation of regulatory capital models and governance frameworks to ensure compliance with Basel III and relevant Basel Committee on Banking Supervision (BCBS) guidance.

We assess the impact of regulatory changes on data, processes, and controls related to credit, market, liquidity and operational risks. We have pioneered unique capital allocation methodologies that allow insight into the capital charge drivers. Our tried and tested tools and accelerators can assist organisations in the successful implementation of the Basel regulations.

Our Centre for Regulatory Strategy keeps abreast of prudential developments in South Africa and major economies including the EU and UK. Furthermore, FS Advisory has extensive experience in regulatory reporting such as BA risk returns and Pillar 3 risk management disclosures. We have assisted several Tier 1 banks to optimise their regulatory reporting processes.

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# Prudential Regulatory Requirements

## Credit Risk

Financial Services Advisory has extensive credit risk modelling experience and subject matter expertise of Basel and regulatory requirements. We understand the existing and emerging modelling requirements of the Basel III reforms across all asset classes including retail, commercial and corporate segments. Whether a lender is looking to adopt standardised or internal ratings based (IRB) methodologies we can support them in developing a suite of compliant models which meet their business needs.

**Our offerings include:**

- **Probability of Default (PD), Loss Given Default (LGD), and Exposure at Default (EAD) Models Development and Validation:** Offer expertise in building and validating PD, LGD, and EAD models in compliance with regulatory requirements.
- **IRB Framework Implementation:** Assist banks in adopting the Internal Ratings-based (IRB) approach, including model development, validation, and parameter estimation.
- **Data Quality and Governance:** Provide guidance on data requirements, data quality assessment, and data governance to ensure accurate and reliable model outcomes.
- **Model Monitoring and Maintenance:** Establish processes for ongoing model monitoring and updating to ensure models remain robust and aligned with changing market conditions.

## Operational Risk

The Basel Committee on Banking Supervision (BCBS) has introduced a single non-model-based method for calculating operational risk capital, the Standardised Approach. The main objectives of the BCBS in defining these new rules were to improve comparability and simplicity.

**Our professionals can assist banks with the introduction of the Standardised Approach by:**

- Advising on the structure of the operational risk management function and models for internal reporting and assessment, and the integration of various categories within the non-financial risk spectrum.
- Reviewing existing operational risk frameworks to incorporate the new requirements while ensuring they remain fit for purpose for current regulatory and internal reporting requirements.
- Validating the calculation accuracy of the standardised approach for operational risk capital requirements and assessing the impact on capital management and optimisation.
- Assessing the loss-data collection and management standards and processes to meet the requirements for usage in the Internal Loss Multiplier.

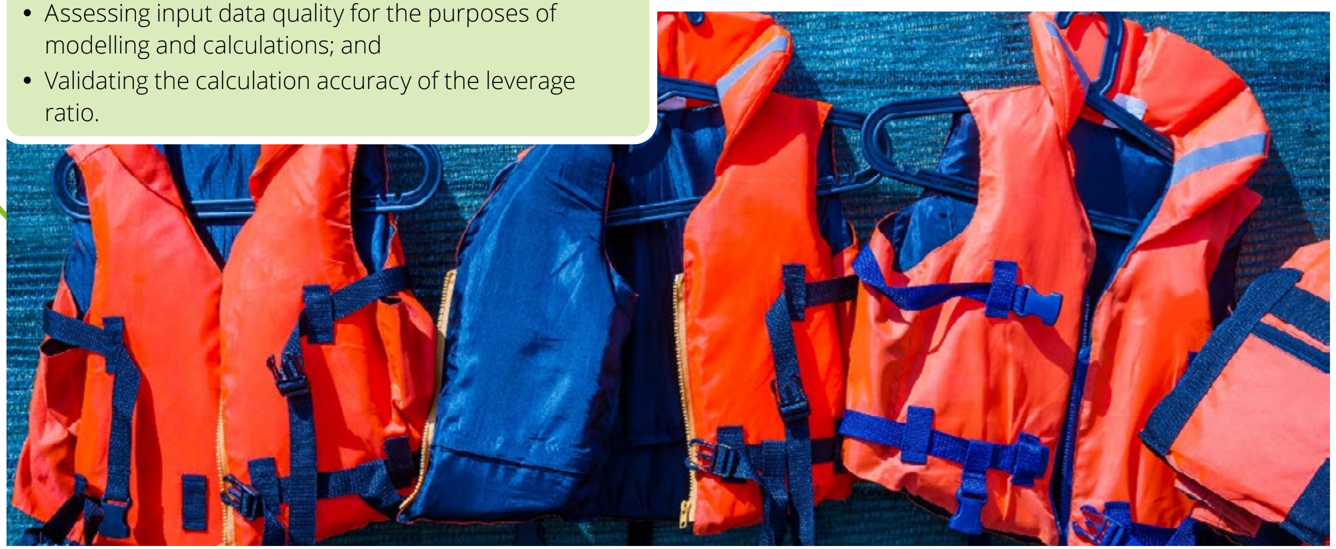
## Leverage Ratio

As a response to the global financial crisis, the Basel Committee on Banking Supervision (BCBS) introduced a non-risk-based leverage ratio requirement with the aim to restrict the build-up of excessive leverage in the banking sector to avoid destabilising, deleveraging processes that can damage the broader financial system and the economy.

The Financial Services Advisory team has worked extensively with the regulatory requirements placed on derivatives and securities financing transaction (SFTs) exposures, which introduce additional determinants in calculating the Basel leverage ratio. We have assisted banks with the implementation of models to calculate inputs to their leverage ratio and have built our own challenger models.

**We have experience and technical knowledge to support clients with broad services, including:**

- Assessment of the conceptual soundness and regulatory compliance of the Leverage Ratio calculations and methodology.
- Assessing input data quality for the purposes of modelling and calculations; and
- Validating the calculation accuracy of the leverage ratio.



## Prudential Regulatory Requirements

### Fundamental Review of the Trading Book (FRTB)

The Basel Committee's FRTB regulation touches many areas of internationally active banks. Implementation of the regulation requires not only an understanding of the immediate impacts, but also insight into potential long-range challenges, including capital impact, optimisation, and business strategy, P&L attribution and non-modellable risk factors (NMRFs), IT implementation, and target operating models.

**Our approach includes, but is not restricted to:**

- Conducting FRTB gap analysis and capital impact analysis.
- Assisting banks with FRTB application packs.
- Using our challenger model to validate the FRTB models.
- Model development and vendor system implementations.
- Reviewing banks' policies and controls, identifying the required changes and drafting the revised documents.
- Providing market risk business-as-usual and FRTB implementation support.

### Counterparty Credit Risk and Credit Valuation Adjustment Risk

The Trading Risk team within Financial Services Advisory has worked extensively with Counterparty Credit Risk (CCR) and Credit Valuation Adjustment (CVA) Risk. We have assisted Tier 1 and Tier 2 Banks with implementation of these models and have built our own challenger models.

**We have experience and technical knowledge to support clients with broad services, including:**

- Developing a robust collateral framework.
- Understanding the optimal deployment of collateral across netting sets as well as the treatment of single-pledge agreements; and
- Using our challenger models to review the SA-CCR and CVA models.
- Model development.
- Application pack reviews and preparation.

## Statutory Compliance and Reporting

### Transition and Compliance

We have extensive prudential banking experience. This experience has been gained from banking regulatory audits as well as advisory projects. These projects have included assisting clients with Basel II and III reviews, gap analyses and implementations. We have good relationships with Regulators, including the Prudential Authority. This is beneficial to our clients because we are able to expedite the resolution of ambiguous or contentious matters.

**We can support clients with the following services:**

- **Regulatory Compliance Assessment:** Assessments of alignment and compliance with relevant regulations through gap analyses, assessment of policies and development of models. Evaluate the bank's credit risk management practices against the Basel Framework to ensure alignment and compliance with regulatory requirements.
- **Supervisory Review and Evaluation Process (SREP) Preparation:** Aid in the preparation of documentation and presentations required for the bank's SREP with relevant regulatory authorities.
- **Regulatory Engagement:** Provide guidance on interacting with regulatory bodies, addressing queries, and ensuring effective communication regarding credit risk frameworks.
- Assistance with transitioning to Basel II/III in other African countries including support with training and quality reviews.
- Testing of parallel runs – returns required by SARB relating to amended legislation to be implemented.
- Testing of amended regulations or changed regulatory processes (outside of a parallel run).
- Preparation of applications for banking licenses.

### Statutory Returns

Financial Services Advisory comprises a team of regulatory specialists with practical experience in statutory reporting. We perform the statutory audits of many large banking groups, and we are seasoned in the regulatory requirements and developments in the banking sector. This offering focuses on risk returns and prudential requirements arising from the Banks Act and related regulations including review of Banks Act Returns (BA Returns) for Tier 1 and Tier 2 banks, as well as responding to requests from the SARB.

### Pillar 3 and Public Disclosures

We assist in preparing comprehensive disclosures for business and statutory purposes.

**Our expertise includes:**

- **Pillar 3 Disclosures:** Assist in preparing comprehensive Pillar 3 disclosures, including credit risk exposure, risk mitigation strategies, and capital adequacy, ensuring compliance with transparency requirements.
- **Reporting Enhancement and Automation:** Evaluate reporting frameworks and propose enhancements to improve efficiency and alignment with regulatory standards. This can include developing automated solutions for generating accurate and timely regulatory reports, reducing manual effort, and minimising errors.
- **Scenario Analysis Reporting:** Provide support in generating scenario analysis reports required by regulators to assess the bank's vulnerability to various economic scenarios.
- **Data Aggregation and Analysis:** Implement systems for efficient data aggregation and analysis to support accurate reporting and disclosures.

## Africa Centre for Regulatory Strategy

**The Deloitte Africa Centre for Regulatory Strategy:**

- Analyses regulatory developments within South Africa, Africa and key markets which have a strong influence on local regulatory developments such as the UK, EU and the USA.
- Identifies clients and sectors impacted by regulatory developments.
- Develops tailored sector and client-specific solutions in response to opportunities identified and assists clients in executing on these.

Through the adoption of a strategic and forward-looking approach to the identification and analysis of emerging financial services regulations, the proposition affords our clients the ability to identify and understand the changing regulations and the impact that this can have on their strategy and business model. The team comprises several regulatory experts who focus on interacting with those individuals at our clients charged with accountability to manage their organisation's response to changes in financial services regulations.

## Resolution Frameworks

In the aftermath of the financial crisis, the issue of firms perceived as too big, complex and interconnected to fail was placed at the top of the regulatory reform agenda. Systemically Important Financial Institutions (domestic or global), as designated by global and domestic regulatory and supervisory bodies, are required to develop and implement Recovery Plans and work closely with the regulatory and supervisory bodies to develop them.

Financial Services Advisory has subject matter expertise and deep practical experience in the development, implementation and testing of Resolution Frameworks.

## Margin Requirements

Under the globally agreed standards, all financial firms and systemically important non-financial entities that engage in non-centrally cleared derivatives will have to exchange initial and variation margin commensurate with the counterparty risks arising from such transactions. The framework has been designed to reduce systemic risks related to over-the-counter (OTC) derivatives markets, as well as to provide firms with appropriate incentives for central clearing while managing the overall liquidity impact of the requirements.

**We have experience and technical knowledge to support clients with broad services, including:**

- Support in the calculation and monitoring of margin requirement needs including SIMM modeling and the regulatory approval process.
- Strategic definition and operational efficiency of the margin and collateral management process.
- Ongoing implementation support throughout the implementation phase; and
- Identification of gaps and definition of remedial actions.

## Financial Market Infrastructure

The Financial Market Infrastructures (FMI) refers to entities performing systemically important activities across the financial market system, which cut across all industries – banking, insurance and investment management. FMIs play a crucial role in connecting the various market players by providing various services in the financial transaction value chain. The proper functioning of modern financial markets cannot be achieved without the development of a strong and robust FMI ecosystem.

Globally, FMIs are being reshaped by business challenges, strategic choices, and the new possibilities that emerging technologies offer. A key development in South Africa will be the establishment of a Central Counterparty (CCP) in line with global best practice requirements. The ability to centrally clear trades and transactions will be critical to manage the economic and regulatory requirements of mitigating counterparty credit risk.

The integration of all elements in the pre- and post-trade life cycle is a complex endeavour and our teams are well placed to support this, both from a regulatory and implementation point of view.

**We cover the following areas of expertise:**

- Provide regulatory advice to ensure compliance with initial margin requirements.
- Margin model implementation or independent validation.
- Design an integrated risk and control framework through the trade life cycle.

## Wholesale Conduct Risk

The conduct of financial institutions and the fair treatment of customers has been an important theme for regulators across the globe. Increasingly this now extends to the conduct of wholesale markets where financial institutions transaction with one another and institutional clients. Organisations are expected to have comprehensive Wholesale Conduct Risk Frameworks in place that address elements like governance and supervision, culture and managing conflicts of interest. Other themes that are emerging include ensuring best execution for clients, the risk management and governance of benchmarks, and algorithmic trading. FS Advisory has a team of experts with extensive experience in wholesale financial markets. They can support with the identification of gaps in the Wholesale Conduct Risk Frameworks and advise on global best practice through their network of international experts.

## Reference Rate Reforms

Globally there has been a shift away from the traditional Ibor reference rates used in financial contracts towards more transaction-based reference rates. This is currently happening in South Africa too, as our market is transitioning away from the Johannesburg Interbank Average Rate (JIBAR) to a rate based on overnight deposit transactions, the South African Overnight Index Average (ZARONIA). The JIBAR rate is entrenched in the day-to-day activities of providers and users of financial services, both unregulated and regulated, and the transition will have implications for operations, legal, risk management, reporting, and finance.

A timely and carefully co-ordinated transition plan is imperative to ensure a seamless transition that protects business interests and avoids reputational, legal and commercial risks later. Our team are able to support your transition programme by identifying both the direct and indirect exposures to JIBAR in your organisation, measuring the risks and impact of transition, supporting the repapering of legacy contracts and ensuring that financial reporting adequately reflects the economics of the transition.

# Business, Reporting and Risk Optimisation

We elevate our clients' risk management infrastructure to a level beyond the mitigation of downside risk and towards the creation of significant economic value. We develop and implement risk management frameworks based on proven practices of governance, controls and processes. This includes establishing ESG strategies and embedding its risk factors into the enterprise risk management (ERM) framework.

Our aim is to enhance your company's decision-making. We drive clients towards an operating model of sophisticated balance sheet management, efficient allocation of capital and effective liquidity deployment. With regard to credit risk, we offer quantitative and qualitative solutions across all stages of the credit lifecycle, enabling lenders to accurately measure risk and improve return within their risk appetite.

Our FinTech specialists develop digital solutions for financial risk management infrastructure using technologies such as blockchain, artificial intelligence and cloud hosting.

For the corporate treasury function, we leverage off our global expertise to provide clients with industry leading methods and tools for the optimal management of liquidity and Foreign exchange or Forex (FX) exposures, thereby managing volatility in your financial performance. We upgrade treasury operating models to better mitigate risks of fraud and financial loss. We have assisted several Tier 1 banks to optimise their regulatory reporting processes.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# Credit Risk Management

## Origination

Financial Services Advisory advises clients on how to improve their credit origination framework. This is done through the development and implementation of models aimed at helping the lender achieve a more objective assessment of the risk of new business and attain a balance of risk and return within their risk appetite. We achieve this by using origination scorecards, affordability models, take-up and retention models.

Furthermore, we have experience in customer demand-based pricing as a way to enhance price setting methodologies. This aims to identify different groups of customers that would react differently when presented with different prices or price changes. The price sensitivities of the respective groups are estimated and used to simulate how different pricing strategies would impact book and revenue growth. We have established a methodology that can be used for the pricing of Deposits, Term Assets, Revolving Assets and Non-Interest Income.

## Portfolio Monitoring

Having a robust credit risk management framework is crucial for lenders to effectively manage risk and improve growth opportunities and returns on their existing portfolios. Credit providers seeking strong risk management capabilities need an understanding of the risk profile of individual borrowers and portfolios as a whole, enabling better informed management decision-making.

**In this regard Financial Services Advisory has service offerings based on:**

- Behavioural and financial scorecards;
- Credit risk management frameworks;
- Early warning signals;
- Risk appetite statements and thresholds;
- Credit analytics;
- Risk-based portfolio forecasting with behavioural drivers of loan migrations, repayments and impairments.


## Collections

The consumer lending environment has become more competitive, with new and non-traditional credit providers gaining a stronger foothold in the market. Disruption in this space has stemmed from innovation, regulation and increased consumer awareness. The collection function should be a key focus for any lending organisation looking to gain a competitive advantage through the introduction of a market leading risk-based collections strategy.

**We can assist with optimising collection processes and methodologies. Financial Services Advisory has developed a risk-based collection strategy encompassing the following key areas:**

- Sophisticated behavioural collections: scorecards and propensity models;
- Automation of collection processes;
- Restructuring policies;
- Enhanced reporting and real time metrics;
- Alignment across the credit lifecycle.

## Model Risk Management

Financial institutions use decision models in processes such as origination, limit management and collections. In the commercial area, customers are able to select a product's characteristics and the system makes real time decisions on viability and price. Customer on-boarding, engagement and marketing campaign models have become more prevalent for establishing customer loyalty and engagement actions in all stages of the customer life cycle.

Access to trusted, quality models is essential to using enterprise data effectively. A clearly defined Model Risk Management (MRM) framework with strong management insight on monitoring models and their risks allows institutions to improve decision-making, drive growth and bolster profitability.

**Financial Services Advisory provides clients with its global expertise on the key building blocks of model risk management, notably:**

- Governance
- Processes
- Policies and documents
- Inventory and model landscape
- Workflow and lifecycle management
- Monitoring and reporting

## Treasury, Capital and Liquidity Management (TCLM)

### Capital Management

Regulators have intensified their focus on capital adequacy in recent years, with a strong emphasis on stress testing and capital planning. Beyond capital adequacy, effective capital management is an imperative for savvy financial institutions. This entails capital optimisation and efficient allocation which supports the entity's objectives, risk appetite and foster better return-on-equity performance. We bring together professionals with diverse experience to provide customised solutions. We serve our clients locally, while drawing upon the firm's considerable global resources and industry expertise.

We assist organisations to develop, assess, and implement capital management and measurement processes, driven by both regulatory and business needs. This includes the development of Internal Capital Adequacy Assessment Process (ICAAP) for banks, Own Risk and Solvency Assessment (ORSAs) for insurers and Market Infrastructure Capital Assessment Process (MICAPs) for financial market infrastructure entities.

**Economic Capital Framework**

- Develop the economic capital framework for a financial institution.
- Implementation of risk-return models and capital planning and allocation framework.

**Capital planning and budgeting**

- Develop multi-year capital planning and budgeting models to facilitate identification of potential shortfalls, incorporating stress testing and scenario analysis.
- Develop capital management and planning policies, establishing prudent guidelines budgeting, dividend payout and contingency plans.
- Review of system automation for capital planning and validation of the system's assumptions.

### Liquidity Risk Management

Liquidity risk stems from the core business of banking, which is the maturity transformation of short-term deposits into long-term assets. Liquidity risk is sensitive to the interconnectedness of financial markets. Idiosyncratic liquidity shortfalls can quickly crystallise systemic liquidity stresses. Since the introduction of Basel III, regulators have been promoting sound liquidity risk management. Several banks have already initiated the documentation and reporting of their Internal Liquidity Adequacy Assessment Process (ILAAP). In some jurisdictions, systemically important banks are required to conduct externally facilitated liquidity stress simulations.

Despite the distinct nature of their business, insurers are also vulnerable to liquidity risk. There are many sources of liquidity risks for insurers including both insurer-specific and marketwide drivers. Sound liquidity management practice is an imperative for the sustainable operation of an insurance business. Similarly, to banking, insurance supervisors are raising expectations and regulatory requirements in this regard.

Our team comprises of strong liquidity management expertise, that have a practical appreciation of treasury management frameworks and liquidity risk regulations. They understand how the respective frameworks need to align and how to address the operational challenges that exist.

**We can advise clients on:**

- Articulation, review, benchmarking and integration of liquidity risk frameworks, liquidity risk appetite statements, contingency funding plans and fund transfer pricing policies.
- Facilitate liquidity and recovery stress simulations to assess the robustness of the liquidity contingency plan and the recovery plan.
- Compliance with regulatory liquidity risk requirements.
- Devising an optimal funding profile strategy.

### Asset and Liability Management

The Asset and Liability Management (ALM) function plays a critical role in ensuring the resilience of an organisation's balance sheet by managing the mismatches between the assets and liabilities and how these react to changing market conditions. ALM operating models are also evolving within the finance industry as a result of increased regulatory requirements, improved technology and higher stakeholder expectations regarding risk management and capital optimisation.

Although ALM has traditionally focused on managing interest rate and liquidity risk, the risks to an organisation's balance sheet are becoming more complex in nature. As a result, industry trends in the ALM operating model have shown an increased preference to establishing a stand-alone and specialised ALM function, particularly for large firms, with enhanced dedication to the separation of duties.

**Financial Services Advisory provides a range of ALM advisory services with specific expertise in the following areas:**

- Reviewing and enhancing ALM policies and procedures.
- Establishing appropriate dashboards for risk monitoring and reporting.
- Technical and strategic support to implement and review hedging programs.
- Connecting pricing and product development processes to the ongoing management of liabilities.
- Providing governance advisory services on the structure and function of the Asset & Liability Committee (ALCO).
- Engaging with vendors to support appropriate implementation of ALM related technologies.
- Assessing the effectiveness of the ALM function in capital optimisation.

### Balance Sheet Management

There has been an increased focus on Balance Sheet Management (BSM) in financial institutions globally. A BSM function helps organisations deliver on their business strategies and achieve profitability targets in a long-term sustainable manner, by considering the constraints imposed on the organisation by various industry risks, market uncertainty and the emerging regulatory landscape.

Financial Services Advisory's BSM offering specialises in the intersection of risk, finance, treasury and strategic planning as well as management and reporting capabilities across an organisation. Our key success factor is to foster coordination across these multiple functions and enable efficient integrated planning to unlock value.

**Our Balance Sheet Management framework covers the following core capabilities:**

- Group and business unit strategic objectives (including portfolio optimization, fit or shape setting)
- Risk appetite and strategy
- Risk identification and assessment
- Integrated risk and finance budgets
- Stress testing
- Risk measurement and management
- Asset & Liability management
- Resource management
- Monitoring and reporting

# Treasury, Capital and Liquidity Management (TCLM)

## Risk Appetite

The need for an effective risk appetite framework was reinforced through observations of failures in its absence during the financial crisis. An effective risk appetite framework combines a series of appetite statements, limits, and measures that together enable the Board to set, monitor and manage the entity's risk appetite, profile and capacity. The organisation's risk appetite should foster board level debate on actionable elements that clearly articulate the organisation's response to losses caused by integrity risks and breaches in integrity risk limits.

Deloitte uses a multi-step approach that has proven to be successful in developing, implementing and monitoring the integrity risk appetite, enabling further optimisation of our client's integrity risk management. Embedding the integrity risk appetite throughout the entire organisation is key in this approach. Not only will the financial institution become compliant with applicable laws and regulations, also several advantages in the marketplace can be achieved by this approach such as: lower (compliance costs, less complexity of operational processes and the quality of service offerings can be improved.

## Interest Rate Risk in the Banking Book

Interest rate risk in the banking book (IRRBB), otherwise referred to as non-traded interest rate risk, relates to the sensitivity of a bank's earnings and balance sheet to interest rate movements. IRRBB is a consequential risk and a result of mismatched positions that banks take on through funding interest rate sensitive assets with interest rate sensitive liabilities.

**If managed effectively, IRRBB upside potential can be essential in creating shareholder value. We have working capabilities and expertise to assist banks with the following:**

- Articulating, benchmarking, and reviewing of IRRBB framework and risk appetite statements.
- Devising asset liability management strategies to manage IRRBB, including hedging strategies.
- IRRBB regulatory reporting and economic capital quantification.

# Economic Capital and Financial Modelling

## Economic Capital Modelling

The necessary first step in effective capital management for a bank is quantifying the capital demand given the bank's risk profile. Beyond regulatory capital modelling and risk management advisory, Financial Services Advisory possesses quantitative skills in the development of economic capital models. In this offering we merge our skillsets across the major financial risks which banks face. Our skills include the capital quantification of credit risk, market risk, counterparty credit risk, interest rate risk on the banking book and operational risk. We incorporate the entity's risk appetite and elements such as diversification benefits.

## Financial and Risk Forecasting

The recent turmoil in financial markets and the resulting disruption to operating environments has forced many companies to reassess how they incorporate risk into decision-making. It has become a top priority to build a balanced approach to risk and return.

Deloitte understands that risk-adjusted forecasting and planning capabilities should be a key component in the strategic toolkit for CFOs and CROs. It is clear that enhanced analytics enables faster and more robust decision-making. Risk-adjusted planning helps finance executives to better demonstrate to boards and investors how the company is taking an integrated approach to managing the business in challenging times.

To successfully deliver, finance organisations should challenge the existing mechanisms by which they are executing their planning processes. Targeted efforts using these short- and long-term strategies can bolster planning capabilities during good times as well as during times of crisis or recovery. This will unlock value that is uniquely attributable to financial forecasting and its ability to inform and strengthen strategic decision-making.

## Stress Testing

Stress testing has become a fundamental tool to gauge the resilience of the financial sector and is now one of the key supervisory tools to assess regulatory capital shortfalls. Only by optimising and embedding stress testing processes into business-as-usual activities can firms cope with the greater demands made of their stress testing teams. A fully embedded stress testing framework enables a firm to better understand its true risk profile and make informed strategic decisions that bolster its long-term sustainability.

Regulators use stress testing to assess firms' financial health, risk management capabilities, adequacy of capital reserves and risk appetite. We help firms develop an industry leading stress testing framework by:

- Designing and implementing bespoke solutions which can support effective end-to-end stress testing activities allowing firms to use their stress testing framework as a core risk management tool.
- Supporting remediation activities by implementing short-term solutions, conducting gap analysis, and peer benchmarking; and helping firms align themselves with their risk strategy; and
- Delivering tactical solutions by providing our clients with specialised resources with demonstrated experience in the market.

# Corporate Treasury

## Treasury Systems

Treasury systems (TS) have become an imperative for both small and large treasury functions alike. Having visibility of cash and financial risk exposures, such as FX and interest rate risk, remain one of the top challenges facing corporate treasuries. To overcome these challenges, automation of cashflow forecasting, cash management and financial risk management remains a priority area driving the adoption of TMS's. A full TS implementation further supports transaction process automation, financial data management and processing, payment infrastructure, liquidity and cash management modelling tools and governance control measures such as multiple signatory and approval functionality. These features are among the baseline capabilities of modern TS's.

Our Corporate Treasury team supports clients on their TS journey. The systems on the market today range from off-the-shelf products to bespoke and highly customisable solutions. System selection is critical to ensure that all business requirements are met, particularly as there may be firm-specific requirements that require unique solutions. The correct and complete implementation is crucial to ensure that the full value of the system is realised, and that no inadvertent operating risks are created. Our team has the experience to support our clients through this process and ensure that the full value proposition is realised from their chosen system. Where clients have existing systems, our team can support clients in ensuring that maximum value is extracted.

Investment in implementing a TS can be significant, and our team is well placed to provide independent advice from experienced ex-market practitioners.

## Cost and Profitability Optimisation

Treasury has moved from a traditionally transactional function to becoming more strategic. Treasurers are partnering with CFOs and Business Leaders in managing market risks and supporting commercial decisions. Our clients face increasing foreign exchange, commodity, and liquidity risks in volatile and competitive markets, as well as complex cross-border cash management requirements. These clients also need to take advantage of automation in the treasury environment as new technologies enable better control mechanisms and improved efficiencies.

Treasury functions, and specifically those that are highly centralised, have the ability to add significant direct cost savings to any business. These savings manifest in a number of ways such as improved risk aggregation, active cash management and cash pooling, rationalising of banking services or being correctly banked, and leveraging treasury systems for operational efficiency.

## Governance and Controls

We provide specialist independent advice and assist management on all aspects of the governance and control environment for the Treasury function. This includes governance structure and reporting requirements, delegation of authority matrix design and its implementation, controls assurance, controls framework review, controls monitoring, end-to-end process and controls review, and controls benchmarking. Additionally, we provide treasury specialist support on internal audits.

## Financial Risk Management

Companies face many financial risks which can range from foreign exchange rate and interest rate risk to liquidity risk. Treasurers are instrumental in identifying and managing these risks. These risks are most notable and extreme in many African markets due to the limited depth of market liquidity for hard currencies coupled with hedging solution limitations and various exchange control or cross-border transaction limitations.

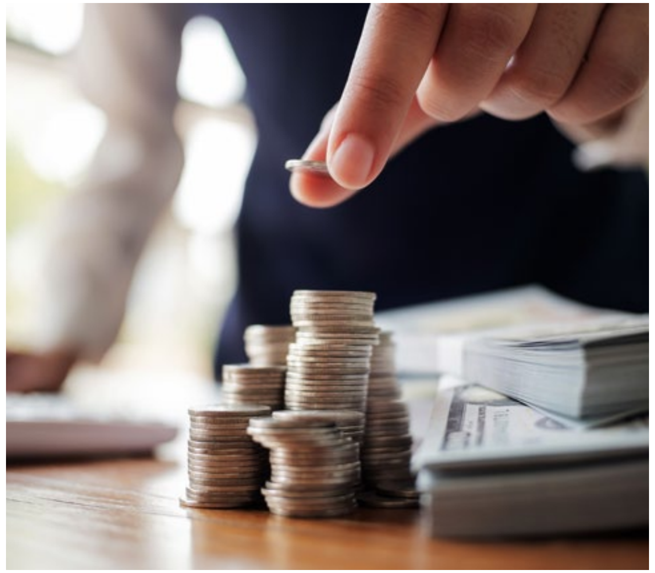
Leveraging on Deloitte global knowledge, we support our clients in formulating best-in-class treasury strategies through the right operating models and tools. We help treasurers identify and quantify their exposure to financial risks, determine appropriate risk management strategies and policies, help quantify the economic implications of specific treasury transactions and assist with hedge accounting. Furthermore, our Treasury Team has direct experience in treasury management across multiple African markets and can support your treasury requirements in that regard.

Deloitte can help you build strong frameworks within the areas of financial risk, liquidity risk and funding management that best supports the business in achieving its targeted business outcomes.

## Cash and Liquidity Management

Effective cash management can release funds and be a catalyst for cost savings and by implication, additional business growth. In the context of the higher interest rate environment and continued global supply chain challenges, reducing working capital requirements are an imperative to deliver cost savings. Enhancing cash and liquidity management capabilities can reduce the working capital requirements of a business which can translate into direct cost savings. Any investment made into improving cash and liquidity management will pay for itself multiple times over into the future.

We assist our clients in the selection and implementation of cash management solutions, efficient cash pooling frameworks, optimising working capital, assessment on the working capital needs, cash forecasting and development of analytics and forecasting tools to understand liquidity issues and support decisions on financing.



# Trading Risk Management

## Market and Counterparty Credit Risks

The global financial crisis resulted in a business landscape riddled with new regulations and volatile business conditions. Financial companies have grappled within this environment while struggling to maintain growth and to enhance their risk and capital management processes. These forces have created an unprecedented need for a robust, sophisticated risk and capital management and governance infrastructure. The focus in capital markets is shifting towards understanding and managing costs plus achieving an efficient capital allocation – while maintaining an effective risk management framework.

Financial Services Advisory works with financial institutions to improve their market risk management framework going from the impact on banks' solvency due to changes in prices affecting the trading book to changes in interest rates affecting the banking book.

**We provide our clients with support on:**

- Market and counterparty credit risk frameworks, governance and controls
- Fundamental Review of the Trading Book (FRTB)
- Standardised Approach to Counterparty Credit Risk (SA-CCR)
- Credit Value Adjustment (SA-CVA) both Standardised and Basic Approach
- Model implementation or independent validation
- Support with regulatory application processes
- Quantitative modelling
- Capital optimisation

## Collateral Management

Collateral management is integral to Basel regulations as it aligns with overarching objectives such as risk mitigation, capital adequacy, liquidity management, operational efficiency, and market discipline. A number of upcoming regulatory requirements also place competing demands on high quality assets, prompting firms to optimise their collateral management processes. Collateral efficiency can have a significant effect on a firm's revenue stream and cost structure. While some in the industry, principally the largest firms, are already adopting sophisticated approaches to collateral management, others are less advanced. The new regulatory requirements have added complexity to collateral management, but through effective use of advanced strategies and by employing appropriate operating models, firms can address these challenges.

Deloitte's local and international network of experienced risk, regulatory, and industry professionals – including a deep roster of former regulators, industry specialists, and business advisers – with a rich understanding of the impact of regulations on business models and strategy can assist firms in optimising their collateral management and ensure compliance to new regulations.

# Environmental, Social and Governance (ESG)

## Climate Risk Management

Climate risk management is not only a humanitarian imperative, but a business one too. The pandemic has brought into focus external factors that can disrupt financial markets. As climate events could cause similar ripple effects, investors are taking note of the potential financial risks and creating momentum for industry and regulatory action. But how can financial services firms embrace a human-centred approach to managing the risk climate change brings to their businesses while capitalising on the opportunities it presents?

Climate change preparedness has become crucial for financial services firms as stakeholders progressively demand accountable action. Learn how strategic climate-risk management can help you thrive in the economy of the future by identifying sustainable investment opportunities that elevate your bottom line while creating opportunities to make a positive impact on the communities in which you do business. How organisations address climate risk management will redefine their brands and determine their future competitiveness.

## ESG Strategy

Climate change poses risks and opportunities for organisations across all industries. It is essential to understand the physical, transition and liability risks to which your organisation is exposed. A purpose-led approach will accelerate the integration of climate-related and environmental risks and opportunities within your organisation. This will safeguard the management of climate-related risks, and the implementation of suitable mitigation strategies.

Deloitte can help your organisation to shape an appropriate approach to manage the climate-related risks, but also seize the opportunities that brings. We combine our in-depth knowledge of climate risk identification, modelling and reporting into an integral approach. We bring added value by translating strategy and regulation into an efficient and effective implementation into your organisation. Our industry expertise and international network ensures that we can offer tailor-made solutions to complex challenges both on a national and an international scale.

# Environmental, Social and Governance (ESG)

## TCFD Benchmarking

Deloitte supports organisations in navigating through the evolving global disclosure landscape. With new regulations and standards constantly being updated or introduced, the pressure for climate risk disclosures on organisations is increasing. The Financial Stability Board (FSB) introduced the Taskforce of Climate-related Financial Disclosures (TCFD) as a response to the demand for greater transparency on climate risks. The TCFD is a strategic risk management framework for climate risk and can feed into sustainability disclosures. Most importantly, it can be used as a tool to integrate climate risk and opportunities into business processes.

The objective of climate scenario analysis and stress testing is to assess the impact of climate related risks on an organisation's business under different climate scenarios. The results enable organisations to identify the main climate related risks they are exposed to, as well as mitigating actions which enable them to better respond to the threat posed by climate related risks. Scenario analysis is widely used by organisations and also recommended by the Task Force as an important tool.

## Climate Risk Modelling

Climate and environmental risks are materially impacting organisations and play a crucial and ever-growing role in the risk management strategy. Integrating these climate risks into the entire organisation can be challenging. Deloitte can help your organisation with the identification and integration of climate and environmental risks, including climate risk modelling, climate scenario analysis and stress testing, setting up a climate risk data infrastructure and climate risk disclosures.

The objective of climate risk modelling is to assess the impact of climate change on business models, sectors and organisations under different scenarios. Climate risk modelling allows organisations to quantify potential risk and opportunities stemming from climate risk. Central banks, supervisors and society are increasingly demanding organisations to quantify climate risk. The results of climate risk modelling enable organisations to identify and mitigate the impacts that climate change will have on their business.

## Climate Financial Impact Assessment

Climate change impacts today's world. It is increasingly important for banks to measure the financial risks related to climate change. Financial regulators consider climate risk as an emerging risk. Banks are expected to incorporate climate risk in their risk management practices. Furthermore, multiple regulators have announced stress tests on climate risk. Once specific climate risks are identified, how can risk managers quantify these in their loan portfolios?

To prevent any permanent consequences, a fundamental change to a more sustainable growth path is required. Financial regulators recognise that such a change may impact the stability of economies. Financial institutions need to identify, quantify and mitigate the financial risks related to climate change. Financial institutions as well as regulatory authorities are exploring methods for quantifying these climate risks, including physical risks (direct results of climate change, such as extreme weather events), and transition risks, which are related to the transition to a low carbon economy.

# FinTech

The fourth industrial revolution is upon us and has already brought with it much disruption. Technological advancement is no longer a choice but a must. Keeping up with the times can be challenging for any business as the number of available technologies increase by the day – each with a more interesting name than the last.

The Financial Innovation and Technology (FinTech) team within FS Advisory has strong expertise in this field and can help your firm get a head start in this fast-paced digital world. We have a range of innovative apps available which provide access to the technologies of tomorrow. Bespoke apps can also be developed for your firm to address specific needs.

## App Suite

The Deloitte App Suite is a cloud-hosted ecosystem of innovative applications engineered by Deloitte to service the modern needs of clients across the financial services industry and beyond. The Deloitte App Suite is already being used by clients across the globe to access these innovative applications which provide greater levels of efficiency, robustness, automation and insight.

The current range of apps covers a broad spectrum of Financial Risk Management (FRM) use cases and beyond.

All of the apps live in one place for seamless accessibility from anywhere in the world with an internet connection and no limit on the number of users. The App Suite leverages the latest technologies available to provide a state-of-the-art, secure solution.

## Machine Learning and AI

The FinTech team always aims to explore ways in which new technologies can be leveraged within the Financial Services industry to harness the many benefits that these technologies offer. One technology that is at the forefront of this exploration is Artificial Intelligence (AI). The FinTech team offers a unique skills set which focuses on the implementation of bespoke machine learning techniques within various aspects of the Financial Services industry resulting in efficiency through automation, improved model accuracy & data insights as well as powerful predictive capabilities. Our bespoke machine learning services have a proven track record across Tier 1 Banks in South Africa.

With the introduction of ChatGPT having taken the world by storm, the FinTech team has added Generative AI to its vast range of capabilities. We continue to push the boundaries within this evolving space through continuous research and exploration, having contributed to many global initiatives. We offer comprehensive training to clients across a vast range of GenAI topics and have developed our very own suite of GenAI tools. Each module is bespoke in nature with powerful capabilities that will transform any team and organisation within the Financial Services domain.

## Blockchain

Blockchain technology was brought into the public limelight with the success of Bitcoin, which is an implementation of a crypto-currency backed by a blockchain. The base technology (blockchain) has subsequently seen mass adoption in the global market and while still the base for cryptocurrencies, other forms of technologies have surfaced, most notably the Ethereum Network.Smart Contracts is a concept that is transforming a whole host of industries and services. Based on blockchain technology, smart contracts open a world of opportunities as well as an innovative approach to thinking about transacting in an environment filled with uncertainties. The blockchain and smart contracts are based on advances in cryptography and a drive to decentralise control of data and functionality on the web. This decentralised way of thinking is going to take some time to find its place in technology, but the benefits are enormous.

The world is adopting this technology and FinTech is at the forefront of research and adoption of this new exciting development.