Stanbic IBTC Holdings PLC

Enterprise Risk Management

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1 Enterprise risk review Overview

Risk Management's objective continues to align with Stanbic IBTC Holdings PLC (“the group”)’s strategic focus "to be the leading end-to-end financial solutions provider in Nigeria through innovative and customer-focused people". Effective risk management is fundamental and essential to the achievement of the group’s strategic objectives. It is also one of the pillars of the institution’s strategic value drivers which entails supporting our clients by doing the right business the right way and maintaining the highest possible standards of responsible business practice using frameworks that align with regulatory expectations and standard business practices as well as procedures.

The Risk function performs its oversight and advisory responsibilities by deploying a consistent, comprehensive and strategic approach to the identification, measurement, management and reporting of enterprise-wide risks across the group. This is executed through proactive risk management practices which ensure that the business maintains the right balance in terms of the risk-return trade off whilst limiting the negative variations that could impact the group's capital, earnings, risk assets and appetite levels in a constantly changing and dynamic operating environment. Furthermore, Risk continues to shape, drive and monitor activities relating to risk and conduct in the institution through various measures including strengthening the risk and control environment, monitoring risk appetite and governance standards across the institution and elevating risk awareness by deploying requisite compliance training programmes for all Stanbic IBTC employees with a standard process of monitoring and escalating deficiencies in meeting the required standards. This is also in line with the established code of conduct and ethics that all members of staff must adhere and attest to on an annual basis.

The Board sets the tone and risk appetite for the organization including the tolerance levels for key risks and ensure the right risk culture is established across the insittution. These risks are however managed in accordance with a set of governance standards, frameworks and policies which align with the global and industry best practices.

The group's integrated risk management architecture, as outlined in the Enterprise Risk Management (ERM) framework, supports the evaluation and prioritisation of the risk exposures and mitigation activities in line with the group's approved risk appetite, through prudent management of risk exposures in a way that balances the risk premium and return on equity.

The overarching approach to managing enterprise-wide risk is based on the "Three Lines of Defense" principle which requires the first line (Business risk owners) to appropriately demonstrate ownership and accountability for risks and manage same closest to the point of incidence; second line (including Risk, Compliance, and Internal Control) to review and challenge as well as provide oversight and advisory functions; and the third line (Internal Audit) to conduct assurance that control processes are fit for purpose, are implemented in accordance with standard operating procedures, and operating effectively or as intended.

1.1 Risk management framework

Approach and structure

The group's approach to risk management is based on governance processes that rely on both individual responsibility and collective oversight that is supported by a tailored Management Information System (MIS). This approach balances corporate oversight at senior management level with independent risk management structures in the business where the business unit heads, as part of the first line of defense, are specifically responsible for the management of risk within their businesses using appropriate risk management frameworks that meet required group minimum standards.

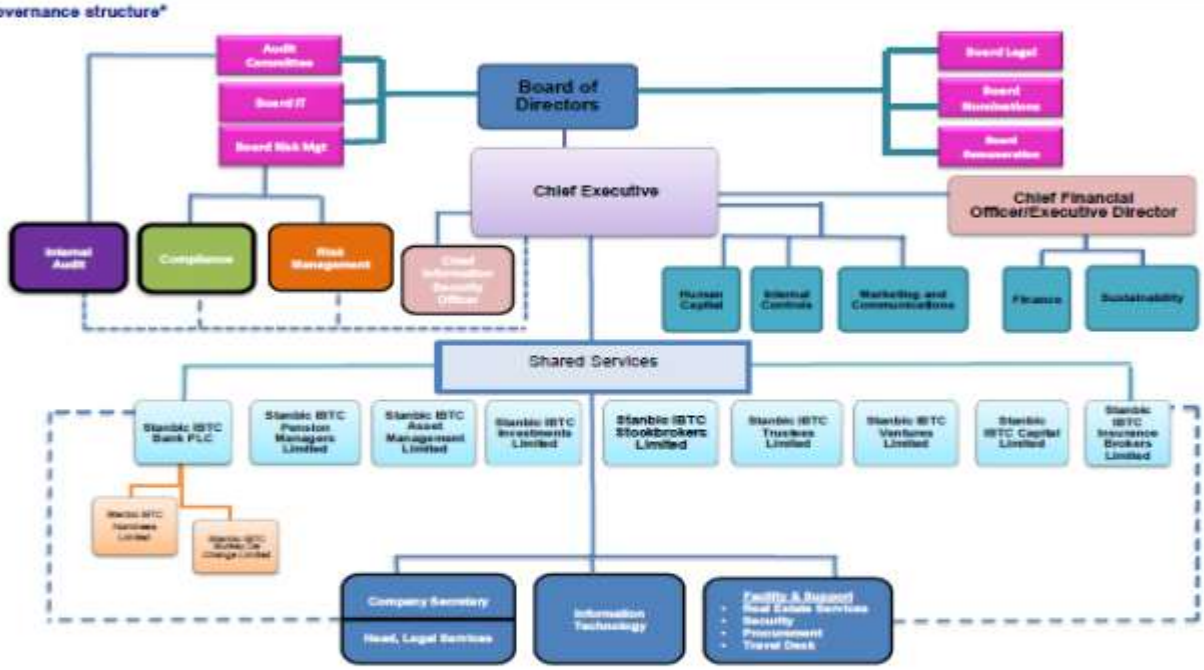
All principal risks are supported by the Risk department.

Governance structure

The risk governance structure provides a platform for the board, executive and senior management through the various committees to evaluate and debate material existential and emerging risks which the group is exposed to, and assess the effectiveness of risk responses through the risk profiles of the underlying business units and functional areas (please refer to the pictorial representation of the group risk governance structure below).

The risk-focused board committees include the statutory audit committee, board credit committee, board IT committee, board legal committee, and board risk management committee, while executive management oversight at the subsidiary and group levels is achieved through management committees that focus on specific risks. Each of the board and management committees is governed by mandates that set out the expected committee's terms of reference.

Governance structure*



*This is continuously evolving to meet changing needs.

1.2 Risk governance standards, policies and procedures

The group has developed a set of risk governance standards for each principal risk including credit, market, operational, information technology (IT), liquidity and compliance risks. The standards define the acceptable conditions for the assumption of the major risks and ensure alignment and consistency in the manner in which these risks are identified, measured, managed, controlled and reported, across the group.

All standards are supported by policies and procedural documents. They are applied consistently across the group and are approved by the Board. It is the responsibility of the business unit executive management to ensure that the requirements of the risk governance standards, policies and procedures are implemented within the business units.

Risk appetite

Risk appetite is an expression of the amount, type and tenure of risk that the group is prepared to accept in order to deliver its business objectives. It is the balance of risk and return as the group implements business plans, whilst recognising a range of possible outcomes. The Board establishes the group's parameters for risk appetite by:

- providing strategic leadership and guidance;
- reviewing and approving annual budgets and forecasts for the group and each subsidiary; and
- regularly reviewing and monitoring the group's performance in relation to set risk appetite.

The risk appetite is defined by several metrics which are then converted into limits and triggers across the relevant risk types, at both entity and business line levels, through an analysis of the risks that impact them.

Stress testing

Stress testing serves as a diagnostic and forward looking tool to improve the group's understanding of its credit; market, liquidity and operational risks profile under event based scenarios. Management reviews the outcome of stress tests and selects appropriate mitigating actions to minimize and manage the impact of the risks to the group. Residual risk is then evaluated against the risk appetite.

Principal Risks

The group's enterprise risk management framework is designed to govern, identify, measure, manage, control and report on the principal risks to which the group is exposed. The principal financial risks are defined as follows:

Credit risk

Credit risk arises primarily in the group operations where an obligor / counterparty fails to perform in accordance with agreed terms or where the counterparty's ability to meet such contractual obligation is impaired. Credit risk comprises counterparty risk, wrong-way risk, settlement risk, country risk and concentration risk.

Counterparty risk

Counterparty risk is the risk of loss to the group as a result of failure by a counterparty to meet its financial and/or contractual obligations to the group. It has three components:

- primary credit risk which is the exposure at default (EAD) arising from lending and related banking product activities, including their underwriting;
- pre-settlement credit risk which is the EAD arising from unsettled forward and derivative transactions, arising from the default of the counterparty to the transaction and measured as the cost of replacing the transaction at current market rates; and
- issuer risk which is the EAD arising from traded credit and equity products, and including their underwriting.

Wrong-way risk

Wrong-way risk is the risk that arises when default risk and credit exposure increase together. There are two types of wrongway risk as follows: specific wrong way risk (which arises through poorly structured transactions, for example, those collateralized by own or related party shares) and general wrong way risk (which arises where the credit quality of the counterparty may for non-specific reasons be held to be correlated with a macroeconomic factor which also affects the credit quality of the counterparty).

Settlement risk

Settlement risk is the risk of loss to the group from a transaction settlement, where value is exchanged, failing such that the counter value is not received in whole or part.

Country and cross border risk

Country and cross border risk is the risk of loss arising from political or economic conditions or events in a particular country which reduce the ability of counterparties in that particular country to fulfill their obligations to the group. Cross border risk is the risk of restriction on the transfer and convertibility of local currency funds, into foreign currency funds thereby limiting payment by offshore counterparties to the group.

Concentration risk

Concentration risk refers to any single exposure or group of exposures large enough to cause credit losses which threaten the group's capital adequacy or ability to maintain its core operations. It is the risk that common factors within a risk type or across risk types cause credit losses or an event occurs within a risk type which results to credit losses.

Market risk

Market risk is defined as the risk of a change in the actual or effective market value or earnings of a portfolio of financial instruments caused by adverse movements in market variables such as equity, bond and commodity prices, foreign exchange rates, interest rates, credit spreads, recovery rates, correlations and implied volatilities in the market variables. Market risk covers both the impact of these risk factors on the market value of traded instruments as well as the impact on the group's net interest margin as a consequence of interest rate risk on banking book assets and liabilities.

Liquidity risk

Liquidity risk is defined as the risk that the group, although balance-sheet solvent, cannot maintain or generate sufficient cash resources to meet its payment obligations in full as they fall due (as a result of funding liquidity risk), or can only do so at materially disadvantageous terms (as a result of market liquidity risk).

Funding liquidity risk refers to the risk that the counterparties, who provide the group with funding, will withdraw or not rollover that funding.

Market liquidity risk refers to the risk of a generalised disruption in asset markets that makes normal liquid assets illiquid and the potential loss through the forced-sale of assets resulting in proceeds being below their fair market value.

2 Credit risk

2.1 Principal credit standard and policies

The group's Governance Standard, as reviewed regularly, sets out the broad overall principles to be applied in credit risk decisions and sets out the overall framework for the consistent and unified governance, identification, measurement, management and reporting of credit risk in the group.

The Corporate and Investment Banking (CIB) and the Personal and Business Banking (PBB) Global Credit Policies have been designed to expand the Group Credit Risk Governance Standard requirements by embodying the core principles for identifying, measuring, approving, and managing credit risk. These policies provide a comprehensive framework within which all credit risk emanating from the operations of the bank are legally executed, properly monitored and controlled in order to minimize the risk of financial loss; and assure consistency of approach in the treatment of regulatory compliance requirements.

In addition to the Credit Risk Governance Standard, CIB and PBB Global Credit Policies, a number of related credit policies and documents have been developed, with contents that are relevant to the full implementation and understanding of the credit policies.

2.2 Methodology for risk rating

Internal counterparty ratings and default estimates that are updated and enhanced from time-to-time play an essential role in the credit risk management and decision-making process, credit approvals, internal capital allocation, and corporate governance functions. Ratings are used for the following purposes:

- Credit assessment and evaluation
- Credit monitoring
- Credit approval and delegated authority
- Economic capital calculation, portfolio and management reporting
- Regulatory capital calculation
- RARORC (Risk-Adjusted Return on Regulatory Capital) calculation
- Pricing: Probability of Default (PDs), Exposure at Default (EADs), and Loss Given Default (LGDs) may be used to assess and compare relative pricing of assets/facilities, in conjunction with strategic, relationship, market practice and competitive factors.

The starting point of all credit risk assessment and evaluation lies in the counterparty risk grading, which is quantified and calculated in compliance with the group’s credit rating policy and using such Basel-2 compliant models as are in current use and which are updated or enhanced from time to time.

Credit risk quantification for any exposure or portfolio is summarised by the calculation of the expected loss (EL), which is arrived at in the following way:

- Based on the risk grading foundation which yields the counterparty’s probability of default (PD), the nature and quantum of the credit facilities are considered;
- A forward-looking quantification of the exposure at default (EAD) is determined in accordance with group standard guidelines.

- Risk mitigants such as security and asset recovery propensities are then quantified to moderate exposure at default to yield the loss given default (LGD).
- Finally, the EL is a function of the PD, the LGD and the EAD.

These parameters are in turn used in quantifying the required regulatory capital reserving, using the Regulatory Capital Calculator developed, maintained and updated in terms of Basel 2, and the economic capital implications through the use of
Credit Portfolio Management's (CPM's) Economic Capital tools. Furthermore, bearing in mind the quantum of the facility and the risk/reward thereof, an appropriate consideration of Basel 2 capital requirements (where applicable) and the revenue and return implications of the credit proposal.

2.3 Framework and governance

Credit risk remains a key component of financial risks faced by any bank given the very nature of its business. The importance of credit risk management cannot be over emphasised as consequences can be severe when neglected. The group has established governance principles to ensure that credit risk is managed effectively within a comprehensive risk management and control framework.

In reaching credit decisions and taking credit risk, both the credit and business functions must consistently and responsibly balance risk and return, as return is not the sole prerogative of business neither is credit risk the sole prerogative of credit. Credit (and the other risk functions, as applicable) and business must work in partnership to understand the risk and apply appropriate risk pricing, with the overall aim of optimising the bank's risk adjusted performance.

The reporting lines, responsibilities and authority for managing credit risk in the group are clear and independent. However, ultimate responsibility for credit risk rests with the board.

2.4 Credit risk mitigation

Credit risk mitigation is defined as all methods of reducing credit expected loss whether by means of reduction of EAD (e.g. netting), risk transfer (e.g. guarantees) or risk transformation.

Guarantees, collateral and the transaction structures are used by the group to mitigate credit risks both identified and inherent though the amount and type of credit risk is determined on a case by case basis. The group's credit policy and guidelines are used in a consistent manner while security is valued appropriately and reviewed regularly for enforceability and to meet changing business needs.

The credit policy establishes and defines the principles of risk transfer, transformation and reduction. The processes and procedures for accepting, verifying, maintaining, and releasing collateral are well documented in order to ensure appropriate application of the collateral management techniques.

2.5 Credit risk measurement

A key element in the measurement of credit risk is the assignment of credit ratings, which are used to determine expected defaults across asset portfolios and risk bands. The risk ratings attributed to counterparties are based on a combination of factors which cover business and financial risks:

The group uses the PD Master Scale rating concept with a single scale to measure the credit riskiness of all counterparty types. The grading system is a 25-point scale, with three additional default grades.

Group's rating	Grade description	Standard & Poor's	Fitch
SB01 - SB12/SB13	Investment grades	AAA to BBB-	AAA to BBB-
SB14 - SB21	Sub Investment grades	BB+ to CCC+	BB+ to CCC+
SB22 – SB25	Cautionary grade	CCC to C	CCC to C

2.6 IFRS 9 changes and methodology

A summary of the primary changes for the Group are provided below.

Impairment model

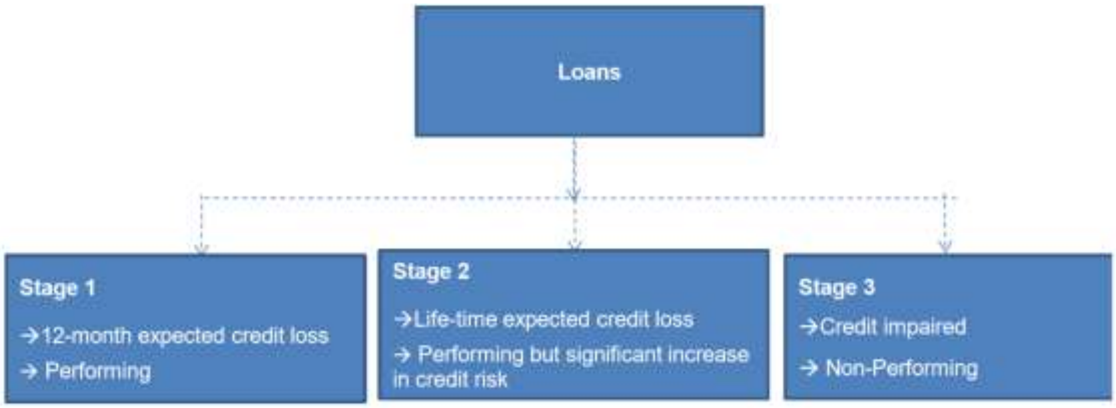
IFRS 9 requires the recognition of expected credit losses (ECL) rather than incurred losses under the previous IAS 39. This applies to all financial debt instruments held at amortised cost, fair value through other commprehensive income (FVOCI), undrawn loan commitments and financial guarantees.

Staging of financial instruments

Financial instruments that are not already credit-impaired are originated into stage 1 and a 12-month expected credit loss allowance is recognised.

- Instruments will remain in stage 1 until they are repaid, unless they experience significant credit deterioration (stage 2) or they become credit-impaired (stage 3).
- Instruments will transfer to stage 2 and a lifetime expected credit loss allowance recognised when there has been a significant change in the credit risk compared with what was expected at origination.
- Instruments are classified as stage 3 when they become credit-impaired.

The framework used to determine a significant increase in credit risk is set out below.



The main methodology principles and approach adopted by the Group are set out below;

Approach to determining expected credit losses

The main methodology principles and approach adopted are set out below:

For portfolios that follow a standardised regulatory approach, the Group has developed new models where these portfolios are material.

Incorporation of forward-looking information

The determination of expected credit loss includes various assumptions and judgements in respect of forward-looking macroeconomic information.

Significant increase in credit risk ('SICR')

Expected credit loss for financial assets will transfer from a 12 month basis to a lifetime basis when there is a significant increase in credit risk (SICR) relative to that which was expected at the time of origination, or when the asset becomes credit impaired. On transfer to a lifetime basis, the expected credit loss for those assets will reflect the impact of a default event expected to occur over the remaining lifetime of the instrument rather than just over the 12 months from the reporting date.

SICR is assessed by comparing the risk of default of an exposure at the reporting date with the risk of default at origination (after considering the passage of time). 'Significant' does not mean statistically significant nor is it reflective of the extent of the impact on the Group's financial statements. Whether a change in the risk of default is significant or not is assessed using quantitative and qualitative criteria, the weight of which will depend on the type of product and counterparty.

The Group uses a mix of quantitative and qualitative criteria to assess SICR.

Assessment of credit-impaired financial assets

Credit-impaired financial assets comprise those assets that have experienced an observed credit event and are in default. Default represents those assets that are at least 90 days past due in respect of principal and interest payments and/or where the assets are otherwise considered unlikely to pay.

Unlikely to pay factors include objective conditions such as bankruptcy, debt restructuring, fraud or death. It also includes credit-related modifications of contractual cash flows due to significant financial difficulty (forbearance) where the bank has granted concessions that it would not ordinarily consider.

Modified financial assets

Where the contractual terms of a financial instrument have been modified, and this does not result in the instrument being derecognised, a modification gain or loss is recognised in the income statement representing the difference between the original cash flows and the modified cash flows, discounted at the original effective interest rate. The modification gain/loss is directly applied to the gross carrying amount of the instrument.

If the modification is credit related, such as forbearance or where the Group has granted concessions that it would not ordinarily consider, then it will be considered credit-impaired. Modifications that are not credit related will be subject to an assessment of whether the asset's credit risk has increased significantly since origination by comparing the remaining lifetime probability of default (PD) based on the modified terms with the remaining lifetime PD based on the original contractual terms.

Transfers between stages

Assets will transfer from stage 3 to stage 2 when they are no longer considered to be credit-impaired. Assets will not be considered credit-impaired only if the customer makes payments such that they are paid to current in line with the original contractual terms. In addition:

- Loans that were subject to forbearance measures must remain current for 12 months before they can be transferred to stage 2;
- Retail loans that were not subject to forbearance measures must remain current for 180 days before they can be transferred to stage 2 or stage 1.

Assets may transfer to stage 1 if they are no longer considered to have experienced a significant increase in credit risk. This will occur when the original PD based transfer criteria are no longer met (and as long as none of the other transfer criteria apply). Where assets were transferred using other measures, the assets will only transfer back to stage 1 when the condition that caused the significant increase in credit risk no longer applies (and as long as none of the other transfer criteria apply).

Governance and application of expert credit judgement in respect of expected credit losses

The determination of expected credit losses requires a significant degree of management judgement which is being assessed by the Credit Risk Management Committee (CRMC).

3 Liquidity risk

3.1 Framework and governance

The nature of banking and trading activities results in a continuous exposure to liquidity risk. Liquidity problems can have an adverse impact on a group's earnings and capital and, in extreme circumstances, may even lead to the collapse of a group which is otherwise solvent.

The group's liquidity risk management framework is designed to measure and manage the liquidity position at various levels of consolidation such that payment obligations can be met at all times, under both normal and considerably stressed conditions. Under the delegated authority of the board of Directors, the Asset and Liability Committee (ALCO) sets liquidity risk policies in accordance with regulatory requirements, international best practice and SBG stated risk appetite.

Tolerance limits, appetite thresholds and monitoring items are prudently set and reflect the group's conservative appetite for liquidity risk. ALCO is charged with ensuring ongoing compliance with liquidity risk standards and policies. The group must, at all times, comply with the more stringent of Standard Bank imposed tolerance limits or regulatory limits.

3.2 Liquidity and funding management

A sound and robust liquidity process is required to measure, monitor and manage liquidity exposures. The group has incorporated the following liquidity principles as part of a cohesive liquidity management process:

- structural liquidity mismatch management;
- long-term funding ratio;
- maintaining minimum levels of liquid and marketable assets;
- depositor restrictions;
- local currency loan to deposit ratio;
- foreign currency loan to deposit ratio;
- interbank reliance limit;
- intra-day liquidity management;
- collateral management;
- daily cash flow management;
- liquidity stress and scenario testing; and
- funding plans;
- liquidity contingency planning.

The cumulative impact of these principles is monitored, at least monthly by ALCO through a process which is underpinned by a system of extensive controls. The latter includes the application of purpose-built technology, documented processes and procedures, independent oversight and regular independent reviews and evaluations of the effectiveness of the system.

The group ensures that the banking entity (Stanbic IBTC Bank PLC) is within the regulatory liquidity ratio of 30% on a daily basis.

Structural liquidity mismatch management

The mismatch principle measures the group's liquidity by assessing the mismatch between its inflow and outflow of funds within different time bands on a maturity ladder. The structural liquidity mismatch is based on behaviourally-adjusted cash flows which factors a probability of maturity into the various time bands. As expected cash flows vary significantly from the contractual position, behavioural profiling is applied to assets, liabilities and off-balance sheet items with an indeterminable maturity or drawdown year.

A net mismatch figure is obtained by subtracting liabilities and netting off-balance sheet positions from assets in each time band. The group's liquidity position is assessed by means of the net cumulative mismatch position, while its liquidity mismatch performance is an aggregation of the net liquidity position in each successive time band expressed as a percentage of total funding related to deposits.

Maintaining minimum levels of liquid and marketable assets

Minimum levels of prudential liquid assets are held in accordance with all prudential requirements as specified by the regulatory authorities. The group needs to hold additional unencumbered marketable assets, in excess of any minimum prudential liquid asset requirement, to cater for volatile depositor withdrawals, draw-downs under committed facilities, collateral calls, etc.

The following criteria apply to readily marketable securities:

- prices must be quoted by a range of counterparties;
- the asset class must be regularly traded;
- the asset may be sold or repurchased in a liquid market, for payment in cash; and
- settlement must be according to a prescribed, rather than a negotiated, timetable.

Depositor concentration

To ensure that the group does not place undue reliance on any single entity as a funding source, restrictions are imposed on the short dated (0 – 3 months term) deposits accepted from any entity. These include:

- the sum of 0 – 3-month deposits and standby facilities provided by any single deposit counterparty must not, at any time, exceed 10% of total funding related liabilities to the public; and
- the aggregate of 0 – 3-month deposits and standby facilities from the 10 largest single deposit counterparties must not, at any time, exceed 20% of total funding related liabilities to the public.

Concentration risk limits are used to ensure that funding diversification is maintained across products, sectors, and counterparties. Primary sources of funding are in the form of deposits across a spectrum of retail and wholesale clients. As mitigants, the group maintains marketable securities in excess of regulatory requirements in order to create a buffer for occasional breaches of concentration limits.

Loan to deposit limit

A limit is put in place, restricting the local currency loan to deposit ratio to a maximum specified level, which is reviewed yearically. Similarly, in order to restrict the extent of foreign currency lending from the foreign currency deposit base, a foreign currency loan to deposit limit, which is also referred to as own resource lending, is observed. As mitigants, the group maintains high levels of unencumbered marketable and liquid assets in excess of regulatory benchmark.

Intra-day liquidity management

The group manages its exposures in respect of payment and settlement systems. Counterparties may view the failure to settle payments when expected as a sign of financial weakness and in turn delay payments to the group. This can also disrupt the functioning of payment and settlement systems. At a minimum, the following operational elements are included in the group's intra-day liquidity management:

- capacity to measure expected daily gross liquidity inflows and outflows, including anticipated timing where possible;
- capacity to monitor its intra-day liquidity positions, including available credit and collateral;
- sufficient intra-day funding to meet its objectives;
- ability to manage and mobilise collateral as required;
- robust capacity to manage the timing of its intra-day outflows; and
- readiness to deal with unexpected disruptions to its intra-day liquidity flows.

Daily cash flow management

The group generates a daily report to monitor significant cash flows. Maturities and withdrawals are forecast at least three months in advance and management is alerted to large outflows. The report, which is made available to the funding team, ALM and market risk also summarises material daily new deposits as well as the interbank and top depositor reliance (by value and product).

The daily cash flow management report forms an integral part of the ongoing liquidity management process and is a crucial tool to proactively anticipate and plan for large cash outflows.

Interbank reliance

Interbank funding traditionally is seen as the most volatile and least stable source of funding, easily influenced by market sentiment and prone to flight under stress situations. Consequently, to ensure prudent liquidity management is enforced, the group restricts the local currency interbank funding as a proportion of the local currency funding base to a maximum of 15% of the total currency funding base.

Liquidity stress testing and scenario testing

Anticipated on- and off-balance sheet cash flows are subjected to a variety of the group specific and systemic stress scenarios in order to evaluate the impact of unlikely but plausible events on liquidity positions. Scenarios are based on both historical events, such as past emerging markets crises, past local financial markets crisis and hypothetical events, such as an entity specific crisis. The results obtained from stress testing provide meaningful input when defining target liquidity risk positions.

Liquidity contingency plans

The group recognises that it is not possible to hold sufficiently large enough quantity of readily available liquidity to cover the least likely liquidity events. However, as such events can have devastating consequences, it is imperative to bridge the gap between the liquidity the group chooses to hold and the maximum liquidity the group might need.

The group's liquidity contingency plan is designed to, as far as possible, protect stakeholder interests and maintain market confidence in order to ensure a positive outcome in the event of a liquidity crisis. The plan incorporates an extensive early warning indicator methodology supported by a clear and decisive crisis response strategy. Early warning indicators span group specific crises, systemic crises, contingency planning, and liquidity risk management governance and are monitored based on assigned frequencies and tolerance levels. The crisis response strategy is formulated around the relevant crisis management structures and addresses internal and external communications, liquidity generation, operations, as well as heightened and supplementary information requirements.

Foreign currency liquidity management

A number of indicators are observed to monitor changes in either market liquidity or exchange rates. Foreign currency loans and advances are restricted to the availability of foreign currency deposits.

Funding strategy

Funding markets are evaluated on an ongoing basis to ensure appropriate group funding strategies are executed depending on the market, competitive and regulatory environment. The group employs a diversified funding strategy, sourcing liquidity in both domestic and offshore markets, and incorporates a coordinated approach to accessing capital and loan markets across the group. Concentration risk limits are used within the group to ensure that funding diversification is maintained across products, sectors, geographic regions and counterparties.

Primary funding sources are in the form of deposits across a spectrum of retail and wholesale clients, as well as long-term capital and loan markets. The group remains committed to increasing its core deposits and accessing domestic and foreign capital markets when appropriate to meet its anticipated funding requirements.

4 Market risk

The identification, management, control, measurement and reporting of market risk is categorised as follows:

Trading market risk
These risks arise in trading activities where the bank acts as a principal with clients in the market. The group's policy is that all trading activities are contained within the bank's Corporate and Investment Banking (CIB) trading operations.

Banking book interest rate risk
These risks arise from the structural interest rate risk caused by the differing re-pricing characteristics of banking assets and liabilities.

Foreign currency risk
These risks arise as a result of changes in the fair value or future cash flows of financial exposures due to changes in foreign exchange rates.

Equity investment risk
These risks arise from equity price changes in unlisted investments, and managed through the equity investment committee, which is a sub-committee of the executive committee.

The primary objective of the Group’s investment in equity securities is to hold the investments for the long term for strategic purposes. Management is assisted by external advisers in this regard. All the Groups investments are designated as at FVOCI, as they are not held for making short term profit.

Framework and governance
The board approves the market risk appetite and standards for all types of market risk. The board grants general authority to take on market risk exposure to the asset and liability committee (ALCO). ALCO sets market risk policies to ensure that the measurement, reporting, monitoring and management of market risk associated with operations of the bank follow a common governance framework.
The market risk management unit which is independent of trading operations and accountable to ALCO, monitors market risk exposures due to trading and banking activities. This unit monitors exposures and respective excesses daily, report monthly to ALCO and quarterly to the board risk management committee.

4.1 Market risk measurement

The techniques used to measure and control market risk include:

- daily net open position
- daily VaR;
- back-testing;
- PV01;
- annual net interest income at risk.

Daily net open position

The board on the input of ALCO, sets limits on the level of exposure by currency and in aggregate for overnight positions. The latter is also aligned to the net open position limit as specified by the regulators, which is usually a proportion of the groups' capital.

Daily value-at-risk (VaR)

VaR is a technique that estimates the potential losses that may occur as a result of market movements over a specified time year at a predetermined probability.

VaR limits and exposure measurements are in place for all market risks the trading desk is exposed to. The bank generally uses the historical VaR approach to derive quantitative measures, specifically for market risk under normal market conditions. Normal VaR is based on a holding year of one day and a confidence level of 95%. Daily losses exceeding the VaR are likely to occur, on average, 13 times in every 250 days.

The use of historic VaR has limitations as it is based on historical correlations and volatilities in market prices and assumes that future prices will follow the observed historical distribution. Hence, there is a need to back-test the VaR model regularly.

VaR back-testing

The group and the banking business back-test its foreign currency, interest rate and credit trading exposure VaR model to verify the predictive ability of the VaR calculations thereby ensuring the appropriateness of the model. Back-testing exercise is an ex-post comparison of the daily hypothetical profit and loss under the one-day buy and hold assumption to the prior day VaR. Profit or loss for back-testing is based on the theoretical profits or losses derived purely from market moves both interest rate and foreign currency spot moves and it is calculated over 250 cumulative trading-days at 95% confidence level.

Stress tests

Stress testing provides an indication of the potential losses that could occur in extreme market conditions. The stress tests carried out include individual market risk factor testing and combinations of market factors on individual asset classes and across different asset classes. Stress tests include a combination of historical and hypothetical simulations.

PV01

PV01 is a risk measure used to assess the effect of a change of rate of one basis point on the price of an asset. This limit is set for the fixed income, money market trading, credit trading, derivatives and foreign exchange trading portfolios.

Other market risk measures

Other market risk measures specific to individual business units include permissible instruments, concentration of exposures, gap limits, maximum tenor and stop loss triggers. In addition, only approved products that can be independently priced and properly processed are permitted to be traded.

Pricing models and risk metrics used in production systems, whether these systems are off-the-shelf or in-house developed, are independently validated by the market risk unit before their use and yearly thereafter to confirm the continued applicability of the models. In addition, the market risk unit assesses the daily liquid closing price inputs used to value instruments and performs a review of less liquid prices from a reasonableness perspective at least fortnightly. Where differences are significant, mark-to-market adjustments are made.

Annual net interest income at risk

A dynamic forward-looking annual net interest income forecast is used to quantify the banks' anticipated interest rate exposure. This approach involves the forecasting of both changing balance sheet structures and interest rate scenarios, to determine the effect these changes may have on future earnings. The analysis is completed under both normal market conditions as well as stressed market conditions.

4.2 Interest rate risk in the banking book

Interest rate risk in the banking book (IRRBB) can be defined as the reduction in banking book net interest income due to changes in interest rates arising from the different re-pricing characteristics of banking book assets and liabilities. IRRBB is further divided into the following sub-risk types:

- Repricing risk referring to the timing differences in the maturity (fixed rate) and repricing (floating rate) of assets and liabilities.
- Yield curve risk arising when unanticipated shifts in the yield curve have adverse effects on the group's income.
- Basis risk arising from the imperfect correlation in the adjustment of the rates earned and paid on different instruments with otherwise similar repricing characteristics.
- Optionality risk arising from the options embedded in bank asset and liability portfolios, providing the holder with the right, but not the obligation, to buy, sell, or in some manner alter the cash flow of an instrument or financial contract.
- Endowment risk referring to the interest rate risk exposure arising from the net differential between interest rate insensitive assets such as non-earning assets and interest rate insensitive liabilities such as non-paying liabilities and equity.

Approach to managing interest rate risk on positions in the banking book

Banking-related market risk exposure principally involves the management of the potential adverse effect of interest movements on banking book earnings (net interest income and banking book mark-to-market profit or loss).

The group's approach to managing IRRBB is governed by prudence and is in accordance with the applicable laws and regulations, best international practice and the competitive situation within which it operates in financial markets. Interest rate risk is transferred to and managed within the bank's treasury operations under supervision of ALCO.

Measurement of IRRBB

The analytical technique used to quantify IRRBB is an earnings based approach. A dynamic, forward-looking net interest income forecast is used to quantify the bank's anticipated interest rate exposure. Desired changes to a particular interest rate risk profile are achieved through the restructuring of on-balance sheet repricing or maturity profiles. All assets and liabilities are allocated to gap intervals based on either their repricing or maturity characteristics. However, assets and liabilities for which no identifiable contractual repricing or maturity dates exist are allocated to gap intervals based on behavioural profiling.

The impact on net interest income due to interest rate changes cover 12 months of forecasting and allows for the dynamic interaction of payments, new business and interest rates. The analyses are done under stressed market conditions in which the banking book is subjected to an upward 300 basis points and downward 300 basis points (2018: 300 basis points) parallel rate shocks for local currency and 100 basis points upward and downward parallel rate shocks for foreign currency positions.

Hedging of endowment risk

IRRBB is predominantly the consequence of endowment exposures, being the net exposure of non-rate sensitive liabilities and equity less non-rate sensitive assets. The endowment risk is hedged using marketable liquid instruments in the same currency as the exposure as and when it is considered opportune. Hedge decisions are made by ALCO following careful consideration of the interest rate views to be hedged against, including magnitude, direction, timing and probability, and the exposure to be hedged.

4.3 Market risk on equity investment

The group's equity and investment risk committee (SEIRC) has governance and oversight of all investment decisions. The committee is tasked with the formulation of risk appetite and oversight of investment performance. In this regard, a loss trigger is in place for the nonstrategic portion.

4.4 Exposure to currency risks

The group takes on exposure to the effects of fluctuations in the prevailing foreign currency exchange rates on its financial position and cash flows. The board sets limits on the level of exposure by currency and in aggregate for both overnight and intraday positions, which are monitored daily.

5 Operational risk

5.1 Overview and definition

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. This includes but is not limited to information risk, legal risk, compliance risk, financial crime risk, digitization risk, model risk, cyber security risk, strategic change risk, environmental and social risk and conduct risk. Strategic, reputational, and business risks are excluded from the definition; the reputational effects of operational and other financial risk events are however covered under reputational risk management.

Operational risk is thus categorised as follows:

- Process risk; the risk of loss suffered as a result of failed or inadequate processes. This includes the design and operation of the control framework.
- People risk; the risk of loss arising from issues related to the personnel within the group.
- Systems risk; the risk of loss suffered as a result of failed or inadequate systems, security breaches, inadequate systems investment, development, implementation, support and capacity.
- External events risks; The risk of loss suffered as a result of external events. This is generally limited to events that impact the operating capability of the group (i.e. it does not include events that impact the areas of market risk, credit risk, or country risk etc.). It also includes risks arising from suppliers, outsourcing, and external system failures, management, monitoring, and mitigation.

Stanbic IBTC Operational risk sub-types

Operational risk subtypes	Definitions
Information risk	This is the risk of unauthorised use, modification or disclosure of information resources.
Legal risk	The risk that legal action will be taken against Stanbic IBTC because of its actions, inactions, products, services or other events.
Compliance risk	This is the risk of regulatory sanctions, material financial loss, or loss to reputation the group may suffer as a result of its failure to comply with laws, regulations, rules, and codes of conduct applying to its business activities.
Financial crime risk	This is the risk of economic loss, reputational risk and regulatory sanctions arising from any type of financial crime against the Group. Financial crime includes fraud, money laundering, violent crime, and misconduct by staff, customers, suppliers, business partners, stakeholders and third parties.
Digitization risk	This relates to risk emanating from the rapid rollout of disruptive innovation and/or new technologies within the financial services industry that may outpace Stanbic IBTC ability to compete and/manage the risk appropriately without making significant changes to our business operating model. It further includes concerns around the security and privacy capabilities emanating from the continued advances of technology in the form of digital

	operations to harvest new sources of value through business model innovation.
Model risk	This arises from potential weaknesses in a model that is used in the measurement, pricing and management of risk. These weaknesses include incorrect assumptions, incomplete information, inaccurate implementation, limited model understanding, inappropriate use, or inappropriate methodologies leading to incorrect conclusions by the user.
Cyber security risk	This is the risk of financial loss, disruption or damage to the reputation of Stanbic IBTC from the failure of its information technology systems due to cyber-attacks or security breaches. This remains a top risk for Stanbic IBTC as it also continues its digital transformation journey. Emerging cyber-related risks include information risk, technology risk and consumer information protection challenges
Strategic change risk	The risks that exist in any change initiatives for business adaptation which involve understanding and controlling the exposure to negative consequences of such initiatives if not properly handed in an efficient and effective manner. Change risk involves different areas such as the risk of unauthorized access to the change process; the risk on unplanned outages; the risk of a low change success rate; the risk of high numbers of emergency changes, the implication of these change initiatives in terms of organizational readiness; and the risk of significant project delays
Environmental and social risk	The risk is described as a measure of the potential threats to the environment, communities and stakeholders that our financial service activities may have. It combines the probability that events will cause or lead to the degradation of the environment and the magnitude of the degradation.
Conduct risk	The risk that actions will be taken against Stanbic IBTC by our customers, third parties and other entities for issues relating to poor service delivery, lapses in transaction execution and other issues bordering on how Stanbic IBTC conducts its business and manages its operations.

5.2 Operational Risk Governance and controls

Operational risk arises in all parts of the group; all senior management are thus responsible for consistently implementing and maintaining policies, processes and systems for managing operational risk in all of material products, services, activities, processes and systems. Operational Risk issues are discussed at the level of Operational Risk and Compliance Committee (ORCC) and Board Risk Management Committee (BRMC). The ultimate responsibility for establishing, approving and periodically reviewing the operational risk framework however lies with BRMC. The Board oversees senior management to ensure that the framework is implemented effectively at all decision levels.

Operational risk is managed to acceptable levels by continuously monitoring and enforcing compliance with relevant policies and control procedures. The group also uses the new and amended business, products or services process in order to address the identification and assessment of risks associated with new and/or amended products or services. Other major frameworks/policies that have been introduced are business resilience framework, IT risk governance framework, Information Security Policy and third Party Risk Management Policy.

Risk tolerance

Stanbic IBTC is willing to tolerate operational risk inherent in conducting its business strategy provided that these risks are managed. The group's overall appetite for operational risk is set at an overall level by the board of directors. Senior management ensures that this appetite is translated into sufficiently meaningful and detailed expressions.

Due to the nature of operational risk, the setting of Risk appetite is the Board's responsibility. Operational risk tolerance is expressed in terms of the following types of measures:

- Operational risk limit; the maximum level of exposure that is tolerated for operational risk and which should not normally be exceeded.
- Operational risk threshold; the level of exposure which, with appropriate approvals, can be exceeded, but which will trigger certain actions.

Risk and control self-assessment (RCSA) and key risk indicators (KRIs)

The inherent and residual risk profile of the group is determined through the RCSA process. The outcome is reported at ORCC, and BRMC and action plans are followed through to ensure that control deficiencies are properly addressed.

KRIs are identified through the RCSA process. Thresholds for each KRI are determined and monitored on a monthly basis. The breaches recorded from the KRIs tracked are also reported at relevant governance committees i.e. ORCC and BRMC.

Incident Management

Operational Risk Incidents provide a veritable source of ascertaining the effectiveness and adequacy of controls for the risk in the business. The Group makes good use of incidents as a tool for learning and for improvement of the risk profile of the organisation by performing necessary Root Cause Analysis to identify the cause of the incident in order to adopt an effective risk treatment strategy.

Operational loss metrics

Several operational loss metrics are measured and reported to the appropriate governance committees. These include operational losses (as an amount and as a percentage of gross income), causal factor analysis of irrecoverable losses and of losses in suspense, and top 5 contributors to irrecoverable losses and to losses in suspense.

Losses in terms of Basel II risk categories such as processes, systems, people and external events are also analysed by the operational risk function. These are reported by subcategory such as human error/negligence, and further broken down into teller differences, cash lost in transit, payments processed in error, etc, and form the basis for the computation of operational losses.

Business Resilience

The ability to ensure the resilience and continuity of its critical business functions in the event of disruptive incidents or disasters and to ensure the recovery of such critical functions to an operational state within acceptable timeframes is key to the financial success of the group. Therefore, the mitigating tools used for reducing exposures to business disruption are primarily sound business resilience practices and governance. Business resilience is enabled by three capabilities, which are integrated in a single framework to provide an agile, cohesive and coordinated suite of point-in-time response and recovery interventions to counter the financial and reputational impacts of worst case operational disruptions. The three Business Resilience capabilities are Emergency Response, Crisis Management and Business Continuity Management (BCM) which includes IT Service Continuity. The group supports the execution of the BCM plans by periodic requirements for the execution of tests by way of drills, desktop and actual simulation exercises.