

RISK CONTROL BODIES

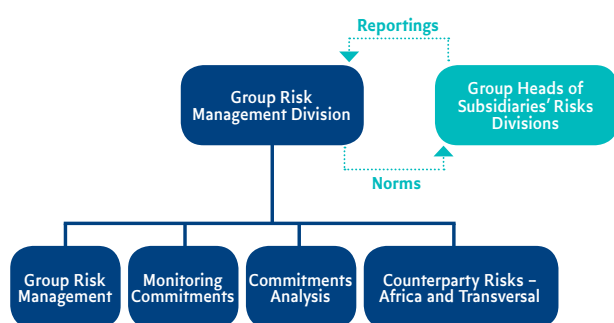
GROUP RISK MANAGEMENT

One of the missions assigned to the Group Risk Management is to strengthen the monitoring and control of credit, market, country and operational risks. It is also responsible for:

- Defining BANK OF AFRICA Group's risk policy;
- Definition and management taking and monitoring of commitments ;
- Implementing of a credit risks control system, market transactions and operational risks ;

The Group Risk Management is composed of four entities:

- Group Risk Management
- Monitoring Commitments
- Commitments Analysis
- Counter party risks - Africa & transversal projects



GOVERNANCE BODIES

GROUP RISK COMMITTEE

The Group Risk Committee BANK OF AFRICA is an instance from the Board of Directors of BANK OF AFRICA, whose prerogatives are extended to direct and indirect subsidiaries included in the scope of consolidation of the Group.

This Committee assists the Board on strategy and risk management, including ensuring that the global risk strategy is adapted to the risk profile of the bank and the Group, to the degree of risk aversion, its systemic importance, its size and its financial basis.

GROUP AUDIT AND INTERNAL CONTROL COMMITTEE

BANK OF AFRICA Group's Audit and Internal Control Committee is an instance from the Board of Directors of BANK OF AFRICA, whose prerogatives are extended to subsidiaries and other entities included in the scope of consolidation.

Group Audit and Internal Control Committee assists the Board of Directors on internal control, by ensuring the existence and maintenance of an internal control system adapted to the Group's organization, the reliability of financial information intended for the Board of Directors and third parties, the examination of the corporate and consolidated accounts before their submission to the Board of Directors.

MANAGEMENT BODIES

GENERAL MANAGEMENT COMMITTEE

The Group Management Committee is responsible for the declination in equity and operational measures of the Group's strategy and monitoring.

This Committee, whose periodicity is weekly, has main tasks the management of the business of the bank, the conduct of internal control and risk management, monitoring the HR component, commercial communication policy, institutional and financial.

THE STEERING COMMITTEE AND GROUP RISK MANAGEMENT

After the BANK OF AFRICA Group's General Management Committee, the Steering Committee and Risk Management assists in the management and monitoring of effective and operational of piloting device Group risks (BANK OF AFRICA S.A and its direct and indirect subsidiaries) and the consistency of Group activities with the policies fixed of risks and limitations:

This Committee ensures the efficiency of the piloting device of the risks (credit, market, country and operational) and its adequacy with the level of risk appetite defined within the framework of the risk management policy.

CREDIT COMMITTEES

Senior Credit Committee

The Senior Credit Committee reviews and approves, on a weekly basis, credit applications from customers of the Bank and of the Group within its delegated powers. Operating rules and powers differ depending on the degree of risk incurred as well as the nature of the Bank's credit portfolio segment in question - Business, Corporate or Personal & Professional Banking customers.

The Credit Committee's scope also covers Group entities. It assesses and issues, via the Senior Credit Committee - Group Entities, decisions regarding risk-taking with regard to certain counterparties or groups of counterparties within the banking and trading portfolio in respect of domestic operations as well as for individual counterparties in respect of overseas operations based on predefined thresholds by subsidiary.

This committee is chaired by the Bank's Chairman and Chief Executive Officer with the Group Executive Managing Director. It is sub-divided by market segment into two committees, one specialising in Corporate Banking, the other in Personal and Professional Banking. These committees meet twice-weekly and include senior managers of the Bank.

RISK CONTROL BODIES

Regional Credit Committee

The Regional Credit Committee (CCR) enjoys delegated powers enabling it to rule on counterparties at a regional level in accordance with the existing scheme of delegation. The Committee meets on a weekly basis. Each region's Regional Director decides on when the CCR will meet and informs all members accordingly.

Regional Directors decide on meeting dates and inform committee members.

Loan Commitments Monitoring Committee (CSE)

As part of its portfolio monitoring remit, the Loan Commitments Monitoring Committee (CSE) (at head office or on a select basis) meets on a monthly basis to follow-up on the various initiatives implemented for the purpose of resolving, recovering and cleaning-up accounts showing anomalies. The Committee also reviews customer dossiers that are eligible for downgrade and decides on what action to take.

Bodies responsible for following up and monitoring, operating at four levels, three of which are at head office, oversee the process of monitoring the loan commitments situation.

CREDIT RISK

The Bank's credit activity is part of the general credit policy approved by the Bank's senior management. Among the guiding principles include the Group's requirement related to ethics, attribution of responsibilities, the existence and adherence to procedures and rigour in risk analysis.

This policy is available in specific policies and procedures appropriate to the nature of activities and counterparties.

CREDIT DECISION CYCLE

General principles

The approval process at BANK OF AFRICA Group level respects the "Troika" principle and is based on the following principles:

- All credit requests adhere to the same approval process which ensures that the Troika principle is respected (minimum requirement). Therefore, at

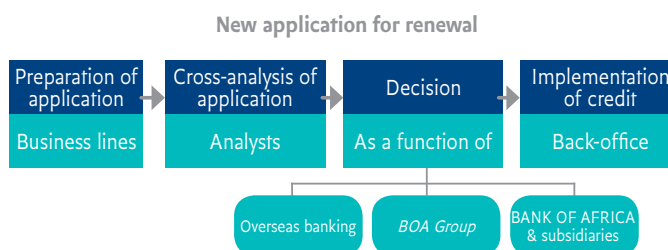
least 3 people, one of which is from the Risk Division, should approve all credit requests except for some predefined specific cases;

- The decision, jointly taken by the Risk and Commercial Divisions – which includes at least one preliminary counterfactual analysis – applies to the applications assigned to the local decision committees as well as to the central decision committees. This involves a multi-level pyramid structure, where the higher level acts as an arbitrator in the event that consensus is not reached;

- The Risk Division can use the escalation procedure (n+1) if there is a disagreement with the Commercial Division.

Credit approval process

The following diagram provides an overview of the credit approval process:



- The Commercial Division in charge of customer relations is responsible for preparing the credit application;

- Counterfactual analysis of the credit application is performed by credit analysts from the entity's Risk Division;

- The decision is jointly taken by the Risk and Commercial Divisions, based on their respective levels of delegation;

- The loan is actually implemented by the back-office, which is a unit independent from the Risk and Commercial Divisions.

Decision making and choice of circuits

In order to facilitate the reporting exercise, the principle of a single decision for each credit proposal should be respected.

Credit decisions are made either by

circulation file, or by holding a Credit Committee, via a manual or electronic process.

Delegation

The credit decision process is based on a delegation system whereby an entity's Board of Directors delegates powers to its employees or a group of employees by setting limits, as it sees fit.

The delegation may in turn involve a sub-delegation depending on the organisation, volume, products and risks.

The delegation of authority to employees is assigned *intuitu personae* on the basis of their decision-making ability, experience, personal skills, professional skills and training.

Approval rules

The credit approval decision is sent for consideration to the Troika or to Credit Committees depending on the approval levels required.

The present delegation system defines the following decision levels:

- At local branch level;
- At "hub" level (BOA Group and Europe);
- At central BANK OF AFRICA level.

The local branch level may involve a sub-delegation depending on the entity's organisation, volume, products and risks.

Credit application contents

All requests for obtaining credit should meet the product's eligibility criteria as defined in the product fact sheets. All credit decisions are taken on the basis of a standard credit application whose format is defined in consultation with the Commercial Division and Risk concerned and in coordination with the Group Risk Division.

A credit application is prepared for each counterparty or transaction to which the entity wishes to make a commitment or for which the entity has already made a commitment in the case of an annual review or renewal. This is done on the basis of the documents mentioned in the product checklist and provided by the client.

The document checklist to be sent by the client and the analysis form should be identical to the one at Group level and these will be modified based on the type of credit. The contents of the credit application should provide the decision-makers with the necessary information as well as the quantitative and qualitative analysis required for taking the credit decision.

The Commercial Division is responsible for preparing the credit application and its contents.

The credit application shall remain the single point of reference for any credit decision; it should contain all the signatures or stamps that guarantee the accuracy of the information provided therein.

CREDIT RISK CONTROL AND MONITORING PROCEDURE

Credit risk control and monitoring ensures the second-level checking, separate from daily monitoring by the Commercial Division.

This procedure may be adapted depending on how each subsidiary is organised in consultation with the Group Risk Division.

Commercial Division is responsible for risk monitoring. Indeed, the credit manager in the Commercial Division is responsible to the daily monitoring of transaction risks. To fulfil this mission, the Commercial Division is helped by the risks which play an alert role.

The risk Division's main objective is to ensure the efficiency running of a forward-looking alert system that allows the Commercial Division to optimize risk management as well as anticipating potential risks so that the bank's portfolio maybe properly managed. The risk Division also ensures that the Commercial Division is monitoring properly and provides alerts for accounts in default.

- Performs pre-checks ;
- Performs post-checks ;
- Identifies and monitors the portfolio of commitments based on several factors : products, maturities, beneficiaries, business sectors, branches, geographical regions etc.;
- Fixes and monitors concentration limits;
- Detects and monitors accounts showing anomalies and high-risk accounts;
- Categorised the portfolio based on regulatory criteria and proposes provisioning;
- Performs stress tests;
- Produces regulatory reports and internal steering reports.

PRE-CHECKS

Pre-checks include all compliance checks carried out prior to a credit mine's initial authorisation and use. These checks are performed in addition to automatic checks and checks carried out by the Commercial Division, Back-office and Legal Department etc.

These checks are implemented by the Risk Division. They mainly relate to:

- Credit proposal data:
- Compliance with the appropriate delegation level;
- Legal documentation compliance;
- Conditions and reservations expressed before initial use of funds or the facility ;
- Data entered in the information systems.

POST-CHECKS

Like pre-checks, post-checks are also performed by the Risk Division.

These checks are aimed at ensuring measurement, control and monitoring of credit risks in terms of the entire portfolio and not just the counterparty. Special attention is therefore paid to credit quality, anticipating and preventing irregularities and risks as well as controlling and monitoring risks by the Commercial Division.

PORTFOLIO MONITORING

Group's portfolio Monitoring commitments and its entities is performed through several indicators, both on the risks to the granting and during the life of the credit records.

The first post-check consists of identifying and monitoring the entity's total commitments based on several factors including products, maturities, customers, business groups, customer segments, counterparty ratings, loan categories (healthy loans and non-performing loans), industries, branches, geographical regions, type of collateral etc. The multi-criteria analysis is a credit risk management tool.

The production of multi-criteria analysis commitments portfolio is the responsibility of the Credit Risk die which also ensures the reporting of credit risks, both internally and vis-à-vis the Risk Committees and management, that external, vis-à-vis the regulators.

SYSTEM FOR DETECTING RISKS AND ANOMALIES

High-risk accounts and those showing anomalies represent a risk that is likely to subsequently increase and therefore generate a cost for the Bank. These consist of customer loan commitments that are still healthy, but which reveal:

- Either a visible deterioration in risk quality as measured against quantitative criteria (Doubtful - in arrears, Sub-standard, frozen (lack of any ledger entry and overdrawn), persistent overruns, etc.);

The main examples of this type include:

- Debit balances on demand accounts for which no actual credit entry has been recorded, covering at least the overdraft fees charged to these accounts as well as a significant part of the said debit balances;
- Outstanding amortised loans that have not been settled within 30 days of their maturity date;
- Outstanding loans that are repayable by means of a single repayment and that have not been honoured within 30 days of their maturity date;
- Trade receivables discounted by the Bank and returned unpaid;
- Persistent overruns, beyond one month, by comparison with the authorisations granted. So as to avoid incurring any operational risks, however, the entities will monitor, on a weekly basis, the authorised overruns of a certain level (at each local entity's discretion).

- Or a potential deterioration in risk quality as measured against qualitative criteria that is likely to subsequently deteriorate and therefore generate a cost for the Bank. These indicators may include incidents of a legal nature (garnishee orders, attachments, etc.) or account-related (loss of income, overdrawn balances, authorisations or guarantees maturing, etc.) or negative information specific to a counterparty (non-performing loans at a competitor bank, deterioration in either its financial position, its credit quality or collateral), or incidents and disputes relating to the main shareholders (death, receivership or liquidation, etc.) or difficulties encountered in a counterparty's business sector etc.

Furthermore, other risk criteria relating to credit dossiers are rigorously monitored by the Bank's various entities such as:

- Loan arrears committees;
- Unsecured collateral (beyond expiry of the notary public's commitment period);
- Credit lines that remain unused for more than 6 months;
- Funded projects revealing irregularities or difficulties that may impact the ability or likelihood of repayment;
- Etc.

These criteria represent the minimal conditions imposed on the Bank as far as detection and monitoring is concerned under BAM Circular 19/G. In fact, the Risk and Commercial functions detect, monitor and submit for analysis and review by the Loan Commitments Monitoring Committee each dossier that they consider sufficiently sensitive for it to be discussed.

As such, Group Risks' General Management, via Permanent Monitoring of Commitments (PSPE), is the designated reference data source relating to risk criteria detection and has prerogatives relating to analysing and qualifying these data.

CLASSIFICATION OF CREDITS

After monthly reviews of the Bank's portfolio and the analysis of risky files, each subsidiary reviews its regulatory classification of loans in line with local regulatory requirements.

This review is carried out within the framework of the monitoring committee of accounts in anomaly and the reclassification committee, based on the Risk management of each entity. The decisions of these committees are implemented in the execution and monitoring of the transfer of healthy accounts to the corresponding category of non-performing loans as well as their provisioning.

RATING MODEL

BANK OF AFRICA has an internal rating tool covering several customer segments.

KEY RATING RULES

Rating's uniqueness

The rating is established for each client, provided as a third code group. The rating process is thus carried out for each third code group so that a third party has one and only one ratings. Thus, BANK OF AFRICA ensures the uniqueness of the rating attributed to each assessed counterparty.

Rating's integrity

Asper the regulatory principles, the attribution of the rating and its periodic review should be carried out or approved by a party that does not benefit directly from the credit approval. It is for this reason that the rating is validated in the back office by the Group Risk Management Division following initial attribution by front-office commercial operations. The rating's integrity is a key component in the credit risk management process and should reinforce and encourage independence in the rating process.

Rating's singularity

A counterparty code is assigned to each of the Bank's counterparties. The rating of each third party is carried out using the counterparty reference code in such a manner that, for all third parties (the counterparty type is single and unique), the assessment will be carried out by using a single rating model but with data specific to each counterparty. BANK OF AFRICA thus ensures the rating's singularity for each counterparty.

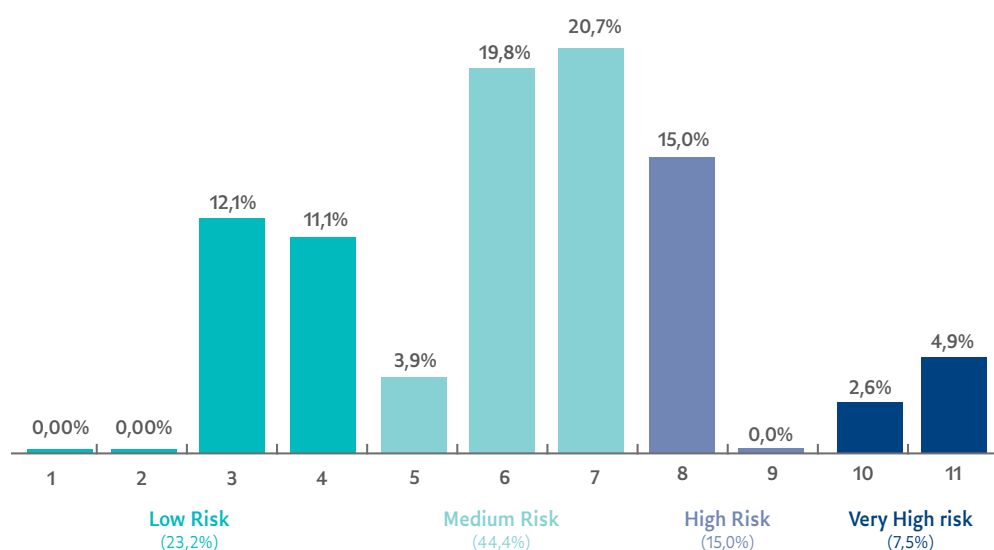
RISK CONTROL BODIES

RATING SCALE

BANK OF AFRICA Group has adopted an 11-level rating scale to attribute a final counterparty rating:

CATEGORY	CLASS	DEFINITION	
Investment grade	LIMITED RISK	1	Extremely stable short- and medium-term; very stable long-term; solvent despite serious disruptions;
		2	Very stable short- and medium- term; stable long-term; sufficiently solvent despite persistently negative events;
		3	Solvent short- and medium-term despite significant difficulties; moderately negative developments can be withstood long-term;
		4	Very stable short-term; no expected change to threaten the loan in the coming year; sufficiently solid medium-term to be able to survive; long-term outlook still uncertain;
	MEDIUM RISK	5	Stable short-term; no expected change to threaten the loan in the coming year; can only withstand small negative developments medium-term;
		6	Ability limited to withstand unexpected negative developments;
		7	Ability very limited to withstand unexpected negative developments;
Sub-investment grade	HIGH RISK	8	Ability limited to repay interest and principal on time; any change in internal and external economic and commercial conditions will make it difficult to fulfil obligations;
		9	Incapable of repaying interest and principal on time; fulfilling obligations dependent on favourable internal and external commercial and economic conditions;
	VERY HIGH RISK	10	Very high risk of default; incapable of repaying interest and principal on time; partial default in repayment of interest and capital;
		11	Total default in repayment of interest and capital.

As of 31 december 2019, the breakdown of the portfolio by asset class was as follows:



RETAIL CUSTOMER SCORING SYSTEM

Scoring for the Retail Customer segment consists of modelling statistics of default and risk behaviour.

Two types of score have been introduced, a behavioural score and a credit approval score.

The behavioural score, for open accounts, is a dynamic risk assessment based on a customer's behaviour.

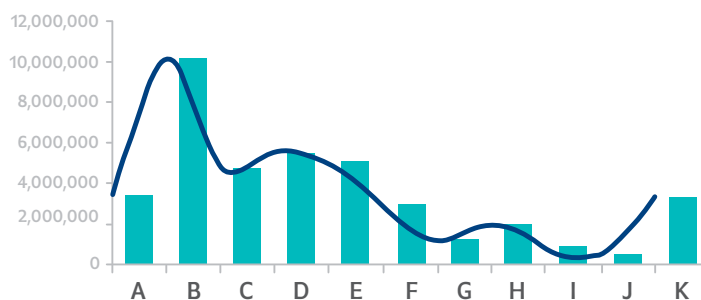
Only customers that are known to the Bank may be assigned a behavioural score.

Each of the Bank's customers is assigned a rating from A to K which is updated on a monthly basis and on a daily basis in the event of any incident.

Class	Description
A	Very low risk
A-	
B	Low risk
B-	
C	Medium risk
C-	
D	Medium high risk
D-	
E	High risk
E-	
F	Very high risk
F-	
G	Major risk
G-	
H	Proven risk
H-	
I	Sub-standard
J	Doubtful
K	Loss

Four separate behavioural scoring models have been introduced for specific market segments: personal banking customers, professional banking customers, Moroccans living abroad and small businesses.

BREAKDOWN OF PERSONAL/ PROFESSIONAL BANKING CUSTOMER PORTFOLIO BY SCORE AT 31 DECEMBER 2019



The credit approval score is a one-off rating that is assigned on opening a line of credit.

A decision support system has been introduced for approving consumer loans.

GUARANTEES

The Group receives different types of guarantee in consideration for loan outstandings. As a general rule, the guarantees required are based on the following two factors: the loan type and the counterparty quality.

Thus, for all property loans (home purchase loans and real estate development loans), the Group systematically possesses mortgages on the financed property as well as insurance cover.

Similarly, the financing of public contracts, merchandise, and equipment and trade premises is systematically guaranteed by collateral in respect of the financed items as well as through insurance cover.

In addition to these guarantees, the Group generally secures its position by requesting personal guarantees from counterparties whenever deemed necessary, depending on the quality of such counterparties.

CONCENTRATION LIMITS

Credit Risk Management has adopted a policy of analysing business line strategies from a risk perspective, especially in respect of new activities or product launches, by setting formal limits on these risks. Credit concentration risk incurred by BANK OF AFRICA Group can arise from exposure to:

- Individual counterparties ;
- Interest groups ;
- Counterparties belonging to the same industry or country.

RISK CONTROL BODIES

INDIVIDUAL COUNTERPARTIES

The Group proceeds monthly monitoring of individual concentrations, on social and consolidated basis, and ensures close monitoring of the commitments of its 10, 20 and first 100 customers with the greatest commitments.

The following table shows commitments to the bank's main debtors at the end of December 2019:

	Dec-19	
	Amount	% of the
Commitments to 10 largest customers	14 869	13%
Commitments to 20 largest customers	21 776	20%
Commitments to 100 largest customers	41 607	37%

INTEREST GROUPS

Diversification of the portfolio by counterparty is monitored on a regular basis, notably under the Group's individual risk concentration policies. Credit risks that result from concentration on a single counterparty or group of counterparties with a relative high level of outstandings (more than 5% of shareholders' equity) are specifically monitored from an individual as well as consolidated perspective.

In addition, monitoring of major risks also ensures that the aggregate exposure to each beneficiary does not exceed 20 % of the Group's net consolidated shareholders' equity capital as recommended by the Moroccan banking regulations. BANK OF AFRICA remains well below the concentration limits defined by the Bank Al Maghrib directive.

COUNTERPARTIES BELONGING TO THE SAME COMPANY

The Group has a methodology for setting sector limits based on a statistical model based on the historical default rate and the number of counterparties by business sector and risk class (rating).

The objective is to model default risk using appropriate econometric techniques, using a random variable dependent, whose value is the result of the enumeration of realization of fault events.

The approach is based on assumptions of the independence of the counterparties

and the non-correlation of defaults. Thus, the key notion of this methodological approach is the probability of default of a counterparty given. This probability is measured through the use of the rate failure of the rating pair / business sectors.

The model also allows you to calibrate the envelopes to be allocated to each business sector, particularly in view of the development plan of the bank and the sector's loss experience. This approach adopted by the Group Risk Management is completed by the implementation of back Testing of the model every six months.

The review of the sectoral limits is carried out every six months in consultation with the commercial sector and the Intelligence Centre The bank's economics, which provide their business vision and costing of the macroeconomic and sectoral perspectives. The opinions of these entities thus make it possible to challenge and further strengthen the relevance of the model in relation to the economic context.

The breakdown of the Group's customer commitments by sector

The breakdown of activities at the end of December 2019 is as follows:

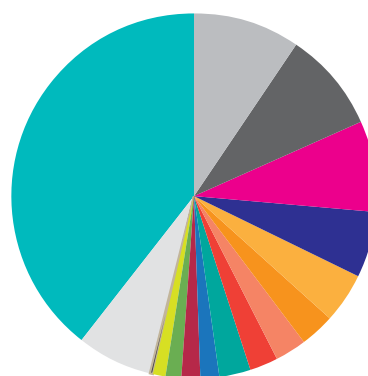
STRESS-TESTS CONDUCT

Every six months, BANK OF AFRICA Group conducts crisis simulations (stress tests) to assess the vulnerability of its credit portfolio in the event of an adverse event or deterioration of the quality of its counterparties.

The stress tests are conducted in order to assess the Bank's resilience in the face of unexpected, extreme events. Operationally, they consist of simulating scenarios relating to the default of a certain percentage of the Group's counterparties. The ultimate objective is to measure the impact on provisions and, as a result, on profitability and the prudential shareholders' equity.

The various scenarios are reviewed regularly and at least twice per year to ensure that they are relevant. This assessment is carried out on the basis of the objectives set for conducting stress tests and whenever the market conditions suggest any potentially adverse changes that are likely to seriously impact the Group's ability to withstand them.

The results of the stress test are made known to the Steering Committee and Group Risk Management and the Group Risk Committee.



Financial activities 10,52%	Miscellaneous manufacturing industries 1,56%
Real estate development 8,44%	Textile, clothing and leather industries 1,50%
Retail, auto repairs and domestic items 8,21%	Mining industries 1,59%
Transportation and telecommunications 6,68%	Chemical and specialty chemical industries 0,95%
Production and distribution of electricity, gas and water 4,24%	Agriculture, hunting and forestry 0,31%
Construction and public works 2,43%	Fisheries, Aquaculture 0,04%
Agribusiness and tobacco industry 2,84%	Public sector administration 0,03%
Metallurgical, mechanical, electrical and electronic industries 2,55%	Others 6,43%
Hotels and restaurants 2,53%	Retail 39,16%

RISK CONTROL BODIES

Level of exposure to counterparty risk based on methods applied to off-balanced sheet items

CREDIT RISK-WEIGHTED ASSETS	31/12/2019
Type of Exposure	Risk-Weighted Assets post-CRM
Balance-sheet items	164 825 530
Off balance sheet items: financing commitments	4 624 202
Off balance sheet items: warranty commitments	11 081 817
Counterparty Risk: temporary disposals of securities relating to the bank portfolio	-
Counterparty Risk: temporary disposals of securities relating to the trading portfolio	140 490
Counterparty Risk: derivative products relating to the bank portfolio	-
Counterparty Risk: derivative products relating to the trading portfolio	397 939
Other assets/Other items	28 264 495
Settlement Risk	330 884
Total	209 665 357

MARKET RISK

Market risk management at BANK OF AFRICA Group adheres to regulatory standards as defined by supervisory authorities and in application of best international management practices as defined by the Basel Accords.

Market risk is defined as the risk of loss on balance sheet and off-balance sheet positions due to changes in market prices. For BANK OF AFRICA, these risks encompass the following:

- Interest rate risk;
- Foreign currency risk;
- Credit risk on market transactions.

Foreign Exchange Instruments	Cash instruments
	Spot Foreign Exchange
	Forward Foreign Exchange
	Foreign exchange Derivatives
	Foreign exchange Swaps
Equity Instruments	Equity shares
	Derivatives on equity or and Indices
Fixed income Instruments	Mutual funds on equities
	I- Corporate and Interbank loans and borrowing
	Fixed rate (in MAD and Foreign Currency)
	Floating Rate (in MAD and Foreign Currency)
	II- Negotiable Debt Securities and bonds
	II-1 Sovereign Debt (Including bonds issued by the Kingdom of Morocco)
	Fixed rate (in MAD)
	Floating Rate (in MAD and Foreign Currency)
	II-2 Securities issued by Credit institutions and Companies Fixed rate (in MAD and Foreign Currency)
	Floating Rate (in MAD and Foreign Currency)
	III- Loans / borrowing of Securities
	Loans / borrowing of securities
	Repo / Reverse repo
	IV- Rate Derivatives
	Rate Swaps
	Rate Futures
Forward Rate Agreement	
V- Fixed income mutual funds	
Money market mutual funds	
Debt mutual funds	
Commodity Products	Commodity futures
	Commodity futures options
	Credit Default Swap (CDS)
	Credit Linked Note (CLN)

GOVERNANCE

The main contributors to BANK OF AFRICA Group's market risk management policy are as follows:

- General Management, which implements market risk management strategies and policies approved by the Board of Directors;
- Group Market Risk Committee, which defines Group market risk management policy and validates any amendment to the steering of market risk across the entire Group;
- The Group Market Risk entity, which ensures the efficiency of the Market Risk Management System of the BANK OF AFRICA and its adequacy with the risk management policy of Group market;
- Group Market Risk Department, which centralises market risk management for BANK OF AFRICA Group as a department which is independent from the Group's front-offices. This gives it maximum objectivity in steering market risks and arbitrating between the Group's various market activities;
- Risk Management Units of BANK OF AFRICA Group entities, which provide a first level check on market activities within their entity and send regular reports to Group Risk Management;
- Internal Audit, which ensures implementation of the market risk management policy and rigorous compliance with procedures.

DESCRIPTION OF THE MARKET RISK MANAGEMENT POLICY

BANK OF AFRICA Group's market risk management policy is based on four main factors:

- Limits ;
- Risk indicators ;
- Capital requirements ;

LIMITS

• Counterparty limits in market transactions

The process for approving limits for counterparties and applications to exceed those limits in market transactions is governed within BANK OF AFRICA Group by a system of delegation of powers within a framework of procedures specific to each counterparty type.

Market transactions are subject to a fixing priori limits, according to a delegation scheme based on the principle of the Troika.

• Market limits

In order to control market risk within BANK OF AFRICA Group and to diversify the trading portfolio, a set of market limits has been adopted. These limits reflect the Group's risk profile and help to steer market risk management by arbitrating between the Group's various market activities.

BANK OF AFRICA Group's set of market limits are as follows:

- Stop-loss limits by activity over different time horizons;
- Position limits by activity;
- Transaction limits.

VaR limits are in the process of being defined and will be included in the project relating to adoption of the advance approach in respect of market risks. This is a dynamic limit management policy that takes into account fluctuations in different risk factors as well as existing correlations in order to assess more accurately the diversification of the portfolio.

• Regulatory limits

In addition to the limits adopted for internal purposes, BANK OF AFRICA Group also complies with regulatory limits defined by Bank Al-Maghrib such as:

- Limits on foreign currency positions which should not exceed 10% of shareholders' equity ;
- Limit on the overall foreign exchange position which should not exceed 20% of shareholders' equity.

RISK INDICATORS

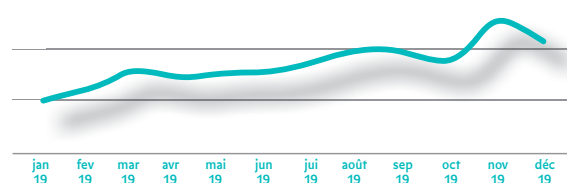
Different risk indicators reflecting the level of exposure to market risks are used within BANK OF AFRICA Group as follows:

• Overall Value-at-Risk (VaR) and VaR by asset class

Value-at-Risk is a probability-based technique used to measure overall market risk. It helps to measure the risk incurred by calculating the potential loss a given time horizon and degree of probability.

Unlike traditional risk indicators, Value-at-Risk combines several risk factors and measures their interaction, thereby taking into consideration the diversification of portfolios.

BANK OF AFRICA Group uses KVar software to calculate overall Value-at-Risk and VaR by asset class as well as back-testing by using different methods.



• Stress-testing by risk factor

BANK OF AFRICA Group conducts stress tests to assess the vulnerability of the Group's trading portfolio to extreme scenarios. Stress tests cover all components of the trading portfolio by simulating all risk factors which have an impact on the portfolio. The results of stress tests for interest rate risks and exchange rate risks on the trade portfolio are described below:

As at December 31, 2019, the results of the stress tests were as follows:

a- Fixed income portfolio

1st scenario: A 25 basis point parallel shift in the yield curve.

This scenario would result in a MAD 65 million impact on the P&L.

2nd scenario: A 50 basis point parallel shift in the yield curve.
This scenario would result in a MAD 129 million impact on the P&L.

b- Equity portfolio

1st scenario: A 15% fall in the value of the equity portfolio.
This scenario would result in a MAD 9 million impact on the P&L.
2nd scenario: A 25% fall in the value of the equity portfolio.
This scenario would result in a MAD 14 million impact on the P&L.

c- Foreign exchange

1st scenario: A 2.5% rise or fall in the value of the dirham.
This scenario would result in a MAD 126 million impact on the P&L.
2nd scenario: A 5% rise or fall in the value of the dirham.
This scenario would result in a MAD 252 million impact on the P&L.
The results of the stress tests show that the Group has adequate capital to withstand adverse stress scenarios and to be able to comply with regulatory standards, even in crisis situations.

CAPITAL USE

BANK OF AFRICA Group uses Risk Authority software to calculate capital requirements under the standardised approach for market risks. This enables it to meet regulatory requirements in terms of reporting and monitor capital requirements regarding the Group's trading portfolio.

The Group's consolidated capital requirements in respect of market risk at 31 December 2018 were as follows:

CAPITAL REQUIREMENTS BY TYPE	CAPITAL REQUIRED
Capital required in respect of fixed income risk	621.549
Capital required in respect of equity risk	101.107
Capital required in respect of foreign exchange risk	12.252
Total capital required in respect of market risk	734.907
Total market risk-weighted assets	9.186.342

METHOD FOR VALUING TRADING PORTFOLIO ITEMS

Dirham-denominated fixed income and money market instruments

Market values of fixed income and money market assets are calculated on Kondor+ using the dirham yield curve for fixed income and money market assets on the basis of the dirham rate curve published by Bank Al-Maghrib and on each transaction's characteristics.

Money Market and fixed income mutual funds

A number of mutual funds publish net asset values on a daily basis while others are updated weekly.

Mutual funds are valued on the basis of net asset value calculated on a daily or weekly basis.

Foreign currency-denominated fixed income products

Foreign currency-denominated fixed income products are valued on Kondor+ on the basis of the yield curves for the foreign currencies in question and on each transaction's characteristics.

Foreign exchange options

Foreign exchange options are valued on the following basis: volatility curve, yield curves (EUR, MAD and USD) and foreign exchange crosses for the three currencies.

The foreign exchange options position is included in the overall foreign exchange position using the delta equivalent method.

Overall foreign exchange position

Branch-based foreign exchange transactions are executed at BANK OF AFRICA's fixing rate (non-negotiable rate).

A final statement of orders awaiting execution is transmitted to the Foreign Exchange Desk on day

«N» which deals with it immediately. On «N+1» in the morning, the Middle Office receives a statement comprising possible amendments to branch network positions and updates Kondor+.

Positive Fair Value of Contracts (Warranties)

Warranties relating to market risks relate to "repo" agreements. The latter are securities sold under repurchase agreements in order to raise funds.

COUNTRY RISK

In a constantly changing world and within the constraints of the Group's overseas growth strategy and regulatory requirements, the introduction of a country risk management system will enable the Group to identify, measure and control its cross border risks.

The Country Risk unit's adopted methodology is based on the following points:

Identifying cross-border risks

BANK OF AFRICA Group is exposed to international risks through the various types of commitment made by the Bank to non-resident counterparties in dirhams or in foreign currencies.

These include:

- Loans to non-residents ;
- Trade finance business ;
- Foreign assets ;
- Market operations.

Alerts system introduced

This system consists of monitoring regulatory, economic and financial factors by tracking all the prominent events occurring during the week. These items are disseminated to all interested parties in a Monthly Report.

An additional module monitors country risk trends and consists of specific research and in-company requests.

Ratings system

BANK OF AFRICA Group bases its country risk assessments on the ratings of external agencies such as Coface, S&P and Moody's...

Setting limits

When establishing country limits for loan commitments, BMCE Bank of Africa Group takes into consideration:

- An assessment of an issuer's risk profile ;
- Risk appetite ;
- The breakdown and diversification of the loan portfolio of each subsidiary and of the Group, while complying with the maximum permitted concentration by country based on a percentage of Tier 1 capital.

These limits are monitored on a permanent basis.

Requests to exceed country limits are assessed on the basis of the levels of decision-making powers in force.

Stress tests

Stress tests are conducted on a regular basis to ensure that the Bank is able to withstand scenarios of extreme deterioration in country risk and to quantify the impact on the Bank's balance sheet and profitability.

Provisioning

A provision is recognised for country risk whenever it materialises, in the event of debt rescheduling, a political crisis or any other factor which may negatively impact the Bank's profitability.

An annual review is systematically carried out to reassess the country supposedly in default, which may potentially require the Group to recognise a provision.



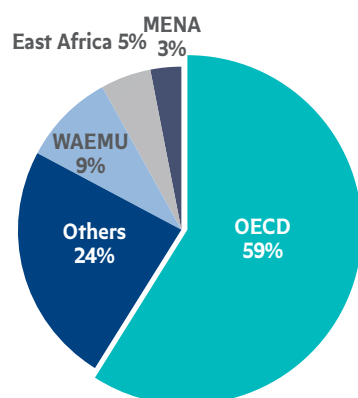
Country risk management policy

The country risk management policy aims to define a framework for overseeing all overseas business activities that generate risks for the Bank. It establishes management standards and rules in order to harmonise regulatory requirements and in company governance.

Country risk reporting

Monthly reporting by overseas subsidiaries and the parent company enables the Group Risks Division to assess each country's potential risk factors and help to establish risk-mitigation strategies.

BREAKDOWN OF BOA GROUP SA'S RISK EXPOSURE BY GEOGRAPHICAL ZONE AT 31/12/2019



Consolidation

Country risk commitments are identified in such a way as to establish a position for each subsidiary as well as for the Group, providing an overview of the Group's overall exposure to cross-border risks.

OPERATIONAL RISK

Operational risk is defined as the risk of loss due to inadequate or failed internal procedures, employee error, systems failure or external events, liable to impact the smooth running of the business.

Operational risk management objective

The operational risk management policy has the following objectives:

- Assess and prevent operational risks;
- Assess controls;
- Implement preventive and/or corrective action for major risks.

The management of operational risks through the implementation of preventive actions and / or corrective address the identified major risks.

The risk management system is regularly reviewed and monitored, allowing continuous improvement of said device.

Classification

Operational risks or losses can be analysed and categorised on the basis of two factors and it is important to differentiate between them: cause and effect, in terms of their financial or other impact. They are classified under Basel by event type.

Links to other risk types (market/ credit risks)

The management of operational risks is potentially linked to the management of other risks (market/credit risks) at two levels:

- Overall level, analysis of the Bank's overall level of risk aversion (and in terms of allocation of capital) must be carried and monitoring of "trans-risks";
- Detailed level, some operational risks can be directly linked to market and credit risk management.

Operational risk management organisation

The framework governing operational risk management within BANK OF AFRICA Group is based on three main objectives:

- Define a target policy consistent with BANK OF AFRICA Group's business organisation and inspired by best practice;
- Involve and empower business lines and subsidiaries in the day-to-day management of operational risk management;
- Ensure that Audit/Control function is separate from the Operational Risk Management function.

Operational risk management at BANK OF AFRICA Group involves four major entities:

- BANK OF AFRICA's Group Operational Risk Direction;
- BANK OF AFRICA network;
- BANK OF AFRICA business divisions;
- Subsidiaries.

Operational risks coordinators have been appointed by the aforementioned entities. These include:

- Operational Risk Correspondents (CRO);
- Operational Risk Coordinators (CORO);
- Operational Risk Liaison Officers (RRO).

The operational risk management's remit includes other Group subsidiaries.

Governance of operational risk management

Governance of operational risks within BANK OF AFRICA Group is organised by three Operational Risk Committees:

- Group Operational Risks Committee;
- Operational Risk Monitoring (Business Lines) Committee;
- Operational Risk (Subsidiaries) Committee.

These committees are tasked with periodically:

- Reviewing changes in the exposure to operational risks and in the environment for controlling such risks;
- Identifying the main areas of risk, in terms of activities and risk types;
- Defining preventive and corrective action required to reduce the level of risk ;
- Reviewing the amount of capital to be allocated to operational risks, the cost of preventive action required and the costs of insurance.

Fundamental methodology principles

BANK OF AFRICA Group's operational risk management policy has two strategic objectives:

- Reduce exposure to operational risks;
- Optimise capital requirements relating to operational risks.

The internal system for measuring operational risks is closely linked to the Group's day-to-day risk management process via:

- Collecting risk events;
- Mapping operational risks,
- Key risk indicators.

The data produced are part of the process of monitoring and control of operational risk profile.

The management of the entity in question, general management and the board of directors are regularly notified of operational risk exposure and losses incurred. Management systems are properly documented, ensuring compliance with a formalised set of controls, internal procedures and corrective measures in the event of non-compliance.

Internal and/or external auditors are invited to periodically review management processes and systems for measuring operational risk. These audits relate to units' activities and the independent operational risk management function.

Management of operational risks at BANK OF AFRICA Group is entirely automated by means of a dedicated system, "MEGA GRC". The collection of risk events, the mapping of operational risks and the key risk indicators are currently managed by this system which is used at Bank level as well as by Moroccan and European subsidiaries.

Operational risk control and mitigation

Several types of action may be taken to manage operational risks:

- Reinforce checks;
- Hedge risks, especially through insurance contracts;
- Avoid risks, in particular, by redeploying activities;
- Draw up business continuity plans.

-BANK OF AFRICA Group has a very strong control policy, resulting in a significant reduction in operational risks. However, in terms of operational risk management and via its dedicated policy, the Group is at liberty to identify optimal behaviour, on a case by case basis, depending on the different types of risks described above.

Additionally, the Group has insurance policies to mitigate risks such as damage to office buildings, fraud, theft of valuable items and third-party liability cover etc.

Business continuity plan

The Business Continuity Plan is a response to the rising demand to minimise the impact in the event of any interruption to the Bank's operations. This is due to a growing reliance on the resources underpinning those operations, including human, IT or logistical resources.

The Plan comprises a set of measures and procedures aimed at ensuring that the Bank, under different crisis scenarios such as a major shock, is able to maintain essential services in fail-soft mode on a temporary basis, prior to the planned resumption of normal operations.

A targeted rescue organisation has been set up, along with alternative locations and backup systems. A specific project is underway at Group level, with disaster avoidance planning a priority.

The strategic transversal principles underpinning the Business Continuity Plan are as follows:

- BANK OF AFRICA has a moral responsibility to allow its customers access to the funds that they have entrusted to it. Any breach of this obligation in times of crisis may have an impact on public order.

This principle shall prevail above any other.

- BANK OF AFRICA must guarantee its commitments towards Morocco's interbank clearing system;

- BANK OF AFRICA intends, as a priority, to comply with every one of the existing legal and contractual commitments entered into (relating to loans and other commitments) before it enters into any other commitment;

- BANK OF AFRICA intends to maintain its international credibility by guaranteeing, as a priority, its commitments vis-à-vis foreign correspondents;

- BANK OF AFRICA Group's existing customers take priority over all others benefiting from its services.

- Services are provided along the entire chain from front-office to back-office e.g. from branch level up until recognition in accounting terms.

Corporate Social Responsibility

CSR issues are an integral part of the operational risk management system, through a management approach of identification, analysis and evaluation and risk monitoring.

The systems for identifying and measuring internal CSR risk analyses are now closely linked to the day-to-day management of operational risks.

Measurement of capital adequacy

The BANK OF AFRICA Group has opted for the standardised approach as outlined in Bank Al Maghrib circulars (BAM).

The latter require banks to have a Tier 1 capital ratio of 9% and a solvency ratio of 12% at both the parent company and consolidated levels.

These threshold calculated for the BANK OF AFRICA Group comply with the regulatory prerogatives established by Bank Al- Maghrib.

COMPOSITION ET ADÉQUATION DES FONDS PROPRES

Main characteristics of items constituting shareholders' equity

BANK OF AFRICA's share capital stood at MAD 1 998 204 600 made up of 199 820 460 ordinary shares, each with a nominal value of 10 dirhams. The shares are fully paid-up. Each ordinary share entitles the holder to one voting right.

At December 31, 2019, fixed maturity subordinated debt stood at almost MAD 6.2 billion.

Measurement of capital adequacy

BANK OF AFRICA Group has opted for the standardised approach to calculating risk-weighted assets as prescribed by Bank Al-Maghrib circulars (BAM):

Since 30 June 2014, capital adequacy ratios have been calculated in accordance with Basel III regulatory standards as defined by BAM.

The method for calculating capital was reviewed in the light of these new regulations and temporary measures have been adopted for a period until 2019.

The circulars governing these declarations are as follows:

- Circular No. 26/G/2006 relating to calculating capital requirements based on the standardised approach for hedging credit institutions' credit, market and operational risks;
- Circular No. 8/G/2010 relating to calculating capital requirements based on internal approaches for hedging credit institutions' credit, market and operational risks;
- Circular No. 14/G/13 relating to capital requirements for credit institutions

Composition of capital and capital adequacy ratio

Tier 1 capital	22 988 684
Items to be included in Tier 1 capital	26 887 264
Share Capital	1 998 205
Consolidated reserves, including premiums related to share capital and not included in hidden reserves	19 467 975
Retained earnings	24 500
Net income for the previous period	1 737 963
Minority interests	3 658 621
Items to be deducted from Tier 1 capital	3 898 581
<i>Good will</i>	1 032 114
Other adjustments to Tier 1 capital	1 690 261
Immobilisations	1 035 931
Other deductions	140 274
Additional core capital	1 800 000
Perpetual subordinated debt	1 800 000
Tier 2 capital	7 185 754
Perpetual subordinated debt	6 223 562
Revaluation differences	760 617
Hidden reserves	201 575
Items to be deducted from capital	29 000
Other deductions	29 000
Total	31 945 439

Equity requirements by type of risk	Dec. 2019
Weighted credit risks	209 665 357
Weighted market risks	9 186 342
Weighted operational risks	24 492 864
Total weighted assets	243 344 564
Tier 1 capital	24 788 684
Tier 1 fund ratio	10.2%
Total eligible capital	31 945 439
Solvency Ratio	13.1%

Risk management system deployment for international subsidiaries

Throughout 2019, the Group Risk Management Department strengthened the monitoring and control of credit, market, country and operational risks at the BANK OF AFRICA Group level.

The year was also marked by the launch of the transformation program in line with the Bank's strategic vision. The objective of this program is to strengthen the dynamics and growth of the "Risks" Sector and, in turn, that of the Group.

Credit risk system

Lot 1: Organization, delegated scheme, management and reporting

The rollout of the Credit Risk system (Lot 1) is finalized for all of the subsidiaries except BCB.

Lot 2: Stress tests and concentration ratios

The Credit Risk system is rolled out across all subsidiaries, except BCB. Deployment is underway within BBI UK.

Operational risks

- The deployment of lots 1 and 2 of the Operational Risk system are finalized for subsidiaries.
- The deployment of lot 2 is underway within the Moroccan subsidiaries. The deployment is pending for BBI London.
- The RO system is pending for BCB.

Group Risk Community

The Group Risk Community reached a perceptible level of maturity thanks to policies and common risk practices. The main achievements of the Group Risk Community for the 2019 financial year relate to ARM (Associate in Risk Management) certification training delivered by Business Risk Academy:

- ARM 55 (Edition 1): 11 English-speaking participants with an average success rate of 82%;
- ARM 55 exam (Edition 2 for French speakers): with a success rate of 70%;
- ARM 54 (Edition 4): 11 French-speaking participants. The exam is scheduled for September 2019.

MANAGEMENT OF GROUP RISK TRANSVERSAL PROJECTS

In 2019, the work of the Group Risk IT Systems and Support unit focused on the following main projects in line with BANK OF AFRICA's Group Risk General Management:

- Implementation of the latest version of the Group Loan Commitments Database (BEG) at BOA subsidiaries (14/17);
- Implementation of the Risk Authority software solution for calculating capital requirements and generating regulatory declarations at BOA subsidiaries within the WAEMU zone;
- A number of invitations to tender issued for IT systems (recovery of sub-standard and non-performing loans at the commercial level, IFRS, internal ratings);
- Completion of a number of project components (CDL, OSCA, BGI).

Risk projects portfolio:

The Group Risk General Management's project portfolio consists of about 20 projects grouped together under 3 headings – Transformation Projects, Regulatory Projects and Transversal Projects.

GROUP RISK PROJECTS



TRANSFORMATION PROJECTS

- ▶ IT system for sub-standard and non-performing loans _ post-approval adopted
- ▶ Software solution for calculations under IFRS acquired
- ▶ ICAAP implemented
- ▶ BEG project – to establish a reference system for third parties and loan commitments at Group level
- ▶ BGI – loan defaults database
- ▶ Ratings system acquired for large enterprises and SMEs
- ▶ Scoring models implemented at GRC level (SMEs and personal and professional banking customers)
- ▶ Management matrices and risk indicators automated
- ▶ Review and steering of Scheme of Delegation



REGULATORY PROJECTS

- ▶ Country risk management system automated
- ▶ Use of the SAS solution optimised, and its environment extended
- ▶ BAM recommendations for Risk Authority
- ▶ Stream 2 system optimised for calculating the capital adequacy ratio and risk steering
- ▶ Management of business groups
- ▶ Early detection of high-risk accounts automated – SFDs produced
- ▶ Management of doubtful and contentious loans (new CDL)
- ▶ Deterioration in NPL balance
- ▶ Operational risk management
- ▶ Operational risks mapped - risk scoring standards (BOA subsidiaries and LCB BANK).



TRANSVERSAL PROJECTS

- ▶ OVO improved
- ▶ Processes for managing and monitoring the Bank's loan commitments improved – authorisations
- ▶ Credit committee documentation Q2/Q3 reviewed
- ▶ ONDs managed
- ▶ IDCE alerts
- ▶ CID handling process revamped
- ▶ SharePoint platform introduced

RISK CONTROL BODIES

SEVERAL PROJECTS WERE COMPLETED IN 2019 WHILE OTHERS REMAIN IN PROGRESS:

- The Group Loan Commitments Database (BEG) is an indispensable solution enabling the Group Risk function to steer and monitor credit risk at the consolidated level for all financial entities included within BANK OF AFRICA – BMCE Group's scope of consolidation (23 subsidiaries – BANK OF AFRICA, 16 BOA subsidiaries, 3 Moroccan subsidiaries, LCB, BBI Madrid and BBI London).

The BEG consolidates third parties and loan commitments:

- Management information – third parties, authorisations, outstandings, incidents, warranties and provisions;
- Accounting information – accounting balances enabling management information to be reconciled.

With the BEG playing an integral role in transformation projects, 85% of the updated version implemented, aimed at satisfying Bank Al-Maghrib's regulatory requirements and BANK OF AFRICA's internal steering needs:

- The Risk Authority software solution implemented for calculating capital requirements and generating regulatory declarations at BOA subsidiaries within the WAEMU zone in accordance with Basel II/Basel III regulatory requirements;
- Schemes of delegation for credit approval and overruns reviewed as well as their system settings;
- Scoring and rating models reviewed and bolstered with a fresh invitation to tender issued to acquire a new internal ratings solution;
- IT solution for recovering sub-standard and non-performing loans at the commercial level implemented and the choice of publisher finalised;
- Work on enhancing and cleaning up the BGI incidents database – improving the reliability of accounts in arrears, automating processes for dealing with frozen accounts and persistent overruns;
- Work on stabilising and improving the OSCA solution for monitoring accounts showing anomalies;
- Work on introducing a new solution for managing doubtful and contentious loans (CDLs);
- Processes optimised for calculating the consolidated cost of risk (IFRS9), invitation to tender issued, candidates scored, and decision-making process drawn up;
- Convergence project ongoing (ICAAP, PRCI, loan defaults included, subsidiaries' reporting), Batch 1 - 'Market risk' implemented at BOA Benin subsidiary.
- Work on migration towards the latest version of the MEGA CRM operational risk management system;
- Project initiated resulting in the Loan Commitments Analysis Division adopting SharePoint, a web-based collaborative platform for managing document and monitoring committee projects.



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