



**4Q18** 

Risk Management Report December 31<sup>st</sup>, 2018

Contact: investor@banorte.com

investors.banorte.com

+52 (55) 1670 2276



# Index

1.	OBJECTIVES, SCOPE AND RISK MANAGEMENT FUNCTIONS	3
2.	CREDIT RISK	5
3.	MARKET RISK (BANK AND BROKERAGE HOUSE)	19
4.	BALANCE AND LIQUIDITY RISK	21
5.	OPERATIONAL RISK	27
6.	SECURITIZATIONS PERFORMED BY GFNORTE	29
7.	POSITION IN SHARES:	32



# **Risk Management**

Risk management at Grupo Financiero Banorte is a key element in determining and implementing the Group's strategic planning. The Group's risk management and policies comply with regulations and market's best practices.

# 1. OBJECTIVES, SCOPE AND RISK MANAGEMENT FUNCTIONS

#### GFNorte's Risk Management main objectives are:

- To provide clear rules to different business areas, that contribute to minimizing risk and ensuring compliance with the parameters established and approved by the Board of Directors and the Risk Policies Committee (CPR by its acronym in Spanish).
- To establish mechanisms to monitor risk-taking across GFNorte, through the use of robust systems and processes.
- To verify the observance of Risk Appetite.
- To estimate and control GFNorte's capital, under regular and stressed scenarios, aiming to provide coverage for unexpected losses from market movements, credit bankruptcies, and operational risks.
- To implement pricing models for different types of risks.
- To establish procedures for portfolio's optimization and credit portfolio management.
- To update and monitor Contingency Plan in order to restore capital and liquidity levels in case of adverse events.

Moreover, GFNorte owns sound methodologies to manage quantifiable risks such as Credit Risk, Market Risk, Liquidity Risk, Operational Risk, Concentration Risk and Counterparty Risk.

<u>Credit Risk</u>: revenue volatility due to constitution of provisions for impaired loans, and potential losses on borrower or counterparty defaults.

<u>Market Risk:</u> revenue volatility due to market changes, which affect the valuation of book positions for active, liabilities or contingent liabilities operations, such as: interest rates, spread over yields, exchange rates, price indices, etc.

<u>Liquidity Risk:</u> potential loss by the impossibility of renewing liabilities or securing resources in normal conditions, and by early or forced sale of assets at unusual discounts to meet their obligations.

Operational Risk: loss resulting from inadequate or failed internal processes, employees, internal systems or external events. This definition includes Technology Risk and Legal Risk. Technology Risk, groups all those potential losses from damage, interruption, disruption or failures resulting from use of or reliance on hardware, software, systems, applications, networks and any other information distribution channel, while the Legal Risk involves the potential loss by sanctions for noncompliance with laws and administrative or judicial decisions unfavorable related to GFNorte's operations.

<u>Concentration Risk:</u> potential loss by high and disproportional exposure to particular risk factors within a single category or among different risk categories.

Likewise, regarding unquantifiable risks, Risk Management's Manual in GFNorte establish specific objectives for:

<u>Reputational Risk:</u> potential loss in the performance of Institution's activities, due to an inappropriate or unethical perception of the different stakeholders, internal or external, on their solvency and viability.

# 1.1 Risk Management – Structure and Corporate Governance

Regarding the structure and organization for a comprehensive Risk Management, the Board of Directors is responsible for authorizing policies and overall strategies such as:

- GFNorte's Risk Appetite.
- Comprehensive Risk Management Framework.
- Risk exposure limits, risk tolerance levels and mechanisms for corrective actions.



- Contingency Plan and the Contingency Funding Plan.
- The outcome of the internal and regulatory capital adequacy scenarios.

The Board of Directors designates the CPR (Risk Policy Committee) as accountable for managing the risks that GFNorte is exposed to, in order to ensure that operations comply with objectives, policies and procedures established by Risk Management.

The CPR also monitors the overall limits of risk exposure approved by the Board of Directors, in addition to approving specific limits for exposure to different types of risk.

The CPR is integrated by members and deputies of the Board, the CEO, the Managing Directors of the Group's Entities, the Risk Managing Director and the Audit Managing Director, the latter participates with voice but no vote.

Moreover, the Assets and Liabilities Committee (ALCO) and the Capital and Liquidity Group, analyze, monitors, and decide regarding interest rate risks in the balance sheet, the financial margin, liquidity and net capital of the Institution.

The Unit for the Comprehensive Risk Management (UAIR by its acronym in Spanish) is in charge of the Risk Management Department (DGAR), and among its functions, is responsible to identify measure, monitor, limit, control, report and disclose the different types of risk to which the GFNorte is exposed to.

The DGAR reports to CPR, in compliance with the regulation related to its independence from the Business areas.

#### 1.2 Scope and Nature of GFNorte's Risk Management

The Risk Management function extends to all subsidiaries that comprise GFNorte. Depending on the line of business of each of the Businesses, Credit, Concentration, Market, Liquidity and Operational Risks are measured, managed and controlled.

For this purpose, DGAR relies on different information and risk measurement systems, which comply with regulatory standards and align with the best international practices in Risk Management's matters. It's worth mentioning that information and reports contained and produced in the risk systems are constantly backed up following institutional procedures in IT security matters. Furthermore, risk systems enclose transactions susceptible to Credit, Market, Liquidity and Operational Risks, processed through revised models and methodologies, thus generating periodic reports for each one of these risks.

At GFNorte, there are policies and procedures for hedging, risk mitigation and compensation strategies for each type of risk in and off balance, all of them enclosed in models, methodologies and procedures for Risk Management. Within these policies, there are certain variables that must be considered for risk mitigation, such as: general features, loan to value, legal terms, instrumentation and hedging level. These policies and procedures also consider collateral execution as a risk compensation mechanism in the case of non-fulfillment by debtors. As part of the strategies and processes for monitoring the coverage or mitigation effectiveness for each type of risk, there are limits for each one of them (Credit, Market, Liquidity and Operational Risks), which are continuously monitored, as well as established procedures for the documentation of excesses and its causes, and the corrective actions implemented to return to acceptable risk levels.



#### 2. CREDIT RISK

Credit risk is the risk of clients, issuers or counterparts not fulfilling their payment obligations. Therefore, proper management is essential to maintain loan quality of the portfolio.

The objectives of Credit Risk Management at GFNorte are:

- Comply with the Risk Appetite defined by the Board of Directors.
- Improve the quality, diversification and composition of the loan portfolio in order to optimize the risk- reward
- · Provide Executive Management with reliable, timely information to assist decision making regarding funding.
- Provide Business Areas with clear and sufficient tools to support and monitor funding placement.
- Create economic value for shareholders through an efficient Credit Risk Management.
- Define and update the regulatory framework for the Credit Risk Management.
- Comply with the information requirements that the authorities establish regarding Credit Risk Management.
- Perform Risk Management in accordance with the best practices, implementing models, methodologies, procedures and systems based on best practices worldwide.
- Measure Institution's vulnerability to extreme conditions and consider those results for decisions making.

GFNorte's Risk Management policies are:

- Grant and Manage Retail Credit Risk according to best market practices through Parametric Models aimed to identify risk, minimize losses and increase loan origination with quality.
- Grant and Manage Wholesale Loans to companies and other entities, according to best market practices
  through a credit strategy including Target Markets and Risk Acceptance Criteria, identifying and managing risk
  through Loan Rating and Early Alerts methodologies.
- Monitor and control asset quality through Loan Classification System which provides treatment and general actions for defined situations, as well as departments or officers responsible for carrying out such actions.
- Surveillance and Control though Global and Specific Limits, loan rating policies and Credit Risk models that identifies expected and unexpected losses at specific confidence intervals.
- Inform and disclose Credit Risks to risk taking areas, CPR, Board of Directors, Financial Authorities and Investors.
- Define faculties for Credit Risks taking at Institution.

In order to comply with objectives and policies, a series of strategies and procedures have been defined including origination, analysis, approval, management, monitoring, recovery and collections.

# 2.1 Credit Risk Scope and Methodology

### 2.1.1 Individual Credit Risk

GFNorte segments the loan portfolio into two large groups: retail loans and wholesale loans.

The individual Credit Risk for retail loans is identified, measured and controlled through a parametric system (scoring) that includes models for each of the SME (small and medium enterprises) and consumer products (mortgage, auto, payroll, personal loans and credit cards).

Individual risk for wholesale loans is identified, measured and controlled through Objective Markets, Criteria for Risk Acceptance, Early Alerts and GFNorte's Internal Risk Rating (CIR Banorte).

The Objective Markets, Criteria for Risk Acceptance and Early Alerts are tools that, together with the Internal Risk Rating, are part of GFNorte's Loan Strategy and support the estimated level of Credit Risk.



The Target Markets are categories of economic activity by region, backed by economic research and loan behavior analysis as well as by expert opinions, where GFNorte is interested in granting loans.

The Risk Acceptance Criteria are parameters that describe different types of risks by industry, in order to estimate the risk taking when granting loans to customers based on their economic activity. The types of risk observed in the Risk Acceptance Criteria are: Financial, Operation, Market, Enterprise's life cycle, Legal and Regulatory Risks, besides credit experience and management quality.

Early Alerts are a set of criteria based on borrower information and indicators, as well as their environment, as a mechanism for timely prevention and identification of a probable deterioration in the loan portfolio, thereby enabling Institution to take prompt preventive actions to mitigate Credit Risk.

Banorte's CIR is a borrower's rating methodology which assesses quantitative and qualitative criteria in order to determine credit quality. CIR applies to commercial loans equal to or greater than the equivalent of four million investment units (UDIS) in Mexican pesos equivalent on the qualification date.

#### 2.1.2 Portfolio Credit Risk

GFNorte developed a portfolio Credit Risk methodology that, besides including international standards for identifying, measuring, controlling and monitoring, has been adapted to function within the context of the Mexican Financial System.

This Credit Risk methodology provides current value of the entire loan's portfolio at GFNorte, that is, the loan exposure, in order to monitor risk concentration levels through risk ratings, geographical regions, economic activities, currency and type of product in order to observe the portfolio's profile and take action to improve diversification, which will maximize profitability with the lowest risk.

The model considers the loan portfolio exposure directly to the balance of each loan, whereas for the financial instruments' portfolio, considers the present value of the instruments and their future cash flows. This exposure is sensible to changes in the market, thereby facilitating estimations under different economic scenarios

The methodology, besides loan exposure, takes into consideration the probability of default, recovery level associated to each client and the classification of the debtor based on the Merton model. The probability of default is the probability that the debtor will not fulfill his/her debt obligation with the institution according to the originally agreed terms and conditions. The probability of default is based on transition matrixes estimated by GFNorte based on the migration of the debtors through different risk rating levels. The recovery ratio is the percentage of total exposure that is estimated to be recovered if the debtor defaults. The classification of the debtor, based on the Merton model, associates the debtor's future behavior to loan and market factors on which his "credit health" depends, as determined by statistical techniques.

The results of this methodology, are risk measures such as the expected and unexpected loss at a one-year horizon. The expected loss is the average of credit portfolio's loss distribution, which is used to measure the following year's expected loss due to default or variations in debtors' credit quality. The unexpected loss is an indicator of the loss in extreme scenarios and is measured as the difference between the maximum losses given the distribution of losses, at a specific confidence level that for GFNorte's is 99.95% and expected loss.

These results are used as a tool for better decision-making in granting loans and in the diversification of the portfolio, according to GFNorte's strategy. The individual risk identification tools and the portfolio Credit Risk methodology are periodically verified and updated to in order to include the application of new techniques that may support or strengthen them.

#### 2.1.3 Credit Risk of Financial Instruments

Credit Risk Management of financial instruments is managed through a series of key pillars with a robust framework of policies for origination, analysis, authorization and management.

Origination policies define the types of eligible negotiable financial instruments, as well as the methodology for assessing Credit Risk of the different types of originators / issuers and counterparts. Credit Risk is allocated through: a



risk rating obtained with an internal methodology, evaluations of external rating agencies or a combination of both. Maximum parameters of operation are also defined depending on the type of originator / issuer or counterpart, rating and type of operation.

The Loan Committee authorizes operation lines with financial instruments for clients and counterparties in accordance with authorization policies. The authorization request is submitted by the business area and other areas involved in the operation, with all the relevant information for analysis by the Committee who, if considered appropriate, issues its authorization. Nevertheless, the UAIR is empowered to authorize counterparty credit lines (mainly financial entities) that comply with certain criteria through a parametric methodology approved by the CPR.

In the specific case of derivatives contracts, and in line with best practices, a methodology for calculating potential exposure of credit lines is used, which are analyzed and approved within the Credit Committee and are monitored on daily and monthly basis in the CPR, where guarantee analysis for derivative transaction is held both for clients and financial counterparties.

The National Credit Committee holds the minimum faculty to approve credit lines for derivatives (in case of applying facilities, the UAIR will hold the faculty). For these transactions, the use of derivatives with margin calls shall be privileged in order to mitigate the risk of potential exposure to these transactions.

To determine the lines of credit adversely correlated (Wrong Way Risk "WWR") a potential exposure adjustment is considered.

On an individual level, the risk concentration on financial instruments is managed on a continuous basis, establishing and monitoring maximum parameters of operation for each counterparty or issuer depending on the qualification and type of operation. There are defined risk diversification policies for portfolios, for economic groups and internal groups. Additionally, the concentration of counterparty type or issuer, size of financial institutions and the region in which it operates, are monitored so that an appropriate diversification is obtained and undesired concentrations are avoided.

Credit Risk is measured through a rating associated with the issuer, security or counterparty which has a previously assigned risk level based on two fundamentals:

- 1) The probability of nonfulfillment of the issuer, security or counterparty, which is expressed as a percentage between 0% and 100% where the better the rating or lower rate differential vs. the instrument of an equivalent government bond, the lower the probability of non-fulfillment and vice versa.
- 2) The loss given default that could be experienced with respect of the total of the operation in the event of non-fulfillment, is expressed as a percentage between 0% and 100% where the better the guarantees or credit structures, the smaller the loss given default and vice versa. To mitigate Credit Risk and to reduce the loss given default in the event of non-fulfillment, the counterparties have signed ISDA contracts and agreements to net out, in which credit lines and the use of collateral to mitigate loss in the event of non-fulfillment are implemented.



# 2.2 Credit Risk Exposure

As of December 31, 2018 the total amount of the exposure subject to the Standard Method to estimate the Capital Ratio is the following:

Gross Exposures subject to the Standard Method (Million pesos)	Banorte	Arrendadora y Factor*	Sólida	Cartera Total
Commercial	189,751	26,818	434	217,003
YoY Revenues or Sales < 14 MM UDIS	68,390	1,087	409	69,885
YoY Revenues or Sales >= 14 MM UDIS	121,361	25,731	25	147,117
States or Municipalities	125,942	91	0	126,033
Decentralized Federal Government Agencies and State Companies	66,292	5,054	0	71,345
Projects with own source of payment	93,529	0	0	93,529
Financial Institutions	21,088	542	0	21,629
Mortgage	157,262	0	0	157,262
Consumer Non-Revolving	76,761	6	2,275	79,041
Total Loans subject to the Standard Method	730,625	32,510	2,709	765,843
Credit Card	38,808	0	0	38,808
Total Loans subject to the Standard Method	38,808	0	0	38,808
Eliminations				(14,218)
Not Rated				22
Cartera Total				790,455

<sup>\*</sup>Excludes operating leases

For transactions subject to Credit Risk, the Institution uses external ratings issued by the rating agencies S&P, Moody's, Fitch, HR Ratings, Verum, DBRS Ratings México and A.M. Best America Latina. Only ratings issues by rating agencies are considered, and are not assigned based on comparable assets.

### 2.2.1 Loan Portfolio

GFNorte's Credit Risk loan portfolio as of 4Q18 presents a total exposure of Ps 790.45 billion, +Ps 24.82 billion higher vs. the previous quarter; or +3.2%, and Ps 162.37 billion or +25.9% vs. the previous year.

Variations per product of GFNorte's total portfolio are:

Product / Segment		Total Loan		Var. vs. 30	Q18	Var. vs. 4Q	217
(Million pesos)	4Q17	3Q18	4Q18	\$	%	\$	%
Government	134,905	197,652	197,377	(276)	(0.1%)	62,472	46.3%
Commercial	140,740	166,969	177,241	10,272	6.2%	36,501	25.9%
Mortgage	136,728	151,966	157,262	5,297	3.5%	20,534	15.0%
Corporate	105,700	131,273	140,726	9,453	7.2%	35,025	33.1%
Payroll	54,490	56,390	54,648	(1,741)	(3.1%)	158	0.3%
Credit Card	36,093	37,871	38,808	937	2.5%	2,715	7.5%
Auto Loans	19,423	23,510	24,393	883	3.8%	4,970	25.6%
<b>Total Loans</b>	628,080	765,630	790,455	24,824	3.2%	162,374	25.9%



Subsidiary Loans			Distressed Po	ortfolio	Total	Total
(Million pesos)	Performing	Past-due	Performing	Past-due	Totat	Reserves
Banorte*	740,840	6,043	1,534	6,797	755,214	18,089
Arrendadora y Factoraje	32,173	11	16	310	32,510	390
Sólida	2,608	76	0	25	2,709	186
Accounting Records**	22	0	0	0	22	179
Total Loans	775,642	6,131	1,550	7,132	790,455	18,844

<sup>\*</sup> Banorte's total loans include eliminations for (Ps 14.22 billion)

Total reserves of Ps 18.84 billion include rating reserves of Ps 18.66 billion and accounting records (to provision 100% of past due interests, valuation, negative debts in the Credit Bureau, and those registered in recoveries) of Ps 179 million.

GFNorte's performing, past-due and distressed portfolios in 4Q18 grouped by sector and subsidiary are detailed in the following two tables:

Sector	Loans	Doof	Distress		Total	Reser		QoQ	Days Past-
(Million pesos)	Performing	Past- Due	erforming	Past- Due	Loans	3Q18	Var vs. 2Q18	Charge offs	-Due**
Government	199,364	4	0	0	199,368	2,119	222	0	2
Services*	79,219	35	244	473	79,971	937	35	66	484
Commerce	48,797	24	194	2,003	51,018	1,309	46	36	402
Construction	48,524	46	334	1,662	50,565	1,265	(38)	163	351
Manufacturing	46,538	123	67	2,098	48,827	1,232	(13)	28	1,615
Top 5 Sectors	422,442	2 23	1 839	6,236	429,749	6,862	251	294	
Other Sectors	83,939	27	711	896	85,573	1,338	(30)	17	
Mortgage	155,798	1,464	0	0	157,262	957	30	381	
Consumer	113,441	4,408	0	0	117,849	9,508	(297)	3,335	
Accounting Records	22	0	0	0	22	179	0	0	
Total Group	775,642	6,131	1,550	7,132	790,455	18,844	(45)	4,027	•

<sup>\*</sup> Includes Financial, Real Estate and Other Services

<sup>\*\*\*</sup> Includes portfolio from trust FCICK 16-1 for Ps 22 million.

Sector/Subsidiary (Million pesos)	Banorte*	AyF	Sólida	Total Loans
Government	194,226	5,142	0	199,368
Services**	75,384	4,587	0	79,971
Commerce	41,037	9,981	0	51,018
Construction	44,958	5,198	409	50,565
Construction Manufacturing	44,287	4,515	25	48,827
Top 5 Sectors	399,891	29,424	434	429,749
Remaining	355,345	3,086	2,275	360,706
<b>Total Loans</b>	755,236	32,510	2,709	790,455

<sup>\*</sup> Banorte's total loans include eliminations for (Ps 14.22 billion)

<sup>\*\*</sup> Includes portfolio from trust FCICK 16-1 for Ps 22 million.

<sup>\*\*</sup>Days past due from Non-Performing Loans.

<sup>\*\*</sup> Includes Financial and Real Estate services

<sup>\*\*\*</sup> Remaining includes the portfolio from trust FCICK 16-1 for Ps 22 million



As of 4Q18, GFNorte's performing, past due and distressed portfolios grouped by federal entity and subsidiary are detailed in the following two tables:

	Federal Entities	Loans		Distressed		Total	Total
	(Million pesos)	Performing	Past- Due	Performing	Past- Due	Loans	Reserves
1	Ciudad de México	301,992	1,748	737	2,854	307,331	6,646
2	Nuevo León	108,713	660	82	2,363	111,818	2,887
3	Estado de México	54,671	757	140	488	56,055	1,564
4	Jalisco	39,383	365	51	200	39,999	845
5	Tamaulipas	21,297	171	53	100	21,621	491
6	Sinaloa	21,034	135	28	110	21,307	370
7	Chihuahua	18,157	145	27	64	18,393	427
8	Baja California Sur	18,017	86	1	8	18,112	247
9	Veracruz	17,110	245	51	154	17,559	474
10	San Luis Potosí	15,150	108	6	14	15,278	313
	Top 10	615,525	4,420	1,175	6,354	627,474	14,264
	Other Federal Entities	160,096	1,711	374	778	162,959	4,401
	Accounting Records	22	0	0	0	22	179
	Total Loans	775,642	6,131	1,550	7,132	790,455	18,844

<sup>\*</sup> Banorte's total loans include eliminations for (Ps 14.22 billion)

As of 4Q18, GFNorte's performing, past due and distressed portfolios grouped by term are detailed below:

Remaining Term	Portfolio	)	Distressed			Total	
(Million pesos)	Performing	Past- Due	Performing	Past- Due	Total Loans	Reserves	
0 - 1 years	130,920	2,411	176	5,029	138,536	8,742	
1 - 5 years	178,917	2,220	648	1,720	183,504	6,331	
5 - 10 years	109,620	140	710	47	110,518	1,051	
> 10 years	321,383	1,273	0	0	322,656	1,965	
Banorte*	740,840	6,043	1,534	6,797	755,214	18,089	
Leasing and Factoring	32,173	11	16	310	32,510	390	
Sólida	2,608	76	0	25	2,709	186	
Accounting Records**	22	0	0	0	22	179	
Total Loans	775,642	6,131	1,550	7,132	790,455	18,844	

<sup>\*</sup> Banorte's total loans include eliminations for (Ps 14,218)

<sup>\*\*</sup> Includes the portfolio from trust FCICK 16-1 for Ps 22 million

<sup>\*\*</sup>Includes the portfolio from trust FCICK 16-1 for Ps 22 million.



The total distressed portfolio is Ps 8.68 billion. Below is the quarterly balance of loan loss provisions for this portfolio:

Loan Loss Reserves for Distressed Portfolio	4Q18				
(Million pesos)	Banorte	Arrendadora y Factor	Sólida	GFNorte	
Initial Loan Loss Provisions	3,768	153	15	3,936	
Charged to results	163	10	0	172	
Loans' write offs	91	0	0	91	
FX changes	36	0	0	36	
Adjustments in Credit Risk	36	10	0	45	
Received in lieu of payment	0	0	0	0	
Write-offs, charge-offs and discounts	(291)	0	0	(291)	
Final Loan Loss Reserves	3,640	162	15	3,817	
Loan Recoveries	31	0	0	31	

#### 2.2.2 Exposure to Financial Instruments

As of December 31, 2018, exposure to Credit Risk for Securities Investments of Banco Mercantil del Norte was Ps 245.59 billion, of which 99.5% is rated higher or similar to A+(mex) on a local scale, placing them in investment grade, and the 3 main counterparties other than the Federal Government, State Governments and National Financial Institutions represent 9% of the Tier 1 Capital as of September 2018. Additionally, exposure of investments with the same counterparty other than the Federal Government that represents a higher or similar concentration to 5% of the Net Capital as of September 2018 has higher or similar rating to AA- (mex) and is comprised of (average considered term, amount in million pesos and average return to annualized maturity): market and bond certificates from Pemex to 5 years and 1 months totaling Ps 12.88 billion at 6.0%; promissory notes, market certificates and certificates of deposits of Banco Santander Mexicano to 4 months totaling Ps 7.80 billion at 8.3%.

For Derivatives operations, the exposure of the 3 main counterparties other than the Federal Government, State Governments and National Financial Institutions represent 1% of the Tier 1 Capital as of September 2018.

Exposure to Credit Risk for Securities Investments of Casa de Bolsa Banorte was Ps 210.4 billion, of which 99.3% is rated higher or similar to A+(mex) on a local scale, placing them in investment grade and the 3 main counterparties other than the Federal Government, State Governments and National Financial Institutions represent 30% of the Capital as of September 2018. Additionally, the exposure of investments with the same counterparty other than the Federal Government that represents a higher or similar concentration to 5% of the Capital as of September 2018 has a higher or similar rating to A+(mex) and are comprised of (average considered term, amount in million pesos and average return to annualized maturity): market certificates of PEMEX for 11 months totaling Ps 4.29 billion at 8.7%; market certificates of CFE for 1 year and 4 months totaling Ps 3.34 billion at 8.9%; certificates of deposit and market certificates of Bancomer for 9 months totaling Ps 2.91 billion at 8.6%; market certificates from Banco Santander Mexicano, for 1 years and 1 month, totaling Ps 2.90 billion at 8.7%; certificates of deposit and market certificates of Banamex for 11 months totaling Ps 2.89 billion at 8.6%; certificates of deposit and market certificates of Scotiabank Inverlat fot 11 months totaling Ps 1.67 billion at 8.6%; certificates of deposit and market certificates of HSBC México for 1 year and 6 months totaling Ps 1.56 billion at 8.8%; market certificates of Banco Inbursa for 3 years and 3 months totaling Ps 1.54 billion at 8..8%; certificates of deposit and market certificates from Banobras for 2 years totaling Ps 1.23 billion at 8.5%; certificates of deposit and market certificates from Consubanco for 2 years totaling Ps 1.01 billion at 9.8%; Deutsche Bank bonds for 4 years and 5 months for Ps 570 million at 12.1%, market certificates from Banco Multiva for 1 year and 4 months for Ps 531 million at 9.1%; market certificates of Banco Actinver for 10 months totaling Ps 523 million at 9.1%; market certificates from Bancomext for 1 year and 6 months totaling Ps 414 million at 8.5%; market certificates from INFONACOT for 2 years and 6 months for Ps 252 million at 8.0% and market certificates of Nafinsa for 1 year and 3 months totaling \$216 million at 8.5%.

There are no Derivative instrument operations.



Arrendadora y Factor Banorte had no exposure to Securities Investments nor to Derivatives.

Sólida Administradora de Portafolios had no exposure whatsoever to Securities Investments nor to Derivatives.

Banorte's exposure to counterparty risk from transactions with derivatives is presented below, as well as the netting effect and risk mitigation based on the aggregate guarantees related to settled transactions (includes operations with Banxico. Excludes settled transactions through central counterparties).

Position (Million Pesos)	4Q18	4Q18 Average
Forwards	(3)	(22)
FX Swaps	(328)	(108)
FX	2	(3)
Options	403	197
Swaps with Interest Rates IRS	4,580	3,785
Cross Currency Swap (CCIRS)	(10,615)	11,049
Total	(5,962)	(7,199)
Positive Fair Value (Positive Fair Value)	15,145	15,938
Netting Effect*	21,107	23,137
Delivered Guarantees(-) /Received(+)	0	0
Cash	(2,109)	(1,623)
Securities	0	0
Total	(2,109)	(1,623)

<sup>\*</sup> Difference between the positive fair value (not considering the net positions) and the portfolio market value. Transactions performed at the clearing house are not included, as they are not subject to counter party risk.



The following table represents the current and potential levels of exposure at the end and the average of the quarter, respectively.

(Million Pesos)	Pote	ential Risk	Curre	nt Risk
Financial	4Q18	4Q18 Average	4Q18	4Q18 Average
Counterparties	1,210	1Q107Weldge	1920	1Q107Weluge
FWD			0	(13)
FX SWAP	1,293	692	(328)	(108)
FX			2	(3)
OPTIONS	1,359	1,219	1,096	949
INTEREST RATE SWAP	18,232	20,002	7,487	8,496
ccs	1,041	1,441	(10,606)	(11,040)
Total	5,306	5,073	(2,350)	(1,718)
Clients	4Q18	4Q18 Avg	4Q18	4Q18 Avg
(Non-Financial)	4010	4Q10 AV9	4Q10	4Q10 AV9
FWD	11	21	(3)	(9)
OPTIONS	31	31	(693)	(752)
INTEREST RATE SWAP	1,424	871	(2,907)	(4,711)
ccs	37	35	(9)	(9)
Total	1,499	952	(3,612)	(5,482)

Based on conditions established in derivative agreements, tolerance levels of exposure are considered according to the rating of involved entities. The following table presents the amount of guarantees to be delivered, in case of a rating downgrade (it's worth noting that with most counterparties we've migrated to cero threshold, thus, guarantees to be delivered do not depend on credit rating but to market movements).

Net Cash Outflows (Million pesos)	4Q18	4Q18 Average
Cash Outflow with 1-notch Downgrade	0	0
Cash Outflow with 2-notch Downgrade	0	0
Cash Outflow with 3-notch Downgrade	0	0

In the following table, the derivatives' market value is detailed according to the counterparties' ratings:

Rating (Thousand pesos)	MoM 4Q18	4Q18 Average
AAA/AA-	0	0
A+/A-	(840)	40
BBB+/BBB-	(1,567)	(1,819)
BB+/BB-	(1,409)	(2,577)



B+/B-	0	0
CCC/C	0	0
SC	(2,146)	(2,843)
Total	(5,962)	(7,199)



#### 2.3 Credit Collaterals

Collaterals represent the second credit recovery source when its coverage, through the predominant activity of the applicant, is compromised. Collaterals may be real or personal.

The main types of real collaterals are the following:

- Civil Mortgage
- Industrial Mortgage
- Regular Pledge
- Pledge w/o possession transfers
- Pledge / Pledge Bond
- Pledge Bond
- Caution Securities
- Securities Pledge
- Management and Payments Trust
- Development Funds

For assets granted in guarantee, the Company has policies and procedures to monitor and make periodic inspection visits to ensure the existence, legitimacy, value and quality of the guarantees accepted as an alternative credit support. Furthermore, when guarantees are securities, there are policies and procedures to monitor its market's valuation and require additional guarantees if needed.

The covered loan portfolio by type of collateral is as follows:

Callatarral Times	4Q18			
<b>Collateral Type</b> (Million pesos	Banorte	Arrendadora y Factor**	Sólida	GFNorte*
Total Loan Portfolio	769,454	32,510	2,709	790,455
Covered Loan Portfolio by type of collateral				
Real Financial Guarantees	24,243	0	0	24,243
Real Non-Financial Guarantees	419,671	6,815	25	426,510
Pari Passu	21,721	0	0	21,721
First Losses	22,132	0	0	22,132
Personal Guarantees	20,061	7,895	0	27,956
Total Loan Portfolio Covered	507,827	14,710	25	522,562

<sup>\*</sup>Total Loans includes eliminations for (Ps 14.21 billion).

# 2.4 Expected Loss

As of December 31, 2018, Banco Mercantil del Norte's total portfolio was Ps 769.43 billion. The expected loss represents 1.9% and the unexpected loss is 4.2% with respect to the total portfolio. The average expected loss is 2.0% during the period October– December 2018.

Regarding Casa de Bolsa Banorte, the credit exposure of investments is Ps 210.44 billion and the expected loss represents 0.04% of the exposure. The average expected loss is 0.04% between October– December 2018.

<sup>\*\*</sup> Excludes operating leasing



The total portfolio of Arrendadora and Factor, including pure leasing is Ps 35.83 billion. The expected loss represents 0.9% and the unexpected loss is 4.9% of the total portfolio. The average expected loss represents 0.9% during the October– December 2018 period.

The total portfolio of Sólida Administradora de Portafolios was Ps 2.71 billion. The expected loss of the portfolio represents 11.0% and the unexpected loss 11.6%, both with respect to the total portfolio. The average expected loss for the period of October– December 2018 was 11.2%.

#### 2.5 Internal Advanced Model for Credit Card

On November 15, 2017, GF Banorte received approval from the banking regulator (Comisión Nacional Bancaria y de Valores) to use Internal Models (IM) for credit card rating for reserves and regulatory capital generation by credit risk with an advanced focus (Document 111-3/706/2017).

These internal models improve overall credit risk management by estimating risk parameters from the bank's own experience based on January 2018 data, and have been applied as of February 2018. The aforementioned parameters are:

- Probability of Default. Indicates the probability that a credit card customer defaults on its contractual
  obligations within the next twelve months after the month being rated. For each loan, there is a score, which
  is mapped to a Master rating scale.
- Severity of Loss. Measures the intensity of the loss upon default expressed as a percentage of the Default Exposure (DE).
- Default Exposure. Is the amount of the debt at the time of default of a loan, considering a time horizon of twelve months after the month being rated.

The next table shows the Credit Card portfolio subject to the Internal Advanced Model, classified by degrees of regulatory risk:

Consumer Revolving Portfolio under Internal Advanced Model					Million Pesos		
Degree of Risk*	Accounting Balance	Default Exposure (DE)**	Severity of Loss	PD factored by DE	Unused credit lines	DE factored by exposure	Current DE
A1	17,654	31,826	87.16%	1.60%	42,823	45%	31,826
A2	6,226	8,442	87.16%	4.08%	4,859	26%	8,442
B1	2,995	3,884	87.16%	5.95%	1,546	23%	3,883
B2	798	925	87.16%	8.29%	396	14%	925
В3	2,140	2,780	87.16%	7.95%	859	23%	2,780
C1	2,514	3,215	87.16%	11.24%	820	22%	3,214
C2	3,788	4,435	87.16%	26.77%	746	15%	4,381
D	1,702	1,779	87.16%	80.57%	157	4%	613
Е	992	1,008	88.70%	98.49%	143	2%	59
Total Portfolio	37,808	58,295	87.33%	9.19%	52,348	33%	56,124

<sup>\*</sup> The scale of Degrees of Risk of the Internal Advanced Model has been mapped in accordance with regulatory risk levels.

The next table shows the difference between expected loss and observed loss resulting from the Internal Advance Model for Credit Cards from 1Q19.

<sup>\*\*</sup> The balances under Default Exposure include Potential Risk as well as Used credit line balance.



Backtesting				
Portfolio	Expected Loss Internal Model (Dic'18)	Observed Loss Ene'18-Dec'18	Difference \$ (Observed Loss – Expected Loss)	% Use
Credit Card	4,471	4,235	236	95%
Cartera Total	4,471	4,235	236	95%

<sup>\*</sup> Internal Models were applied for the first time in February 2018; therefore, Observed Loss cannot be estimated for a full year.

#### 2.6 Risk Diversification

In December 2005, the CNBV issued "General Provisions Applicable to Credit Institutions related to Risk Diversification". These guidelines state that institutions must perform an analysis of their borrowers and/or loans to determine the amount of "Common Risk"; also, institutions must have the necessary information and documentation to prove that the person or group of people represent a common risk in accordance with the assumptions established in those rules.

In compliance with risk diversification regulation on active and passive operations, Banco Mercantil del Norte presents the following information (million pesos):

Tier 1 as of September 30, 2018	109,074
I. Loans with individual balance greater than 10% of basic equity:	
Loan Operations	
Number of loans	0
Total amount of loans	0
% in relation to Tier 1	0%
Money Market Operations	
Number of loans	0
Total amount of loans	0
% in relation to Tier 1	0%
Overnight Operations	
Number of loans	0
Total amount of loans	0
% in relation to Tier 1	0%
II. Maximum amount of credit with the 3 largest debtors and common risk groups:	44,883



In compliance with risk diversification regulation on active and passive operations, Leasing and Factoring (Arrendadora y Factor Banorte) presents the following information (million pesos):

Equity as of September 30, 2018	4,752
I. Loans with individual balance greater than 10% of equity:	
Loan Operations	
Number of loans	7
Total amount of loans	9,378
% in relation to Equity	197%
Money Market Operations	
Number of loans	0
Total amount of loans	0
% in relation to Equity	0%
Overnight Operations	
Number of loans	0
Total amount of loans	0
% in relation to Equity	0%
II. Maximum amount of credit with the 3 largest debtors and common risk groups:	7,166

In compliance with risk diversification regulation on active and passive operations, Sólida Administradora de Portafolios presents the following information (million pesos):

Equity as of September 30, 2018	3,248
I. Loans with individual balance greater than 10% of equity (group level):	
<u>Loan Operations</u>	
Number of loans	1
Total amount of loans	409
% in relation to Equity	13%
Money Market Operations	
Number of loans	0
Total amount of loans	0
% in relation to Equity	0%
Overnight Operations	
Number of loans	0
Total amount of loans	0
% in relation to Equity	0%
II. Maximum amount of credit with the 3 largest debtors and common risk groups:	618



# 3. MARKET RISK (BANK AND BROKERAGE HOUSE)

GFNorte's objectives regarding Market Risk are:

- Comply with the Desired Profile Risk defined by the Group's Board of Directors.
- Maintain an adequate monitoring on Market Risk.
- Maintain the Senior Management adequately informed in time and form.
- Quantify exposure to Market Risk through the use of various methodologies.
- Define maximum risk levels the Institution is willing to maintain.
- Measure the Institution's vulnerability to extreme market conditions and consider such results when making decisions.

#### GFNorte's Market Risk Policies are:

- New products subject to market risk must be evaluated and approved though the new products' guidelines approved by the CPR.
- The Board of Directors is the entitled body to approve global limits and market risk's appetite metrics, as well as their amendments.
- The CPR is the entitled body to approve models, methodologies and specific limits, as well as their amendments.
- Market risk models will be valid by and independent area, which is different from the one that develop and manage them.
- Market risk inputs and models will be valid as per a properly approved policy by the CPR.

#### 3.1 Market Risk Methodology

Market Risk Management is controlled through a series of fundamental pillars, highlighting the use of models and methodologies such as Value at Risk (VaR), Back Testing and Stress Testing, which are used to measure the risk of traded products and portfolios in the financial markets.

Risk management is supported by a framework of policies and manuals through which the implementation and monitoring on market risk limits, the disclosure of the aforementioned risk metrics and its tracking regarding the established limits, are set.

Key risk ratios are disclosed in monthly reports to the Risk Policy Committee and through a daily report to top executives at the Institution, related to the Market Risk risk-taking.

#### 3.2 Market Risk Exposure

Exposure of the Institution's financial portfolios to Market Risk is quantified using the standard methodology in the industry known as Value at Risk (VaR).

The VaR model considers a one day horizon base, and considers a non-parametric historical simulation with a 99% confidence level and 500 historical observations on risk factors. Furthermore, it considers all the positions (money market, treasury, equities, FX and derivatives for trading purposes) classified for accounting purposes as trading assets, both on and off the balance sheet.

The average VaR of the portfolio for 4Q18 was Ps 59.1 million (Ps 4.3 million higher than the average VaR from last quarter).

The result shows that the Bank's potential loss will be above Ps 59.1 million in one out of a hundred days.



VaR Million Pesos	Average 4Q18
VaR Total	59.1
Net Capital	128,307
VaR/Net Capital	0.05%

VaR by risk factor for Banorte's portfolio had the following behavior during the fourth quarter of the year:

Risk Factor Million Pesos	4Q18	Average 4Q18
Rates	57.8	55.0
FX	25.6	23.8
Equity	7.8	7.0
Diversification Effect	(28.4)	(26.7)
Bank's Total VaR	62.8	59.1

VaR for 4Q18 was Ps 62.8 million. The contribution to VaR for each risk factor is:

Risk Factor Million Pesos	4Q18	Average 4Q18
Domestic Rates	55.2	52.9
Foreign Rates	8.0	4.3
FX	(1.1)	1.8
Equity	0.7	0.1
Bank's Total VaR	62.8	59.1

VaR by risk factor is determined by simulating 500 historical scenarios to each risk factor and assessing instruments by their main risk factor. It is important to note that all positions classified as trading were considered, positions classified as held to maturity and available for sale were excluded.

The proportion by market risk factor excluding the diversification effect is:

Risk Factor	4Q18
Rates	63%
FX	28%
Equity	9%

# 3.2.1 Sensitivity Analysis and Stress Testing under extreme conditions

Since VaR indicates the potential losses under normal market conditions, Banorte complements its risk analysis enforcing tests under extreme conditions known as Stress Testing. This is presented to the Risk Policy Committee on monthly basis with the main objective of assessing the impact on the Institution's positions of extreme movements in risk factors.

# 3.2.2 Backtesting

In order to validate the effectiveness and accuracy of the VaR, a monthly Back testing analysis is presented to the Risk Policy Committee. Through this analysis, it is possible to compare losses and gains observed with respect to the estimated Value at Risk and if necessary make the required adjustments to the parameter.



#### 3.2.3 Value at Risk Casa de Bolsa (VaR)

The average VaR of the portfolio for 4Q18 was Ps 24.7 million, Ps 4.5 million lower vs. 3Q18.

The result shows that potential loss will be above Ps 24.7 million in one out of a hundred days.

VaR Million Pesos	Average 4Q18
Total VaR	24.7
Net Capital	3,035
VaR/Net Capital	0.81%

VaR by risk factor for Casa de Bolsa Banorte Ixe portfolio had the following behavior during the fourth quarter of the year:

Risk Factor (Million Pesos)	4Q18	Average 4Q18
Rates	20.9	24.7
FX	0	0
Equity	0.4	0.3
Diversification effect	(0.4)	(0.3)
Casa de Bolsa Total VaR	20.9	24.7

VaR at the end of 4Q18 was Ps 20.9 million.

The VaR by risk factor is determined by simulating 500 historical scenarios and performing a grouping of instruments by their main risk factor. It is important to note that all positions classified as trading were taken into account, excluding the held-to-maturity position and available for sale, were taken into account.

Concentration by Market Risk factor is mainly in interest rates

#### 3.2.4 Sensitivity Analysis and Stress Testing under extreme conditions

Since VaR indicates the potential losses under normal market conditions, Casa de Bolsa Banorte-Ixe complements its risk analysis enforcing tests under extreme conditions known as Stress Testing. This is presented to the Risk Policy Committee on a monthly basis with the main objective of assessing the impact on the Institution's positions of extreme movements in risk factors

#### 3.2.5 Back testing

In order to validate the effectiveness and accuracy of the VaR, a monthly Back testing analysis is presented to the Risk Policy Committee. Through this analysis it is possible to compare losses and gains observed with respect to the estimated Value at Risk and if necessary make the required adjustments to the parameter.

#### 4. BALANCE AND LIQUIDITY RISK

GFNorte's Balance and Liquidity Risk objectives are:

- Comply with the Risk Appetite defined by the Group's Board of Directors.
- Give proper monitoring of Balance and Liquidity Risk.
- Assessing through the use of different methodologies, Balance and Liquidity Risk exposure.



- Measure Institution's vulnerability to extreme market conditions and consider such results for decision making.
- Maintain Senior Management properly informed in a timely manner on Balance and Liquidity Risk exposure and on any limits' and risk profile's deviation.
- Follow-up on the institution's coverage policy and review it at least annually.
- Maintain a sufficient level of liquid assets eligible to guarantee the institution's liquidity even under stress conditions.

# GFNorte's Liquidity Risk Policies are:

- Establishment of specific global limits of Balance and Liquidity Risk Management.
- Measurement and monitoring of Balance and Liquidity Risk.
   Information and disclosure of Liquidity Risk to risk-taking areas, CPR, Board of Directors, Financial Authorities and to public investors.

## 4.1 Liquidity Risk Methodology and Exposure

Balance and Liquidity risk is managed through a series of fundamental pillars that include the use of key indicators such as the Liquidity Coverage Ratio (LCR), re-price gaps and liquidity, as well as stress testing. The latter, based on a framework of policies and manuals, including a funding contingency plan, and a contingency plan to preserve solvency and liquidity. Similarly, is enhanced with monitoring limits and Risk Appetite metrics of Balance and Liquidity Risk. The disclosure of metrics and indicators and their compliance with established limits and desired established risk profile is performed through monthly reports to the CPR, weekly reports to the capital and liquidity management group, and quarterly reports to the Board of Directors.



# 4.2 Profile and Funding Strategy

The composition and evolution of the Bank's funding during the quarter is shown in the following table:

Funding Source (Million Pesos)	3Q18	4Q18	Change vs. 3Q18
Demand Deposits			
Local Currency <sup>(1)</sup>	360,935	364,156	0.9%
Foreign Currency <sup>(1)</sup>	47,783	50,282	5.2%
<b>Demand Deposits</b>	408,717	414,438	1.4%
Time Deposits – Retail			
Local Currency (2)	193,033	204,654	6.0%
Foreign Currency	18,857	18,094	(4.0%)
Core Deposits	620,607	637,187	2.7%
Money Market			
Local Currency (3)	116,179	110,436	(4.9%)
Foreign Currency <sup>(3)</sup>	4,204	9,082	116.0%
<b>Banking Sector Deposits</b>	740,990	756,705	2.1%

- 1. Includes balance of the Global Deposits without Movement.
- 2. Includes eliminations among subsidiaries
- 3. Money Market & Time Deposits

# 4.3 Liquidity Coverage Ratio (LCR)

The LCR measures Liquidity Risk through the relationship between Liquid Assets and Net Cash Outflows in the next 30 days, under a regulatory stress scenario.

The LCR is an indicator designed to ensure that the institution has sufficient liquidity to meet its short term obligations, under an extreme scenario using exclusively high quality liquid assets as source of funding.

The following table presents the average evolution of LCR components in 4Q18.

	LCR Components		Sofomes
	(Million Pesos)	Unweighted amount (Average)	Weighted amount (Average)
COMPUTA	BLE LIQUID ASSETS		
1	Total Computable Liquid Assets	NA	107,956
CASH DISE	BURSEMENTS		
2	Unsecured retail financing	371,594	25,256
3	Stable financing	238,075	11,904
4	Less stable financing	133,519	13,352
5	Unsecured wholesale financing	258,260	96,966
6	Operational Deposits	143,829	32,627
7	Non-Operational Deposits	102,333	52,242
8	Unsecured debt	12,097	12,097



9	Secured wholesale financing	283,410	17,642
10	Additional Requirements:	340,195	20,135
11	Disbursements related to derivatives and other guarantee requirements	74,896	5,467
12	Disbursements related to losses from debt financing	0	0
13	Lines of credit and liquidity	265,299	14,667
14	Other contractual financing obligations	0	0
15	Other contingent financing liabilities	0	0
16	TOTAL CASH DISBURSEMENTS	NA	159,998
CASH INFL	ows		
17	Cash Inflows for secured operations	121,797	4,254
18	Cash Inflows for unsecured operations	63,703	47,887
19	Other Cash Inflows	6,328	6,328
20	TOTAL CASH INFLOWS	NA	58,468
		A	djusted amount
21	TOTAL COMPUTABLE LIQUID ASSETS	NA	107,956
22	TOTAL NET CASH DISBURSEMENTS	NA	101,531
23	LIQUID COVERAGE RATIO	NA	106.95%

During 4Q18, the average LCR for the Bank and Sofomes was 106.95%, and at the end of 4Q18 the LCR was 91.71% the aforementioned levels are above the Risk Appetite and the regulatory minimum standards. These results show that Banorte can meet all of its short-term obligations in a crisis scenario<sup>1</sup>.

# 4.4 Evolution of LCR Components

The evolution of the LCR components comparing 3Q18 and 4Q18 is presented in the following table:

LCR Component (Million Pesos)	3Q18	4Q18	Var. vs. 3Q18
Liquid Assets	98,461	116,491	18.3%
Cash Inflows	47,351	38,474	(18.7%)
Cash Outflows	152,596	165,498	8.5%

The Liquid Assets that compute in the LCRs for the Bank and Sofomes between 3Q18 and 4Q18 are distributed as follows:

Type of Asset (Million Pesos)	3Q18	4Q18	Var. vs. 3Q18
Total	98,461	116,491	18.3%
Level I	92,081	110,630	20.1%
Level II	6,379	5,861	(8.1%)
Level II A	2,103	2,146	2.0%
Level II B	4,276	3,715	(13.1%)

<sup>&</sup>lt;sup>1</sup> The Liquidity Coverage Ratio information is preliminary and is subject to Banco de Mexico's affirmation.



Liquid assets decreased in the quarterly comparison in 3Q18 and 4Q18, due to the federal government securities exchange in foreign currency as part of a long term repo operation.

#### 4.5 LCR Result's Main Causes

Variations in the LCR between 3Q18 and 4Q18 are mainly due to the increase in cash outflows related to the funding exchange market conditions, as well a decrease in the balances of liquidity maganement accounts of the treasury due to balance optimization strategies.

#### 4.6 Liquidity Risk in foreign currency

For Liquidity Risk quantification and monitoring, in the specific case of the foreign currency denominated portfolio, Banorte uses the criteria established by Banco de México for the assessment of the foreign currency Liquidity Coefficient.

The Liquidity Coefficient in foreign currencies should be interpreted as the ability of the institution to meet its liquidity mismatches with liquid assets, both in foreign currency.

# 4.7 Exposure to Derivatives and possible Margin calls

Banorte applies the regulatory methodology to determine cash outflows for derivatives. At the end of 4Q18, estimated outflows for derivatives were as follows:

Derivatives Cash Outflows (Million Pesos)	3Q18	4Q18	Var. vs. 3Q18
Net cash outflows at market value and for potential future exposure	4,379	4,379	0.0%
Cash outflows for a 3 notch credit rating downgrade.	0	0	0%

The former measurement shows that potential outflows for derivatives may represent a liquidity requirement up to Ps 4.379 billion, stable vs. 3Q18.

# 4.8 Liquidity Gaps

As part of the liquidity analysis for the Bank, 30 days liquidity gaps for the Institution's assets and liabilities (obligations) are analyzed. Results for the Bank at the end of 4Q18 are presented in the following table.

<b>Concept</b> (Million Pesos)	3Q18	4Q18	Var. vs. 3Q18
Cumulative 30 day Gap	(69,178)	(85,370)	23.4%
Liquid Assets	93,023	109,651	17.9%

Mismatch among inflows and outflows (gaps) for the next 30 days are covered with liquid assets. In addition, a more granular breakdown of the liquidity gaps is presented, remaining as follows for 4Q18:

Concept (Million pesos)	1 day	7 days	1 month	3 months	6 months	12 months
Natural Gap	(18,178)	(23,680)	(39,970)	3,623	(3,316)	(6,754)
Accumulated Gap	(18,178)	(41,858)	(81,828)	(78,205)	(81,521)	(88,275)



#### 4.9 Stress Testing under liquidity extreme conditions

As part of its Liquidity Risk management, Banorte performs tests under extreme liquidity circumstances with internal scenarios, to assess the Bank's liquidity adequacy under adverse conditions from the environment as well as by the bank's intrinsic conditions. A total of 9 scenarios, based on 3 sources of risk (systemic, idiosyncratic and combined) with 3 levels of severity (moderate, medium and severe) are used.

#### 4.10 Contingency Funding Plan

In order to comply with comprehensive liquidity management practices, and to ensure its operation in adverse situations in terms of Liquidity, Banorte has implemented a contingency funding plan, which incorporates elements to identify possible liquidity problems and defines alternate funding sources available to deal with contingencies.

#### 4.11 Balance Risk

The structural risk in the balance sheet or interest rate is managed using tools such as the sensitivity analysis to changes in domestic, foreign and real rates, obtaining the impact thereof on the net interest margin. In the sensitivity analysis, it is included assumptions on deposits according to a model of stability

As part of the rate risk mitigation actions, the Institution has policies and limits for portfolio hedging at a fixed rate. The compliance of the above is reported to the CPR on a monthly basis.

In the table below, the effect on net interest income of a movement of 100 basis points over the rates is shown, which considers available for sale, that as of 4Q18 amounted to Ps 147.98 billion and in average during 4Q18 to Ps 153.48 billion.

(Million Pesos)	3Q18	4Q18	Var. vs. 2Q18
Margin Sensitivity	1,508	1,404	(6.9%)

### 4.12 Subsidiaries

Balance and Liquidity Risk Management processes for the Bank and its Sofomes are centralized in GFNorte's Credit and Risk Management General Direction. To monitor Sofomes' liquidity, an analysis of the balance sheet structural behavior is conducted, as well as funding diversification. Furthermore, a liquidity gap analysis is performed. Specifically for the Brokerage House, regulatory liquidity requirements are monitored.

The following table shows the composition of the gap indicators for the Bank's subsidiaries and Sofomes at the end of 4Q18.

<b>Liquidity Ratio</b> (Million Pesos)	Casa de Bolsa Banorte	Arrendadora y Factor	Sólida
Cumulative 30 days Gap	2,103	(1,911)	(3,017)
Liquid assets	2,495	12	84



#### 5. OPERATIONAL RISK

GFNorte has a formal Operational Risk department headed by the "Deputy Managing Director of Financial and Operational Risk', reporting directly to the Chief Risk Officer.

Operational Risk is defined as the potential loss due to failures or deficiencies in internal controls, errors in operation processing and storing or in data transmitting, as well as to adverse administrative and judicial rulings, fraud or theft (this definition includes Technological and Legal Risk).

The objectives of Operational Risk Management are: a) Enable and support the organization to reach its institutional objectives through prevention and management of operational risks; b) To ensure that the existing operational risks and the required controls are properly identified, assessed and in line with the risk strategy established by the organization; and c) To ensure that operational risks are properly quantified in order to adequately allocate capital per Operational Risk.

#### 5.1 Policies, Objectives and Guidelines

As part of the Institutional regulations, there are documented policies, objectives, guidelines, methodologies and responsible areas in Operating Risk management.

The Operational Risk Management Directors maintains close communication and coordination with the Regulatory Comptrollership in order to facilitate effective Internal Control in which proper procedures and controls are established for mitigating Operating Risk among the processes, and provide monitoring through the Internal Audit Department.

The Regulatory Comptrollership, as part of the Internal Control System, carries out the following activities to mitigate risk: a) Internal control validations; b) Institutional regulations management and control; c) Monitoring of operating processes' internal control by means of control indicators reports, that are reported by the process comptrollers in the various areas; d) Money Laundering Prevention process management; e) Control and monitoring of the regulatory provisions; and f) Analysis and assessment of the operating processes and projects with the participation of the responsible Directors of each process in order to ensure adequate internal control.

#### 5.2 Quantitative and Qualitative Measuring Tools

#### **5.2.1 Operational Losses Database**

In order to record operating loss events, the Institution owns a system that enables, the central information supplier areas, to directly record such events online, which are classified by Type of Event in accordance with the following categories:

<u>Internal Fraud:</u> Losses derived from a type of action intended to defraud; unlawfully assets appropriation; or sidestep regulations, laws or company policies (excluding diversity/discrimination events) in which at least one company party is involved.

<u>External Fraud:</u> Losses derived from a type of action intended to defraud; unlawfully assets appropriation; or sidestep the laws, caused by a third party.

<u>Labor Relations and Safety in the Workplace:</u> Losses caused by acts incompatible with the legislation or labor agreements regarding hygiene or safety, the payment of personal damage claims, or cases associated with diversity/discrimination.

<u>Customers, Products & Business Practices:</u> Losses caused by involuntary noncompliance or negligence of a professional obligation to specific customers (including fiduciary and adjustment requirements), or due to the nature or design of a product.

<u>Natural Disasters and Other Events</u>: Losses caused by damage or harm to material assets as a consequence of natural disasters or other events.

Incidences in the Business and Systems Failures: Losses caused by incidences in the business and systems failures.



<u>Process Execution, Delivery and Management:</u> Losses caused by errors in operations processing or management, as well as relations with commercial counterparties and suppliers.

This historical Database provides the statistics of the operational events in which the institution has incurred to determine their trends, frequency, impact and distribution. Moreover, the Database will enable, in the future, to own enough information to estimate capital requirements as per Advances Models.

#### 5.2.2 Legal and Fiscal Contingencies Database

For recording and monitoring legal, administrative and tax issues that may arise from adverse ruling, an internal system called "Legal Risk Issues Monitoring System" (SMARL by its acronym in Spanish) was developed. This system enables the central data supplying areas to record such events directly and on-line, which are then classified by company, sector and legal issue, among others.

As part of GFNorte's Legal Risk Management, legal and fiscal contingencies are estimated by the attorneys that process the cases, determining its risk level based on an internal methodology. This allows to constitute necessary reserves in a determined term (according to lawsuit's term) to face such Contingencies.

#### 5.3 Risk Management Model

GFNorte has defined objectives, which are achieved through different plans, programs and projects. Compliance with such objectives may be adversely affected due to operating risks, therefore it is imperative to provide a methodology for managing them within the organization. Consequently, Operating Risk Management is now an institutional policy defined and supported by senior management.

To perform Operating Risk Management, each of the operating risks involved in the processes must be identified in order to analyze them. In this regard, the risks identified by the Regulatory Comptrollership with the support of Process Comptrollership, are processed in order to eliminate or mitigate them (seeking to reduce their severity or frequency) and if the case ,defining tolerance levels. Currently, work is being done on developing a new Institution Operating Risk Management Model and the technological tools needed to implement it.

# 5.4. Required Capital Calculation

In accordance with the current Capitalization for Operational Risk Regulations, the Institution has adopted the Alternative Basic Model, which is estimated and reported periodically to the authorities.

#### 5.5. Information and Reporting

The information generated by the Database and the Management Model is processes periodically to report to the Risk Policies Committee and the Board of Directors regarding the main operating events that were detected, the trends, identified risks and their mitigating strategies. Reporting is also done regarding the status of the main Operating Risk mitigation initiatives implemented by the various areas of the organization.

# 5.6 Technological Risk

Technological Risk is defined as all potential losses from damage, interruption, alteration or failures derived from the use of or dependence on hardware, software, systems, applications, networks and any other information distribution channel in the rendering of banking services to the customers. This risk forms an inherent part of Operating Risk, which is why its management is handled collectively throughout the entire organization.

To address the Operating Risk associated with information integrity, and "Integrity Committee" has been created. Its objectives are to align security and information control efforts under a prevention focus, to define new strategies, policies, processes or procedures and to provide solutions to information security issues that affect or may affect the Institutional patrimony.

The functions established by the CNBV for Technology Risk Management are performed by the Institution under regulatory and Integrity Committee guidelines.



To address the Operating Risk caused by high impact external events, GFNorte has a Business Continuity Plan (BCP) and Disaster Recovery Plan (DRP) based on a same-time data replication system at an alternate computer site. All the above, covers the backup and recovery of the Institution's critical applications in the event or any relevant operating contingency.

## 5.7 Legal risk

Legal Risk is defined as the potential loss from failure to comply with the applicable legal and administrative provisions, the issuance of indisputable unfavorable court rulings and the application of penalties regarding the operations that the institution performs.

The Legal Risk must be measured as an inherent part of Operating Risk in order to understand and estimate its impact. Therefore, those legal issues which result in actual operating losses of the SMARL system are later recorded in the SCERO a database of operational events.

Based on the statistics of the current legal issues and real loss events, the Institution can identify specific legal or operating risks, which are analyzed in order to eliminate or mitigate them in an attempt to reduce or limit their future occurrence or impact.

#### 6. SECURITIZATIONS PERFORMED BY GFNORTE

The main objective of the securitization operations carried out by the Group, is to transfer risks and benefits of certain financial assets to third parties.

GFNorte has accomplished the following securitizations:

- On October 11<sup>th</sup>, 2006, Fincasa Hipotecaria (Fincasa), now merged with Banorte, held the irrevocable trust for the issuance of market certificates No. 563, issuer code FCASACB, whose underlying assets are mortgages originated and transferred by Fincasa.
- On November 5<sup>th</sup>, 2007, Banorte held the irrevocable trust for the issuance of market certificates No. 477, issuer code BNTECB, whose underlying assets are loans originated and transferred by Banorte to federal entities, states and municipalities, as well as trusts in which any of such entities act as trustees.

In accordance with criterion C-1 Recognition and Disposal of Financial Assets, these assets were written off from the Institution's balance sheet as a sale, given that conditions for the risk's and benefit's transfer inherent in the ownership of the financial assets were met. The Institution is not responsible for assumed or retained risks with respect to trust assets, its sole responsibility is the fulfillment of its obligations in the trust agreement and administration contract.

The Institution is responsible that each of the assigned loans meets the eligibility criteria, at the time of their respective assignment. If the trust, the common representative, the financial guarantor, identify any non-eligible loans, they may require Banorte to replace such loan or if replacement is not possible, to make payment for the "non-replaced ineligible loan" in question. If Banorte identifies any non-eligible loan, it must notify and replace or make the corresponding payment.

Particularly in Trust 477, operations with derivatives are carried out, specifically swaps, in order to reduce exposure to exchange rate and interest rate risks. The Institution assumes the counterparty risk generated by these operations, however these operations are only carried out with institutions of recognized solvency. The Trust's policy is to only carry out derivative instrument operations for the sole purpose of coverage, never for speculation.

The Institution's Board of Directors has no pre-determined policies for the issuance of securitizations, authorization for any new issuance must be requested.

The Institution does not participate in securitizations of third party positions.



There are several risk factors for securitizations that may affect trusts. If these risks materialize, payment to market certificates' holders could be adversely affected. The main risks which these financial instruments are exposed to are credit, market, liquidity and operational risk, which have been detailed in previous sections.

To monitor the quality of Credit Risk exposure of financial instruments arising from securitized assets, the Institution estimates expected loss within one-year time horizon. Likewise, in order to monitor exposure to market risk, the value at risk is calculated with a one-day time horizon and a 99% confidence level, for these instruments.

Banco Mercantil del Norte is the settlor and trustee of trusts for the securitizations carried out. At the same time it acts as underwriter on each issue, offering bonds to investors. Additionally, the Institution also carries out the duties of administrator in each of the trusts.

On the other hand, the Institution also acts as an investor by acquiring titles of market certificates issued by the trusts set up for securitizations. By December 31, 2018 Grupo Financiero Banorte had the following position in securities and securitization amounts carried out by the same Institution:

Securitization	Banorte		Insurai	nce	Total GFNorte		
(Million pesos)	Securities	Amount	Securities	Amount	Securities	Amount	
91_BNTECB_07	50,763,776	1,569	500,000	15	51,263,776	1,585	
91_BNTECB_07-2	563,059	15	-	-	563,059	15	
97 FCASACB 06U	-	-	_	_	_	_	

The following shows the proportion of securities held by Grupo Financiero Banorte, in relation to the total issued for each series:

<b>Securitization</b> (Million pesos)	Issued Securities	Banorte	Insurance	Total GFNorte	Total Clients
91_BNTECB_07	52,313,776	97.0%	1.0%	98.0%	2.0%
91_BNTECB_07-2	1,113,059	50.6%	0.0%	50.6%	49.4%
97_FCASACB_06U	1,351,386	0.0%	0.0%	0.0%	100.0%



Ratings assigned by each rating agency at the end of the quarter for each market certificate issued by the aforementioned trusts are as follows:

Securitization	Stand Poo	ard & or's		ch ings	Моо	dy's	HR Ra	itings	Ve	rum	Вє	est	DE	BRS
	Local	Global	Local	Global	Local	Global	Local	Global	Local	Global	Local	Gobal	Local	Global
91_BNTECB_07					Aa3.mx	Baa3	HR AAA							
91_BNTECB_07-2					A3.mx	Ba3	HR AA+							
97_FCASACB_06U	mxA+		BBB (mex)											

As of December 31, 2018 the amounts of the underlying assets of each securitization were:

Securitization		Amount	
(Million pesos)	Performing	Past-Due	Total
91_BNTECB_07	Ps. 2.164	Ps. 0	Ps. 2,164
91_BNTECB_07-2	FS. 2,104	F3. U	FS. 2,104
97_FCASACB_06U	Ps. 102	Ps. 130	Ps. 233

There are no impaired assets in trust 477.

Securitization exposure broken down by Credit Risk Weight is shown below:

<b>Concept</b> (Million Pesos)	Balance	Capital Requirement
Securitizations with Risk Level 1 (weighted 20%)	0	0
Securitizations with Risk Level 2 (weighted 50%)	1,569	63
Securitizations with Risk Level 3 (weighted 100%)	15	1
Securitizations with Risk Level 4 (weighted 350%)	0	0
Securitizations with Risk Level 4, 5, 6 or not rated (weighted 1250%)	0	0
*Excludes the position in Seguros Banorte		

No securitization position is registered in memorandum accounts and no maintained securitization position is deducted from basic capital.

Securitizations trusts 563 and 477 consider early amortization provisions. The institution has not made revolving securitizations or resecuritizations operations during the quarter.

#### 6.1 Applied Accounting Policies

All securitization operations carried out by the Institution were recognized as sales in accordance with criterion C-1 *Recognition and Disposal of Financial Assets.* This is because, despite retaining the contractual rights to receive cash flows from financial assets, a contractual obligation is assumed to pay such cash flows to a third party. In addition, an analysis of the transfer of these assets concluded that the entity substantially transfers all the risks and benefits inherent with ownership of the financial assets. Registration of profits from sales conforms to the provisions in paragraph 31 of criterion C-1, which states:

- a) Eliminate transferred financial assets at the last book value;
- b) Recognition for the consideration received in the operation;
- c) Recognition of profit or loss in the income statement, for the difference between the book value of eliminated financial assets, and the sum of (i) compensation received (recognized at fair value) and (ii) the effect (gain or loss) by cumulative valuation recognized in equity.

The BORHIS and GEM Trusts issued certificates in favor of the institution, as holders of rights in last place under the trust agreement. These certificates provide the right to receive a percentage of the distributions and in general to the corresponding proportions of the remnant that may be in the trust after full payment of the bonds. Valuation of the



certificates is based on the method of net present value of remaining cash flows expected over the lifespan of the securitization. Remaining cash flows, depending on the type of securitization, are determined as follows:

- a) BORHIS: the sum of the cash flow to receive from the securitized loan portfolio, less the cash flow to pay off the market certificates, less the monthly administration expenses plus the income from sales of foreclosed properties, if the case.
- b) GEM: the sum of the cash flow to receive from the securitized loan portfolio, less the cash flow to pay off the stock certificates, less expenses for Administration, plus or less the change in the reserve's interests.

Remaining flows are discounted with the B1 banking curve, which takes into consideration the trust's Credit Risk. The most important assumptions in the valuation of the certificates are the following:

- a) Non-compliance rate: cash flows to be received from loan portfolios are adjusted by a determined percentage of the outstanding portfolio amount that is estimated to fall into non-compliance. That percentage is estimated using historical performance information of this portfolio. This percentage is applied to flows greater than 12 months.
- b) Prepayment rate: cash flows to be received from the loan portfolio are adjusted by a determined percentage of the outstanding portfolio amount estimated to be prepaid. That percentage is estimated using historical performance information of this portfolio.
- c) Portfolio term: is estimated using WAM (Weighted Average Maturity) of the securitized portfolio.
- d) Portfolio interest rate: is estimated using WAC (Weighted Average Coupon) of the securitized portfolio.
- e) Portfolio payment dates: loan portfolio payment dates are considered to be the same as those of the stock certificates.
- f) Reserve to be rated: the current value of the remaining flows is reduced by the amount of the reserve to be rated. This reserve corresponds to the non-compliance risk for cash flows in the first 12 months.
- g) General account: the current value of the remaining flows are added to the amount of cash or cash equivalents deposited in the general account, collection account and if the case, in the expense reserve account, in case of total payment of the stock certificates, these assets would be distributed to the certificate holders.
- h) General terms of stock certificates: estimated to be in accordance with prices published by Valmer.

Regarding the policies for recognizing obligations in balance sheet of the agreements that may require financial support from the Institution in case of asset's securitization: all amounts due under the stock certificates of the different existing securitizations, will be charged to the trust estate. If, for any reason, the liquid assets of the trust net worth are not sufficient to ensure payment of the amounts due under the stock certificates, holders will not have the right to claim payment from the Institution, the Trust, the common representative, the placement agent, the guarantor or guarantors in the case, or anyone else. The stock certificates have not been guaranteed or endorsed by any of the persons involved in the issuance thereof, therefore none of them are obligated to make payments to the certificate holders, with the exception, in the case of a trust, where payments may be charged to the trust in accordance with the trust agreement.

#### 7. POSITION IN SHARES:

At the end of December 31 2018, Banco Mercantil del Norte held shares amounting to Ps 4.88 billion, with gains of Ps 713.8 million accumulated during 2018.

During the fourh quarter, accumulated losses from sales and settlements were Ps 17.1 million.

For negotiable securities, the capital requirement for Market Risk was Ps 56 million. For securities available for sale, the capital requirement for Market Risk was Ps 1.0 million and for Credit Risk Ps 20.3 million.



Institution	Type of Trading	Accounting Classification	Capitalization Treatment	Market Value 4Q18	Gains / Losses 4Q18	Acum. Profit / Loss 3Q18-4Q18
Banorte	Public	Negotiation	Market Risk	5.5	0.0	(21.7)
Banorte	Public	Available for Sale	Market Risk	4.1	(38.0)	(11.6)
Banorte	w/o Public trading	Negotiation	Credit Risk	248.5	5.3	107.7
Banorte	Public	Negotiation	Capital Reduction	204.3	(29.1)	103.6
Banorte	Public	Available for Sale	Capital reduction	455.5	(64.9)	210.9
Banorte	w/o Public trading	Available for Sale	Market and Credit Risk	3,968.0	63.4	324.8
			Total	4,885.9	(63.2)	713.8

In December 31 2018 it has a position of 508.9 billion million pesos in Casa de Bolsa Banorte

During the quarter, there were gains for 0.7 million pesos from sales and settlements.

Regarding Market Risk Capital Requirement the amount was of 154 million pesos of the total position in shares of Banorte.

Institution	Type of Trading	Accounting Classification	Capitalization Treatment	Market Value 4Q18	Gains / Losses 4Q18	Acum. Profit / Loss 3Q18-4Q18
Casa de Bolsa Banorte	Public	Negotiable Securities	Market Risk	508.9	(70.3)	257.8
			Total	508.9	(70.3)	257.8