Risk control has become a matter of prime importance in the banking business in recent years, driven by regulatory pressure and market dynamics. It is a strategic pillar for Bankia that must be applied at all levels of the organisation.
BANKIA’S MANAGEMENT TAKES BOTH CREDIT RISK AND NON-FINANCIAL RISKS INTO ACCOUNT.

CREDIT RISK PROFILE

An analysis of the risk profile, having regard to the distribution of risk-weighted assets (RWAs), shows a clear predominance of credit risk, followed by operational risk and market risk.

During 2018, the credit risk profile and the level of credit risk were determined mainly by loans and receivables, loans and advances to customers and real estate development.

Thus, the mortgage portfolio accounts for 59% of total loans and receivables, followed in second place by the Businesses portfolio, with 21% of the total.

The distribution of loans to customers between wholesale and retail segments remained similar to 2017, with 31% wholesale and 69% retail. The portfolio of real estate development-related assets represented only 0.5% of total loans and receivables.

Bankia thus ended 2018 with a sharp decline in non-performing assets, which were down 31% (3,702 million euros), reducing the NPL ratio to 6.5%.
07. RISK MANAGEMENT

**DISTRIBUTION BY RWAS**
- Credit Risk: 91%
- Operational Risk: 7%
- Market Risk: 2%

**LOAN PORTFOLIO MIX**
- Mortgage: 59%
- Businesses: 21%
- Public Sector: 5%
- Consumer Finance and Cards: 5%
- Micro-enterprises and Self-Employed: 5%
- Specialised Lending: 3%
- Financial Intermediaries: 1%
- Real Estate Developers: 0.5%

**NON-PERFORMING ASSETS BY COMPONENT**
- Doubtful in Arrears: 64%
- Doubtful for reasons other than arrears or in cure period: 36%
64% of non-performing assets are classified as doubtful in arrears, while the remaining 36% either are classified as doubtful for reasons other than arrears or else are in a cure period. That means there is no past-due debt in this portfolio with a status of doubtful in arrears.

As regards the quantification of credit risk at year-end 2018, it is worth noting that the expected loss represents 3.83% of the entire exposure. This figure includes the non-performing portfolio, which is fully covered by the provisions recorded at year-end 2018.

Similarly, regulatory capital amounted to 4,720 million euros, of which 45% relates to the Mortgage portfolio and 35% to the Businesses portfolio.

The bank therefore has more than sufficient provisions and capital to absorb both expected and unexpected losses with a very high level of confidence.

### The Distribution of Credit Risk by Portfolio

<table>
<thead>
<tr>
<th>Name</th>
<th>Regulatory Capital</th>
<th>Expected Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public bodies</td>
<td>39.7</td>
<td>105.8</td>
</tr>
<tr>
<td>Banks and financial intermediaries</td>
<td>211.8</td>
<td>13.9</td>
</tr>
<tr>
<td>Companies</td>
<td>1,652.9</td>
<td>1,846.1</td>
</tr>
<tr>
<td>Developers</td>
<td>84.4</td>
<td>278.1</td>
</tr>
<tr>
<td>Retail:</td>
<td>2,702.6</td>
<td>2,780.9</td>
</tr>
<tr>
<td>Mortgage</td>
<td>2,108.2</td>
<td>2,076.0</td>
</tr>
<tr>
<td>Consumer finance</td>
<td>245.0</td>
<td>157.9</td>
</tr>
<tr>
<td>Cards</td>
<td>94.8</td>
<td>49.4</td>
</tr>
<tr>
<td>Micro-enterprises and self-employed</td>
<td>254.6</td>
<td>497.6</td>
</tr>
<tr>
<td>Equity</td>
<td>28.7</td>
<td>0.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4,720.0</strong></td>
<td><strong>5,025.6</strong></td>
</tr>
</tbody>
</table>

In millions of euros
CREDIT RISK POLICIES

The Bankia Group’s credit risk policies are approved annually by the Board of Directors. The main objectives can be summed up as follows:

• Responsible lending. Customers must be offered the financing that best meets their needs, matching both the terms and conditions and the amounts to the customer’s ability to pay and providing borrowers who act in good faith with support to overcome possible financial difficulties.

• Alignment with the Risk Appetite Framework. The credit risk policies are a set of lines of action and management criteria aimed at achieving compliance with the risk appetite statement.

• Environment of transparency. Systems must be put in place to prevent financial crime and fraud, in accordance with applicable law.

• Setting of criteria that support good banking practice. Specific policies have been adopted in socially sensitive areas, such as dealings with companies involved in controversial weapons, human rights violations or any activity that could compromise the bank’s integrity.

• Stability of the general criteria. The general guidelines are intended to remain in force in the long term.

• Adaptation. The general criteria must be supplemented with segment- and product-specific criteria, so as to establish a well-defined, unambiguous framework for action.

• Risk-adjusted pricing. Each customer must be considered as a whole and each transaction, individually, in accordance with the bank’s pricing policies, so as to ensure that business objectives are met and the cost of risk is covered.

• Data quality. To adequately assess risk, the information used must be sufficient in quantity and quality.

• Two-way relationship with the internal rating systems. On the one hand, the internal rating systems must be based on information that is accurate and sufficiently complete. On the other, lending decisions are influenced by the customer or transaction rating.

• Continuous monitoring of exposures. Specific management responsibilities must be assigned, based on policies, procedures, tools and systems that allow proper identification and assessment of exposures throughout their life cycle.

• Strengthening of the recovery activity. Recovery action must be swift and aimed at minimising losses.
The foundations for the implementation of credit risk management are as follows:

- Senior management involvement in decision making.
- Holistic view of the credit risk management cycle, so as to plan and specialise each phase (approval, monitoring and recoveries).
- Credit approval model with criteria such as minimum transaction and customer requirements and target profile for each type of material risk, consistent with the Risk Appetite Framework, to be taken into account in risk analysis and decision making.
- Preventive customer monitoring system that involves all the business units and facilitates recovery in the event of impairment of exposures.
- Flexible recoveries model that can be adapted to changes in the regulatory environment.
- Decision support and risk measurement tools based on the exposures’ credit quality (credit scoring, rating).
- Clear separation of roles and responsibilities. The risk control function is spread throughout the organisation and is based on a three-lines-of-defence system.

The aim is to have a loan book that is as diversified as possible, both across borrowers and across sectors.

An important aspect of the credit risk policies concerns loan refinancing and restructuring. The bank’s priority is to adapt the financing to customers’ current capacity to meet their payment obligations.
GENERAL LENDING CRITERIA

The most important criteria for credit approval are:

- **Responsible lending.** It is important to understand the customer’s financing needs, taking the information provided by the customer and that obtained from external sources into account. Customers must be offered the financing that best suits their situation; and the facilities and amounts must match their ability to pay. No loans will be granted for the purpose of restructuring debts to other financial institutions. In collateralised lending, the collateral valuation must be carried out properly and independently.

- **Transparency.** Customers, especially retail customers, must receive the information they need in order to know and understand the risks associated with the proposed financing. The bank must also give customers clear and comprehensible information about the cost of the proposed product compared with that of other products of the same bank. In general, the customer must be provided with pre-contractual information and suitable advice.

- **Social and environmental commitment.** In the case of businesses, the environmental impact of their activity will be taken into consideration and they will be required to comply with applicable environmental laws and regulations, in particular the Environmental Responsibility Act. Bankia will not finance new operations or projects linked to companies which it knows to have been involved in human rights violations.
CREDIT RISK MANAGEMENT TOOLS

Credit risk management is supported by a set of tools which can be classified in the following types according to their function:

• **Classification tools.** Credit rating and credit scoring are used to classify borrowers or transactions by risk level. Practically all lending segments are subject to classification, based mainly on statistical models. Classification not only assists risk decision making but also allows management to factor in the risk appetite and tolerance criteria decided by the governing bodies. In addition, risk classification includes a system of monitoring levels, across four exposure categories: high (to be extinguished), medium-high (to be reduced), medium-low (to be maintained) and normal. The aim is to facilitate early management of impaired exposures linked to business activities.

• **Quantification tools.** Based on two metrics: the expected loss of the portfolios, which is associated with the calculation of provisioning requirements; and the unexpected loss, which is the likelihood that the actual loss in a given period will substantially exceed the expected loss, thus affecting the level of capital considered necessary to meet objectives. The parameters for measuring credit risk, which are obtained from internal models, are exposure at default, probability of default by rating grade, and loss given default (severity). The bank must have sufficient capital to cover these potential losses; the greater the coverage, the greater the bank’s solvency.

• **Projection.** Stress tests are another key tool of credit risk management, as they can be used to assess portfolio profiles and capital adequacy in adverse scenarios. Stress testing involves analysing the impact of macroeconomic stress scenarios on the risk parameters and migration matrices.

• **Risk-adjusted return (RaR).** RaR is a vital tool for risk management. The return of a transaction has to be adjusted for the cost of the various risks it entails (not just credit risk). It must also be compared with the volume of capital that has to be set aside to cover unexpected losses (economic capital) and meet regulatory capital requirements (regulatory capital).

• **Business development.** One of the functions of credit risk management is to create value and develop the business. The Risk Directorate therefore provides tools and criteria to identify potential customers, simplify decision processes and assign credit lines, always within the set tolerance levels.

• **Recovery management.** Recovery management starts even before any default has occurred and covers all phases of the recovery cycle. In retail lending, early warning models are used to identify potential problems and provide solutions, which may involve adjusting the terms of the borrowing. In fact, many of the mortgage modifications granted during 2018 were carried out in response to proactive proposals by the bank.
• **Concentration risk management.** In order to analyse and monitor risk concentration, the specific economic capital component is identified as the difference between systemic economic capital and total economic capital, which includes the concentration effect. Additionally, a methodology similar to that used by rating agencies is applied, assessing the main exposures as a percentage of capital and in terms of their income-generating capacity.

**MARKET RISK**

Market risk is the loss that would be incurred in the event of adverse changes in the prices of the financial instruments in which Bankia trades.

The bank’s activity in the financial markets is focused on two primary objectives: providing services to customers (banking franchise) and managing its own structural risks.

Market risk is measured using mainly two metrics:

• VaR, which is the maximum loss that can be incurred in a given period with a given confidence level. SVaR (stressed VaR) is the VaR calculated in an extreme market situation.

• Sensitivity, which is a measure of how rapidly the economic value of a portfolio changes in response to predetermined, fixed movements in the variables which affect that value. The main movements in market factors that are used to analyse sensitivity are movements in interest rates (100 basis point change), equity prices (20% change), exchange rate (10% change), volatility (by underlying risk type) and credit risk spreads (by rating).

In 2018 Bankia carried out various activities in relation to market risk, including the integration of its stress testing programme in a single application and the migration of all market risk reports to the integrated environment. The revised standardised approach for the calculation of minimum capital requirements for market risk was also improved.

Furthermore, Bankia responded to requests from the European Banking Authority (EBA) and the European Central Bank (ECB) for it to participate in various exercises. It thus took part in the following market risk exercises.

• ECB Target Review of Internal Models (TRIM).

• EBA 2018 EU-wide Transparency Exercise.

• EBA 2018 Benchmarking Exercise.

• SSM 2018 Short Term Exercise for SREP (STE quarterly report).

• SSM 2018 Reporting of time series concerning back-testing (quarterly report).

• BCBS 2018 QIS Basel III.
In line with the projects undertaken last year, the challenges for 2019 are: to complete the integration and validation of the revised standardised approach for the calculation of minimum capital requirements for market risk; to review internal policies so as to adapt them to the new capital requirements framework; and once again to participate in the EBA and ECB exercises.

COUNTERPARTY RISK IN FINANCIAL MARKETS

Counterparty credit risk is the risk that a counterparty will fail to meet its contractual obligations, giving rise to a loss for the bank in its financial market activity.

The bank’s risk control and risk management policy is based on the Policy Manual for Credit Risk in Market Activities, which is approved by the Board of Directors. All the Group’s financial market activity is affected by this manual, which includes policies for financial and non-financial entities, as well as for Treasury departments, setting overall limits that function as action frameworks.

Among other things, the manual covers the types of authorised products, the criteria for the allocation of limits, the metrics used for calculating counterparty risk and the measures for mitigating it.

Last year, Bankia carried out various processes in relation to the merger with BMN (the integration of BMN’s operations and the novation of the collateral master agreements) and took part in various counterparty risk exercises at the request of the EBA and the ECB, along with other activities in this area.

The challenges for 2019 are to complete the novation of the BMN contracts, integrate and validate the tools needed for the calculation, reconciliation and exchange of initial margin, adapt contracts to comply with the new EMIR regulations and continue to participate in the counterparty risk exercises proposed by the EBA and the ECB.

INTEREST RATE RISK IN THE BANKING BOOK

Interest rate risk in the banking book is the risk of loss resulting from adverse movements in market interest rates, which affect both net interest income and the value of assets and liabilities. The intensity of the impact depends largely on the different schedules of maturities and repricing of assets, liabilities and off-balance sheet transactions.

The measures relating to regulatory scenarios are incorporated in the bank’s Risk Appetite Framework. The limits are adapted to the tolerance and appetite levels set by the Board of Directors. To oversee and monitor these limits, the Assets and Liabilities Committee (ALCO) receives monthly reports on the levels of asset and liability management (ALM) risk,
both in terms of economic value (sensitivity to different scenarios) and in terms of net interest income (net interest income projections in different interest rate scenarios over horizons from one to three years).

The Board of Directors is informed at least quarterly through the Risk Advisory Committee about the situation and monitoring of the limits and is notified immediately if the high-level limits have been exceeded.

To supplement the regulatory scenarios (impact of parallel shifts in interest rates, currently ±200 basis points), various other sensitivity scenarios are prepared involving non-parallel shifts in the curves that alter the slope of the reference rates for assets and liabilities.

Last year, Bankia gave priority to the introduction of the metrics associated with the new EBA guidelines on interest rate risk. In particular, reporting and data quality were improved, the new risk model in the banking book started to be reported and the demand account, term deposit and loan prepayment models were implemented.

The challenges for 2019 are to improve the model architecture and the efficiency of the processes associated with the calculation engine and to develop a stress testing programme to assess interest rate risk under stressed conditions. Also, dynamic models that can be used to project the banking book risk metrics are expected to be implemented.

LIQUIDITY AND FUNDING RISK

The group aims to maintain a long-term funding structure in line with the liquidity of its assets and with maturity profiles that are compatible with the generation of stable and recurrent cash flows, so that the balance sheet can be managed without liquidity strains in the short term.

To that end, its liquidity position is identified, controlled and monitored daily. In line with the retail business model on which the group’s banking activity is based, the main source of funding is customer deposits. To cover any additional liquidity requirements Bankia raises funds in the domestic and international capital markets and has sizeable funding activity in the repo markets.
For reasons of prudence and to protect itself against possible strains or crisis situations, the bank also holds various assets as collateral at the ECB, which allow it to obtain immediate liquidity. Constant collateral surveillance identifies the assets that can be used immediately as a liquidity reserve in times of market stress, differentiating between those that are accepted by the ECB and those that are accepted by the clearing houses or other financial counterparties (insurance companies, mutual funds, etc.).

The ALCO is charged with monitoring and managing liquidity risk in accordance with the proposals prepared mainly by the Corporate Finance Directorate and with the Liquidity and Funding Risk Appetite Framework approved by the Board of Directors. The ALCO proposes rules for acquiring funding, for each instrument and maturity, so as to ensure the availability at all times of funds at reasonable prices to meet the bank’s obligations and finance the growth of its lending activity.

At the same time, the Market and Operational Risks Directorate monitors and analyses liquidity risk and promotes the integration of liquidity risk in management by developing metrics and methodologies for ensuring that the level of risk remains within the set tolerance limits.

In 2018, Bankia continued to strengthen the liquidity and funding risk management framework. For that purpose, a series of qualitative aspects were assessed to determine the extent to which the management framework built around liquidity and funding risk complies with the regulatory and supervisory guidelines. As a result of this exercise, the bank was able to identify various weaknesses and points for improvement and thus enhance the quality of its liquidity risk management framework. For example, various improvement were made to regulatory reporting, the risk measurement metrics were reinforced and reverse stress test scenarios were developed.

The goal for the current year is to further improve regulatory reporting.
OPERATIONAL RISK

Operational risk is the risk of loss resulting from inadequate or failed processes or systems, human factors or external events. This definition includes legal risk but excludes reputational risk.

To manage operational risk, Bankia works to promote an operational risk management culture, with a particular emphasis on awareness building, acceptance of responsibility and commitment, and service quality. It also aims to reliably identify and measure operational risk; implement systems for continuous improvement of processes, the control structure and mitigation plans; and develop new risk transfer mechanisms that will limit exposure, while also ensuring that contingency and business continuity plans are in place.

In 2018 the bank carried out the risk self-assessment exercise, reviewing its degree of exposure and the applicability of the controls over the most important risks. Additionally, new roles and responsibilities were created in the Operational Risk Unit, in line with the Three Lines of Defence model that has been implemented.

As regards regulatory reporting, progress was made in the automation of operational risk reporting. And in relation to the management of outsourcing arrangements, Bankia developed an outsourcing governance model, with clear responsibilities in the risk analysis system.
The bank also took part in three operational risk exercises at the request of the EBA and the ECB.

The goals for 2019 are to closely monitor the IT and cyber security risk management system, so as to reinforce the controls against potential incidents.

**REPUTATIONAL RISK**

In 2018 Bankia devoted major efforts to managing reputational risk, in line with regulatory and supervisory requirements. One of the most important steps taken was to integrate reputational risk in the bank’s risk model, culminating in the development of a methodology for quantifying reputational risks and the addition of a monitoring indicator to the Risk Appetite Framework.

Various training sessions and workshops were held to make employees aware of the importance of reputational risks, with the participation of the heads of reputational risk management and coordination at Bankia. Also, the number of organisational units involved was increased, so as to provide a more comprehensive and precise view and facilitate decision making.

These measures brought to completion a project that in 2017 resulted in the design of a synthetic indicator to monitor changes in Bankia’s reputation, which serves to determine the main risk events (internal to Bankia or industry-wide) and analyse the quality of the control environment in place in Bankia to prevent or mitigate such events. Thanks to this indicator, the Board of Directors is able to monitor Bankia’s reputation and the associated risk map so as to identify actual or potential problems and lay down basic principles and guidelines in this respect.

**SOCIAL RISK**

Against the background of moderate growth in economic activity and disposable income in Spain and within the framework of its policy of preventing social risks, Bankia maintained its policy of protecting debtors whose financial situation or wealth has been adversely affected by unforeseen circumstances through offering negotiated solutions that will enable them to meet their obligations.

Since 2012, when legislation for the protection of mortgage debtors was enacted, the bank has been sensitive to the vulnerable situation of many Spanish households and has taken measures and provided solutions in the spirit the legislator intended.

Bankia adopted the Code of Good Practices created by Royal Decree Law 6/2012 of 9 March on urgent measures to protect mortgage debtors without resources, and subsequent amendments.

It also takes voluntary measures to resolve, as far as possible, situations in which families are at risk of losing their home...
and to prevent situations in which vulnerable families are made homeless.

Such measures are adopted both at the customer’s request and through the intervention of social agents (social services departments, NGOs, associations of various kinds, etc.) with which the bank has agreements and a relationship of trust.

As a result of this policy, in 2018 a total of 1,127 mortgage modifications (more flexible terms to adapt the loans to the household’s ability to pay) were implemented, representing a total amount of 114.3 million euros, compared to 1,236 modifications in 2017.

At the same time, the bank accepted 991 debt-for-asset transactions (agreements to cancel the mortgage debt in return for surrender of the home) in the amount of 175.2 million euros, compared to 665 the previous year. In all cases, these were negotiated solutions, aimed at avoiding evictions among especially vulnerable social groups, while at the same time seeking to minimise the loss to the bank.

Since 2012, Bankia has accepted a total of 9,583 home surrenders and has executed 76,638 mortgage modifications. In doing so it has helped mitigate the loss of family homes due to the supervening impossibility of servicing the loans with which they were financed.

Foreclosed assets (i.e. assets the bank recovered under a court order) totalled 2,170 in 2018, compared to 1,823 in 2017. Of this total, 1,803 were homes.

Bankia’s help for customers in need also extends to other loans. In 2018, it renegotiated the terms of 4,671 consumer loans (1,549 in 2017), in an amount of 61.8 million euros; and 1,085 loans to self-employed individuals and businesses (793 in 2017), in the amount of 67.7 million. The cumulative totals since 2012 are 66,495 and 19,017, respectively.
Bankia will follow the recommendations of the UN Financial Stability Board (FSB) in analysing its risks and opportunities in relation to climate change, so as to promote the transition towards a low-carbon economy.

The indications given by the Task Force on Climate-Related Financial Disclosure (TCFD) focus on four areas:

1. Detailed analysis of Bankia’s internal information in relation to climate change management.
2. Identification of the key units for the bank’s positioning on the TCFD recommendations.
3. Preparation of a road map based on a maturity analysis for each of the recommendations, with a view to carrying out specific actions, classified according to their complexity and priority.

An initial diagnosis was carried out in July 2018 with the assistance of an independent third party, to discover how Bankia stands in this respect. This was done with the participation of the senior managers of the bank most affected by the TCFD’s recommendations: Corporate Credit Risk Directorate, Corporate Risk Directorate, Corporate Services and Procurement Directorate, Deputy General Directorate Business Banking and Corporate Social Responsibility Directorate.

To determine the starting point in relation to the TCFD recommendations, a study was carried out in three phases:

1. Detailed analysis of Bankia’s internal information in relation to climate change management.
2. Identification of the key units for the bank’s positioning on the TCFD recommendations.
3. Preparation of a road map based on a maturity analysis for each of the recommendations, with a view to carrying out specific actions, classified according to their complexity and priority.
EMERGING RISKS

According to the European Central Bank, the most important emerging risk factors in 2019 affecting the euro area banking system are geopolitical uncertainties, cyber-crime and IT system failures, as well as the reaction of financial institutions to regulation.

In previous years the impact of regulatory risk was mitigated by specific actions that required major investments on the part of financial institutions. However, the steady increase in regulatory pressure may be considered a new risk in its own right.

The European Banking Union regulations, which currently cover bank regulation, bank supervision and bank resolution, represent a demanding framework for the business. Particularly important is the Supervisory Review and Evaluation Process (SREP), which is carried out each year and which determines each entity's capital requirements. In addition, in 2018 the European MiFID 2 directive on financial services and the new IFRS 9 accounting standard came into effect, both of which have an impact on management and the business, forcing the Bankia Group to implement new systems and allocate resources to comply with the new regulations.

To facilitate such adaptation processes, the bank has a Regulatory Compliance Committee, one of whose functions is to deliberate on and evaluate regulations, assess the risks of non-compliance in systems, policies or procedures and propose the adoption of appropriate measures.

On the other hand, 2018 saw a marked decrease in the risks arising from economic and fiscal conditions in the euro area, mainly as a result of favourable cyclical forces. At the same time, the geopolitical uncertainties and the possibility of a resurgence of risk in the financial markets increased. Bankia focuses its activity on retail banking, specifically on the households and SME segments. Geographically, the target market is Spain, which significantly reduces the geopolitical uncertainties affecting the banking sector.

However, the market for financial services has been affected by the emergence of innovative technologies. These technologies can be used to increase efficiency, expand the range of services to customers and facilitate access to financial services. But they also entail new risks, which could affect consumer protection and the stability and integrity of the financial system as a whole. Specifically, the spread of digitisation intensifies the risks associated with IT systems, which are much more exposed to cyber-attacks. Bankia therefore has an IT risk management framework and has included a cyber security indicator in its Risk Appetite Framework.