

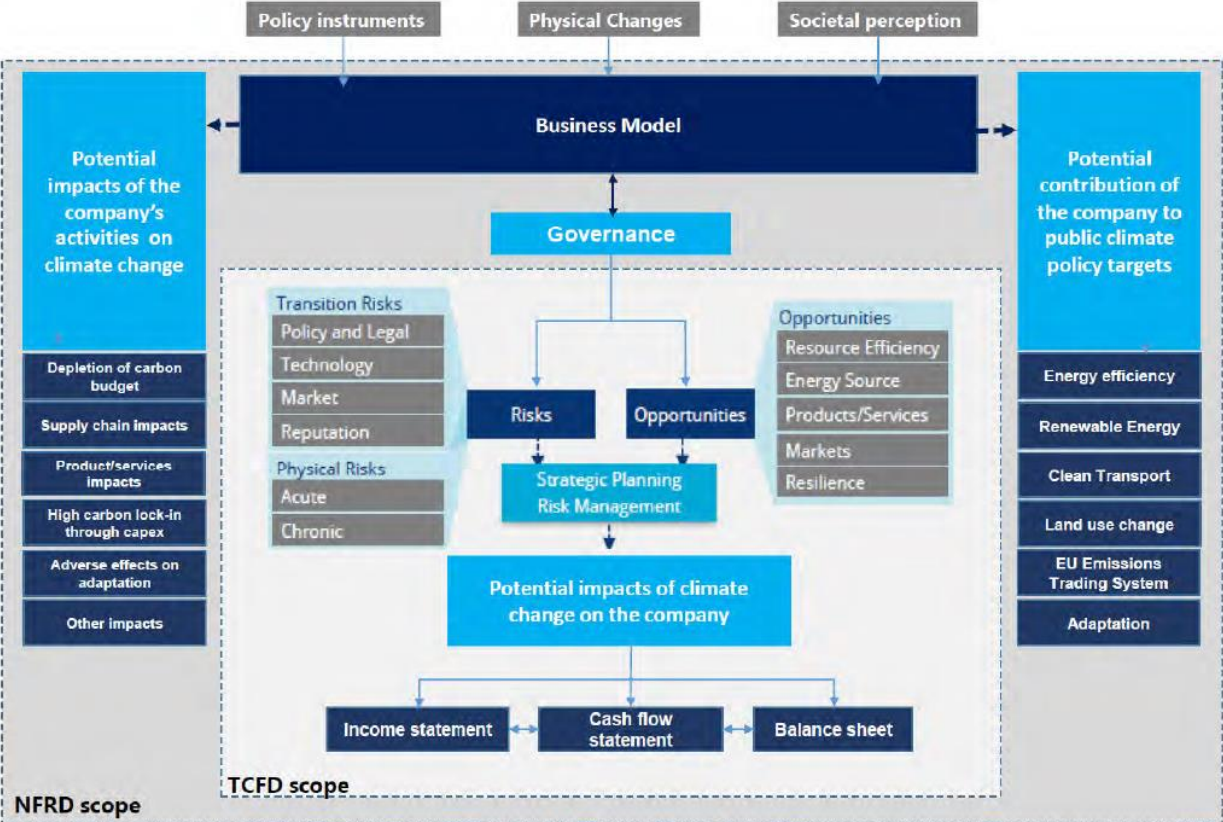
A Roadmap for the implementation of TCFD recommendations

Madrid, 20th May 2019

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ALIDE 49th General Meeting

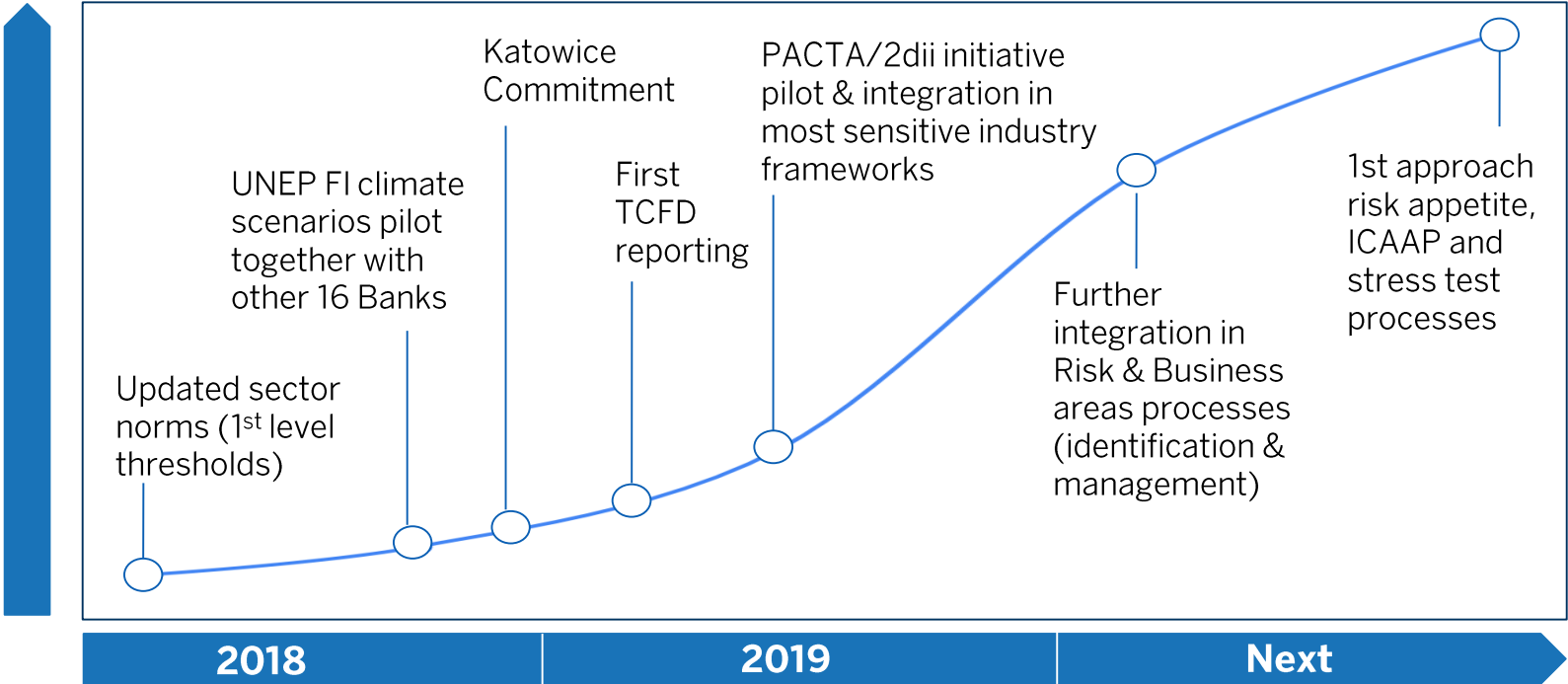
A strategy aligned with new trends on Climate-related Disclosures¹



(1) Approach proposed by the TEG in his Report on Climate-related Disclosures. January 2019

Focusing on climate risk management: BBVA's journey towards alignment with Paris Agreement and its financial impact

All the roads lead to... Paris for BBVA



BBVA's journey towards alignment with Paris Agreement and its financial impact

Methodologies & standards development

1_Climate Change Scenarios and Financial Impact

(Pilot exercise in 2018)

- Methodology developed by **UNEP FI, 16 Banks** and supported by Oliver Wyman & Acclimatise, **aligned with TCFD recommendations**
- BBVA's scope: **Transition Risks** for **Energy, Utilities & Transportation** sectors; **Physical Risks** for real state credit portfolio in Mexico
- Main conclusion. The need to **incorporate this forward looking vision into BBVA's industry frameworks**

2_Credit Portfolio alignment to Paris Agreement

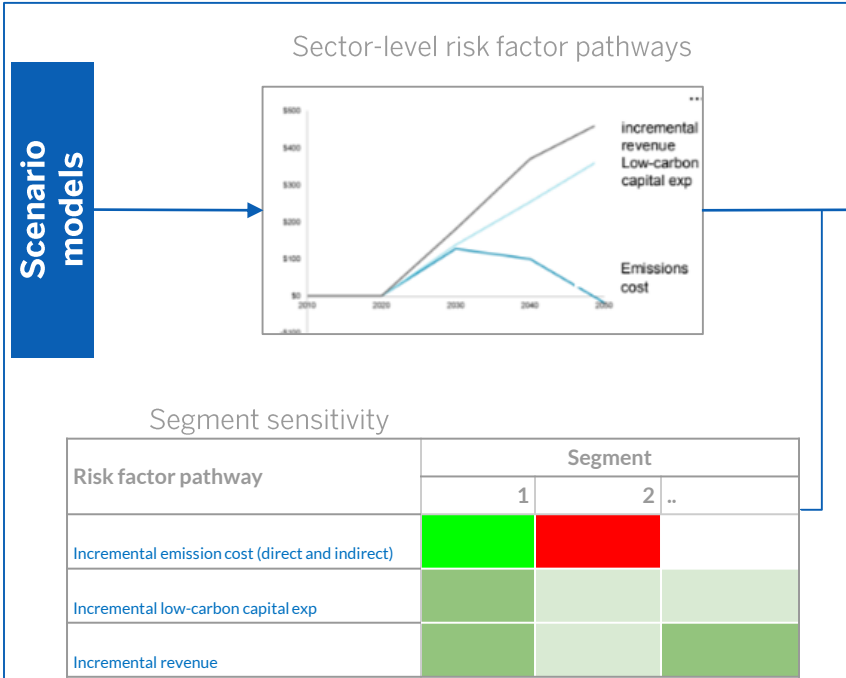
(Pilot exercise in 2019)

- **PACTA Methodology** developed by **2Degree Investing Initiative**
- Analysis at **Portfolio** level, focusing on most sensitive sectors & **5 years forward looking**
- **Public (Katowice) commitment** together with 4 Banks (ING, BNP, SocGen, Standard Chartered)

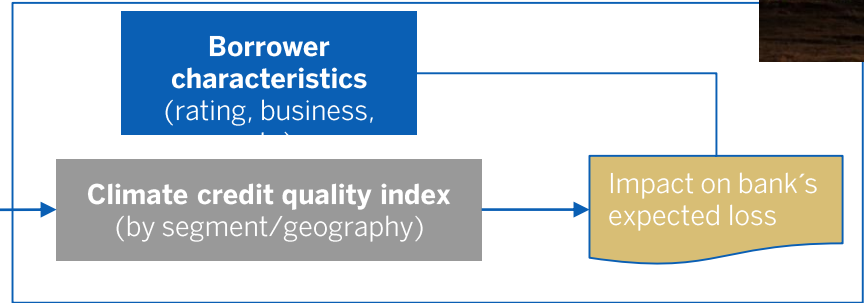
1a_Climate change scenarios and financial impact

Overview of transition risks methodology¹

Transition scenarios



Portfolio impact assessment



Borrower-level calibration

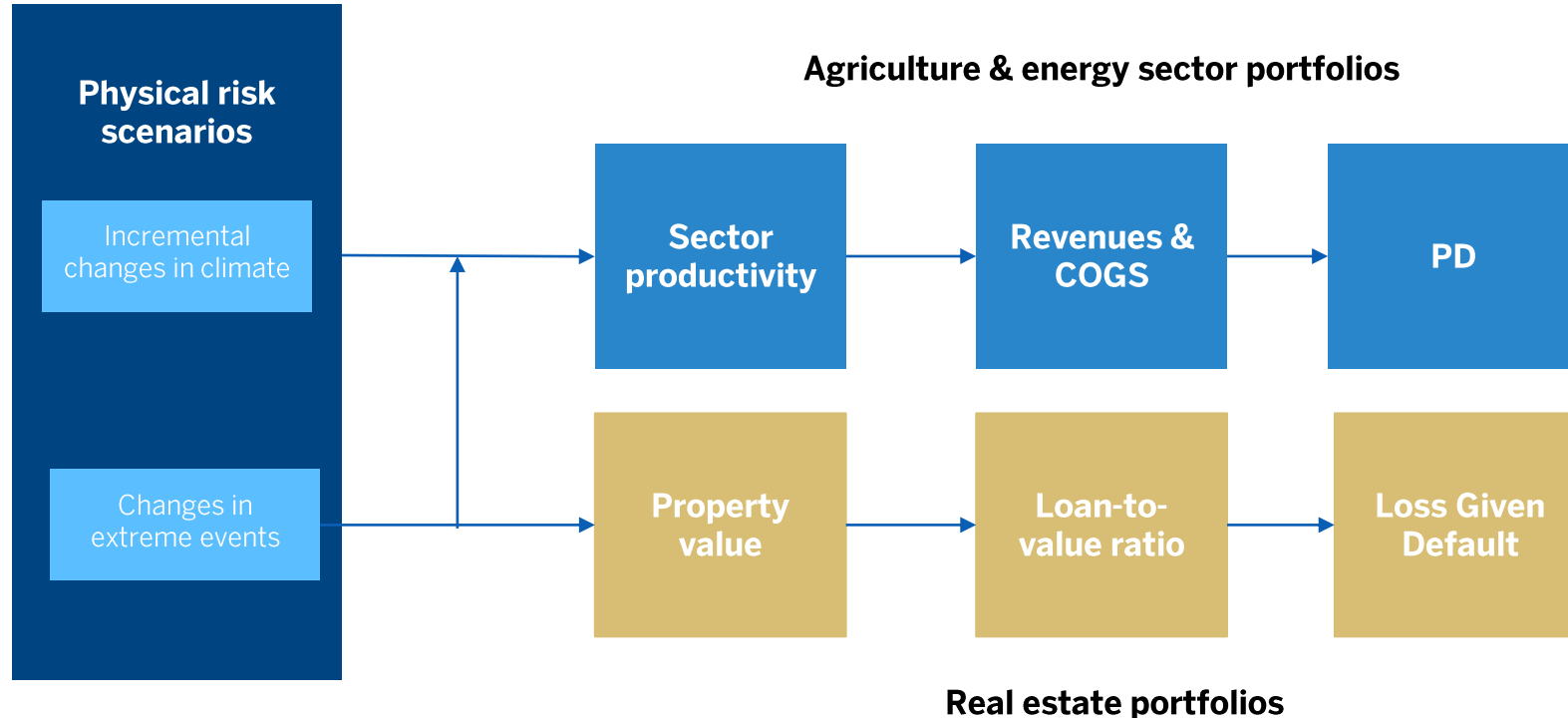


(1) Oliver Wyman methodology. UNEP FI pilot project



1b_Climate change scenarios and financial impact

Overview of physical risk methodology¹



(1) Acclimatise methodology. UNEP FI pilot project

What we have learned in these pilot exercises

Challenges

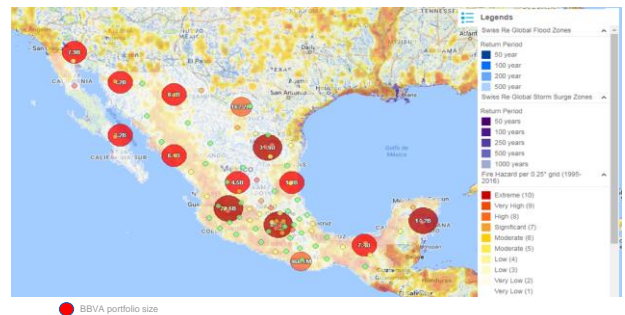
- Sectors definition: Internal vs Standards
- Scenario pathways identification & assessment
- Better knowledge about clients' strategy
- Clients geographical dispersion and Groups' structures
- Internal data availability

Achievements

- Improved Climate-related risk identification
- A better understanding of climates scenarios
- 1st Approach to credit portfolio exposure to climate-related risks

				Low carbon capital expenditure		Change in revenue	
Delonante	Tipo de riesgo afectado	Plazo	Probabilidad	Impacto	Racional	Impacto	Racional
Caida de demanda combustibles(p96) y subida del precio del carburante	Market	Medio (3-8)	Alta	Moderate	Inversiones en infraestructura que soporte una mayor electrificación	Low	Mayor electrificación impulsa las ventas
Incremento costes emisiones CO2+	Policy and legal	Corto (1-3 años)	Muy alta	Low	Limitada inversión en reducir CO2, abandono paulatino del carbón, y limitada inversión en CCGT en geografías concretas	Moderate	Precio de la electricidad debería subir por mayor coste de CO2, pero la sustitución de generación por renovables debería bajar el precio. Efecto neto, limitado a la baja, aunque volatilidad dependiendo del phase out de carbón y nuclear
Subida de impuestos a Diésel	Market		Muy alta	No impact		No impact	
Cambio en preferencias del mercado	Reputation	Medio (3-8)	Alta	Low	Sector enfocado en reemplazo de tecnología contaminante (ie Carbón, nuclear) por renovables según van siendo amortizadas. Limitada inversión en modificaciones a los activos actuales	Moderate	Tendencia a consumir electricidad producida por tecnología no contaminante a precios competitivos. Mayoría de utilities centradas en generación renovable hará que el impacto sea limitado. Impacto D reemplazo electricidad calefacción (general)
					continúa inversión en tecnologías renovables, sistemas que permitan mayores eficiencias y seguridad de suministro. Inversiones en infraestructura que soporte una mayor electrificación (electrificadoras, smart grids)		Mayor consumo de jugadores distribuidos
Sustitución de tecnologías	Technology	Largo (>8)	Alta	Moderate y high	Riesgo elevado de cambios forzados en tecnologías (fin de nuclear o plantas de generación de carbón o petróleo)	Moderate y low	servicios y conocimiento de clientes
Media Ponderada				moderate y low		moderate y low	

EUROPA			USA			LATAM			ASIA		
2018	2040	Var.	2018	2040	Var.	2018	2040	Var.	2018	2040	Var.
AAA	0.01%	0.02%	0.01%	0.01%	0.02%	0.01%	0.01%	0.00%	0.01%	0.02%	0.01%
AA+	0.01%	0.02%	0.01%	0.01%	0.02%	0.01%	0.01%	0.00%	0.01%	0.02%	0.01%
AA	0.02%	0.04%	0.02%	0.02%	0.05%	0.02%	0.03%	0.01%	0.02%	0.04%	0.02%
A+	0.03%	0.06%	0.03%	0.03%	0.07%	0.03%	0.04%	0.01%	0.03%	0.06%	0.03%
A	0.04%	0.08%	0.04%	0.04%	0.09%	0.04%	0.05%	0.01%	0.04%	0.07%	0.03%
A-	0.07%	0.13%	0.06%	0.07%	0.15%	0.08%	0.07%	0.09%	0.07%	0.13%	0.06%
BB+	0.10%	0.18%	0.08%	0.10%	0.21%	0.11%	0.10%	0.13%	0.10%	0.18%	0.08%
BB	0.15%	0.27%	0.12%	0.15%	0.30%	0.14%	0.15%	0.20%	0.14%	0.26%	0.11%
BB-	0.23%	0.40%	0.17%	0.23%	0.45%	0.22%	0.23%	0.30%	0.23%	0.39%	0.16%
B+	0.36%	0.61%	0.25%	0.36%	0.68%	0.32%	0.36%	0.46%	0.30%	0.60%	0.24%
B	0.56%	0.93%	0.37%	0.56%	1.03%	0.47%	0.56%	0.71%	0.55%	0.91%	0.35%
B-	0.88%	1.42%	0.54%	0.88%	1.57%	0.69%	0.88%	1.10%	0.72%	1.39%	0.51%
BB+	1.40%	2.19%	0.79%	1.40%	2.41%	1.01%	1.40%	1.73%	1.03%	1.40%	0.75%
B	2.24%	3.40%	1.16%	2.24%	3.71%	1.47%	2.24%	2.73%	1.49%	2.24%	1.10%
B-	3.61%	5.30%	1.69%	3.61%	5.75%	2.14%	3.61%	4.33%	2.24%	3.61%	1.69%
CCC/C	5.89%	8.34%	2.45%	5.89%	8.97%	2.08%	5.89%	6.95%	1.06%	5.89%	2.44%
CCC/C	26.87%	33.16%	6.29%	26.87%	34.64%	7.77%	26.87%	29.74%	2.87%	26.87%	6.03%



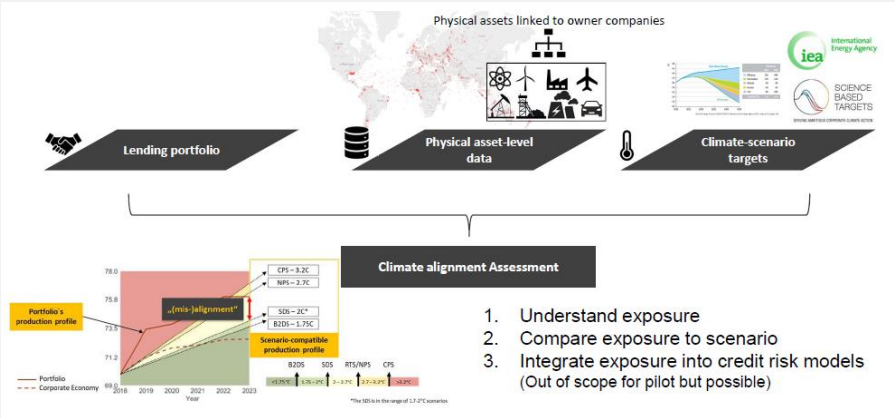
2_Credit portfolio alignment to the Paris Agreement

The fundamentals of PACTA methodology

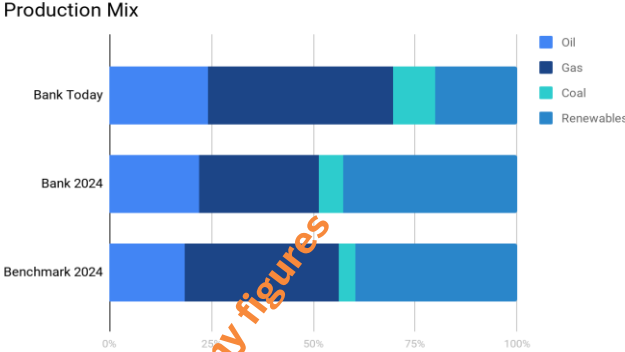
Key pathway metrics at sector level

Sector	Key Metrics	Data Availability
Power generation	Energy Mix	High
Oil & Gas	Production Mix	Medium / High
Car manufacturers	Production Mix by type of engine	High

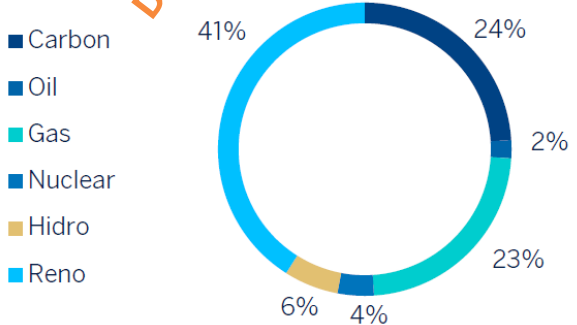
How does it work?



Example power generation



Dummy figures



2_Credit portfolio alignment to the Paris Agreement

Main expected outcomes

Phase 1: measure alignment (2019)

- Better knowledge of clients' resilience to transition climate-related risks
- Improved strategic dialogue between BBVA and clients over time

Phase 2: set science based targets & integrate in asset allocation (next)

- Integration in business planning
- Mitigation transition climate-related risks in key sectors

Moving ahead (food for thought)

- ▮ We need to mobilize green finance at a large scale to help society to make the transition required
- ▮ Incentives (green supporting factor) are being considered but always if they are risk-based, what can take too much time except in specific assets as energy efficiency mortgages
- ▮ There is not historical data for climate-related risks so traditional ex-post approaches are very limited

From GSF for specific assets to Climate Alignment Portfolio Factor (CAPF)

The use of science-based methodologies in asset allocation could be the best proxy to reduce transition climate-related risks and its financial impact (forward-looking risk approach)

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ANNEXES

TCFD recommendations road map

TCFD recommendations road map (1/2)

Area	Recommendations	Done	Plan 2019
Governance	Describe the board's oversight of climate-related risks and opportunities	Included in the CSR Policy approved by the Board of Directors Board of Directors' oversight (3 times in 2018)	Reporting to the Board of Directors and to the Board Executive Committee Progressive inclusion in Board Risk Committee agenda
	Describe management's role assessing and managing climate-related risks and opportunities	Plans & norms approved and oversighted by the CEO Global Leadership Team & Sustainable Finance Working Group as forums to help decision-making Responsible Business as specialist function coordinating implementation & monitoring	Reporting to the Global Leadership Team meeting Sustainability KPI to be included in variable compensation scheme for executive board members
Strategy	Describe the climate-related risks and opportunities the organization has identified over the short, medium and long term	Quantify credit exposure to carbon-related assets & mix energy generation in utilities First climate risks (transition & physical) defined	Update risks and opportunities definition that are material for BBVA
	Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy and financial planning	Pledge 2025. Strategy on climate change and sustainable development Product portfolio defined at CIB Dashboard for climate finance in 2018	Climate issues in strategic planning Retail business opportunities
	Describe the resilience of the organization's strategy, taking into consideration different scenarios , including a 2°C or lower scenario	Climate scenarios: participation in pilot group with UNEP FI Joint the initiative to develop methodologies to assess the alignment of lending portfolios to the Paris Ag	Second climate scenario exercise Pilot PACTA methodology in most intensive sectors

TCFD recommendations road map (2/2)

Area	Recommendations	Done	Plan 2019
Risk management	Describe the organization's processes for identifying and assessing climate-related risks	Sustainable Finance Working Group oversees climate-related risks identification Research unit & Public Affairs unit update regulation trends	Process formalization
	Describe the organization's processes for managing climate-related risks	New sector norms approved by the CEO Equator Principles implemented Due diligence processes in clients, transactions & products implementation	Update sector norms & conclude implementation Inclusion in key industry frameworks
	Describe how processes for identifying, assessing & managing these risks are integrated into the organization's overall risk management		Integration as emerging risk Road map definition to fully integration
Metrics and targets	Disclose the metrics used to assess climate-related risks and opportunities in line with its strategy and risk management process	Quantify credit exposure to carbon-related assets & mix energy generation in utilities Dashboard for climate finance in 2018	Definition of key sector metrics to assess Paris alignment
	Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions	Emissions reported Scope 1, Scope 2 Committed with Science Based Targets Initiative	
	Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets	Performance reporting in 2018 against targets set: mobilize €100 Billion 2018-2025. Renewable energy 70% and 68% reduction in direct GHG emissions. 100% renewable energy in 2030	Enhance granularity of climate finance targets at country & product level Define targets on climate pathways at the most relevant sectors

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