Workshop on Natural Capital
Understanding Risks and Opportunities for Financial Institutions

September 23rd, 2014
## From Regional to National Bank

<table>
<thead>
<tr>
<th></th>
<th>Dec '96</th>
<th>Dec '01</th>
<th>Dec'11</th>
<th>Dec'12</th>
<th>Sep'13</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BTE</td>
<td>BTE + BCN</td>
<td>BTE + IXE</td>
<td>BTE + IXE</td>
<td>BTE + IXE</td>
</tr>
<tr>
<td><strong>Branches</strong></td>
<td>156</td>
<td>1,182</td>
<td>1,285</td>
<td>1,316</td>
<td>1,286</td>
</tr>
<tr>
<td><strong>States (Mex.)</strong></td>
<td>7</td>
<td>32</td>
<td>32</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td><strong>Individual Clients</strong> &amp; SMEs (MM)</td>
<td>0.6</td>
<td>3.0</td>
<td>9.8</td>
<td>11.3</td>
<td>12.4</td>
</tr>
<tr>
<td><strong>Branch Employees (1)</strong></td>
<td>4,840</td>
<td>15,099</td>
<td>18,742</td>
<td>20,964</td>
<td>20,851</td>
</tr>
<tr>
<td><strong>Deposits (2)</strong></td>
<td>3.0%</td>
<td>11.7%</td>
<td>15.0%</td>
<td>16.5%</td>
<td>17.4%</td>
</tr>
<tr>
<td><strong>Loan Portfolio (2)</strong></td>
<td>3.3%</td>
<td>8.6%</td>
<td>15.8%</td>
<td>16.8%</td>
<td>16.6%</td>
</tr>
</tbody>
</table>

(1) During 2012, there was a transfer of personnel from Ixe subsidiaries and Casa Bolsa Banorte to Banorte's payroll.

(2) Includes the 7 largest banks.
Rapid Growth in Assets under Management

Billion Pesos

US 139 bn

Afore XXI Banorte

Insurance & Annuities

Mutual Funds

Broker Dealer

Banking Sector

2005 2009 2010 2011 2012 3Q13

434 650 712 1,296 1,471 1,834

42 72 86 203 245 531

129 60 50 81 69 116

251 30 39 37 99 69

411 108 137 464 569 567

413 498 569 551

203 245 531

251 411 712 1,296 1,471 1,834

US 139 bn

2009 2010 2011 2012 3Q13

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US 139 bn
Increasing Climate Change Vulnerability

**Figure 6: Climate change vulnerability index 2012**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Haiti</td>
<td>extreme</td>
</tr>
<tr>
<td>2</td>
<td>Bangladesh</td>
<td>extreme</td>
</tr>
<tr>
<td>3</td>
<td>Zimbabwe</td>
<td>extreme</td>
</tr>
<tr>
<td>4</td>
<td>Sierra Leone</td>
<td>extreme</td>
</tr>
<tr>
<td>5</td>
<td>Madagascar</td>
<td>extreme</td>
</tr>
<tr>
<td>6</td>
<td>Cambodia</td>
<td>extreme</td>
</tr>
<tr>
<td>7</td>
<td>Mozambique</td>
<td>extreme</td>
</tr>
<tr>
<td>8</td>
<td>D.R. Congo</td>
<td>extreme</td>
</tr>
<tr>
<td>9</td>
<td>Malawi</td>
<td>extreme</td>
</tr>
<tr>
<td>10</td>
<td>Philippines</td>
<td>extreme</td>
</tr>
</tbody>
</table>

Negative environmental externalities across 11 sectors

Source: KPMG Expect the Unexpected, 2012
Increasing losses due to natural disasters and extreme weather

Figure 8 / Increasing losses due to natural disasters and extreme weather

Billion USD

Source: © 2014 Münchener Rückversicherungs-Gesellschaft, NatCatSERVICE
Mexico Vulnerability to Climate Change

Its location between two oceans, latitude and reliefs, expose the country to diverse weather phenomena.

Drought risk level  
Heatwave risk level  
Flood prone areas
Temperature Rise in the Last Fifty Years

Since the sixties, Mexico has become warmer.

The average temperature has increased 0.85 °C, a figure that matches the overall increase reported by the IPCC.

Rainfall has decreased in the southeast of the country for half a century.

Climate Change Scenarios for Mexico

In most of the country, temperatures are projected to rise 1° C to 1.5° C by 2015-2039 and in the north the increase could reach 2° C.

The trend of declining rainfall varies in a range between 10 and 20%.
Social and Economic Vulnerability to Climate Change

• It is estimated that 68% of the population has been affected by disasters, a figure that coincides with the groups in poverty and extreme poverty.

• The economic impacts have increased from an annual average of 730 million pesos in the period 1980-1999 to 21,950 million from 2000-2012 (30 times more).

Economic impact in millions of pesos for the period 2000-2012

- **Tropical cyclone**
  - $2,493 to $39,345

- **Floods**
  - $263 to $1,814

- **Railfall**
  - $2,298 to $42,201
Comparison of government budget assignments for prevention and reconstruction

319 municipalities are highly vulnerable to climate change (13% of total).

37 times more budget for post-disaster reconstruction than prevention.
<table>
<thead>
<tr>
<th>2013: Guerrero (Ingrid &amp; Manuel)</th>
<th>2014: Baja California Sur (Odile)</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Map of Mexico with 2013 flooding" /></td>
<td><img src="image" alt="Damage from 2014 flooding" /></td>
</tr>
<tr>
<td>1,250 million dollars (0.1 GDP Points) and 3,760 million dollars (0.3 GDP points)</td>
<td>30,000 people without homes and counting… &gt;153 million dollars</td>
</tr>
</tbody>
</table>
Natural Capital: Drivers of Internalization

Figure 4 / Three drivers of internalization

- Deforestation
- Climate change
- Energy & fuel
- Material resource scarcity
- Water scarcity
- Population growth
- Wealth
- Urbanization
- Food security
- Ecosystem decline

Regulations & standards

REVENUES / COSTS / RISK

Market dynamics

Stakeholder action

CORPORATE VALUE

Drivers of Internalization: Regulation & Standards

Figure 6 / Map of existing, emerging and potential emissions trading schemes

Status of implementation:
- Implemented (in force with established rules)
- Implementation scheduled (mandate agreed, start date communicated, rules in preparation)
- Under consideration*** (government gave public signal towards the development of an Emission Trading Scheme)

Offsetting:
- National
- Sub-national or regional
- CDM and JI credits
- Bilateral offsets
- Domestic offsets

Linking:
- Planned link

* WCI - Western Climate Initiative. Participating jurisdictions are British Colombia, California, Manitoba, Ontario and Quebec
** RGGI - Regional Greenhouse Gas Initiative
*** Schemes under consideration are at different stages in the process
OBJECTIVES ON ADAPTATION

1. Reduce the vulnerability of the population, ecosystems and infrastructure from the adverse effects of climate change.

2. Minimize risk and damage considering current and future climate change scenarios.

3. Identify the vulnerability and capacity of adaptation and transformation of ecological and social systems.

4. Establish mechanisms for immediate attention to those areas impacted by climate change.

5. Facilitate and promote food security.
Natural Capital: Drivers of Internalization

**Figure 4 / Three drivers of internalization**

- Deforestation
- Climate change
- Energy & fuel
- Material resource scarcity
- Water scarcity
- Population growth
- Wealth
- Urbanization
- Food security
- Ecosystem decline

**Revenues / Costs / Risk**

- Regulations & standards
- Market dynamics
- Stakeholder action

**Corporate Value**

Drivers of Internalization: Market Dynamics

- Commodity prices are becoming increasingly volatile
- 1992 Collapse of Atlantic cod stocks off the East Coast of Newfoundland
- More ecosystems on the tipping point
Drivers of Internalization: Market Dynamics

**Decrease**
- Productivity of maize.
- Coniferous forest cover and marine populations.

**Increase**
- Drought.
- Precipitation could be more intense and frequent increasing the risk of flooding.
- Sea level.
- Temperature in the oceans.

The infrastructure may be affected by the increase in number and intensity of tropical cyclones and more intense storm surges.
Natural Capital: Drivers of Internalization

Figure 4: Three drivers of internalization

- Deforestation
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- Ecosystem decline

Regulations & standards

Revenues / Costs / Risk

Market dynamics

Stakeholder action

Corporate Value

Respondents who were ´extremely´ or ´somewhat´ concerned about biodiversity loss as a threat to their business growth prospects.

<table>
<thead>
<tr>
<th>Region</th>
<th>Concerned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latin America</td>
<td>53</td>
</tr>
<tr>
<td>Africa</td>
<td>45</td>
</tr>
<tr>
<td>Middle East</td>
<td>36</td>
</tr>
<tr>
<td>Asia Pacific</td>
<td>34</td>
</tr>
<tr>
<td>Western Europe</td>
<td>18</td>
</tr>
<tr>
<td>North America</td>
<td>14</td>
</tr>
<tr>
<td>Central &amp; Eastern Europe</td>
<td>11</td>
</tr>
</tbody>
</table>

Q: How concerned are you about the following potential threats to your business growth prospects? Base: All respondents (139,442,289,167,93,28,40) Please note small base for Middle East.

Source: TEEB 2012
Drivers of Internalization: Stakeholder Action

Our Investors

40% of our top 10 investors signed the PRI

60% of our top 10 investors has an ESG policy
Drivers of Internalization: Stakeholder Action

How often investors consider ESG

- 1000 investors surveyed
- About half of them were research analysts and portfolio managers
- Study of global reach: 33% USA, 8% UK, 6% India, 4% Brazil, 3% China, 3% Germany.

Source: SustainAbility. (December, 2012). Rate the Raters Phase Five. The Investor View.
Social and Environmental Management System

11/2009

SEMS 1.0 (2012)
- Corporate Banking
- SME Banking

SEMS 3.0 (2014)
- > scope
- > performance

Natural Capital Declaration

Provides a sustainability framework to understand, integrate, account and report on natural capital direct and indirect dependencies
Performance Standard 6 recognizes that the protection and conservation of biodiversity and ecosystem services and sustainable management of natural resources are fundamental for sustainable development.
Social and Environmental Management System

Exclusion List

No → Yes → STOP

A. Initial Project Screening
• Monto solicitado mayor a USD $1 millón y
• Proyecto de inversión o capital de trabajo de más de 2 años

B. Activity Based Filtering

Project/Activity → Predetermined Risk (based on relation matrix)

CASB

Low

Medium

Risk Analysis (B)

Low predetermined risk. Proceeds to risk analysis (C)

Medium predetermined risk. Proceeds to risk analysis (C)

C. Additional Risk Filtering

• Resetlement
• <5 km. Natural/Cultural Heritage Areas
• <5km Indigenous Communities

High Predetermined Risk
Social and Environmental Management System

Predetermined Risk Level

- Low → No Due Diligence

Medium / High

Due Diligence Process (EHS Guidelines)

¿Complies with due diligence?

- Yes: Credit Dispersion. Sólo como excepción se lleva al Comité de Autorización para análisis
- No: Se lleva al Comité de Autorización

Credit Committee Approval?

- YES: Dispersion/ Dispersion w/conditions
- NO: No Financing Provided
SEMS: Results

> 2000 Cases analyzed
> 40 Free consulting services provided to our clients
> 300 Credit analysits trained

13 “Sustainability Champions” + 2 Sustainability Coordinators

<table>
<thead>
<tr>
<th>Before SEMS: Wind Energy</th>
<th>After SEMS: Tourist Development</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.jpg" alt="Image of a protest sign" /></td>
<td><img src="image2.jpg" alt="Map of Holbox" /></td>
</tr>
<tr>
<td>• Project Finance</td>
<td>• Project Finance Tourism development</td>
</tr>
<tr>
<td>• Oaxaca – Windfarm</td>
<td>• Holbox – Biodiversity Hotspot</td>
</tr>
<tr>
<td>• Community uprising – Project delayed</td>
<td>• Landuse change &amp; Community uprising</td>
</tr>
<tr>
<td></td>
<td>• SEMARNAT banned project</td>
</tr>
</tbody>
</table>
### SEMS: Learnings & Challenges

#### Culture Change

**Learnings**
- Resistance to change
- New language / system implementation
- Educate, educate, educate

**Challenges**
- Position risk assessment as positive not as negative

#### Complexity of Sustainability

**Learnings**
- Different opinions – Hard to educate credit analysts
- Legal complexity (national vs international)

**Challenges**
- Defining precise standards for impact level

#### User friendly IT

**Learnings**
- Make IT user friendly not tech savvy
- Simple is better
- Work within IT boundaries
- Start simple – Iterate fast

**Challenges**
- Bank IT’s modifications take a lot of time

#### Sust. Advisory Services

**Learnings**
- Clients are regularly happy to receive feedback
- Enhance credit officer client relationship

**Challenges**
- Thorough due diligence without loosing competitiveness (time)
- Lack of information
WG1: Understanding natural capital risks for financial institutions and embedding them in credit risk assessment
Aims to provide NCD signatories with the business case, approaches, and tools to integrate natural capital into their operations from the investment risk perspective, thereby strengthening financial health of their portfolios.

WG2 - Pilot project: Risk Policies on Soft Commodities
Develop and test a framework to evaluate financial institutions’ policies on managing deforestation and forest degradation risks in soft commodity value chains.

WG3 - Embed natural capital in financial accounts
Working group 3 work plan to develop accounting framework for financial institutions by 2015; a scoping report on developing a possible global standard by 2020.

WG4 - Disclose and report on natural capital
Methodology(ies) on natural capital disclosure and (b) reporting from the perspective of financial institutions.
GRACIAS