



Addressing Climate-related Risks for Financial Institutions in Chile: First Steps

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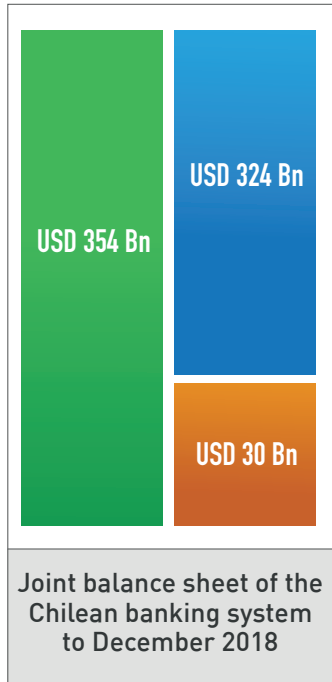
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Overview of the Chilean Banking system



Overview of the Chilean banking system

- The Chilean banking sector consists of 18 banks: 9 foreign banks, 8 national banks and 1 is state-owned
- Superintendencia de Bancos e Instituciones Financieras (SBIF), is the banking supervisor. The lender of last resort is the Central Bank of Chile
- The WEF placed the Chilean Banking industry 5th in its Competitiveness Ranking on Soundness of Banks
- On January 12th 2019 was enacted the most important reform to the banking law in nearly 30 years
- Chile is adopting Basel III capital standards (liquidity and leverage were already in place). Capital gap USD 3 billion, as of Dec 2017
- The reform will integrate the SBIF with the Comisión para el Mercado Financiero (CMF), supervising banks, insurance and securities. The CMF combines 3 legal mandates: financial stability, market conduct and market development
- The merger of the SBIF with the CMF is set to take place on June 1st, 2019



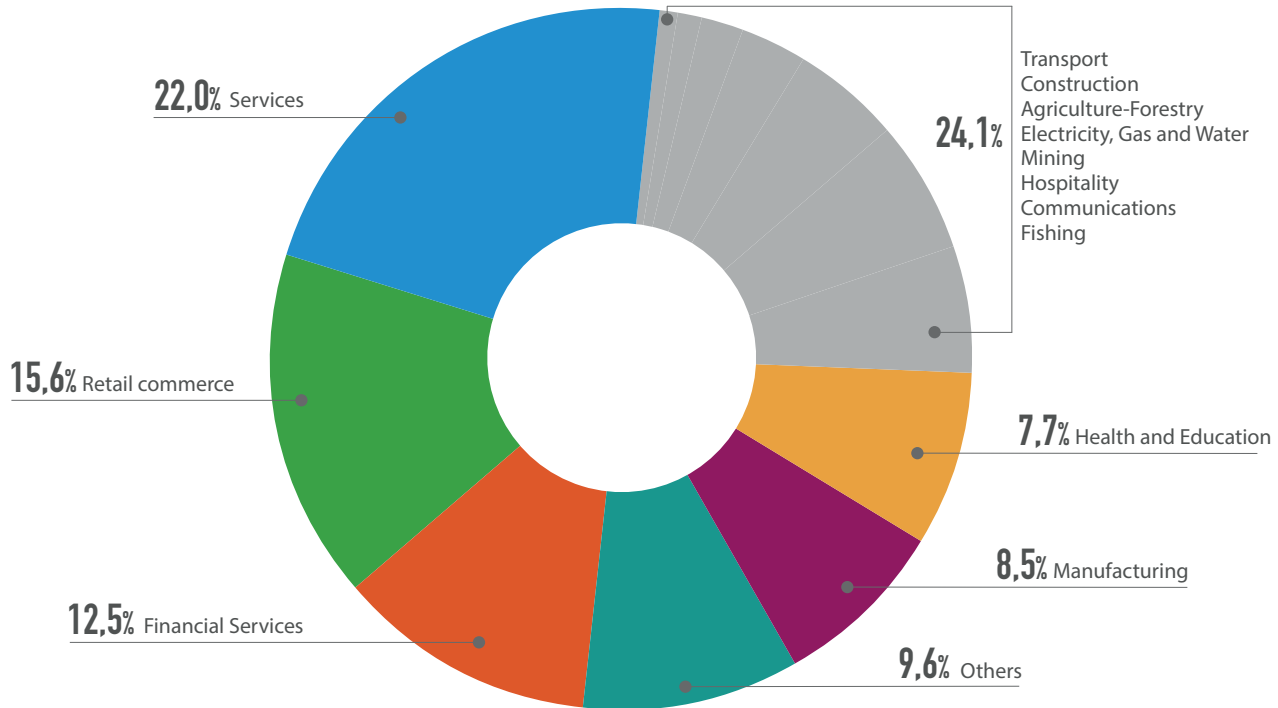
Overview of the Chilean banking system

Debtor Category	Probability of Default	LGD	Expected Loss
A1	0,04%	90,0%	0,03600%
A2	0,10%	82,5%	0,08250%
A3	0,25%	87,5%	0,21875%
A4	2,00%	87,5%	1,75000%
A5	4,75%	90,0%	4,27500%
A6	10,00%	90,0%	9,00000%
B1	15,00%	92,5%	13,87500%
B2	22,00%	92,5%	20,35000%
B3	33,00%	97,5%	32,17500%
B4	45,00%	97,5%	43,87500%

Managing credit risk: how provisions are calculated

- Under the SBIF's Accounting Standards Manual (ASM), banks are required to assess the economic-financial situation of its debtors in order to determine their ability to pay
- According to the ASM, debtors can be classified in 10 categories, Each category has its own Probability of Default and Loss Given Default
- Risk factors are calculated from historical data resulting in a robust standard model
- This model will determine loan loss provisions carried by banks

Commercial portfolio by sector (Dec. 18)



Source: SBIF (DEC-2018).



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High level analysis of climate-related risks by sector and its associated credit risks for Banks



These Massive Renewable Energy Projects Are Powering Chilean Mines

A surge in solar, geothermal, and wind development is helping to wean the industry off imported fossil fuels.

By Laura Millan Lombrana and Jamey Stillings

Bad Weather Closes Chilean Ports



Chile's Port Authority has issued a warning of adverse weather conditions and strong swells affecting the Chilean coast over the next two days, Inchcape Shipping Services (ISS) reports.

Ports in the north, along with the central region - Quintero, Valparaiso and San Antonio - remain closed and port operations are subject to Port Authority evaluation.

A new weather front of heavy rain is forecast to

arrive on Thursday, August 6.

The warning follows other recent adverse weather in Chile, with the Port Authority already warning of expected damage to some ports as a result of local conditions.

People are also being warned to stay away from immediate coastal areas.

Markets

Copper Mines Halted by Heavy Rains in Chile

By Laura Millan Lombrana
8 febbraio 2019, 17:12 GMT-3 Updated on 8 febbraio 2019, 16:22 GMT-3

- Storms have blasted northern Chile and southern Peru for days
- Rain expected to continue through the weekend, agencies say

Chile: Losses in fruit production due to hail estimated at 120-150 M\$

Ten days after heavy rains and hailstorms in the south central zone of Chile, the President of the Association of Fruit Exporters of Chile AG (ASOEX), Ronald Bown Fernandez, delivered a new damage report for the fruit sector.

Pursuits

Chile's Water Shortage Threatens Wines and Mines

Matt Craze

10 marzo 2015, 00:00 GMT-3 Updated on 10 marzo 2015, 16:58 GMT-3

Business

Chile's Growing Desert Is Closing In on the Country's Capital

Javiera Quiroga

6 luglio 2015, 06:00 GMT-3 Updated on 6 luglio 2015, 13:22 GMT-3

Technology

Mining Giant Vows to Scrap \$3 Billion Plan If Opposition Soars

By Laura Millan Lombrana
8 aprile 2019, 08:00 GMT-4 Updated on 8 aprile 2019, 20:00 GMT-4

- Anglo American's Los Bronces in Chile is close to glaciers
- Miner says studies prove copper project won't harm environment

ENVIRONMENT JUNE 17, 2014 / 1:30 PM / 5 YEARS AGO

Climate change threatens tourism as ski slopes thaw, seas rise

Alister Doyle

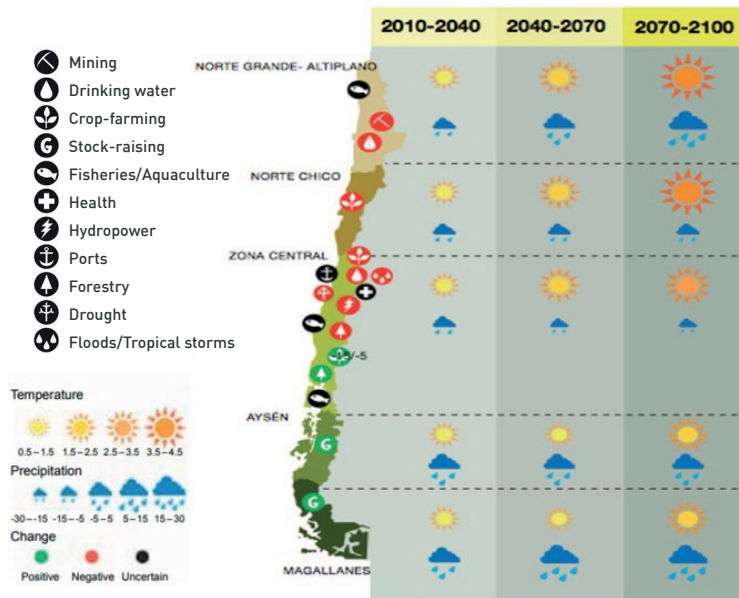
3 MIN READ



Chile's forest fires will cost government \$333 million, minister says

Source: Bloomberg, Reuters, Freshplaza, Worldmaritimewews.

How Climate Change is affecting Chile's economic activity

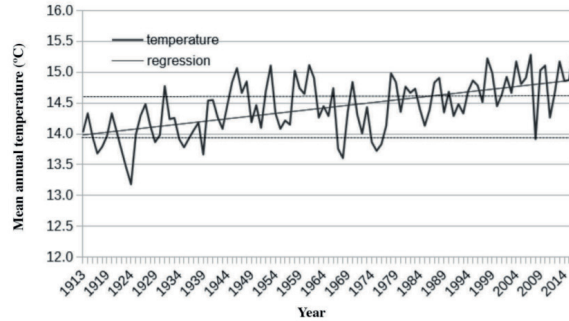


Source: ECLAC (2009).

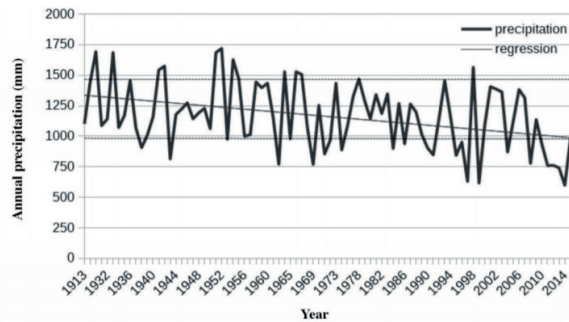
- Chile is widely exposed to Climate Change, affecting a broad variety of activities
- Short and severe rain showers are already occurring and are expected to increase in Atacama desert area (Chilean north), causing destruction of public infrastructure, private investments and disrupting activities such as mining
- A sharp decrease of rain is already happening in the central region of Chile, affecting energy, agriculture and utilities, among other
- Heat waves have created conditions required for bonfires affecting extensive areas
- Opportunities have arisen for agriculture and livestock in the southern regions

Retail Sector in Chile

Mean anual Temperature of Santiago, Chile (1912-2015)

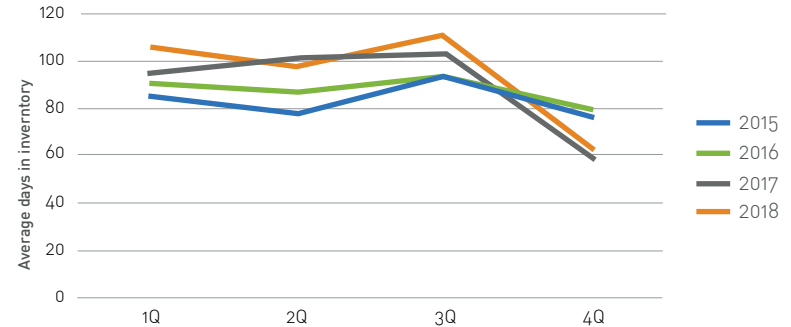


Annual Precipitacion of Concepción Chile (1912-2015)

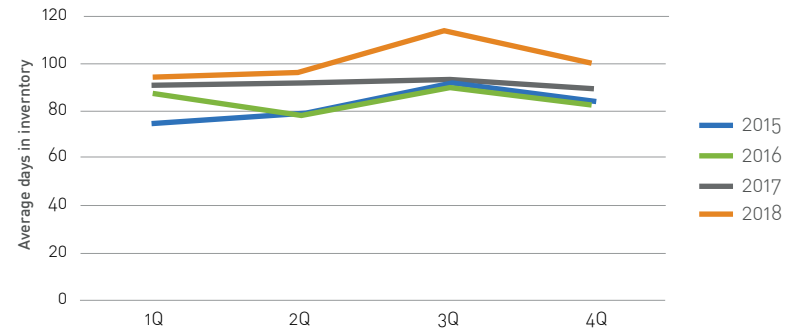


Source: Stolpe, Undurraga (2016).

Retail 1 (Chile)



Retail 2 (Chile, Perú)



Source: Own elaboration from data provided by retailers.



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Next steps



From awareness to action

- We have identified two possible ways of action within the existing micro-prudential framework: (i) inclusion of climate risks within the policy framework and risk management of institutions and (ii) the calculation of provisions (credit risk management)
- Chile is hosting COP25 in Dec 2019, increasing opportunities to raise awareness and place the topic in the national agenda
- The SBIF will participate in the Round Table for the Development of Sustainable Finance in Chile, organized by the Ministry of Finance
- Banks need to address climate-related risks in an orderly and systematic manner by collecting data and measuring the impact of these risks
- The financial system needs to identify how key players are planning on the risks and seize the opportunities
- There is an important transition risk arising from the need to adjust regulation on carbon emissions, property of water rights, fishing rights and project approval framework to ensure sustainability and progress



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