

# CFA Institute Research Challenge hosted by CFA Society Chile

# We Came Looking for Copper and We Found Lithium

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# SOCIEDAD QUÍMICA Y MINERA DE CHILE S.A. (Santiago Stock Exchange : SQM-B)

Valuation as October 16th, 2020



### FIGURE 1: POINTS OF PRODUCTION



FIGURE 2: SQM PRODUCTION LOCATIONS



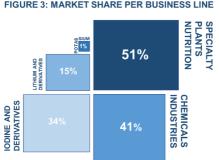
# **TABLE 1: MAJOR SHAREHOLDERS**

MAJOR SHAREHOLDERS	5
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23,77% Inversiones TLC SpA 17,41% Soc Inv Pampa Calichera S.A. 16,03% BNY Mellon, ADRs

Source: Company Data

### FIGURE 3: MARKET SHARE PER BUSINESS LINE



Source: Company Data

### **BUSINESS DESCRIPTION**

Sociedad Química y Minera is a Chemical and Non-metallic Mining Company founded in 1968 through a JV between Compañía Salitrera Anglo Lautaro S.A. ("Anglo Lautaro") and a Chilean government entity named Corfo. In 1971, Anglo Lautaro sold all-off its shares to Corfo, and therefore SQM became fully owned by the Chilean Government until 1983. Lastly, Corfo began a process of privatization and sold the shares to the public, subsequently listing such shares on the Santiago Stock Exchange. From the beginning, the Company produced and sold nitrates and iodine, but as SQM grew, the Company started adding other products, like Lithium. Currently, SQM has a presence in several industries in 115 countries, such as the United States, México, Chile, Japan, and China, with more than 9.000 employees around the world (Appendix A1). Its production is mostly based in Chile, specifically in Tarapacá and Antofagasta regions (Figure 2). SQM operates 5 main segments: Lithium and derivatives (26% of total revenue) Specialty Plant Nutrition (37% of revenue), Iodine and derivatives (19% of revenue), Industrial Chemicals (5% of total revenue), and Potassium (11% of revenue). SQM is a world leader in the production of lithium, iodine, potassium nitrate, and thermo-solar salts (Appendix A3).

Lithium and its derivatives are mainly used in industrial applications and as a cathode in the production of rechargeable batteries. They are also a key component in the development of electromobility and different technologies worldwide. This business line is composed of lithium carbonate and lithium hydroxide which are obtained through the extraction of the brine from the salt flats. Lithium world consumption is divided into 46% of rechargeable batteries, 25% of ceramic and glass, 11% of greases and polymers, 11% of other uses, 4% of industrial powders, and 2% of air treatment.

Specialty plant nutrition includes four types of products: potassium nitrate, sodium nitrate, sodium potassium nitrate, and specialty blends. Although Specialty Plant Nutrients (aka "SPN") are fertilizers, they are quite different from the commodity fertilizers sold by SQM's competitors and they are characterized by possessing several advantages over them. These nutrients are produced from the caliche ore extraction. In this business line, SQM can set its prices and not depend entirely on the supply and demand for fertilizers. The target market for this line of business are farmers with high-quality crops.

lodine and derivatives are commodities obtained from caliche ore extraction, used for multiple purposes, such as X-rays, nylon, disinfectants, paints, or as a screen biasing medium, and inhuman and animal nutrition products.

Industrial Chemicals is a business line that includes the production of sodium nitrate, potassium nitrate, and potassium chloride. Those products are mainly produced from caliche ore extraction and used for industrial purposes. The first two are used, in the production of glasses, and the third, in oil drilling. SQM also sells solar salts, which are a combination of potassium nitrate and sodium nitrate. These are used to store solar energy.

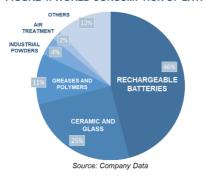
Potassium business line comprises potassium chloride and potassium sulfate, both obtained through the extraction of brine from the salt flat. Potassium chloride is a commodity fertilizer, while potassium sulfate is a specialty fertilizer. During the last decade, the increase in the world population coupled with the decrease in available land for crops, have been key factors for the growth in the demand for potassium chloride and fertilizers in general. However, more sophisticated fertilizers than potassium chloride are increasingly being needed to obtain better quality crops, so this business line does not represent a large percentage of the profit margin, nor the future of SQM.

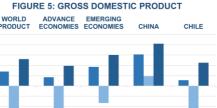
SQM's development strategy is to maintain its worldwide leadership position in lithium, potassium, nitrate, iodine, and thermo-solar salts markets, through the manufacture of high-quality products, complemented by a culture of excellence that is attentive to the dynamic needs of clients. The Company can do this because of its cost leadership, a wide range of diversified products, and vertical integration. On the other hand, SQM is constantly evaluating new opportunities that fulfill its investment criteria, in both, new and existing businesses. The Company is currently exploring its mining properties searching for metallic minerals that can be exploited (Figure 3).

### **KEY DRIVERS**

- Lithium is the key business segment of SQM's business. There are very good prospects for the lithium industry. It is accepted that the demand will increase considerably, and price will continue an upward trend because it is difficult for new competitors establish themselves in the market in the short or medium term. Since most of the products sold by SQM are commodities, the only variable that they can control to increase the profit margin is cost, therefore, technology becomes a key driver to increase margins (Figure
- 2. The Solar Energy market is also an important driver, since the demand for solar salts, the main product of the Industrial Chemicals line, depends on this. Consensus expects a growing trend of concentrating solar energy plants due to their economical storage of electricity.
- Maintenance of concessions: SQM Salar S.A. (a SQM's fully owned subsidiary) owns exploitation concessions located in Salar de Atacama. During 2019, 37% of SQM's revenues come from products extracted from this location. Therefore, these concessions rights have an important impact on revenue. It is important to note that the above-mentioned concession is the only one that has an expiration date, since the other concessions owned by SQM owns are held at perpetuity.
- Electric cars demand: This is a key driver regarding the demand for lithium. Expectations for lithium demand growth are currently stronger than ever as a consequence of the decision of car manufacturers to producing electric cars.

### FIGURE 4: WORLD CONSUMPTION OF LITHIUM





### FIGURE 6: CHANGE IN WORLD TRADE VOLUME

■2019 GDP ■2020 GDP ■2021 GDP

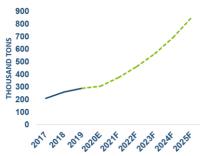
Source: IMF





Source: National customs service of Chile

### FIGURE 8: LITHIUM CONSUMPTION



Source: Department of Industry, Science, Energy and Resources Australia 2020

### 2. INDUSTRY OVERVIEW

SQM develops and produces diverse products for several industries, but in general, the Company is involved in the Chemical and Non-metallic Mining industry. Also, it can be considered as a "Chemical" Company only because the non-metallic minerals are involved in chemical reactions and processes. The Chemical industry is characterized by competitiveness, and because of that, it spends large amounts on R+D, varying from one branch to another.

**ECONOMIC GROWTH** The chemical industry is largely dependent on the economic growth of countries and active international trade. The IMF (Figure 5) projects that world GDP will contract by 4.4% during this 2020, with Latin American countries being the most affected with a decrease of 8.1% and particularly Chile with 6.0%. These results harm the demand for chemical products because they are needed in other industries. By 2021, a recovery is expected with a growth in domestic product of 5.2% for the world and 4.5% for Chile.

For this industry, China is positioned as the most relevant actor, where its economic situation completely determines the performance of each of the companies. In January, a series of measures were established to prevent the propagation of the coronavirus by closing its main ports, forcing the paralysis of several economies in the world. However, since March, measures have been adopted to open up and deconfine the country's activities, so for this year the IMF is projecting a growth in GDP of 1.9%. By 2021, it is expected that the markets will recover, reaching an economic expansion of 8.2%.

**COVID-19 AND INTERNATIONAL TRADE** International trade has been strongly affected by restrictions (Figure 6), registering negative growth in most of the year, accumulating a variation of -6.17% in the volume of world trade until July. For Chile, exports have witnessed an important contraction during this year with a CAGR January-September -4.18% (Figure 7), cushioned by a slight increase in mining exports. However, exports to China increased 7.5% in the first semester, which shows signs of the fast recovery of the Asian country that helps to reactivate the Chilean economy.

**ELECTIONS IN THE US** The US presidential elections on November 3<sup>th</sup> could create very different economic scenarios that will have repercussions on the chemical-agricultural and non-metallic mining industries. On one side, Donald Trump has a powerful economic proposal, however, the existing threat of a deepening trade war with China could negatively affect international trade. On the other side, Joe Biden is less aggressive in his economic proposals, but inspires more confidence on international relations and pro-environmental policies, which are an important mainstay for one of the key drivers of the lithium mining industry; the electric car.

**SOCIAL CRISIS AND POLITICAL UNCERTAINTY IN CHILE** On October 18<sup>th</sup> of 2019, the so-called "Social Explosion" emerged in Chile, leading to a plebiscite to be held on October 25<sup>th</sup> of 2020, where a vote will be held on whether to draft a new Constitution for the country. Besides, with the crisis, ideas of nationalization of natural resources, such as lithium, and changes to water rights have been raised. These changes would directly affect the industry, generating a climate of uncertainty regarding what could be established in a new constitution.

### **BUSINESS LINES ANALYSIS**

**LITHIUM AND DERIVATIVES** The largest exporter of lithium worldwide is Australia, which is responsible for 55% of total production, and also has 30% of total lithium reserves. Lithium is very abundant (China, Serbia, Chile, Brazil, Canada, etc.), many players have entered for the same reason, but the cost curve in this industry is very steep and rises very fast, so many companies are left out in periods when prices are not attractive to produce.

World demand for lithium chemicals has been increasing in recent years, and by the end of 2025 it is estimated to reach 850 thousand tons, which means an increase of 177% to the demand of 2020 (Figure 8).

The increase in this demand is explained by a 5% growth in industrial applications, and 8% in the battery segment. However, one of the main factors is the electric vehicle market, which is expected to have an explosive increase in the coming years, specifically growing from 11% in 2020 for electric or hybrid vehicles about total annual sales, to 32% in 2025 and 59% in 2030. It is expected that the price in this segment will progressively increase from an average of US\$ 6,724 to US\$ 12,204 per ton, being US\$ 11,500 for lithium carbonate and US\$ 16,500 for lithium hydroxide in 2025 (Figure 9).

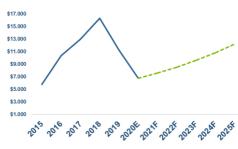
**SPECIALTY PLANT NUTRITION** The majority of this fertilizer business line covers the production of Potassium Nitrate, Sodium Nitrate, Sodium-Potassium Nitrate and other special mixtures. Compared to Potassium Chloride, these specialty nutrients have a higher nutritional contribution for plants, that's why they are sold at a higher price, which causes a lower demand. The production has historically grown by an average of 6%, but in the current year there has been a slowdown in its growth, and it is expected to return to these high levels once the pandemic is over.

Prices have been variable due to the economic context of the moment. They are currently at their lowest levels, corresponding to \$ 693.93 per ton, however, it is expected that the prices can recover and return to the average before the pandemic, reaching \$ 766 per ton in 2025.

For potassium nitrate and sodium nitrate, it's important to consider that Chile is positioned as the main producer with 949,434 MM in 2018, which is reflected in the value of chilean potassium nitrate exports that has grown from US\$ 102,735 in 2002 to US\$ 368,477 in 2018 (CAGR 8,31%). According to projections, it will continue to grow for the following years, reaching \$498,830 in 2025 (Figure 10).

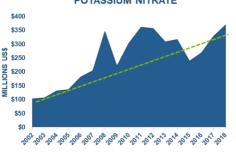
**IODINE AND DERIVATIVES** lodine is mainly produced in two countries, the first is Chile, which represented 59% of world sales in 2019, and the second is Japan, which reached 27% of the same indicator (Figure 11). In recent years, there has been no increase in supply, so prices have risen against a demand that has remained stable over the same period. The global demand for iodine in 2019 was 36,700 tons, with a projected fall for this year of 4.68%. For the next few years, the demand is expected to grow by 3.04% per year until 2025, when a total demand of 42,600 tons is expected. Today a not lesser percentage of the demand is supplied through iodine recycling, which during 2019 reached 17% of the total.

### FIGURE 9: AVERAGE LITHIUM PRICE 2015 - 2025F



Source: Company Data, Seeking Alpha and Team Analysis

### FIGURE 10: EXPORT VALUE CHILE POTASSIUM NITRATE



MILLIONS

Source:FAO

FIGURE 11: IODINE PRODUCTION

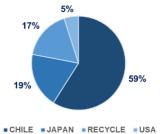
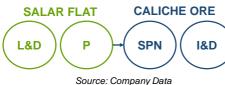


FIGURE 12:



**FIGURE 13: VERTICAL INTEGRATION** 



Source: Company Data

Prices have faced a growth of almost 30% since 2018, and 8.6% for 2019. A stable price level is expected to be maintained. As for supply, it is expected to increase in the same way as demand, following the trend of the past years.

INDUSTRIAL CHEMICALS The market for Industrial Chemicals is composed in particular by Sodium Nitrate and Potassium Nitrate, which are used in a wide range of industrial applications. Other important products within the segment are: Thermo-Solar Salts, Potassium Sulfate, Potassium Chloride, Silvinite, Magnesium Chloride hexahydrate and Sodium Chloride (Appendix A5).

The production of industrial chemicals has the same behavior as the production of SPN's nitrates and its demand depends on economic growth. Currently on the side of solar salts, SQM is the only producer and it still does not have a consolidated demand, it is expected to increase together with the promotion of renewable energies.

POTASSIUM The world production of potassium was 41 million tons during 2019, being the first producer Canada with 13.3 million tons, followed by Belarus and Russia with 7 and 6,8 million tons respectively. Historically, this production has been increasing, but it has stagnated in recent years due to the economic slowdown, the trade war between the US and China, and Covid-19. The recuperation is expected in 2021, returning to the historical growth.

The future demand of Potassium Chloride and Potassium Sulfate can be estimated in base of the economic growth, reaching 47,627 million tons in 2025. The price of potassium, as a commodity fertilizer, it is directly correlated with increases in supply and the level of demand. In the last years, the price has been increasing until 2019, with a small drop in 2020, which is expected to recover its historical high levels by 2025 (World Bank) with a CAGR of 1.34% 2020-2025.

### **COMPETITIVE POSITIONING**

As a consequence of it different competitive advantages, SQM has strongly positioned itself in the chemical and non-metallic mining industry.

### **DIVERSIFICATION AND POSITIONING**

The fact that this company participates in different markets, allows it to have a wide range of clients from different industries such as food, agriculture, medicine, technology, transport, energy, construction, and other industrial applications. This allows SQM to diversify the risk of low demand in some of the items, managing to maintain a relatively low level of risk under normal circumstances.

This diversification has allowed SQM to satisfy the demand of its clients in more than one product, generating value for them by reducing their transaction costs of negotiating with various suppliers and reducing their exposure to any default. An example of this is evidenced in the solar salts which for their production requires a mixture of 60% sodium nitrate and 40% potassium nitrate. SQM is the only player that can provide the two nitrates together, therefore only they can deliver solar salts without the risk of shortages.

Another example is that SQM is the only one that produces three types of potassium Sulfate, Chloride, and Potassium Nitrate.

Lower cost producer: SQM is vertically integrated (Figure 13), since it manages from the extraction to the last stage of production, which allows it to have the lowest costs in the industry, and to position itself as one of the leaders in some of the markets in which it participates, obtaining competitive advantages over its competitors. The integration and diversification of their products have made it easier for them to generate operational synergies in their business lines, allowing them to extract the highest possible profits from raw materials. For example, for the elaboration of potassium nitrate (SPN), SQM started to operate in "Salar de Atacama",

from where they extract potassium. This extraction process allows them to produce potassium chloride and potassium sulfate.

SQM expects to maintain its leadership in terms of costs and to satisfy the expected demand, but it still has to deal with some challenges and problems, mainly environmental, that make it difficult to be sure of meeting its goals, especially because of the water shortage faced by the area and the possibility of building a seawater extraction channel for its operations.

A constant increase of capacities: To maximize the competitive advantage of lower costs and participate in the expected growth in demand, the company has made and plans to make large investments in order to expand

As for the lithium business line, it has made important investments to increase the production capacity from 70 thousand tons of Lithium Carbonate and 13.5 thousand tons of Lithium Hydroxide in 2020, to 180 and 29.5 thousand tons in 2025, respectively. For this, its needed to disburse a total of US\$ 588 million (approximately), which have already started to be part of the company's CAPEX investments, thinking of a first big increase for

Regarding the iodine line of business, SQM has the capacity to produce 14.8 thousand tons of iodine and expects to expand its capacity to 29.6 thousand tons, which means doubling its current capacity to meet the expected growth in demand. This growth will be carried out in 3 stages based on the "Tente en el Aire" project. which will allow the introduction of a total of 3.85, 4.85, and 6.11 thousand tons in 2023, 2024, and 2025, respectively.

SQM within the industry: SQM is inserted in a very competitive industry, in which the company act as a pricetaker (Appendix B1). For this reason, they are forced to create advantages in costs and in other edges. It's difficult for other new companies to enter this industry because of the high barriers like scale economics, huge investments in capital, and vertical integration (SQM has all these characteristics).

However, the Company has the advantage of offering products that are difficult to substitute. SQM sell commodities, which are raw material and supply for other companies. Also, they don't depend too much on suppliers since they are the suppliers.

### TABLE 2.1: MARKET DATA

KEY FIGURES	
Dividend Yield	2.47%
52w High	\$ 28,990
52w Low	\$ 13,600
Number of Shares SQM (MM)	263
Number of Shares SQM-B (MM)	120
Enterprise Value (BN)	\$ 7.2
Free Float (%)	99%
LTM EV / EBITDA	15.19
Beta	1.11
Source: Bloomberg	

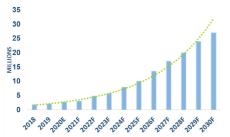
### **TABLE 2.2: RECOMMENDATION**

HOLD	
Share Price (CLP)	\$ 27,158
Target Price (CLP)	\$ 27,757
Upside	+ 2.2%

### **TABLE 3: VALUATION SUMMARY**

VALUATION			
DCF	40%	\$	28,766
RIM	40%	\$	27,526
Market Approach	20%	\$	26,203
Target Price (CLP)		\$	27,757

### FIGURE 14: ELECTRIC VEHICLES SALES

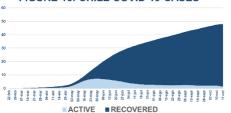


Source: Department of Industry, Science, Energy and Resources Australia 2020



FIGURE 16: CHILE COVID-19 CASES

Source: Bloombera



One strategy that SQM uses to differentiate itself is selling a variety of products in order to offer a reduction in the customer's transaction costs. Also, the Company tries to be the sole competitor in the world producing and selling certain products, like solar salts. They also attempt to make long term contracts with the customers.

### 4. INVESTMENT SUMMARY

We issue a HOLD recommendation on SQM-B (more liquid but less controlling share, Appendix F2) with a target price ("TP") of CLP 27,757 per share (Table 2.2). This TP represents a 2.2% upside from its October 16<sup>th</sup> closing price of CLP 27,158. It is important to mention that this 2.2% is lower than the cost of equity of 9.26%, which reaffirms our HOLD recommendation. Our TP is based on a 40% weight on our Free Cash Flow Model, a 40% weight on a Residual Income Model, and a 20% weight on Market Approach (Table 3).

The recommendation is based on the great uncertainty that exists, both, in the local market, and in the entire world. In Chile, mainly because of the plebiscite and in the world, because of the coronavirus pandemic. With this recommendation, we are not denying that SQM could be a good investment alternative, only that at this moment it would be very risky, given the current scenario. This is why we suggest waiting a while for the uncertainty in the markets to decrease, and then reevaluate SQM's position. In-depth, our recommendation is driven by the following keys:

HIGH EXPECTATIONS IN LITHIUM, BUT ALSO GLOBAL UNCERTAINTY First thing to keep in mind, is that demand and lithium prices are expected to face significant growth in the years to come. This is due, in large part, to the massification of lithium-ion batteries. For example, currently, 0.4% of the world's vehicles are electric, but by 2030 these are expected to be 30% of the total (Figure 14).

However, around the world, there are enough lithium reserves that can be exploited, so competition in this market may increase and there are already signs of companies that want to enter this market, like Tesla. Despite this, there is a long way between saying and doing it, so there is great uncertainty that these companies are really willing to make huge investments. It should be noted that this industry is already quite competitive, in fact, SQM does not have a large market share (15%).

On the other hand, electric car makers are concerned about future lithium supplies, due to new regulations being planned by Chile's environment regulator. These regulations may include the reduction of the amount of brine used, the reduction of carbon emissions, among others. It is important to mention that Chile has half of the world's lithium reserves. Despite this, SQM communicated a few days ago, for the tranquility of its clients, that these new regulations would not generate an impact on its level of production. This is because they have spent years making efforts to be a company with a low impact on the environment. In fact, that same day, they announced plans to cut their brine use in half and produce carbon-neutral lithium by 2030.

**COMPETITIVE POSITION, SOLID AS A ROCK** SQM has a great competitive advantage: producing a wide range of products that allow it to provide integral solutions to its clients. It often happens that a client needs more than one product for a particular project and SQM is one of the few chemical companies that develop so many products. This makes many customers prefer them, as it allows them to lower transaction costs. This is why this advantage allows SQM to capture a greater part of the demand and also to generate synergies between the different lines of business.

On the other hand, it is important to mention that SQM is a solid competitor due to its vertical integration (they extract the minerals and carry out all the necessary processes to obtain the final product). This allows them to create value in each link in the chain, therefore also, control and reduce their production costs.

Due to everything mentioned above, SQM is positioned as a world leader in lithium, iodine, potassium nitrate, and thermo-solar salts.

WILL THE NEW CONSTITUTION IN CHILE BITE SQM? Plebiscite uncertainty of October 25<sup>th</sup> begins to reflect in stock exchange Since October came, the Stock Exchange Market started to reflect more volatility, especially in the Chilean market. The IPSA index has had a worse performance in relation to Global Stock Exchanges because of the political tension, due to the plebiscite on October 25<sup>th</sup> (Figure 15). Besides, in these last days, the Chilean peso decoupled from its peers, and on October 10<sup>th</sup> was the currency with the worst performance in the world. The nearby plebiscite is bringing a lot of uncertainty to the market, making it difficult to operate.

Leaving this behind, the possibility that the result of the plebiscite is "approval", for a new constitution, presumes a risk for SQM, because it can be proposed Lithium nationalization in the construction of the constitution, which would imply the intervention and transfer of control to the State.

GLOBAL CRISIS DOES NOT SEEM TO AFFECT SQM AS MUCH AS ITS PEERS The Covid-19 outlook triggered a global sanitary and economic crisis. Because the company sells its products worldwide, with Asia, Europe, and North America being its main markets, they explained that border closures, a decrease in commercial activity, and difficulties and disruptions in the supply chains in the markets in which they operate have impacted on the sales volumes. Besides, the average prices depend on the duration of the virus, the efficiency of the measures implemented to contain the spread of the virus in each country, and fiscal incentives to promote economic recovery. For example, Iodine has been really affected by the pandemic scenario; the volumes have decreased a lot, but the prices have increased because of the shortage. Otherwise, potassium nitrate has not been impacted as much as other SQM's business; the volumes have decreased, but slightly.

The pandemic affects all the world. However, SQM reacted on time to prevent a worse scenario on their sales, and because of its diversification in products, it's possible to reduce risk and show more confidence and stability in order to overcome the crisis. What protects SQM in some way is that from the same geographical location and the same brine they obtain various products, apart from lithium. This causes their production costs to be lower and their margins higher, compared to their competitors, giving more space to them to handle price volatility.

FIGURE 17: SQM STOCK CLOSE PRICE (CLP)



### **TABLE 4: DCF SUMMARY**

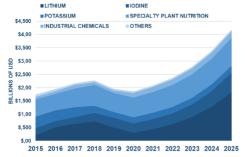
lion	s
\$	10,736
\$	30
\$	682
\$	182
\$	11,570
\$	1,931
\$	9,639
\$	36.6
\$	28,766
	\$ \$ \$

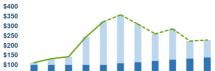
WACC - USD	8.16%
Cost of Equity	9.26%
Risk Free	1.23%
Country Risk	0.67%
Relative Volatility	1.25
Equity Risk Premium	5.23%
Beta	1.11
Size Premium	0.89%
Specific company Risk	0.5%
Cost of Debt	3.44%
Country Risk	0.67%
IRS	2.77%
TAX	27%
D/E	20%

### **TABLE 6: PERPETUAL GROWTH**

TERMINAL GROWTH RATE		
Terminal growth rate	2.85%	
ROIC	7.98%	
Reinvestment rate	35.76%	
Invested capital	3,982	
Equity	2,120	
Debt	1,863	

### FIGURE 18: SQM SALES





20214 20228

\$200

FIGURE 19: CAPEX SQM

Source: Company Data and Team Analysis

### **VALUATION**

To estimate the target price for SQM we used the Income and Market Approach. In the Income Approach, we used Discounted Cash Flow analysis (DCF) and Residual Income Model (RIM) and in Market Approach we used the implied trading multiples of comparable listed companies to make a relative valuation.

We obtained the target price of CLP 27,757 assigning a 40% weight to DCF valuation, a 40% weight to the Residual Income valuation, and a 20% weight to the Relative valuation. We assigned a higher weight to the DCF valuation and RIM rather than the valuation obtained when applying the Market Approach, due to the difficulty finding companies that were comparable to SQM because of its size and business model.

Although SQM's production is based mainly in Chile, its financial statements are expressed in US dollars, which is their functional currency. Consequently, we developed our financial models in dollar terms, and used a dollardenominated discount rate. We calculated SQM's stock target prices using the spot FX rate at the valuation date of 785.5 CLP/US\$.

To find SQM's price range, we made two sensitivity analyses, first using WACC and terminal growth rate and other using WACC and the estimated price of Lithium.

### **INCOME APPROACH - DCF Model 5 Year**

We developed a 5 DCF model with 5 years of explicit projections and then we used a Gordon model to derive the terminal value. We also used mid-year convention to present value the future cash flows (Table 4).

The DCF model with 5 years of projections was combined with a perpetual growth of 2.85% to derive the estimated value of the business. The long-term growth rate was calculated as the reinvestment rate of the last year of the discrete period multiplied by the Return of Capital. The financial projections were made based on historical financial performance, research in the public domain, and Company guidance. Revenues were estimated per business line: Lithium, Potassium, Specialty Plant Nutrition, Industrial chemicals, and Iodine. We derived a target price from DCF of CLP 28,766 after dividing the estimated market capitalization (calculated as EV less Debt) by the number of total shares of the Company at valuation date (Appendix D1).

WEIGHTED AVERAGE COST OF CAPITAL (WACC) We estimated a Weighted Average Cost of Capital denominated in US dollars of 8.16% (Table 5). The cost of equity was derived using a modified CAPM model. We used a Country Risk Premium of 0.67% adjusted by the Relative Volatility of 1.25, a Size Premium of 0.89%, and a Company Specific Risk of 0.5%. We concluded with a cost of equity of 9.26% expressed in dollar terms. We used the 20-year US Treasury Bond Yield of 1.23% as the risk free rate at valuation date together with the 5.23% as the Equity Risk Premium (For more details and sources, see Appendix D2).

We sourced the levered beta from SQM comparables (Appendix D3). We segmented the comparable companies into two groups: Lithium and Other chemicals, to obtain a more accurate beta. We estimated the unlevered betas by calculating the median for both sets of comparable companies betas. We averaged these betas using a weight of 30.6% for Lithium and 69.4% for Other chemicals. Finally, we re-levered the beta using the historical capital structure of SQM (Debt to Equity ratio of 20%) rather than considering the median comparable capital structures as a proxy for the optimal financial structure. This because it was quite different from the historical data. Finally, we obtained a re-levered beta of 1.11. With all these procedures, the calculated cost of equity was 9.26%, expressed in dollar terms.

To develop the cost after tax of debt we used the term structure of interest rates for bonds with the same credit risk than SQM (BBB+). We furtherly adjusted this corporate rate by country risk, resulting in a 3.44% cost of debt before taxes expressed in dollar terms. We used the statutory corporate tax rate of 27% to calculate an after-tax cost of debt of 2,51%. We finally concluded with a WACC rate of 8.16% in US dollars (Appendix D2).

REVENUE GROWTH To forecast SQM's revenues for the next five years, we projected prices and quantities of Lithium, Specialty Plant Nutrition, Potassium, Iodine, Industrial Chemicals, and Others (Figure 18). To determine the quantity sold, we carried out an analysis between production (linked to the capacities it has and is expected to have for each business line until year 2025) and global demand (linked to the market share it has and is expected to have for each line of business until 2025) (Appendix D4). To calculate the trends in prices and demands and finally project the income until 2025, we used historical data from 2015, reports (mainly obtained from Bloomberg), and information provided by the CFO of SQM on this topic. It should be noticed that we expect the close of 2020 to be sort of pessimistic in comparison to the next years, which is justified with the pandemic and economic crisis. The estimated CAGR in total revenues (2020 - 2025) is 17%.

TERMINAL GROWTH RATE AND TERMINAL VALUE To calculate the terminal value of the Company, we used the cash flow of the last year of our valuation (Y2025) together with a long term growth rate as the reinvestment rate multiplied by the return on invested capital (Table 6). The ROIC was calculated by dividing the NOPAT in invested capital (debt plus equity) of 2019. The reinvestment rate was obtained by taking 2019's net reinvestment, which is calculated by adding the investment in net working capital plus the CAPEX minus the depreciation (all these values at 2019), then we divided this result in NOPAT (to obtain the reinvestment rate). Finally, we used the Gordon model perpetuity formula to calculate the terminal value of the company: MUS\$ 13,453,847 at 2025.

CAPEX AND DEPRECIATION To estimate the CAPEX for the next few years, we separated it into "Maintenance CAPEX" and "Expansion CAPEX" (Figure 19). The historical maintenance CAPEX was around US\$100 million, but we grew it to keep the relation of 2019's CAPEX-M/Depreciation until 2025. We calculated the expansion cost per ton for each business line, based on every capacity increase made since 2011. Then, we projected the capacity increases in tons based on SQM's announcements, news, and information provided by the CFO about future investments related to demand increases. Finally, we obtained the total expansion CAPEX by the sum of every business line's capital expenditures (Appendix C4 & C6).

To calculate future depreciation, we first estimated the property, plant and equipment at cost, through the sum of the PPE at the cost of the previous period and the current CAPEX. Then we determined based on a ratio of [depreciation of the year from the previous period / PPE at cost] the depreciation for the year, until 2025.

TABLE 7: RESIDUAL INCOME SUMMARY

RI SUMMARY - USD in millions	
PV Residual Income	\$ 7,100
(+) Current Shareholder's Equity	\$ 2,123
Implied Equity Value	\$ 9,223
Share Price (USD)	\$ 35
Share Price (CLP)	\$ 27,526

**TABLE 8: FINANCIAL MULTIPLES** 

	LITHIUM	OTHER CHEMICALS
EV/EBITDA	27.4x	9.7x
P/E	48.5x	20.1x

**TABLE 9: MA SUMMARY** 

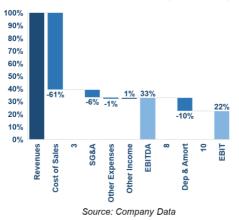
MARKET APROACH			
MULTIPLE USED PRICE			
EV/EBITDA	\$	37.2	
P/E	\$	29.5	
Share price (USD)	\$	33.4	
Share price (CLP)	\$	26,203	



■L&D ■SPN ■I&D ■P ■IC ■Others

FIGURE 20.2: HISTORICAL GROSS PROFIT MIX 50% 48% 46% 44% SSU. 42% Ligit W24 \$300 38% So 5 \$200 34% \$100 32% \$-2017 2019 2015 2016 2018 ■L&D SPN ----I&D -% Gross Margin
Source: Company Data

FIGURE 21: COST BRIDGE 2019 (as % of Sales)



To calculate a projection of the depreciation, per year, we first estimated the PPE at cost, through the sum of the PPE at cost  $_{t-1}$  and the current CAPEX $_t$ . Then we determined the depreciation expenses (2020-2025) by maintaining the ratio [depreciation  $_{2019}$ / PPE at cost  $_{2018}$ ] for the next years, using the PPE at cost previously calculated.

**INVESTMENT IN NET WORKING CAPITAL** We calculated the investment in net working capital by projecting the operating assets using the "days" methodology, like Accounts Receivable Days, Accounts Payable Days, and Inventory Days. To forecast, we used the average days of the previous years in every account. With this, we estimated the Working Capital for the next five years. The variation was used in the DCF model. It should be mentioned that we did not consider the "cash" as operational (Appendix C3).

### **INCOME APPROACH - RESIDUAL INCOME MODEL (RIM)**

We used this model to justify the absolute valuation and recommendation obtained with the DCF Model, plus, this model can be very useful to determine if a company is creating value or not. If SQM is generating more income than its cost of capital, is creating value.

To estimate the SQM stock price using this model, we projected the balance of SQM for the next five years (Appendix C1). We used the Net operating Assets, Debt, and Shareholder's Equity plus Operating Income, Interest expenses, Taxes, and Dividends paid. Then we calculated the earnings to retain minus the equity retribution to obtain the residual income from 2020 to 2025.

It should be mentioned that the shareholder's equity and debt are expressed in book value terms. The cost of debt used was the effective rate in book value and the cost of equity was the one obtained with CAPM. Also, to calculate the equity retribution, we determined the shareholder's equity, which was projected as the sum of the equity book value from the previous period plus the profit to be retained, to finally multiply it by the cost of using the equity (Appendix D6). Finally, we discounted the residual income for each year to September 30<sup>th</sup>, 2020 plus the terminal value discounting a terminal cost of equity of 10.6% and using a 2% growth rate. With all of these estimations, we calculated the price of CLP 27,526 with RIM (Table 7).

### MARKET APROACH - IMPLICIT MULTIPLES FOR LISTED COMPARABLE COMPANIES

To perform this valuation, we defined a set of listed public comparables for SQM. We grouped these comparables into two different groups: "Lithium" and "Other chemicals" (Appendix D7). We filtered these comparables by size, EBITDA margin, and EBIT margin. We used two trading multiples and then calculated the average of these multiples on both sets: EV to EBITDA and Price to Earnings. In specific, we used the Fiscal Year 1 (2021) and Fiscal Year 2 (2022) of these multiple groups and averaged them to obtain just one value of EV/EBITDA and P/E for each category. Then, we calculated the EBITDA and Earnings for SQM, using the forecast of 2021 and 2022, and averaged them to obtain one value of EBITDA and Earnings for SQM (Appendix D8). Finally, we calculated two different prices using a weighted average for each multiple, depending on the weight in gross profit. In specific, we use 43% in Lithium and 57% in Other chemicals. Then we averaged the two prices and obtained a CLP 26,203 stock price (Table 9).

It should be noticed that in the case of the "EV to EBITDA" multiple we obtained the enterprise value of SQM first, then we subtracted the debt and divided by the number of shares to calculate the stock price.

### 6. FINANCIAL ANALYSIS

## REVENUE STRUCTURE

SQM's revenues are determined by the market price of the commodities traded and the quantity sold. Historically, revenues have been increasing, with a CAGR of 2% from 2015 to 2019, however, the composition of this account has varied according to how much each business line has contributed.

In 2015, potassium took a strong position in the company, becoming the second largest contribution to income after SPN. For 2019, lithium occupied this place, due to its strong growth driven by the development of the electric vehicle that implied a significant increase in demand and a historical rise in sales prices.

By 2025, we expect that lithium sales will grow (CAGR 2020-2025 of 43%) being the main actor in SQM's revenues, which will be driven by the inevitable massification of electric vehicles in the world that will also push the price up (Figure 20).

Revenues in the IC business line were unstable in 2019 (CAGR 2015-2019 of 1%). However, the development of the new product, Solar Salts, has increased sales for 2020 due to the establishment of contracts with the Middle East that ensure the sale of this product for the following years. For 2025, we project that the demand will continue growing, following the average growth of energy demand, considering that SQM is positioned as the only player of this product in the world.

For SPN, we expect for 2020 to return to its historical growth and remain stable for the following years, driven by the global economic growth and agriculture development.

For Iodine and Derivatives, SQM is developing capacity expansion projects that will allow an increase in sales growth by 2025. However, an imminent increase in world supply is also expected, which will drive a drop in projected prices for this commodity, affecting the potential rise in revenues, achieving a CAGR 2020-2025 of 7% (compared to CAGR 2015-2019 of 2%).

The Potassium business line has lost relevance in revenues from 2016 to 2019 and it is projected that this trend will continue for 2025 since a large part of the potassium production was redirected to the production of Solar Salts.

### **COST STRUCTURE**

In 2019, SQM's main costs were lodine and derivatives, which represent 43% of total COGS, but we expect that this percentage will go down to 32% of COGS in 2025. On the other hand, we expect that the cost of Lithium and derivatives will increase in relation to total COGS, representing 22% of total costs in 2019 to 33% in 2025. This can be explained because the capacity increase expected in Lithium for the next few years, rising revenues, and Lithium costs. SQM's COGS include labor costs and depreciation, but to make a better analysis, we separated them from the depreciation (Figure 21).



In general, the 2019 total COGS (without depreciation) represents 61% of total revenues, implying a gross margin of 39%. We believe that this relationship is going to decrease in the next few years, because of the CAPEX investments that they do every year, especially the last ones. This seems possible because SQM is 44% & constantly working on being more productive and efficient, increasing the revenues by selling more quantity but 42% figmaintaining the cost levels, or decreasing them but maintaining the quantity sold at certain levels. SQM has lower costs than the median competitors because of its vertical integration, economy scales, and product diversification, mainly. We can notice that gross profit per business line has change in weight through the years. For example, in 2015, SPN was the most relevant in SQM's gross profit, but then L&D started being the leader between the business lines (Figure 20.2).

If we see the expected growth in costs for the next five years, we can notice that the CAGR between 2020 and 2025 is 13%, a lot more than the previous five years where CAGR (2015-2019) was 5%. However, this can be explained by seeing the CAGR in revenues previously mentioned. We believe that this growth is organic because the costs are increasing less than the revenues, relatively (Appendix C2).

### **PROFITABILITY**

The EBITDA margin went down from 39% in 2018 to 33% in 2019 explained by the sales decrease. The median of the EBITDA margin was 36% in the last five years. The 2020's EBITDA margin is expected to decrease because of the pandemic situation. Anyway, we provide this margin to increase in the next five years to reach 42% in 2025, representing a CAGR (2020-2025) of 7%. This maintains a similar relation with gross margin, because GAVs, Other Revenues, and Other Expenses are accounts that move, mainly, with changes in sales (Figure 22.2).

2019's EBITDA was US\$ 637,295 and EBIT was US\$ 435.095, representing a 33% of EBITDA margin and 22% of EBIT margin. The EBIT margin's median of the previous years was 23%, so the results in this margin were lower than the last years because the depreciation remained stable, but the revenues went down in 2019, implying a drop in EBIT margin (Figure 22).

The net profit for 2019 was 14.8%, the lowest since 2016 (Appendix C8). The CAGR for the last five years was 2,53%, reduced because of the lower results in 2019. We can notice that 2015 and 2019 were bad years for SQM, but in 2017 and 2018, for example, they had better outcomes reaching a Net profit of 29%. We expect that 2020's net profit will go down because of the economic crisis, but we also expect this margin to improve from 11.2% in 2020 to 24.68% in 2025.

### FIGURE 22.2: SQM'S EBITDA \$2,000 \$1.800 39% \$1,400 \$1,200 37% 35% \$1,000 33% \$800 \$400 20208 2019 20218 2018 2022

-EBITDA MARGIN

Millions USD

\$600

### FIGURE 23: DEBT STRUCTURE 2015 - 2019

Source: Company Data and Team Analysis

■EBITDA -



### **TABLE 10: BOARD MEMBERS**

BOARD OF DIRECTORS			
Alberto Salas	George Bourbuignon		
Patricio Contesse	Laurence Golborne		
Hernán Buchi	Gonzalo Guerrero		
Robert Zatta	Francisco Ugarte		

Source: Company Sustainability Report

### LIQUIDITY AND SOLVENCY ANALYSIS

Before developing the liquidity and solvency analysis, it's important to notice that SQM has limits and conditions about the capital management of the company. In specific, the 2019's annual memory explains that: "Capital management must comply with, among others, the limits contemplated in the Financing Policy approved by the Shareholder's Meeting, which establish a maximum consolidated indebtedness level of 1.5 times the debt to equity ratio". In other words, SQM's debt cannot be more than 1.5 times the equity. The only way this can be possible, it's through an express approval at an Extraordinary Shareholder's Meeting.

In the last year, SQM has increased its long-term debt to finance the expansion projects related to lithium, nitrates, and iodine, which is why the Debt to Equity ratio has increased slightly from 63.33% in 2018 to 85.16% in 2019. The 2019's annual memory explains that they have a strong balance sheet with low debt levels in relation to their cash generation and high liquidity and this will allow them to reach their expansion goals without problem. While this is true, SQM needs to be careful and not abuse increasing the debt too much, because they have a dividend policy that allows them to have a payout ratio of 100% or even to give extraordinary dividends.

A common ratio to analyze the SQM's liquidity is Current Liquidity (Current Assets/Current Liabilities), which has been stable in the last five years, but in 2019 this ratio went down from 4.32 to 3.45. In SQM's dividend policy, it is explained that one of the conditions to distribute 100% of SQM's earnings is to maintain this ratio above 2.5. In our Balance Sheet projection, we expect that SQM's is never going to pass the ratio's limit. If we see the Acid Test ratio [(Current Assets - Inventories) / Current Liabilities] the analysis is similar; it went down from 2.68 to 2.19, because of the reasons already mentioned.

If we notice the indebtedness ratios, like Liabilities/Total Equity, we can see that it has been increasing year by year, at least from 2016 (83%) to 2019 (119%). This ratio needs to be lower than 150% to distribute all the Net Profit in dividends. However, we expect that SQM is going to continue taking debt to finance the capacity expansion provided. They need to take care and make sure that financing their operations by increasing debt is going to be worth it and improve the company's results. If not, SQM should reduce their payout ratio or change their Capital Management.

Analyzing the company's solvency, we separated in other two important ratios: Short-term debt to total debt ratio (Current liabilities / Total debt) and Long-term debt to total debt ratio (Non-current liabilities / Total debt). In first place, the STD to TD has increased 17% in the last year from 0.26 to 30.5. On the other side, the LTD to TD ratio has decreased 6% from 73.9 in 2018 to 69.5 in 2019. This is because the company took a long-term debt during 2019, around USD\$ 520 million (Figure 23). They mentioned that: "since the Current Liabilities (CL) increased in the aforementioned manner, and the Non-Current Liabilities (NCL) increased by US\$198 million (12.6%), mainly explained by the increase in Other Non-Current Financial Liabilities of US\$189 million. [...] the Total Liability can be seen increased by US\$419 million while the equity was held almost constant, causing the ratio to increase."

### **TABLE 11: DUPONT ANALYSIS** ROE DESCOMPOSITION

	2015	2016	2017	2018	2019
Net Profit Margin	13,1%	15,6%	20,1%	20,2%	14,8%
Asset Turnover	0,4x	0,5x	0,5x	0,5x	0,4x
ROA	4,9%	7,2%	10,1%	10,7%	6,1%
Equity Multiplier	1,93	1,83	1,91	2,00	2,19
ROE	9,4%	13,1%	19,3%	21,4%	13,5%
Source: Company Data					

# **DUPONT ANALYSIS**

By analyzing SQM's ROE, we can see that it was growing steadily from 2015 to 2018, but in 2019 decreased to 13%. The implied variables and changes that affected 2019's ROE will be detailed down below:

TABLE 12: VALUATION SENSITIVITY SUMMARY TABLE

	WACC(%)			
(%		7,28%	8,16%	8,76%
TERMINAL GROWTH (%)	2,00%	\$29.065	\$26.985	\$25.896
	2,85%	\$31.392	\$28.593	\$27.186
	3,00%	\$31.891	\$28.926	\$27.450

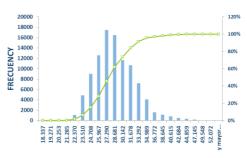
Source: Team Analysis

TABLE 13: VALUATION SENSITIVITY SUMMARY TABLE

	WACC (%)			
\$		7,28%	8,16%	8,76%
\$ asn	USD 11.000	\$27.544	\$25.181	\$23.993
E	USD 11.500	\$29.145	\$26.600	\$25.322
PRI	USD 12.204	\$31.392	\$28.593	\$27.186
Σ	USD 13.000	\$33.923	\$30.837	\$29.287
LITHIUM PRICE	USD 14.000	\$37.092	\$33.646	\$31.915
=	USD 16.500	\$44.962	\$40.620	\$38.440

Source: Team Analysis

FIGURE 24: MONTE CARLO SIMULATION



Source: Team Analysis

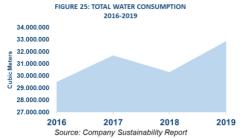
**TABLE 14: INVESTMENT RISKS** 

MARKET RISK	MITIGATOR
Commodity Prices	Long term contracts
Increase in Supply	Reduction of costs

OPERATION RISK	MITIGATOR
Concessions	Negotiation of terms
Project risks	Market studies
Water Supply	Use of seawater

LEGAL RISK	MITIGATOR
Environmental	Monitoring impact operations
New Constitution	No mitigator

FINANCIAL RISK	MITIGATOR
Exchange rate	Financial derivatives
Credit and Liquidity	Insurances / Liquidity ratio
Interest rate	No mitigator



Profit Margin was increasing from 2015 to 2018 reaching 20% (Table 11), due to the growth in revenue, higher sales volumes, and the increase in commodity prices, mainly lithium. At 2019, there was a strong drop explained by lower sales volumes and by the decrease in prices. We expect this indicator to improve for the next few years, driven by global economic recovery.

Analyzing the Asset Turnover, we found an upward trend until 2018 explained by the revenue increase already mentioned, in contrast to Total Assets that didn't show major variations. In 2019, they realized capacity increases in different business lines, which explains the increase in assets besides the sales decrease. These two situations explain the ratio results in 2019. This year we expect that this indicator remains low because of the new PPE's investments and the drop in sales. However, for the next few years, we projected that the expansions will achieve increasing SQM's sales, impacting it positively and reaching historical levels in this indicator.

SQM's indebtedness, measured by the Equity Multiplier, has been increasing until 2019, justified by the financing of expansion projects with debt above their own resources, in which the last ones have been destined for the dividends distribution. We expect for 2020 and the next five years that the ratio will continue increasing, because of SQM's dividends distribution policy and financial needs, which are explained by expansion schedule.

### **SENSITIVITY ANALYSIS**

We made two sensitivity analyses based on different important variables that affect the valuation and would change the recommendation. First, we sensitized by WACC and terminal growth rate, these affect mainly the DCF model, and in consequence, the price sock of SQM (Table 12). In specific, we used the calculated WACC for ten (7.28%), twelve (8.16%), and thirty years (8.76%) and the terminal growth rates: 2% (expected inflation rate of USA), 2.85% (terminal growth rate actually used in DCF model) and 3% (expected inflation of Chile). With this, we obtained a maximum SQM's stock price of CLP 31,005, and a minimum of CLP 25,060. With our current growth rate of 2.85%, the WACC needs to increase to 8,76% to change our recommendation to SELL and decrease to 7.28% to change it to BUY. On the other hand, with our current 8.16% WACC, the terminal growth rate must decrease to 2% to make a SELL recommendation and even when the growth rate is 3%, the recommendation stills in HOLD.

Besides that, we considered that our RIM and DCF models are very sensitive to changes in Lithium prices. This is why we made another sensitivity analysis table with WACC (the same rates previously mentioned) and Lithium price, going from US\$ 11,000 to US\$ 16,500 (The price we used in the valuation was US\$ 12,204). The results are very extremist because the maximum stock price was CLP 43,926 and the minimum was CLP 23,214 (Table 13).

### MONTE CARLO SIMULATION

We did a Monte Carlo Simulation to understand the sensibility of our model to variations in our variables. We ran 1,000,000 simulations considering possible variations in the most important variables and we assumed a Normal Distribution. We conclude that 63% of the simulations are above the current market price. And there is a 22% probability that the recommendation changes to SELL. Along with the Sensitivity Analysis, we can notice that Lithium price is the key variable of our model. The uncertainty difficulties the idea of a price in the future with less dispersion, which impacts directly in SQM revenues, and earnings (Figure 24).

### 7. INVESTMENT RISKS

### **OPERATION RISKS**

[01] RENEWAL OF CONCESSIONS As we mentioned earlier, SQM has a concession that ends in December 2030; this is the contract in Salar de Atacama. Failure to renew these rights could have a significant adverse effect on the business, specifically in the potassium and lithium business lines (Table 15)

Mitigant: The negotiation for the renewal of the concession will begin long before 2030, however, it cannot be guaranteed that a successful agreement will be reached. This negotiation could involve modifying any of the terms and conditions, including, but not limited to, lithium and potassium extraction limits and lease payment calculations.

[O2] PROJECT RISKS AND ISSUES SQM's business requires a large capital investment, due to constant development in projects that have as purpose increase the production levels on the different business lines, however, unexpected problems and delays may be experienced during development, construction, and commissioning. Caused for example by environmental permits. A delay in future projects considered in the valuation, such as the increase in lithium and iodine capacity, would harm the projected income level for the years 2020-2025.

Mitigant: Carry out market studies to ensure the viability, future profitability, and synergies that the project can generate.

[O3] WATER SUPPLY For SQM's operations, access to water is essential and this can be affected by several natural factors that are not controllable (Figure 25).

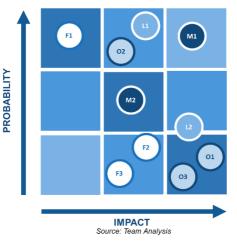
Mitigant: Process of developing a project that will use seawater, however, this could increase operating costs.

### **MARKET RISKS**

[M1] VOLATILITY OF COMMODITY PRICES The prices for most of SQM's products are determined by world prices (supply and demand). In recent years these have presented significant volatility, as they are linked to global economic cycles. Also, it is important to notice that the supply of lithium, certain fertilizers, and chemical products, varies by the different levels of production of the largest producers, including SQM. This has an impact on prices.

Mitigant: Long term contracts with customers to fix the prices and reduce the risk.

**FIGURE 26: RISK MATRIX** 



**TABLE 15: CONCESSIONS** 

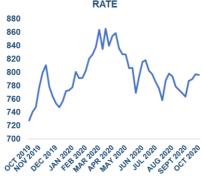
Number of concessions for region			
REGION	TOTAL NUMBER	<b>HECTARES</b>	
First	2.835	535.996	
Second	8.899	2.345.691	
Third and other	488	110.876	
Total	12.222	2.992.563	

Source: Company 20F Report



Source: Data Company

FIGURE 28: USDCLP EXCHANGE RATE



Source: Bloomberg

# FIGURE 29: INVESTMENTS IN ENVIRONMENTAL MATTERS



Source: Company Sustainability Report

[M2] RISK OF INCREASED SUPPLY OF COMMODITIES In recent years, new and existing competitors have increased the supply of iodine, potassium nitrate, and lithium, and this has harmed the prices of both products. If potential competitors are focused on increasing production in the short term, they can negatively affect market prices and the company's market share, which would result in a drop in SQM's revenues (Figure 27).

Mitigant: Constant investments in capital expenditures to increase SQM's efficiency, and consequently improve the profit margin, through cost reductions.

### **LEGAL AND REGULATORY RISKS**

**[L1] ENVIRONMENTAL LAWS AND REGULATIONS** In Chile, environmental regulations are increasingly stringent; the approvals of new projects and development of already approved projects. It is strongly believed that this trend will continue in the years to come. These can result in SQM having to incur higher costs, obligations, or lawsuits, which could have an adverse effect on their financial position and operations results. Mitigant: SQM is constantly monitoring the impact of their operations in the environment and in modifying its facilities to minimize these as much as possible.

**[L2] NEW CONSTITUTION RISK** The constitution in force as of 2020 ensures an operational capacity in the exploitation of natural resources for SQM. An eventual new constitution could modify the regulatory framework in terms of water, mining, and property rights. These regulations could have a material adverse effect on SQM's business, financial condition, and results of operations.

Mitigant: there is nothing they can do to avoid these changes and uncertainties.

**[L2.1] Lithium nationalization risk** The current constitution ensures SQM access to the legally agreed concessions for its operations. Currently, society is in public discussion to declare lithium as a resource of national interest, which can lead to a nationalization of the commodity and a potential expropriation of SQM deposits, this risk increases with a new constitution that could modify the regulation on natural resources in Chilean territory.

**[L2.2] Water rights risk** Currently, SQM has water use rights that are key to its operations, however, with this change in the constitution the water supplies from rivers and wells near the facilities could be affected in relation to the amount and cost of extraction. In the same way, a bill for the desalination of seawater for mining production processes could be affected, which would have repercussions on future projects that have a purpose to use this desalinated water for the production of iodine.

### **FINANCIAL RISKS**

**[F1] EXCHANGE RATE RISK** SQM's costs are, for the most part, in Chilean pesos, however, its income is generated in dollars. This creates a currency mismatch, leaving the company exposed to exchange rate risk. In recent years, the Chilean peso has faced significant fluctuations (Figure 28). Currently, it has depreciated a lot against the dollar, in fact, during 2019 it was devalued by 7.8%. This strongly affects their operational results, as it is not something they can directly control. It is important to note that, although the dollar is the most used foreign currency for business, it is not the only one. They also trade in the euro, South African rand, Mexican peso, Chinese yuan, and Brazilian real.

Mitigant: they incurred in open options, forward exchange contracts, cross-currency swaps, and open forwards contracts to sell euros, South African rands, and US dollars.

**[F2] CREDIT AND LIQUIDITY RISKS** A global economic downturn could affect the payment terms of SQM's receivables by increasing its exposure to credit risk. On the other hand, an economic recession could generate a risk of liquidity for the company, related to the funds needed to respond with obligations.

Mitigant: the company maintains meticulous control of the collection and uses credit insurances, prepayments, and credit letters. Also, they maintain a high liquidity ratio in order to cover current obligations and they have a capital expenditure program.

**[F3] INTEREST RATE RISK** Important increases in interest rates would create difficulties in accessing financing with attractive rates for future investment projects. To the year 2019, SQM had approximately 4% of its financial debts at LIBOR, so significant increases in this would impact its financial condition.

### B. ENVIRONMENTAL, SOCIAL, AND GOVERNANCE

It is important to know how SQM handles socially responsible investing (ESG), an investment discipline that considers environmental, social and corporate governance criteria, that affects the short and long-term prospects of the company.

### **ENVIRONMENTAL**

All of the company's projects are subject to an Environmental Impact Assessment System. At the end of 2019, the company had 62 projects with environmental authorization (Appendix E2). Besides, the company has made strong investments in environmental matters, reaching US\$17,063 thousand in 2019, US\$19,877 thousand in 2018, and US\$15,255 thousand in 2017. Of the US\$17,063 thousand disbursed in 2019, 39.6% corresponded to Sustainability, environmental monitoring and mitigation measures, 31.95% to Improvements in environmental, hygienic, and sanitary conditions, another 4.89% to Environmental assessments, and finally 1.07% to Management of hazardous substances (Figure 29).

The company has a Sustainable Development Policy, which aims to "establish a commitment as a company to develop our work in a sustainable manner with our stakeholders and the environment, and to carry out our work under the principle of continuous improvement of our environmental and quality management systems".

WATER Company's measures for the efficient use of this resource are the recirculation of treated water from its wastewater treatment plants and recirculation of process solutions that reduce the consumption of freshwater. Also, they have made use of industrial water suppliers, which come from the treatment of domestic water that has allowed SQM to supply a large part of the water required in the Lithium industry. Part of the necessary consumption is supplied by desalinated seawater, because the extraction of freshwater for productive purposes has strict environmental assessments, given the shortage affecting the area (Appendix E3).

WASTE SQM has eight warehouses for the temporary storage of hazardous waste, which are authorized by the Regional Ministry of Health, and six more warehouses for the temporary storage of non-hazardous industrial

TABLE 16: ENERGY CONSUMPTION SUMMARY

ENERGY CONSUMPTION (GJ)				
Energy / Year	2019	2018		
Solar Energy	57.952.904	98.312.397		
Electric	1.863.344	1.757.533		
Diesel	1.434.766	1.175.611		
Natural Gas	2.238.568	674.393		
Liquefied Gas	113.428	129.755		
Búnker	28.740	515.583		
Gasoline	660	426		
Total	63.632.410	102.565.698		

# FIGURE 30: SQM'S WORKFORCE



Source: Company Sustainability Report

# FIGURE 31: BOARD OF DIRECTORS

SQM'S FEMALE PARTICIPATION



SQM'S FEMALE PARTICIPATION EXPECTED

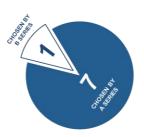


FEMALE PARTICIPATION MINING INDUSTRY



Source: Company Sustainability Report

### **FIGURE 32: BOARD OF DIRECTORS**



Source: Company Sustainability Report

waste. There is also a place for the disposal of domestic waste generated by the operations. Of the total amount of industrial hazardous waste in 2019, the company sent 82% to final disposal, while the rest was recycled or used for energy recovery (Appendix E4).

**EMISSIONS** SQM seeks to control the emissions of its operations through the prediction of their identified environmental effects, the installation and implementation of abatement equipment, and the monitoring of emissions. In María Elena, since 2007 they have achieved a 97.8% reduction of PM10 emissions in the area's production plant. In Tocopilla, the commitments for atmospheric decontamination in the area have been met, reducing emissions by 37% in 2019 compared to 2007. In relation to Greenhouse Gases, the total of SQM's Carbon Footprint during 2019 was 647,209 tons of CO2 equivalent (Appendix E5).

**ENERGY** SQM covers a large part of its energy needs with solar energy, which is indispensable in the production processes of solar evaporation pools. The energy that the company used in 2019 for its operations was divided into, 91.22% solar energy, 2.93% electric energy, 2.26% diesel, 3.52% natural gas, 0.02% liquid gas, 0.05% bunker, and a minimum amount with gasoline, all for a total of 63,530,330 GJ (Table 16).

### SOCIAL

SQM promotes integrity in the company, which corresponds to one of its 3 fundamental values, which are designed to create shared value for all stakeholders. The way to translate this value to the company as a whole is through an ethics and compliance department, which is in charge of managing conflicts of interest, establishing policies that support the ethics code, and also assumes responsibility for the channel of support and complaints from SQM (93 complaints were received in 2019). To strengthen commitment and relationships with workers, the VIVO program was established, which celebrates their different achievements (Figure 30).

SQM established a diversity and inclusion policy, which aims to **PROMOTE AN INTERNAL CULTURE OF DIVERSITY AND NON-DISCRIMINATION**. The company has more than 30 nationalities, which corresponds to 467 foreign employees.

**TO FOMENT EQUAL OPPORTUNITIES**, for which reason a mobility program was created that promotes the development and job growth of workers within the company.

FACILITATE THE GRADUAL INCORPORATION OF PEOPLE LIVING WITH DISABILITIES, the goal of the company is to go beyond the disability law and exceed the 1% required, and this has been complemented with suitable infrastructure, inclusive events, and workshops of employability aimed at developing soft skills. Additionally, SQM works with various institutions that seek to socially integrate people with physical and intellectual disabilities and people who suffer from Autism Spectrum Disorders (ASD).

**EXPAND FEMALE PARTICIPATION** By 2019, 16.4% of total employees were women, which is above the 12% average for the mining industry, however, SQM has a goal for 2021 to increase this participation to 20%.

In relation to customers, SQM serves markets with a high level of sophistication and demand, so to ensure their satisfaction, regular visits are made by the sales team, and then a corresponding report is made. The company has implemented quality management systems, review, and continuous monitoring of the performance of indicators, quality complaint systems, and a platform that helps to have a 360 ° view of lithium and iodine customers (Figure 31).

Finally, it is important to consider how SQM deals with the community. For the villages near the operations, a work guided by four lines of action has been focused, corresponding to education and culture, social development, historical heritage, and healthier life, in a complementary way to these measures, SQM contributed in 2019 an amount of US \$ 3,090,988 which were delivered to the different municipalities in the area, which corresponds to 1.7% of sales, a percentage that must be contributed until 2030 by the Corfo contract. Additionally, US\$ 14 million must be provided for investment projects and promotion of sustainable development of the communities and a contribution of US\$ 10.8 million for the Center for Clean Technologies (R&D) of Antofagasta.

### **GOVERNANCE**

SQM has a board of directors with 8 members, 7 of which are elected by type A shareholders, and only 1 by type B shareholders; every 3 years (Figure 32). Nowadays, this is composed of the president, Alberto Salas, the vice president, Patricio Contesse, and 6 other directors (Appendix E8). This board of directors is subdivided into 3 committees: Audit and Financial Risk Committee, Corporate Governance Committee, and Safety, Health and Environment Committee (Appendix E9).

AUDIT AND FINANCIAL RISK COMMITTEE is made up of 3 directors, who must meet at least 4 times a year, to control in the best possible way the financial risks that the company faces.

SAFETY, HEALTH, AND ENVIRONMENT COMMITTEE is made up of 3 directors, who must meet at least 4 times a year to give recommendations on matters of safety, health, care for the environment, and sustainability. CORPORATE GOVERNANCE COMMITTEE is made up of 3 directors, who must meet at least twice a year to give recommendations on possible modifications that may be made to corporate governance, such as succession plans.

Senior management positions include the CEO, CFO, Legal Vice President, Vice Presidents for each line of business, Manager of Corporate Affairs, Internal Auditor, and Risk and Compliance Manager (Appendix E10). Compensation paid to senior executives during 2019 was US\$ 22.6 million. The detail of individual remunerations is not public; however, it is known that these have a large variable component as an incentive system, which is based, mainly, on individual performance, the performance of the company, and short-term indicators.

SQM ensures that decision-making is in accordance with its code of ethics. They put this into practice with their Ethics and Compliance Program, which establishes a set of policies that support the standards of the code. Within this program are policies against Bribery and Corruption, Free Competition, on Donations and Contributions, among others. The person in charge of enforcing these policies is the compliance officer, leader of the ethics and compliance department.

### **APPENDIX A1: SQM IN THE WORLD**

☐ Atlanta / USA

☐ Florence / Italy

☐ Beijing / China

□ Tokyo / Japan

□ Jackson / USA

□ Cadiz / Spain

Salar del Carmen,

Antofagasta

Tocopilla



Source: Company's Sustainability Report

Lithium Carbonate and Lithium Hydroxide

Production

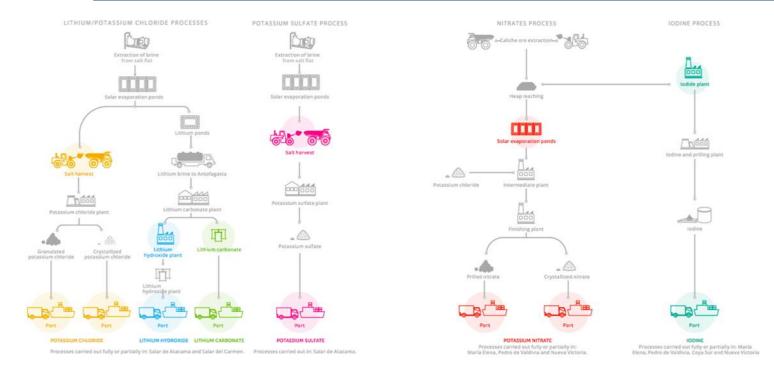
Port Installations

### **APPENDIX A2: PRODUCTION FACILITIES**

	PRODUCTION FACILITIES AS OF DECE	MBER 31, 2019	
INSTALLATION	TYPE OF INSTALLATION	NOMINAL PRODUCTION CAPACITY (thousands of metric tons/year)	
ya Sur	Nitrate Production	Potasio Nitrate: 1300 Crystallized Nitrates: 1200 Prilled Nitrates: 360	NUEVA VICTORIA
ría Elena	Nitrate and Iodine Production	Nitrates: n/a lodine: 1,6 lodine: 1,6	TOCOPILLA PEDRO DE VALDIVIA
ueva Victoria	Production of Concentrated Nitrate Salts and lodide	Prilled Nitrates: 300 lodine: 13	SA LA R DEL CA RMEN
mpa Blanca	Production of Concentrated Nitrate Salts and lodide	Nitrates: n/a lodine: n/a	
edro de Valdivia	Nitrate and lodine Production	Nitrates: n/a lodine: 3,2	
alar de Atacama	Production of Potassium Chloride, Lithium Chloride, Potassium Sufalt and Boric Acid	Potassium Chloride: 2680 Potassium Sulfate: 245 Boric Acid: 15	
alar del Carmen	Lithium Carbonate and Lithium Hydrovide	Lithium Carbonate: 70	

Lithium Hydroxide: 13.5

# **APPENDIX A3: PRODUCTION PROCESSES**



### **APPENDIX A4: DESCRIPTION OF CHEMICAL PROCESSES**



12: Iodine, NaNO3: Sodium Nitrate, KCL: Potassium Chloride, KNO3: Potassium Nitrate, LiCO3: Lithium Carbonate, LiOH: Lithium Hydroxide

# APPENDIX A5: PRODUCTS AND THEIR APPLICATIONS

BUSINESS LINES	PRODUCTS	PRODUCT APPLICATIONS
Lithium and Derivatives	Lithium carbonate and lithium hydroxide	Rechargeable batteries, special glasses, ceramics and tiles, special cements and adhesives, powders for continuous casting, industrial air conditioning, aluminum, lubricating greases and colorants.
Specialty Plant Nutrition	Chlorine-free potassium nitrate, 100% soluble.	Fertilizers for a wide variety of crops, for organic farming, foliar application and fertigation.
lodine and Derivatives	ACS / US / EP iodine	X-ray contrast media, human and animal nutrition, iodophores, biocides, pharmaceutical syntheses, LCD or LED screens, nylon fibers, fluorine polymers.
Potassium	Potassium Chloride and Chlorine Free Potassium.	Drilling fluids and metal recovery.
Industrial Chemicals	Thermo-solar salts, sodium and potassium nitrate, potassium sulfate, potassium chloride, sylvinite and bischophyte.	Explosives, glass, charcoal briquettes, metal treatment, ceramics and clay,

# APPENDIX A6: SQM'S CLIENTS

revenues.

Source: Company's web page

AT LINDIX AU. OQIN O OL	LILITIO		
	SQM's Customers	Specialty Plant Nutrition	2019
Product	Description	North America	34%
	In 2019 SQM sold to approximately 96 countries and to more than	Europe	21%
	1,100 customers. No customer represented more than 10% of	Chile	15%
	specialty plant nutrition revenues, and the ten largest customers	Central and South America (excluding Chile)	11%
Specialty Plant Nutrition	accounted in the aggregate for approximately 32% of revenues	Asia and Others	20%
	during that period. SQM's customers are located in both the northern and southern hemispheres. Consequently, we do not believe there	lodine and its Derivates	2019
	are any seasonal or cyclical factors that can materially affect the	North America	24%
	sales of our specialty plant nutrients.	Europe	33%
	sales of our specialty plant fruitients.	Chile	0%
		Central and South America (excluding Chile)	2%
	In 2019 sold iodine products in approximately 48 countries to approximately 279 customers, and most of SQM's sales were	Asia and Others	40%
lodine and Derivatives	exports. Two customers each accounted for more than 10% of	Lithium and its Derivates	2019
louine and Denvatives	iodine revenues in 2019. These two customers accounted for	North America	9%
	approximately 31% of revenues, and ten largest customers	Europe	15%
	accounted in the aggregate for approximately 75% of revenues.	Chile	0%
		Central and South America (excluding Chile)	1%
	In 2019 sold lithium products in approximately 45 countries to approximately 185 customers, and most of SQMs sales were to	Asia and Others	75%
	customers outside of Chile. Two customers each accounted for	Potassium	2019
Lithium and Derivatives	more than 10% of lithium revenues in 2019, accounting for	North America	20%
	approximately 34% of our lithium revenues. Ten largest customers	Europe	13%
	accounted in the aggregate for approximately 69% of revenues.	Chile	13%
		Central and South America (excluding Chile)	31%
	In 2019, SQM sold potassium chloride and potassium sulfate to approximately 514 customers in approximately 38 countries. One	Asia and Others	23%
Potassium	individual customer accounted for more than 10% of revenues of	Industrial Chemicals	2019
1 0(233(4))	potassium chloride and potassium sulfate in 2019, which represents	North America	29%
	approximately 12% of total revenues. Ten largest customers	Europe	16%
	accounted in the aggregate for approximately 44% of such revenues.	Chile	42%
	SQM sold industrial nitrate products in approximately 52 countries in	Central and South America (excluding Chile)	7%
Industrial Chemicals	2019 to approximately 277 customers. One customer accounted for more than 10% of revenues of industrial chemicals in 2019, accounting for approximately 37%, and ten largest customers accounted in the aggregate for approximately 59% of such	Asia and Others	6%

# APPENDIX B1: PORTER'S FIVE FORCES ANALYSIS



### The Porter's Five Forces

The Porter's Five Forces is a framework for analyzing a company's competitive environment.

Scale: [1] Insignificant threat [2] Low level threat [3] Moderate level threat [4] Material threat [5] Significant threat

Force	Description	
	The chemical and non-metallic mining industry has exhibited high barriers to entry. Some of these barriers are:  The scale economics that can be used to take advantage in these industries.	
	Huge <b>investments</b> in <b>capital</b> like machines, territories, treatment plants and others keep off new entrants, because of its high first investment plus high and constant CAPEX.	
Threat of new entrants: LOW [2]	Access to distribution channels: SQM has forward integration and this benefits the service distribution, saving on outsourcing costs.	
	<b>Public policies:</b> This type of companies are constantly on eye of the government, because of its impact on the environment, which makes it difficult for others to enter, because they have to comply with many parameters in order to follow the laws and other regulations.	
	The vertical integration of SQM and other companies, allows them to reduce their costs and gain other benefits, so they take advantage and prevent others from entering.	
Threat of substitutes: LOW [2]	The products that SQM offers are, mainly, commodities that are later manufactured in order to sell the final product. Because of this, the "raw materials" that this industry offers are difficult to replace, but not impossible, since a competitor could improve its chemical composition so that it presents better properties and benefits for customers.	
Power of customers: MODERATE [3]	Like it was previously mentioned, the industry that the company is involved in, the prices can not be managed by SQM, they are determined by the intersection of the offer and demand. The power of customers is relatively moderate, because they can negotiate with these companies making long term contracts and fixing prices for huge quantities of sales.	
Power of suppliers: LOW [2]	While SQM is fairly vertically integrated, there are a number of products that must be purchased from third parties. Some examples are: ammonium nitrate, sulfuric acid, kerosene, sodium carbonate, liquefied natural gas, electricity, among others. These are obtained through contracts with various suppliers from, mainly, Chile and the USA. These are long-term agreements and generally priced at a fixed price. On the other hand, it is important to mention that SQM is a much bigger company than its suppliers, so this threat is low because of this and due to the fixed price contracts.	
Competitive Rivalry: HIGH [4]	Depending on the commodity that we are talking of, is the competitiveness significance. In this industry it is hard to differentiate, so if Lithium has a lot of competitors, the competitive Rivalry is high because there is no way to differentiate the carbonate lithium of one company from another. However, if a client wants carbonate lithium and potassium nitrate, SQM can offer that, and other companies do not. In this case, the advantage here is to offer more than one commodity, to reduce the client's transaction costs. It should be mentioned that SQM competes in commodities that have low competitiveness, like solar salts.	

		SWOT AN	IALYSIS		
	STRENGTHS (+)			WEAKNESSES (-)	
SQM is vertically integrated, since it manages from the extraction to the last stage of production, which allows it to have the lowest costs in the industry	Diversification and positioning The fact that this company participates in different markets, allows it to have a wide range of clients from different industries	Worldwide leadership position in lithium, potassium, nitrate, iodine and thermosolar salts markets	The prices of most of SQM's products are determined by world prices (supply and demand). In recent years these have presented significant volatility, as they are linked to global economic cycles.	As the majority of SQM products are commodities, it is difficult for them to differentiate.	Strict and expensive environmental regulations
The company has its own network of representative offices throughout the world, which is concerned with serving as a link and storage center, allowing it to maintain stocks of products to facilitate the prompt delivery of them to customers	The company has made and plans to make large investments to expand its capacity, and thus maximize its competitive advantage of lower costs	SQM is the only supplier of solar salts for thermosolar plants	Possible agency problems, related to the fact that control of the company is concentrated in Julio Ponce Lerou, who does not have a respectable reputation within the Chilean business world.	Bad reputation in civil society, for unfair activities in their past, related to illegal financing of political campaigns.	There are several natural factors that are not controllable, which have implications with access to water for SQM's operations.
	OPPORTUNITIES (+)			THREATS (–)	
Large expected growth in demand for electric cars	Strong population growth, which will have an implication in an increase in specialty fertilizers, due to higher efficiency requirements in harvests	Possible unexplored deposits that can be exploited by SQM	The company is in public discussion to declare lithium as a resource of national interest, which could lead to a nationalization of the commodity and a potential expropriation of SQM's deposits.	The water supplies of rivers and wells near the facilities could be affected in relation to the amount and cost of extraction due to a possible change of constitution	Potential increase in the supply of iodine, potassium nitrate and lithium by SQM's competitors
Increase lithium production capacity, participating in the expansion of demand and taking advantage of the expected price increase at the same time.	Take advantage of new chemicals in the industry, due to its vertical integration and diversification in business lines	Position itself as an eco-friendly company	SQM has a concession that ends in December 2030; this is the contract in Salar de Atacama. Failure to renew these rights could have a significant adverse effect on the business, specifically in the potassium and lithium business lines	agricultural and non-metallic	Currently it is investing in cheaper forms of production of the electric car, which would hurt the demand for lithium

# **APPENDIX C: FINANCIALS**

# APPENDIX C1: BALANCE SHEET

BALANCE SHEET												
Assets	2015A	2016A	2017A	2018A	2019A	2020E	2021F	2022F	2023F	2024F	2025F	
In Millions of USD												
Current Assets												
Cash and cash equivalents	527	515	630	556	589	682	666	616	540	427	295	
Other curent financial assets	636	289	367	313	505	431	421	389	342	270	187	
Other current non-financial assets	47	30	27	49	51	40	45	51	60	73	90	
Trade and other receivables	302	369	447	467	399	364	409	465	547	664	819	
Trade receivables due from related parties	100	82	59	45	61	36	41	47	55	66	82	
Current Inventories	1.004	993	902	914	983	1.091	1.122	1.243	1.404	1.619	1.884	
Current tax assets	65	55	32	57	91	47	52	60	70	85	105	
Total current assets other than those	2.682	2.333	2.465	2.400	2.680	2.692	2.757	2.871	3.017	3.205	3.463	
classified as held for sale or disposal	2.662	2.333	2.465	2.400	2.660	2.632	2.757	2.671	3.017	3.205	3.463	
Non-Current assets or groups classified	0	2	2	1	2	32	32	32	32	32	32	
as held for sale	U	2	2	1	2	32	32	32	32	32	32	
Total non current assets held for sale	0	2	2	1	2	32	32	32	32	32	32	
Total currents assets	2.682	2.335	2.466	2.401	2.682	2.725	2.789	2.903	3.049	3.237	3.495	
Non current assets												
Other non current financial assets	0	14	43	17	9	21	21	21	21	21	21	
Other non-current non financial assets	34	25	19	28	20	19	19	19	19	19	19	
Trade receivables, non current	1	2	2	2	2	3	4	4	5	6	7	
Investments classified using the equity	79	133	153	112	109	72	72	72	72	72	72	
method of accounting	19	100	100	112	103	12	12	12	12	12	12	
Intangible assets other than goodwill	110	109	114	188	188	188	188	188	188	188	188	
Goodwill	38	38	38	35	35	35	35	35	35	35	35	
Property, plant and equipment	1.684	1.533	1.429	1.455	1.607	1.649	1.739	1.765	1.807	1.773	1.735	
Tax assets, non current	15	29	32	32	32	32	32	32	32	32	32	
Total non current assets	1.961	1.884	1.830	1.868	2.002	2.019	2.109	2.136	2.179	2.146	2.109	
Total assets	4.644	4.219	4.296	4.270	4.684	4.743	4.898	5.040	5.228	5.383	5.604	

Liabilities	2015A	2016A	2017A	2018A	2019A	2020E	2021F	2022F	2023F	2024F	2025F
In Millions of USD											
Current Liabilities											
Other current financial liabilities	402	179	220	24	299	216	228	231	237	232	227
Trades an others payables	137	200	196	164	206	190	208	231	261	301	350
Trade payables due to related parties	0	0	1	0	0	1	1	1	1	1	0
Other current provisions	32	42	63	106	111	86	96	109	128	156	192
Current tax liabilities	52	76	75	47	18	37	47	60	81	114	161
Provisions for employes benefits	10	21	22	20	16	28	25	26	32	42	49
Other current non financial liabilities	70	62	169	195	127	112	134	168	193	223	276
Total current liabilities	703	580	748	556	777	669	739	826	933	1.068	1.256
Non-Current liabilities	0	0	0	0	0	0	0	0	0	0	0
Other non-current financial liabilities	1.290	1.093	1.032	1.330	1.519	1.715	1.809	1.837	1.880	1.845	1.805
Other non-current provisions	9	9	30	32	35	35	35	35	35	35	35
Deferred tax liabilities	219	206	205	175	183	172	161	183	215	261	322
Provisions for employes benefit, non curren	22	23	34	37	36	28	31	35	42	51	62
Total non-current liabilities	1.540	1.331	1.301	1.575	1.773	1.950	2.036	2.090	2.172	2.192	2.225
Total Liabilities	2.243	1.911	2.049	2.130	2.550	2.620	2.775	2.916	3.104	3.259	3.480
Equity	2015A	2016A	2017A	2018A	2019A	2020E	2021F	2022F	2023F	2024F	2025F
Equity attributable to owners of the Pare	nt										
Share capital	477	477	477	477	477	477	477	477	477	477	477
Retained earnings	1.882	1.782	1.725	1.623	1.623	1.623	1.623	1.623	1.623	1.623	1.623
Other reserves	(20)	(13)	(14)	(15)	(14)	(25)	(25)	(25)	(25)	(25)	(25)
Equity attributable to owners of the Parent	2.340	2.246	2.188	2.085	2.086	2.075	2.075	2.075	2.075	2.075	2.075
Non Controlling interest	61	61	60	52	48	48	48	48	48	48	48
Total Equity	2.400	2.307	2.247	2.138	2.134	2.123	2.123	2.123	2.123	2.123	2.123
Total Liabilities and Equity	4.644	4.219	4.296	4.268	4.684	4.743	4.898	5.040	5.228	5.383	5.604

# APPENDIX C2: INCOME STATEMENTS

			INCOM	ME STATE	MENT						
	2015A	2016A	2017A	2018A	2019A	2020E	2021F	2022F	2023F	2024F	2025F
In Millions of USD											
Revenues	1.728	1.939	2.157	2.266	1.944	1.852	2.079	2.366	2.780	3.374	4.165
Cost of Sales	(914)	(1.078)	(1.156)	(1.264)	(1.181)	(1.172)	(1.289)	(1.427)	(1.612)	(1.859)	(2.164)
Gross Profit	814	861	1.001	1.002	762	681	790	939	1.168	1.515	2.002
Other Income	15	15	18	32	18	20	20	20	20	20	20
Administrative Expenses	(87)	(88)	(101)	(118)	(117)	(112)	(125)	(143)	(168)	(203)	(251)
Other Expenses by Function	(114)	(90)	(62)	(37)	(26)	(31)	(31)	(31)	(31)	(31)	(31)
EBITDA	629	698	856	879	637	557	653	785	989	1.300	1.739
Depreciation and Amortization	(272)	(250)	(239)	(222)	(202)	(218)	(229)	(243)	(255)	(268)	(278)
EBIT	357	448	617	657	435	339	424	541	734	1.032	1.461
Finance Income	12	11	13	23	26	21	23	21	19	15	10
Finance Costs	(70)	(57)	(50)	(60)	(77)	(89)	(94)	(95)	(97)	(95)	(93)
Share of Profit of associates	10	13	14	6	10	13	11	11	11	11	11
Profit before taxes	309	414	595	626	394	284	365	479	667	962	1.389
Taxes	(84)	(112)	(161)	(169)	(106)	(77)	(98)	(129)	(180)	(260)	(375)
NetIncome	226	302	435	457	288	207	266	350	487	702	1.014

# APPENDIX C3: WORKING CAPITAL SCHEDULE

Working Capital Schedule	2015A	2016A	2017A	2018A	2019A	2020E	2021F	2022F	2023F	2024F	2025F
In Millions of USD											
Trades Receivables	302	369	447	467	399	364	409	465	547	664	819
Inventory	1.004	993	902	914	983	1.091	1.122	1.243	1.404	1.619	1.884
Trades Payables	(137)	(200)	(196)	(164)	(206)	(190)	(208)	(231)	(261)	(301)	(350)
Net Working Capital	1.169	1.161	1.153	1.217	1.177	1.266	1.322	1.478	1.690	1.982	2.353
Change in NWC		8	9	(64)	40	(89)	(56)	(155)	(212)	(292)	(371)

# APPENDIX C4: CAPEX SCHEDULE

CAPEX (In millions USD)	2018A	2019A	2020E	2021F	2022F	2023F	2024F	2025F
Maintenance CAPEX	100	100	108	113	120	126	133	138
Expansion CAPEX	145	221	250	196	139	160	90	90
Total CAPEX	245	321	358	309	259	286	223	228

DEPRECIATION & MAINTENANCE CAPEX (In millions USD)	2018A	2019A	2020E	2021F	2022F	2023F	2024F	2025F
PPE at cost	4,450	4,796	5,046	5,355	5,614	5,900	6,123	6,351
Depreciation of the year		(193)	(208)	(219)	(233)	(244)	(256)	(266)
Accumulated Depreciation	(2,995)	(3,189)	(3,397)	(3,616)	(3,849)	(4,093)	(4,350)	(4,616)
Amortization		(9)	(9)	(10)	(11)	(11)	(12)	(12)
Net PPE	1,455	1,607	1,649	1,739	1,765	1,807	1,773	1,735

# APPENDIX C5: CAPACITY PROJECTIONS

CAPACTIY PER BUSINESS LINES (Thousands of Tons)	2018A	2019A	2020E	2021F	2022F	2023F	2024F	2025F
Specialty Plants Nutrition	1860	1860	1860	1860	1860	1860	1860	1860
Potassium	4225	4225	4225	4225	4225	4225	4225	4225
lodine	18	18	18	18	18	20	23	26
Lithium	84	84	84	142	150	210	210	210
Industrial Chemicals	15	15	15	15	15	15	15	15

# APPENDIX C6: CAPACITY INCREASE PER BUSINESS LINE

		CAPACI	TY INCREA	SE PER BUS	SINESS LINE	(Thousand	of Tons)			
	2016A	2017A	2018A	2019A	2020E	2021F	2022F	2023F	2024F	2025F
Potassium	185	200	0	0	0	0	0	0	0	0
Cost per Ton (USD)	\$169	\$174	\$179	\$185	\$190	\$196	\$202	\$208	\$214	\$221
Total CAPEX	\$31,300	\$34,853	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
lodine	0	1	3	0	0	0	0	2	3	3
Cost per Ton (USD)		\$7,247	\$7,464	\$7,688	\$7,919	\$8,157	\$8,401	\$8,653	\$8,913	\$9,180
Total CAPEX	\$0	\$7,247	\$22,393	\$0	\$0	\$0	\$0	\$20,736	\$24,233	\$28,320
Lithium	0	0	30	0	0	58	8	60	0	O
Cost per Ton (USD)			\$4,146	\$4,270	\$4,398	\$4,530	\$4,666	\$4,806	\$4,951	\$5,099
Total CAPEX	\$0	\$0	\$122,307	\$0	\$0	\$262,765	\$37,331	\$288,380	\$0	\$0
% Growth Per Year		3%	3%	3%	3%	3%	3%	3%	3%	3%

**DEPRECIATION OF THE YEAR:** To project the year's depreciation, we calculated the change in accumulated depreciation from 2018 to 2019 and used a ratio of the year's depreciation on PPE to the prior year's cost as a control, which corresponds to 4.35%. We then calculate depreciation for each year while projecting PPE at cost and cumulative depreciation through 2025.

**AMORTIZATION:** Amortization is calculated as a percentage of each year's depreciation, which corresponds to 4.35% of the 2019 depreciation. The percentage is maintained to calculate depreciation for each of the following years.

MAIN TENANCE CAPEX: First of all, the average maintenance CAPEX was used as the data provided by the company, which corresponded to USD\$ 100,000 million in previous years, and a constant growth is expected from the capacity expansions that the company will make in the coming years. A control ratio was used to project the maintenance CAPEX, which corresponds to a percentage of this over the depreciation of the year in 2019, for a value of 52%, and is used to project this over the following years, based on the calculation of the depreciation of the year.

**EXPANSION CAPEX:** For the Expansion CAPEX, we used previous data on expansions made since 2015, and calculated an average expansion cost per ton for Potassium, lodine and Lithium, clearing from the information we had on total CAPEX and average maintenance CAPEX. This cost per ton was increased by an expected 3% to adjust costs over time, based on average expected inflation.

We then calculated the total cost of expanding the units to be added in each line, both Lithium and Iodine, in 2019 and 2022 specifically, and reduced the total cost based on CAPEX estimates, to finally distribute this over a period of 3 and 2 years respectively. In addition, a historical contribution was added as a measure to reduce the uncertainty for possible new projects of the company, and a CAPEX remaining from previous years, in relation to what is normally observed.

### APPENDIX C7: DEBT SCHEDULE

	(1) DEBT MATURITIES AS OF DECEMBER 31, 2019													
DEBT INSTRUMENT		HORT TERM DUNT (TH USD)	LON	IG TERM AMOUNT (TH USD)	INTEREST RATE	DATE OF ISSUE	EXPIRATION DATE	AMORTIZATION						
Bilateral Loan - US\$ 70 million	\$	187	\$	69,138	3.98%	29th May 2019	29th May 2023	Bullet						
5.50% Notes due 2020 - US\$ 250 million	\$	252,288	\$	-	5.50%	April 21st, 2010	April 21st, 2020	Bullet						
3,625% Notes due 2023 - US\$ 300 million	\$	2,044	\$	298,607	3.63%	03 April 2013	03 April 2023	Bullet						
4.375% Notes due 2025 - US\$ 250 million	\$	4,215	\$	248,486	4.38%	October 28, 2014	January 28th 2025	Bullet						
4.25% Notes due 2029 - US\$ 450 million	\$	2,190	\$	444,077	4.25%	07 May 2019	07 May 2029	Bullet						
H Series Bond - UF 4 million	\$	17,027	\$	129,364	4.90%	January 5th, 2009	January 5th, 2030	Semiannual, starting in 2019						
Series O Bond - UF 1.5 million	\$	823	\$	55,904	3.80%	February 01, 2012	February 01, 2033	Bullet						
P Series Bond - UF 3 million	\$	1,674	\$	113,341	3.25%	06 April 2018	15 January 2028	Bullet						
Q Series Bond - UF 3 million	\$	317	\$	113,329	3.45%	08 November 2018	15 June 2038	Bullet						

(1) With the exception of the Q-series bond, UF-denominated bonds are fully hedged to U.S. dollars with currency swaps.

LONG-TERM MATURITIES	(MILLIONS OF DOLI	LARS)
YEAR	MC	UNT
2020	\$	264
2021	\$	14
2022	\$	14
2023	\$	384
2024 OR AFTER	\$	1,080

### APPENDIX C8: KEY FINANCIAL INDICATORS

	2015A	2016A	2017A	2018A	2019A	2020E	2021F	2022F	2023F	2024F	2025F
Gross Margin	47%	44%	46%	44%	39%	37%	38%	40%	42%	45%	48%
EBITDA Margin	36%	36%	40%	39%	33%	30%	31%	33%	36%	39%	42%
<b>EBIT Margin</b>	21%	23%	29%	29%	22%	18%	20%	23%	26%	31%	35%
Net Margin	13%	16%	20%	20%	15%	11%	13%	15%	18%	21%	24%

	KEY FINANCIAL INDICATORS												
	2015A	2016A	2017A	2018A	2019A	2020E	2021F	2022F	2023F	2024F	2025F		
DuPont Analysis													
Gross Margin	47%	44%	46%	44%	39%	37%	38%	40%	42%	45%	48%		
Operating Margin	44%	52%	62%	66%	57%	50%	54%	58%	63%	68%	73%		
Net Margin	13%	16%	20%	20%	15%	11%	13%	15%	18%	21%	24%		
Asset Turnover	0.37	0.46	0.50	0.53	0.41	0.39	0.42	0.47	0.53	0.63	0.74		
Return on Assets	0.05	0.07	0.10	0.11	0.06	0.04	0.05	0.07	0.09	0.13	0.18		
Equity Multiplier	1.93	1.83	1.91	2.00	2.19	2.23	2.31	2.37	2.46	2.53	2.64		
Return on Equity	9%	13%	19%	21%	13%	10%	13%	16%	23%	33%	48%		
Liquidity Indicators													
Current Liquidity	3.82	4.02	3.30	4.32	3.45	4.07	3.78	3.52	3.27	3.03	2.78		
Acid Test	2.39	2.31	2.09	2.68	2.19	2.44	2.26	2.01	1.76	1.51	1.28		
Cash Ratio	0.75	0.89	0.84	1.00	0.76	1.02	0.90	0.75	0.58	0.40	0.24		
Leverage Indicators													
Total Debt Ratio	48%	45%	48%	50%	54%	55%	57%	58%	59%	61%	62%		
Debt Equity Ratio	70%	55%	56%	63%	85%	91%	96%	97%	100%	98%	96%		
Net Financial Debt (\$M)	528	455	212	468	715	797	928	1,042	1,215	1,359	1,530		
Net Debt/Capitalization	18%	16%	9%	18%	25%	27%	30%	33%	36%	39%	42%		
Indebtness	0.93	0.83	0.91	1.00	1.19	1.23	1.31	1.37	1.46	1.53	1.64		
Indebtness less cash	0.45	0.48	0.47	0.59	0.68	0.71	0.79	0.90	1.05	1.21	1.41		
Operating Effenciency Indicators													
Inventory Turnover	0.91	1.09	1.28	1.38	1.20	1.07	1.15	1.15	1.15	1.15	1.15		
Days Sales Inventory	401	336	285	264	304	340	318	318	318	318	318		
Receivables Turnover	5.72	5.26	4.83	4.86	4.87	5.08	5.08	5.08	5.08	5.08	5.08		
Days Sales Receivables	64	69	76	75	75	72	72	72	72	72	72		
Payables Turnover	6.68	5.38	5.89	7.72	5.74	6.18	6.18	6.18	6.18	6.18	6.18		
Days Payabables	55	68	62	47	64	59	59	59	59	59	59		
Operating Cycle	465	405	360	339	379	412	390	390	390	390	390		
Cash Convertion Cycle	410	338	298	292	315	353	331	331	331	331	331		

# **APPENDIX D: VALUATION**

# APPENDIX D1: DCF MODEL

SQM CONSOLIDATED PROFORMA										
INCOME STATEMENT	2020 E	2021 F	2022 F	2023 F	2024 F	2025 F				
In millions of USD										
Revenues	1,852	2,079	2,366	2,780	3,374	4,165				
Lithium and derivatives	310	442	630	899	1,283	1,831				
Specialty Plant Nutrition	745	782	830	889	961	1,039				
lodine and derivatives	349	383	412	475	589	730				
Potassium	231	238	243	250	258	264				
Industrial Chemicals	173	188	204	220	236	253				
Others	44	45	46	47	48	49				
Cost of Sales	(1,172)	(1,289)	(1,427)	(1,612)	(1,859)	(2,164)				
Lithium and derivatives	(199)	(257)	(332)	(429)	(555)	(716)				
Specialty Plant Nutrition	(502)	(527)	(559)	(599)	(647)	(700)				
lodine and derivatives	(154)	(172)	(189)	(222)	(280)	(354)				
Potassium	(159)	(163)	(166)	(169)	(173)	(176)				
Industrial Chemicals	(117)	(128)	(139)	(150)	(161)	(172)				
Others	(40)	(42)	(43)	(43)	(44)	(45)				
Gross Profit	681	790	939	1,168	1,515	2,002				
Other Incomes	20	20	20	20	20	20				
S&A	(112)	(125)	(143)	(168)	(203)	(251)				
Other expenses	(31)	(31)	(31)	(31)	(31)	(31)				
EBITDA	557	653	785	989	1,300	1,739				
Depreciation and Amortization	(218)	(229)	(243)	(255)	(268)	(278)				
EBIT	339	424	541	734	1,032	1,461				
Taxes (27%)	92	114	146	198	279	394				
FREE CASH FLOW	2020 E	2021 F	2022 F	2023 F	2024 F	2025 F				
NOPAT	248	309	395	536	753	1.066				

FREE CASH FLOW	2020 E	2021 F	2022 F	2023 F	2024 F	2025 F
NOPAT	248	309	395	536	753	1,066
Less: Change in Net Working Capital	2	(56)	(155)	(212)	(292)	(371)
Add: Depreciation and Amortization	218	229	243	255	268	278
Less: Capital Expenditures	(358)	(309)	(259)	(286)	(223)	(278)
Unlevered Cash Flow	110	173	224	293	506	695
Terminal Value						13,454

WACC	9.26%
Terminal growth rate	2.85%

	2020Q4 E	2021 F	2022 F	2023 F	2024 F	2025 F
Unlevered Cash Flow	19	173	224	293	506	14,149
Period	0.1	0.8	1.8	2.8	3.8	4.8
Present Value Factor	1.0	0.9	0.9	0.8	0.7	0.7
PV of Unlevered Cash Flow	19	163	195	236	377	9,746
Implied Enterprise Value	11,570					
Total PV of Unlevered Cash Flow	10,736					
Cash and equivalents	682					

Cash and equivalents		682			
Share of profit of associates		182			
Minority Interest		30			
Enterprise Value		11,570			
Enterprise Value		11,570			
Debt	1,931				
Equity		9,639			
Number of shares		263			
Stock price (USD)	\$	36.6			
Stock price (CLP)	\$	28,766			
CLP/USD	\$	786			

### **APPENDIX D2: WACC ASSUMPTIONS**

WAG	CC ASSUMPTIONS		
	10Y	20Y	30Y
US Treasury bond yield	0.68%	1.23%	1.46%
Country risk premium	0.67%	0.67%	0.67%
Relative Volatility	1.25	1.25	1.25
Equity risk premium	5.23%	5.23%	5.23%
Beta	1.1	1.1	1.1
Size premium	0.89%	0.89%	0.89%
Specific company Risk	0.0%	0.5%	1.0%
Ke	8.22%	9.26%	10.00%
Country risk premium	0.67%	0.67%	0.67%
Kd	3.4%	3.4%	3.4%
Tax	27%	27%	27%
Kd*(1-tax)	2.51%	2.51%	2.51%
E/A	84%	84%	84%
D/A	16%	16%	16%
WACC	7.29%	8.16%	8.78%

**WACC** was estimated using USD rates through the adjusted CAPM and the Interest Rate for bonds BBB+ adjusted by country risk premium.

We separated the analysis in two comparable sets, "Lithium" and "Other Chemicals", to derive beta and capital structure. In specific the betas of the companies were unlevered individually, then we calculated the median of these unlevered betas in each group as the unlevered beta for SQM. Then, we weighted them using 30.6% for "Lithium" and 69.4% for "Other chemicals", resulting 0,97 the SQM unlevered beta. Finally, this was relevered using the historical capital structure of the Company, because the median structure of the comparables was very different from SQM's tendency. To choose the comparables we filtered them by business, size, EBITDA and Market Capitalization.

### Important assumptions:

- We used as risk-free rate the 20-year USD Treasury bond yield. This risk-free rate is 1.23%. To sensitize the WACC, we also used a 10- and 30-year rate, which can be found on the table below.
- Beta is calculated on a monthly and 5-year historical basis. The beta estimated for SQM is 1.11.
- We used as the market risk premium the Equity Risk Premium rate from Damodaran. This rate is 5.23%.
- Market Return is the implied premium for the S&P 500 by Damodaran.
- Size premium estimated was provided by Duff and Phelps. For SQM, the size premium is 0.89.
- Country risk premium for Chile was estimated using the Chile 5-year CDS of 0.67%, adjusting by relative equity market volatility of 1.25. The result is 0.84%.
- Company specific risk of 0.5% reflects the risk of not renewal the concessions. This rate was sensitized 10, 20 and 30 years.
- Capital structure was estimated using the SQM's average structure of the last five years. We didn't use the structure of comparables because they were very different from SQM.
- The cost of equity obtained is 9.26%. This cost was sensitized by the change invariables that affect CAPM adjusted.
- The cost of debt was calculated using the Term Structure of Interest Rates for bonds that had the same Risk Classification than SQM (BBB+) and adjusting by country risk premium. The cost of debt obtained is 3.44%. The cost of debt after tax is 2.51%.
- WACC calculations used a 27% Chilean corporate tax.
- We used a WACC of 8.16% that was sensitized 10, 20 and 30 years. These are expressed in dollar terms.

### APPENDIX D3: COMPARABLES TO OBTAIN SQM'S LEVERED BETA

OTHER CHEMICALS COMPARABLES										
COMPANY	DEBT	MARKET CAP	D/E	D/A	E/A	COUNTRY	TAX	LEVERED BETA	UNLEVERED BETA	
In millions of USD										
FMC Corporation (NYSE:FMC)	3,713	14,321	26%	21%	79%	USA	27%	1.2	1.0	
Nutrien Ltd. (TSX:NTR)	12,348	22,619	55%	35%	65%	CANADA	27%	0.7	0.5	
K+S Aktiengesellschaft (XTRA:SDF)	4,014	1,330	302%	75%	25%	GERMANY	30%	1.3	0.4	
ICL Group Ltd (TASE:ICL)	2,841	4,664	61%	38%	62%	ISRAEL	23%	0.5	0.3	
Yara International ASA (OB:YAR)	4,161	10,954	38%	28%	72%	NORWAY	22%	0.6	0.5	
CF Industries Holdings, Inc. (NYSE:CF)	4,242	7,206	59%	37%	63%	USA	27%	1.2	0.8	
Kingenta Ecological Engineering Group Co., Ltd	1,041	732	142%	59%	41%	CHINA	25%	0.4	0.2	
Saudi Arabian Fertilizers Company (SASE:2020	32	9,242	0%	0%	100%	SAUDI ARABIA	20%	0.4	0.4	
Albemarle Corporation (NYSE:ALB)	2,676	10,441	26%	20%	80%	USA	27%	1.4	1.2	
Axalta Coating Systems Ltd. (NYSE:AXTA)	4,021	5,811	69%	41%	59%	USA	27%	1.6	1.0	
Celanese Corporation (NYSE:CE)	4,246	13,419	32%	24%	76%	USA	27%	1.4	1.1	
Ashland Global Holdings Inc. (NYSE:ASH)	2,142	4,443	48%	33%	67%	USA	27%	1.4	1.0	
Avient Corporation (NYSE:AVNT)	1,927	2,514	77%	43%	57%	USA	27%	1.8	1.2	
H.B. Fuller Company (NYSE:FUL)	1,956	2,607	75%	43%	57%	USA	27%	1.8	1.2	
PQ Group Holdings Inc. (NYSE:PQG)	1,957	1,569	125%	56%	44%	USA	27%	0.8	0.4	
RPM International Inc. (NYSE:RPM)	2,784	10,994	25%	20%	80%	USA	27%	1.1	0.9	
								Median	0.9	

Source:Capital IQ

COMPANY	DEBT	MARKET CAP	D/E	D/A	E/A	COUNTRY	TAX	LEVERED BETA	UNLEVERED BETA
Nemaska Lithium	6.3	101.8	6%	6%	94%	CANADA	27%	0.7	0.6
Lithium Americas Corp. (TSX:LAC)	121.3	824.2	15%	13%	87%	CANADA	27%	1.2	1.0
Critical Elements Lithium Corporation (TSXV:CF	3.6	41	9%	8%	92%	CANADA	27%	1.6	1.5
Galaxy Resources Limited (ASX:GXY)	21.9	438.9	5%	5%	95%	AUSTRALIA	30%	1.4	1.3
AVZ Minerals Limited (ASX:AVZ)	0.1	131.3	0%	0%	100%	AUSTRALIA	30%	1.4	1.4
Ganfeng Lithium Co., Ltd. (SZSE:002460)	860.6	9711.3	9%	8%	92%	CHINA	25%	1.6	1.5
Orocobre Limited (ASX:ORE)	668.1	648.5	103%	51%	49%	AUSTRALIA	30%	0.8	0.5
Iluka Resources Limited (ASX:ILU)	251.3	2984.5	8%	8%	92%	AUSTRALIA	30%	1.1	1.0
								Median	1.2

Source: Capital IQ

WEIGHING							
Lithium	31%						
Other chemicals	69%						
D/E	20%						
SQM unlevered beta	0.97						
SQM levered beta	1.1						











### APPENDIX D4: PRICE AND COST PROJECTIONS PER BUSINESS LINE

	PRICES AND COSTS PER TON																	
BUSINESS LINE		2015 A	:	2016 A		2017 A		2018 A		2019 A	2020 E	:	2021 F	2022 F	2023 F	2024 F	:	2025 F
Lithium and derivatives																		
Volume (Mton)		39		50		50		45		45	46		58	74	94	118		150
Price per ton	\$	5,763	\$	10,355	\$	12,969	\$	16,293	\$	11,213	\$ 6,724	\$	7,575	\$ 8,534	\$ 9,615	\$ 10,832	\$	12,204
Cost per ton	\$	2,181	\$	2,870	\$	3,122	\$	6,033	\$	5,784	\$ 4,326	\$	4,413	\$ 4,501	\$ 4,591	\$ 4,683	\$	4,777
Specialty Plant Nutrition																		
Volume (Mton)		831		841		966		1,083		1,042	1,073		1,105	1,150	1,207	1,279		1,356
Price per ton	\$	785	\$	742	\$	722	\$	722	\$	695	\$ 694	\$	708	\$ 722	\$ 736	\$ 751	\$	766
Cost per ton	\$	428	\$	462	\$	480	\$	499	\$	485	\$ 467	\$	477	\$ 486	\$ 496	\$ 506	\$	516
Yodo y Derivados																		
Volume (Mton)		9		10		13		13		13	11		12	13	15	19		23
Price per ton	\$	28,233	\$	22,661	\$	19,852	\$	24,434	\$	29,214	\$ 31,729	\$	31,729	\$ 31,729	\$ 31,729	\$ 31,729	\$	31,729
Cost per ton	\$	15,307	\$	15,225	\$	12,922	\$	12,945	\$	14,722	\$ 14,004	\$	14,224	\$ 14,509	\$ 14,799	\$ 15,095	\$	15,397
Potasio																		
Volume (Mton)		1,242		1,535		1,344		832		597	700		700	700	700	700		700
Price per ton	\$	347	\$	263	\$	282	\$	322	\$	355	\$ 330	\$	340	\$ 348	\$ 357	\$ 368	\$	377
Cost per ton	\$	189	\$	190	\$	193	\$	211	\$	232	\$ 228	\$	232	\$ 237	\$ 242	\$ 246	\$	251
Químicos Industriales																		
Volume (Mton)		126		129		168		136		124	222		238	254	268	281		296
Price per ton	\$	774	\$	808	\$	809	\$	797	\$	768	\$ 780	\$	789	\$ 805	\$ 821	\$ 838	\$	854
Cost per ton	\$	436	\$	424	\$	459	\$	419	\$	459	\$ 527	\$	537	\$ 548	\$ 559	\$ 570	\$	582

### Revenues

As the products sold by SQM are commodities, they do not have the power to define the sales prices. Revenues for each business line were projected based on expected market factors, defining key drivers to be used for price behavior proxies, as well as market estimates for the future.

### During the last few years the price varied greatly due to the increase in demand for the electric vehicle, which is expected to continue increasing exponentially Lithium and Derivatives: in the future. We consider the price expected by the market in 2025 (source "seeking alpha") to follow the growth in demand of the main driver mentioned for this product. We consider the historical behavior of the prices of this line of business and its reaction to the increase in Specialty Plant Nutrition: demand for the products. When we saw a stable behavior, we projected the last price at the valuation date plus the expected US inflation of 2% for each year. The price has been increasing until 2020, however, there are large projects in the world that will increase the supply of this product, which considering a low **lodine and Derivatives:** variable demand in the future, would generate pressure on the price that will prevent it from growing in the future. A stable price is projected for 2025. The price of potassium is based on the price behavior of potassium chloride, which is the main commodity. Potassium: We use the World Bank projection for 2025 for this

product.

### Costs of Sales

The costs for each business line were projected considering the historical behavior and the expected US inflation of 2%.

### **APPENDIX D5: TERMINAL GROWTH RATE**

	TERMINAL GROWTH RATE	
KEYS	FORMULA	RESULT
Growth	Reinvestment rate x Return on capital	2.85%
Return on capital	Nopat / investment capital	7.98%
Reinvestment rate	Reinvestment / NOPAT	35.76%
Investment capital	Equity + Debt	3,982
Equity	Book Value (MM)	2,120
Debt	Book Value (MM)	1,863

To determine the terminal growth rate of 2.85%, we multiply two components, the first corresponds to the return on capital and the second to the reinvestment rate.

**Return on capital:** it was calculated by dividing the net operating profit after taxes for 2019 (MU\$ 317,619) by the invested capital, which corresponded to the sum between debt and equity of SQM in 2019 at book value (MUS\$ 3,982,307), reaching a return on capital of 8% **Reinvestment rate:** it was obtained through the division between the net reinvestment of 2019 (MU\$ 113,571) and the NOPAT of 2019 (MUS\$ 317,619), reaching a reinvestment rate of 36%.

Net reinvestment is calculated by adding the change in net working capital with CAPEX, and finally subtracting depreciation (all these values in 2019)

# APPENDIX D6: RESIDUAL INCOME MODEL

RESIDUAL INCOME MODEL						
	2020 E	2021 F	2022 F	2023 F	2024 F	2025 F
In millions of USD						
Net profit	166	223	305	440	654	961
Equity Retribution	(197)	(197)	(197)	(197)	(197)	(197)
Residual Income	(30)	27	108	244	457	765

	2020Q4 E	2021 F	2022 F	2023 F	2024 F	2025 F
In millions of USD						
Residual Income	(8)	67	150	286	501	811
Terminal Value						9,091
Period	0.1	0.8	1.8	2.8	3.8	4.8
Present Value Factor	1.0	0.9	0.9	0.8	0.7	0.7
Discounted Residual Income	(8)	63	131	231	373	559

PV Residual Income	7,100
Actual Book Value Equity	2,123
RIM Equity	9,223
Number of shares	263
Stock price (USD)	\$ 35
Stock price (CLP)	\$ 27,526
CLP/USD	785.5

# APPENDIX D7: TRADING MULTIPLES OF COMPARABLES

CY+2
18,1x
17,2x
11,4x
22,0x
19,5x
11,2x
10,7x
14,5x
11,8x
10,0x
19,5x
15,5x

Source: Capital IQ

	EV / EBITDA				P	/ E		
LITHIUM COMPARABLES	FY	LTM	CY+1	CY+2	FY	LTM	CY+1	CY+2
Albemarle Corporation	8.5x	12.0x	17.3x	14.5x	13.6x	21.7x	25.6x	21.0x
Ganfeng Lithium Co., Ltd.	48.6x	78.6x	64.6x	34.0x	77.0x	NM	120.4x	54.2x
Livent Corporation	10.6x	30.2x	40.9x	20.8x	16.4x	83.4x	147.5x	39.6x
Galaxy Resources Limited	9.6x	NM	NM	NM	NM	NM	NM	NM
Pilbara Minerals Limited	NM	NM	NM	24.6x	NM	NM	NM	NM
Mineral Resources Limited	6.0x	6.5x	4.3x	3.8x	3.8x	4.7x	10.1x	8.4x
Tianqi Lithium Corporation	28.8x	32.7x	25.9x	20.8x	53.9x	NM	NM	41.9x

Source: Capital IQ

### **APPENDIX D8: MARKET APPROACH**

TRADING MULTIPLES						
COMPARABLES	EV / EBITDA			P/E		
COWPARABLES	LTM	CY+1	CY+2	LTM	CY+1	CY+2
Lithium	32.0x	30.6x	19.8x	36.6x	75.9x	33.0x
Other Chemicals	9.9x	10.1x	9.1x	23.7x	21.8x	15.1x

	EBITDA	EPS	EV
SQM	679	0.91	11732

	LITHIUM	OTHERS
EV/EBITDA	27.4x	9.7x
P/E	48.5x	20.1x

MARKET APPROACH SQM					
Price EV to EBITDA		37.3			
Price P/E		29.4			
Stock price (USD)	\$	33.4			
Stock price (CLP)	\$	26,203			
CLP/USD		785.5			

We chose and filtered a set of comparables for Lithium and for Other chemicals, and defined the multiples to use: EV / EBITDA and P / E. We calculated the average of the comparables of these multiples in LTM, CY + 1 and CY + 2. Then, we averaged these multiples to get EV / EBITDA and P / E per set. Then, using SQM's estimated average EBITDA for the next two years, we obtained two EVs which we weighted by the future importance in SQM's revenues (43% Lithium and 57% Other chemicals). With this weighted EV, we solved the share price (by subtracting the debt and dividing by the total shares). Similarly, using SQM's current EPS, we obtained two possible share prices for the P / E multiple, which we also weighted in the same proportions. Thus, we obtain a price for the EV to EBITDA multiple of US \$ 37.2 and another price for the P / E multiple of US \$ 29.5. Finally we averaged those two prices and obtained the final price of US \$ 33.4, by the market approach, which are CLP 26,203.

### **APPENDIX D9: INVESTMENT IN ASSOCIATES**

ASSOCIATES	EQUITY ACCOUNTED INVESTEES	SHARE IN PROFIT OF ASSOCIATES	SHARE IN OTHER COMPREHENSIVE INCOME OF ASSOCIATES
	As of December 31, 2019	As of December 31, 2019	As of December 31, 2019
Abu Dhabi Fertilizer Industries WWL	11,609	634	1
Doktor Tarsa Tarim Sanayi AS	26,001	3,912	198
Ajay North America	14,669	2,871	-
Ajay Europe SARL	7,451	1,165	-179
Charlee SQM Thailand Co Ltd	-	-	-
SQM Eastmed Turkey	623	354	-42
Kore Potash PLC	24,739	-534	-549

Source: Company's 20F Report

# APPENDIX E1: SQM'S STAKEHOLDERS



# APPENDIX E2: ENVIRONMENTAL INVESTMENTS

ENVIRONMENTAL INVESTMENTS	2017	2018	2019
Environmental assessments	\$1,175	\$512	\$835
Sustainability, environmental monitoring and mitigation measures	\$6,491	\$10,202	\$6,757
Improvements to environmental/hygiene/sanitary conditions	\$2,989	\$4,403	\$5,452
Domestic and industrial waste management	\$4,111	\$4,221	\$3,836
Hazardous waste management	\$489	\$539	\$183
Total expenditures (ThUS\$)	\$15,255	\$19,877	\$17,063

### **APPENDIX E3: WATER CONSUMPTION 2019**

	WATER CONSUMPTION 2019			
FACILITY	OTHER WATER (TSD >1000 mg/l) GROUNDWATER (m3) SURFACE WATER (m3)		FRESH WATER (TSD < 1000mg/l) THIRD-PARTY SUPPLY (m3)	
Salar de Atacama	5,286,219			
Salar del Carmen				939,586
Nueva Victoria	19,896,165			
María Elena, Coya Sur, Pedro de Valdivia		6,227,886		426,472
Tocopilla-Antofagasta				39,790
Other offices				12,924
Total per category (m3)	25,182,384	6,227,886	1	1,418,772

# APPENDIX E4: TOTAL WASTE

TYPE OF WASTE	2019
Hazardous industrial waste (ton)	2,791
Non-hazardous industrial waste (ton)	1,898
Domestic waste and other (ton)	4,688
Total	9,377

# APPENDIX E5: EMISSIONS FROM FUEL

DIRECT EMISSIONS FROM FUEL CONSUMPTION					
Year	CO2 emissions (tons)	CH4 em issions (tons)	N20 emissions (tons)		
2019	240958	6.7	1.1		
2018	160314	5.6	1.1		
2017	212947	7.6	1.5		
2016	219801	8	1.5		

# APPENDIX E6: ENERGY CONSUMPTION

ENERGY CONSUMPTION	2019	2018	2017	2016
SOLAR POWER	57,952,904	98,312,397	116,675,659	115,512,541
	·	, ,		
ELECTRICITY	1,863,344	1,757,533	1,810,331	1,866,756
DIESEL	1,434,766	1,175,611	1,323,902	1,444,806
NATURAL GAS	2,238,568	674,393	809,842	789,626
LIQUID GAS	113,428	129,755	120,684	51,805
BUNKER FUEL	28,740	515,583	1,050,644	1,035,708
GASOLINE	660	426	275	486
TOTAL IN USD	63,632,410	102,565,698	121,791,337	120,701,728

# APPENDIX E7: ROTATION AND PARTICIPATION

ROTATION BY AGE AND GENDER OF WORKERS IN CHILE IN 2019				
DISTRIBUTION	MALE	FEMALE		
UNDER 30 YEARS	23.8%	30.3%		
BETWEEN 30 AND 40 YEARS	13.2%	18.3%		
BETWEEN 41 AND 50 YEARS	10.0%	14.7%		
OLDER THAN 50 YEARS	6.0%	11.9%		
Total	12.7%	20.0%		

SQM EMPLOYMENT BY ROLE, GENDER AND PERCENTAGE IN CHILE AND THE WORLD 2019								
TOTAL SQM EXECUTIVES SUPERVISORS GENERAL ROL DIRECTORY								
FEMALE PARTICIPATION	943	20	539	384	0			
FEMALE PARTICIPATION	16.40%	14.80%	28.10%	10.40%	0%			
MALE PARTICIPATION	4798	115	1378	3305	8			
MALE PARTICIPATION	83.60%	85.20%	71.90%	89.60%	100%			
TOTAL	5741	135	1917	3689	8			

# APPENDIX E8: SQM BOARD MEMBERS

TITLE	NAME	PROFESSIONAL TITLE	NA TIONALITY	CURRICULUM VITAE SUMMARY (extracted from Company's Sustainability Report)	CURRENT POSITION SINCE
CHAIRMAN	Alberto Salas M.	Mining Engineer of Universidad de Chile	Chilean	Graduate degree in Corporate Finance from Universidad Adolfo Ibáñez. Board Member of Cia. Minera Valle Central, CAP, ENAP, ENAEX S.A. and Amerigo Resources Ltd. He also chairs the board of Universidad de Chile's Foundation of Mining Engineers. He is currently the chairman of INACAP and sits on the board of ABAC.	April 2018
VICE CHAIRMAN	Patricio Contesse F.	Lawyer of Universidad Católica de Chile	Chilean	Vice Chairman of the following boards of directors: Sociedad de Inversiones Pampa Calichera S.A., Potasios de Chile S.A., Sociedad de Inversiones Oro Blanco S.A. and Norte Grande S.A. He also serves on the board of Nitratos de Chile S.A. He is also the chairman of Invercap S.A. and serves on its Directors' Committee.	April 2018
BOARD MEMBER	George de Bourguignon A.	Economist of Universidad Católica de Chile	Chilean	MBA from Harvard Business School; he is co-founder and chairman of Asset Chile S.A. and Asset Administradora General de Fondos S.A. Over the last ten years he has served on the boards of various Chilean companies such as LATAM Airlines and Embotelladora Andina, where he remains on the board.	April 2019
BOARD MEMBER	Hernán Buchi B.	Civil Engineer of Universidad de Chile	Chilean	He served on SQM's board for several years until April 2016. He is currently on the boards of Quiñenco S.A. and S.A.C.I. Falabella, among other companies. He also chairs the board of Universidad del Desarrollo.	April 2017
BOARD MEMBER	Laurence Golborne R.	Industrial Engineer of Universidad de Chile	Chilean	He is currently on the board of Ripley Corp. S.A., Construmart S.A., Aventura S.A., Sociedad Inversiones Arrigoni S.A. and Metalürgica Arrigoni S.A., and is the chairman of Tavamay S.A. Previously, he served as a minister of the Chilean government from 2010-2012 and before that he was CEO of Cencosud S.A. and Corporate CFO of Gener S.A.	April 2018
BOARD MEMBER	Gonzalo Guerrero Y.	Lawyer of Universidad de Chile	Chilean	Master's degree in business administration from Universidad Adolfo Ibáñez. He was on the board of Inversiones Oro Blanco S.A., Asfaltos Chilenos S.A., Vantrust Capital Asset Management and SMA Clinica Internacional S.A. He is currently Executive Director of Guerrero y Asociados and sits on the boards of Sanasalud S.A., SMA Clinica Internacional S.A. and Club Deportivo Palestino.	April 2017
BOARD MEMBER	Francisco Ugarte L.	Lawyer of Universidad Católica de Chile	Chilean	LL.M. from University of Chicago Law School. Partner, Carey Abogados. Extensive experience with Chilean and international financial companies and institutions in the area of mergers and acquisitions, financing, capital and debt offerings and other corporate matters.	April 2019
BOARD MEMBER	Robert J. Zatta	Business Administration on Merrimack College	Chilean	MBA in Finance from Fairleigh Dickinson University. He has held senior management positions at the former General Foods Corporation and Campbell Soup Company. He worked with Rockwood Holdings, Inc, was a board member of Nexeo Solutions, Inc., and since 2017 has chaired the Advisory Committee of Silberman College of Business – Fairleigh Dickinson University.	April 2019

# APPENDIX E9: SQM COMMITTEES

AUDIT AND FINANCIAL RISK COMMITTEE	TITLE
Alberto Salas Muñoz	Chairman
Laurence Golborne Riveros	Member
George de Bourguignon Arndt	Member
CORPORATE GOVERNANCE COMMITTEE	TITLE
Hernán Buchi Buc	Chairman
Patricio Contesse Fica	Member
Francisco Ugarte Larraín	Member
HEALTH, SAFETY AND ENVIRONMENT COMMITTEE	TITLE
Gonzalo Guerrero Yamamoto	Chairman
Patricio Contesse Fica	Member
Robert J. Zatta  Source: Company's 20F Report	Member

# APPENDIX E10: SQM KEY EXECUTIVES

TITLE	NAME	PROFE SSIONAL TITLE	NATIONALITY	RELEVANT EXPERIENCE (extracted from Company's 20F Report)	CURRENT POSITION SINCE
CHIEF EXECUTIVE OFFICER	Ricardo Ramos R.	Industrial Engineer of Universidad Católica de Chile	Chilean	Mr. Ramos earned an industrial engineering degree from the Pontificia Universidad Católica de Chile. In 1989, he joined SQM as Finance Advis or and served as Chief Financial Officer and Vice President of Corporate Services from 1994 until 2018, before assuming his current role in January 2019.	January 2019
FINANCIAL SENIOR VICE- PRESIDENT AND CFO	Gerardo Illanes G.	Industrial Engineer of Universidad Católica de Chile	Chilean	Mr. Illanes earned an engineering degree from the Universidad Católica de Chile and a Master of Business Administration from Emory University's Goizueta Business School. In 2006, he joined SQM and has served in several positions within the finance area at our headquarters in Santiago, Chile and in subsidiaries around the world. Mr. Illanes is also a member of the Board of Soquimich Comercial. In May 2016, he became Vice President of Finance, and assumed his current role in October 2018.	October 2018
LEGAL SENIOR VICE-PRESIDENT	Gonzalo Aguirre T.	Lawyer of Universidad Católica de Chile	Chilean	He joined SQM in April 2016 and has served as Legal Vice President since September 2016. Prior to joining SQM, he work ed at SunEdis on as Head of Legal for Latin America and at AES Gener, where he served as a coursel oncorporate and project matters. Prior to his includes experience, he work ed for Carey y C is Ltda, PaulHastings LLP (as an international legal consultant) and Vial and Palma, where his practice focused oncorporate and financial matters. He is admitted topractice in Chile and in Was hington, D.C., as as pecial legal consultant.	September 2016
POTASSIUMAND LITHIUM OPERATIONS SENIOR VICE- PRESIDENT	Carlos Díaz O.	Industrial Engineer of Universidad Católica de Chile	Chilean	Mr. Díaz earned an engineering degree and a Master of Business Administration from the Pontificia Universidad Católica de Chile. In 1998, he joined SQM as Planning Engineer in the Sales Division. He was promoted to Planning Manager in 1998. In 2002, he assumed the position of Deputy Financial Manager of the Commercial Offices. In 2008, he became our Logistics Manager, and in 2019 he became Vice President of Operations, Potassium and Lithium.	March 2019
NITRATES AND IODINE OPERATIONS SENIOR VICE- PRESIDENT	José Miguel Berguño C.	Industrial Engineer of Universidad Católica de Chile	Chilean	In 1988, he joined SQM as Planning Engineer. In 2001, he served as Supply Chain Manager, and in 2006 he was Human Resources Manager. From 2010 to 2011, he was the National Director of Science under the Minister of Labor. In 2012, he was Human Resources Manager for Vitamina Work Life. In 2013, he res umed his role as Supply Chain Manager at SQM, and in 2016 took on the postion of Vice President of Human Resources and Performance. In 2019, he became Vice President of Operations of Nitrates and Iodine.	March 2019
POTASSIUM AND NITRATES COMMERCIAL SENIOR VICE- PRESIDENT	Frank Biot	Master's in Applied Economics University of Antwerp	Belgian	Biot earned a Master in Applied Economics from the University of Antwerp in Belgium and a Master of Business Administration from the Catholic University of Leuven. In 1994, he pined Nitrate Corporation of Chile Ltd. in London. In 1991, he was promoted to President of SQM Europe at SQMs regional headquarters for Europe, Africa, As and Oceania. In 2000, he as sumed the position of Commercial Vice President Specialty Plant Nutrition.	October 2018
LITHIUM AND IODINE COMMERCIAL SENIOR VICE- PRESIDENT	Pablo Altimiras C.	Industrial Engineer of Universidad Católica de Chile	Chilean	Mr. Atimiras earned an engineering degree and a Master of Business Administration from the Universidad Católica de Chile. In 2007, he pined SQM as Chilef of Logistics Projects. In 2009, he was promoted to Regulatory Affairs Director. He was Business Development Vice Manager from 2010 to 2011 and Development and Planning Manager in 2012. In 2016, he became Vice President of Development and Planning.	October 2018
PEOPLE AND PERFORMANCE SENIOR VICE- PRESIDENT	Natalia Pizarro G.	Civil Engineer of Universidad de Santiago	Chilean	She joined SQM in 2007 as a Management Engineer, being promoted the following year to Leader of Management Control and, in 2010, she became Technical Director under the vice presidency of Nueva Victoria Operations, where she was responsible for the area of Investment, Planning Studies, and a research pibit plant. In 2013 she led the implementation of the Lean methodology with a pilot program in Coya Sur. In November of 2018, she became Senior Director of People, and in April 2019 she was named Vice President of People and Performance.	April 2019
DIRECTOR OF CORPORATE AFFAIRS	María Ignacia López B.	Journalist of Universidad Finis Terrae	Chilean	Ms. Lopez earned a journalism degree and Master of Strategic and Digital Media Communications from the University of Finis Terrae. She has over 15 years of experience working as an executive for various communications age	October 2019
DIRECTOR OF INTERNAL AUDITING	Raúl Puerto M.	Industrial Engineer of Pontificia Universidad Javeriana de Colombia	Chilean	Mr. Puerto earned a Master of Busines's Administration from the Universidad de Chile and Tulane University and an industrial engineering degree from the Portificia Universidad Javeriana de Colombia. Mr. Puerto has over 20 years of experience in audit, risk management, internal control, and compliance, having worked in AngloAmerican, BHP, and Deloitte, leading Internal Audit, Risk Management and other Administrative areas in Chile and Latin America.	January 2016
DIRECTOR OF RISK MANAGEMENT AND COMPLIANCE	Francisco Sánchez V.	Industrial Engineer of Universidad Católica de Chile	Chilean	He joined SQM in 2008 as a Management Control Engineer, then he worked in Finance in Soquimich Comercial S.A., and in 2012 he was promoted to Finance Director, first for SQM Mexico, and then for the Latin America region. In 2017, he assumed the position of Comptance Project Director.	April 2019
VICE PRESIDENT OF MINING OPERATIONS	Rodrigo Vera D.	Industrial Engineer of Universidad Católica de Chile	Chilean	In 1999, he joined SQM as Controlling Engineer for Nitrates and Iodine Operations. He was promoted to Head of Planning in 2002. In 2010, he as sumed the position of Technical Manager. In 2016, he became Research and Environmental Manager for Nitrates and Iodine Operations, and in 2019 he became Senior Development Director for Potassium and Lithium Operations. In 2020, he assumed the position of Vice President of Mining Operations.	March 2020

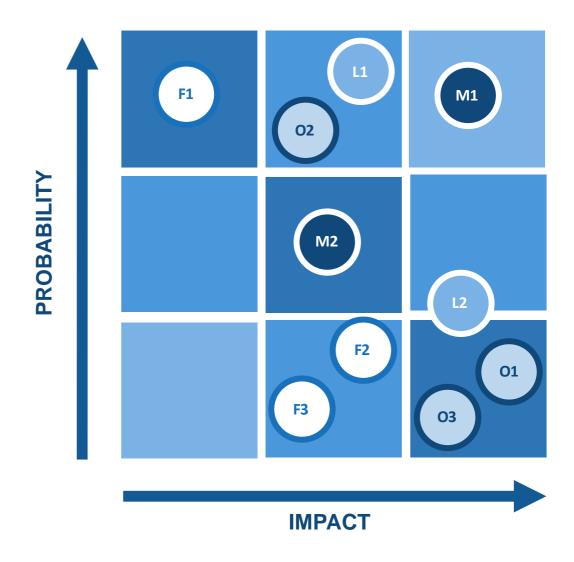
### **SQM MATERIALITY MATRIX**



Source: Company Sustainabilty Report

### **APPENDIX F: Others**

### APPENDIX F1: RISK MATRIX



# APPENDIX F2: BOARD MEMBER ELECTION BY TYPE OF SHARE



Source: Company Sustainability Report

### APPENDIX F3: LIST OF ABBREVIATION

ABBREVIATION	FULL TERM
SQM	SOQUIMICH
SPN	Specialty Plant Nutrition
L&D	Lithium and Derivatives
I&D	Iodine and Derivatives
P	Potassium
IC	industrial Chemicals
GDP	Gross Domestic Product
IMF	International Monetary Fund
CAGR	Compound annual growth rate
R+D	Research and Development
JV	Join Venture
US	United States
COGS	Cost of good sold
TD	Total Debt
STD	Short Term Debt
LTD	Long Term Debt
CL	Current Liabilities
NCL	Non-Current Liabilities
ESG	Environmental, Social and Governance
CFO	Chief Financial Officer
MM	Millions
BN	Billions
TP	Target Prince
CLP	Chilean Pesos
DCF	Discounted Cash Flow
RIM	Residual Income Model
ROIC	Return on invested Capital
CAPEX-M	Maintenance CAPEX
PPE	Property, Plant and Equipment
WACC	Weighted Average Cost of Capital

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