

## CREDIT OPINION

29 October 2018

Update

✓ Rate this Research

### RATINGS

#### Corporacion Nacional del Cobre de Chile

Domicile	Chile
Long Term Rating	A3
Type	Senior Unsecured - Fgn Curr
Outlook	Stable

Please see the [ratings section](#) at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

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### CLIENT SERVICES

Americas 1-212-553-1653

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Japan 81-3-5408-4100

EMEA 44-20-7772-5454

# Corporacion Nacional del Cobre de Chile

## Update to credit analysis

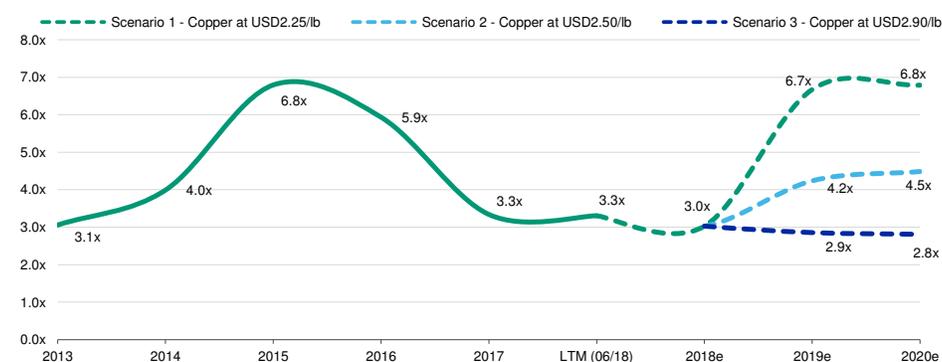
### Summary

The affirmation of [Corporacion Nacional del Cobre de Chile's](#) (CODELCO) ratings at A3 and its higher Baseline Credit Assessment (BCA) at baa3 reflects a stronger standalone credit profile because of a better operating environment, higher production levels and an enhanced liquidity position. Besides, the company has a cost and productivity agenda aiming at improving productivity by 20% through 2020, while achieving cost savings of \$2.2 billion in total (from 2014 to 2020).

CODELCO continues to face credit challenges related to high capital spending needs and copper market volatility. The BCA incorporates the ongoing large investment plan to increase production and improve falling ore grades, requiring the issuance of incremental debt while generating sustained negative free cash flow. We estimate annual capital spending of around \$4 billion over 2018-20, mostly directed to key structural projects. Still, the capitalization from the government (2014 to early 2019) and a more comfortable debt profile, following liability management initiatives in recent years, will support its operating stability and provide a buffer in a downside metal price scenario.

Exhibit 1

#### CODELCO's adjusted leverage in different scenarios for copper prices in 2019-20



Sources: Moody's Financial Metrics™, Moody's Investors Service (forecast)

The A3 rating reflects CODELCO's status as a government-related issuer and is based on the following inputs: (1) the company's baa3 BCA, a measure of its intrinsic risk regardless of its controlling entity; (2) the [Government of Chile's](#) A1 bond rating; and (3) our assumptions of high support from the Chilean government and high interdependence between CODELCO and the government. The high level of support from the government provides three notches of uplift to the company's BCA.

CODELCO's ratings continue to reflect the company's position as the world's largest copper producer and the second-largest molybdenum (moly) producer, its competitive cost position (currently positioned within the second industry quartile) and its substantial reserve base. The ratings also incorporate support from the Chilean government through the capitalization law, based on which the company will have received \$2.6 billion in equity and \$200 million in profit retention through year-end 2018/early 2019.

### Credit strengths

- » Strong business profile as the largest copper producer globally, with significant moly production and a long-lived reserve base
- » Multiple mine profiles, which diversify the risk of an impact from operational disruptions
- » High level of proven government support, which backs its investment needs through down cycles

### Credit challenges

- » High capital spending requirements to maintain production volumes, leading to an increasing debt burden and negative free cash flow in a lower price environment
- » Concentration in one commodity (copper), which leads to an enhanced exposure to market volatility

### Rating outlook

The stable outlook reflects our expectations for strengthened operating performance and adequate liquidity. The outlook incorporates ongoing cost-reduction initiatives and a more efficient operating profile. Credit challenges related to high capital spending needs to maintain production volumes are also taken into consideration next to capitalization from the government and CODELCO's capacity to direct cash flows toward investment projects. While market volatility remains a risk, underlying factors promoting steady operating performance are likely to provide some flexibility, even in a weaker pricing environment.

### Factors that could lead to an upgrade

Positive pressure on CODELCO's ratings or outlook could arise if copper prices improve significantly and are sustained at higher levels, leading to stronger cash flow, more robust liquidity and a lighter debt burden. The company's BCA could be raised with stronger credit metrics such that:

- » its leverage (adjusted gross debt/EBITDA) remains below 2.5x (3.3x in the 12 months ended June 2018)
- » its interest coverage (adjusted EBIT/interest expense) is maintained above 5.0x (3.8x in the 12 months ended June 2018)
- » its adjusted EBIT margin is sustained above 15% (15.8% in the 12 months ended June 2018)

### Factors that could lead to a downgrade

The ratings or outlook could suffer negative pressure should earnings contract for a prolonged period or if CODELCO is unable to maintain costs within the second quartile of the industry. Any indication of a decline in the level of support from the Chilean government or a marked deterioration in CODELCO's liquidity position would also exert downward pressure on the company's ratings. A lower BCA could also be considered if:

- » the company's leverage ratio (adjusted gross debt/EBITDA) increases toward levels above 3x
- » its interest coverage (adjusted EBIT/interest expense) remains below 4.5x
- » its adjusted EBIT margin falls to levels below 12%, all on a sustained basis

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on [www.moody's.com](http://www.moody's.com) for the most updated credit rating action information and rating history.

## Key indicators

Exhibit 2

### Corporacion Nacional del Cobre de Chile

US Millions	Dec-13	Dec-14	Dec-15	Dec-16	Dec-17	LTM (Jun-18)	2018-proj.	2019-proj.
Revenue	14,956.3	13,826.7	11,693.5	11,536.8	14,641.6	16,078.4	15,317.0	13,522.0
EBIT Margin %	16.4%	12.3%	2.9%	5.0%	16.5%	15.8%	17.0%	8.7%
EBIT / Interest Expense	5.3x	3.6x	0.6x	0.9x	3.7x	3.8x	3.9x	1.8x
Debt / EBITDA	3.1x	4.0x	6.8x	5.9x	3.3x	3.3x	3.0x	4.2x
Debt / Book Capitalization	46.4%	49.8%	56.7%	55.5%	51.2%	50.9%	48.2%	45.7%
(CFO - Dividends) / Debt	15.3%	16.1%	16.9%	8.5%	24.5%	27.6%	25.4%	20.3%

All figures are calculated using Moody's estimates and standard adjustments. Moody's Forecast (f) or Projections (proj.) are Moody's opinion and do not represent the views of the issuer.

Periods are financial year-end unless indicated. LTM = Last 12 months.

Copper price assumption = \$2.9/lb in 2018 and \$2.5/lb in 2019.

Sources: Moody's Financial Metrics™, Moody's Investors Service (forecast)

## Profile

Headquartered in Santiago, Chile, Corporacion Nacional del Cobre de Chile (CODELCO) is 100% owned by the Chilean State and is the largest producer of copper globally, holding a share of around 9% of mined copper production. The company also ranks as one of the top two global moly producers (as a by-product of copper production), with a market share of around 10%. Operating through seven mining divisions, Chuquicamata, Radomiro Tomic, Ministro Hales, Andina, El Teniente, Salvador, Gabriela Mistral, and Ventanas (refinery), CODELCO's operations include several world-class mines from a reserve, production capacity and cost perspective, as well as smelting and refining capability. In addition, CODELCO owns 49% of the El Abra mining operations in Chile and is part of a joint venture with Mitsui & Co., Ltd. (A3 stable) that owns a 29.5% interest in Anglo American Sur — and CODELCO owned, through this joint venture, 20% of Anglo American Sur's revenue for the 12 months ended June 30, 2018, which was around \$16.1 billion.

## Detailed credit considerations

### Strong business profile as the largest copper producer globally, complemented by a long-lived reserve base

With reserves of roughly 48 million tons of fine copper in 2017, CODELCO holds slightly under 7% of reserves globally, an important determinant in its ongoing operating profile and long-term performance. Considering the reserve position held and the various projects in process and under evaluation, CODELCO is likely to achieve production levels that will offset the impact of declining ore grades and maintain at least the current levels.

Exhibit 3

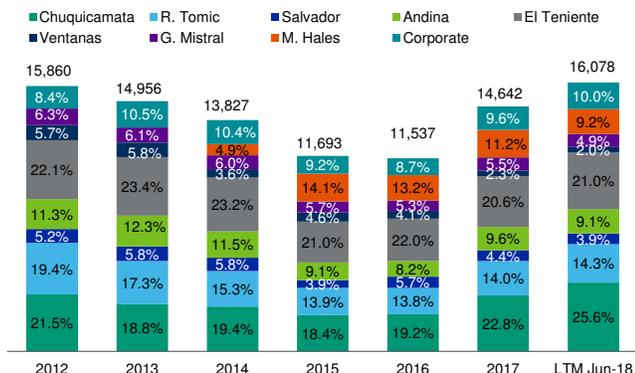
### Key operational figures for CODELCO

	2014	2015	2016	2017	1H18
Annual Copper Output (000 Tons)	1841	1891	1827	1842	875
Reserves (Million Tons)	61	51	48	48	48
Number of Operating Copper Mines	9	9	9	9	9
Number of Projects Under Construction	3	3	3	3	3
Ore Grade (%)	0.79	0.77	0.71	0.71	0.67
Total Net Cash Cost (\$/lb)	150 cents	139 cents	126 cents	136 cents	138 cents

Sources: Moody's Financial Metrics™, company financial statements

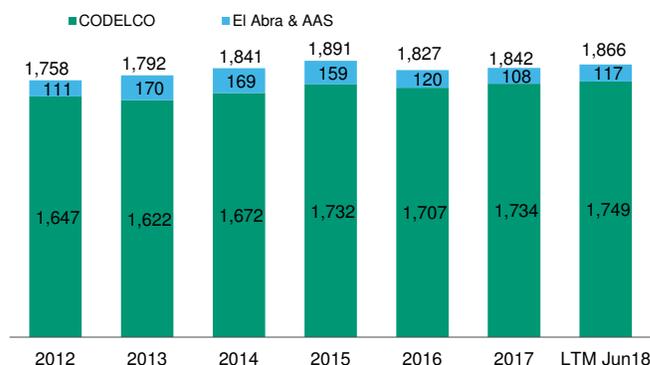
CODELCO's key products include refined copper (in the form of cathodes), copper concentrates, blister and anode copper, and by-products such as moly, anode slime and sulfuric acid. Through an associate company, CODELCO also manufactures wire rods in Germany. Additionally, the company has shares of joint ventures with El Abra and Anglo American Sur, which collectively produced around 117,000 thousand metric tons (mtf) of copper through the 12 months ended June 2018, considering CODELCO's share only. In the first half of 2018, 46% of the company's sales came from China, 29% from the Americas and 12% from Europe, with the rest of Asia and other regions representing the remaining 13%.

Exhibit 4  
**CODELCO's revenue breakdown demonstrates strong mine diversification**  
 \$ millions



Sources: Company financial statements, Moody's Financial Metrics™

Exhibit 5  
**CODELCO's copper production breakdown**  
 thousands mtf of copper



Sources: Company financial statements, Moody's Financial Metrics™

**Rangebound copper prices support earnings and credit metrics; exposure to high market volatility remains**

Our expectation of a more stable operating environment incorporates a market supported by lower copper supply levels, which will help keep supply and demand in balance, with potential for a small deficit. Supply disruptions will remain a key factor influencing copper prices, and the potential for a deficit could be influenced by the lack of projects lined up that could materially increase supply in the market over the next couple of years. Copper prices began improving only in late 2016, based on expectations of more infrastructure investment after the US presidential election. Spot London Metal Exchange (LME) prices for copper averaged \$2.21 per pound (lb) in 2016, roughly a 29% drop from the 2014 average, while average prices for 2017 reached \$2.81/lb, a 31% increase from the 2016 average. Average prices for year-to-date mid-October 2018 are \$3.02/lb, 10.3% higher than in the year-earlier period. Although commodity prices have been responding to the trade war between China and the US, deceleration in China's GDP growth and overall global economic growth, potential production disruptions because of labor negotiations, declining ore grades and delays in new projects will likely lead to small deficits, thus limiting downside risk for copper prices, and we expect prices to remain rangebound.

Exhibit 6  
**Historical copper prices and our rangebound sensitivities**



We apply a range of pricing sensitivities to help inform our view of potential future credit metrics for the purpose of rating consistency in the commodity sector. We use the midpoint of the range to gauge the near- to mid-term operating performance, and the stress-case price to assess the company's financial and liquidity position in a more stressed pricing environment. These are price assumptions and we do not assign ratings based on any one single price because we recognize the inherent volatility in the commodity markets.  
 Sources: LME, Moody's Investors Service

At the current price levels, CODELCO's credit profile will be steady through 2019-20. Recent improvements mostly reflect a recovery in copper prices, but also ongoing cost-cutting initiatives. The company has a cost and productivity agenda aiming to increase

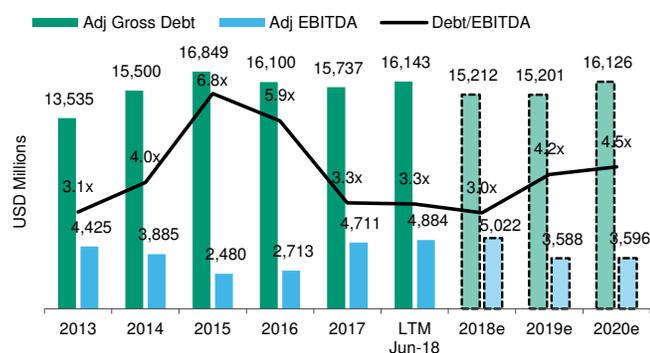
productivity by 20% by 2020 while achieving cost savings of \$2.2 billion over 2014-20. By year-end 2018, \$1.6 billion, almost 73% of the goal, is planned to be materialized. Although credit challenges related to high capital spending needs and market volatility remain, both proved government support and a more certain capacity to direct cash flow toward capital spending needs without jeopardizing liquidity following liability management will support operating stability and provide a buffer in a downside metal price scenario.

CODELCO's gross leverage has steadily declined in recent quarters, reflecting stronger EBITDA generation and some debt reduction. After reaching a peak of 9.9x for the 12 months ended September 2016, leverage fell to 3.3x as of year-end 2017 and remained at the same level through the end of June 2018. Based on the midpoint estimate of \$2.50/lb of copper in our rangebound price assumptions, leverage would remain between 4.2x and 4.5x in 2019-20, considering some incremental debt to fund capital spending, and complemented by the direct capitalization from the Chilean government through 2019.

Exhibit 7

**CODELCO's adjusted gross leverage breakdown**

Declining leverage is supported by stronger EBITDA as well as a slightly lower debt burden



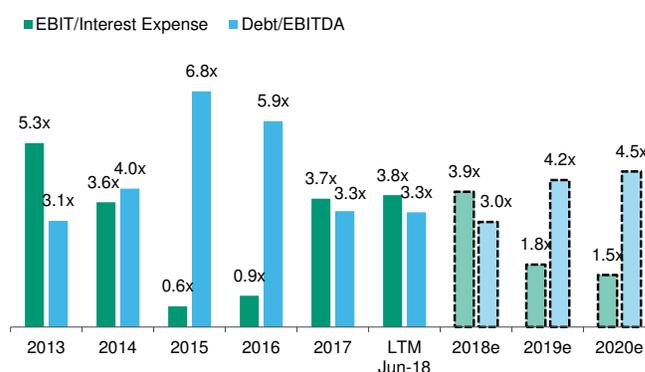
Forecast assumes a copper price assumption of \$2.50/lb.

Sources: Moody's Financial Metrics™, LME, Moody's Investors Service (forecast)

Exhibit 8

**CODELCO's adjusted debt protection metrics**

Recovery pressure in 2015 on the company's credit profile is underway



Forecast assumes a copper price assumption of \$2.50/lb.

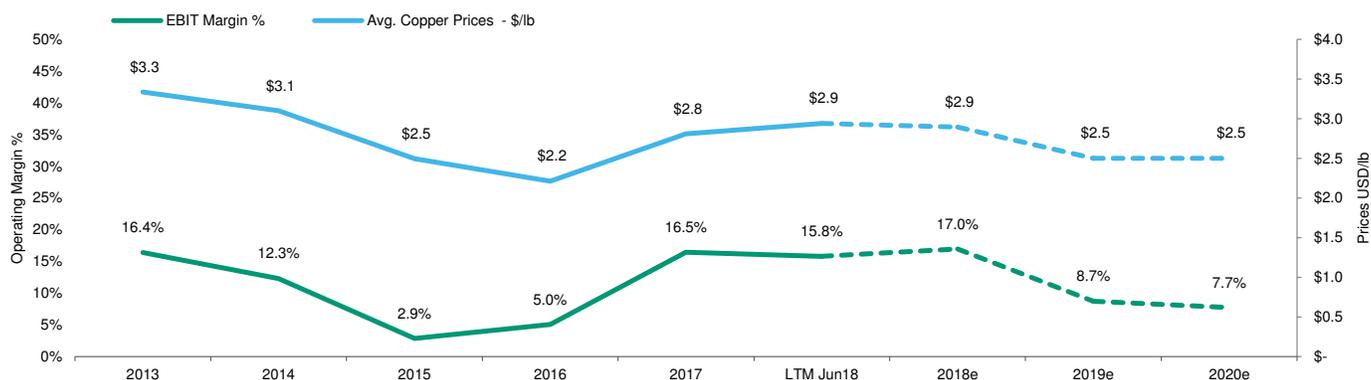
Sources: Moody's Financial Metrics™, LME, Moody's Investors Service (forecast)

Incorporated in gross debt is the Mitsui loan, which had a balance of about \$650 million as of June 30, 2018, and is non-recourse to CODELCO. However, since this amount is consolidated in CODELCO's financial statements, it is reflected in our credit metrics. We believe the investment in Anglo Sur provides CODELCO with an interest in low-cost, long-lived mines with attractive cash cost positions and development growth potential with no incremental increase in debt.

The company's profitability has returned to more robust levels, with the EBIT margin reaching 15.8% for the 12 months ended June 2018 from 16.5% in 2017, but 5.0% and 2.9% in 2016 and 2015, respectively. In our base-case scenario, which assumes a \$2.5/lb copper price, margins will trend toward 9% by 2020. Cash costs have declined since 2013, to \$1.30/lb in 2016-17 from \$1.63/lb, reflecting both lower input prices as well as the results of the ongoing cost and productivity agenda. However, despite an increase in underlying efficiencies, higher input prices and the negative effect of the appreciation of the Chilean peso, combined with the relatively flat production levels, strained cash costs toward \$1.38/lb in H1 2018. CODELCO's unit cash cost position remains competitive in terms of current average copper prices, and within the second quartile of the industry's cash costs.

Exhibit 9

## Evolution of copper prices and adjusted operating margin



Forecast assumes a copper price assumption of \$2.50/lb.

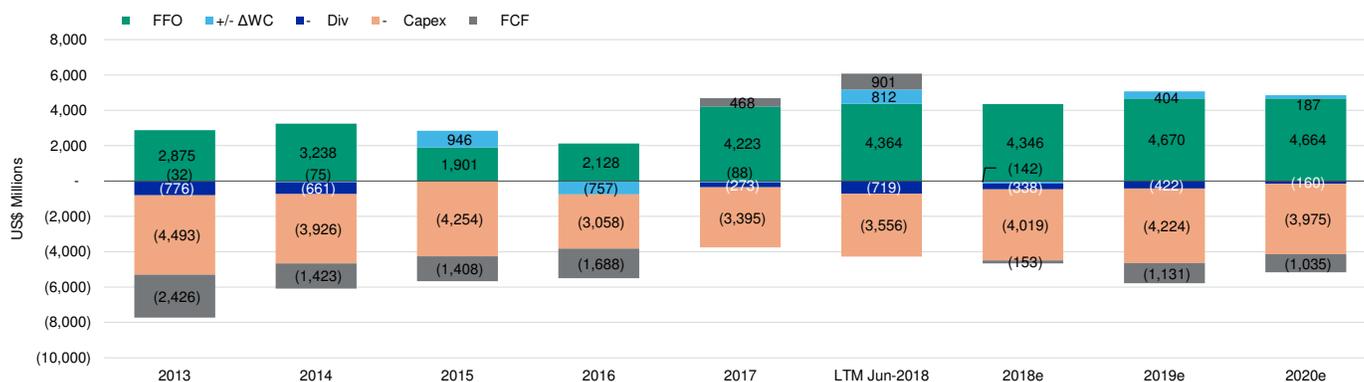
Sources: Moody's Financial Metrics™, LME, Moody's Investors Service (forecast)

CODELCO has relatively aggressive spending plans over the next several years to maintain and improve its production profile, reverse falling ore grades, and consequently maintain a solid level of profitability. As a result, the company will generate sustained negative free cash flow in 2019-20 as it continues to invest heavily and copper prices remain below \$3/lb. The company's capital spending will likely increase in 2019-20, reaching close to \$4.0 billion-\$4.5 billion in the period from \$3 billion-\$3.5 billion in 2017-18. However, CODELCO has some flexibility to reduce capital spending depending on copper price levels. Higher capital spending will nonetheless be supported by stronger copper prices and a more comfortable liquidity position following liability management executed between H2 2017 and H1 2018.

Exhibit 10

## CODELCO's cash flow

## Higher capital spending through 2020 will strain free cash flow generation



Forecast assumes a copper price assumption of \$2.50/lb.

Sources: Moody's Financial Metrics™ (historical), Moody's Investors Service (forecast)

CODELCO's free cash flow generation is limited (see Exhibit 10) because of the high dividend payout required to the Chilean treasury, and its relatively high level of capital spending for strategic growth initiatives. The company essentially pays 100% of its income to the Chilean treasury through income and export taxes and royalties. CODELCO's importance to Chile's economy, and its requirement that its annual budget include interest and debt payment requirements are key elements mitigating the negative free cash flow as a consequence of the large government take, dividends and large capital spending.

CODELCO will prioritize spending to continue to develop the key structural projects, including El Teniente, Chuquicamata and Andina. The El Teniente New Mine Level project, which CODELCO expects to complete by 2023, will maintain the current production levels. Meanwhile, CODELCO expects the Chuquicamata Underground project, now about 62% completed, to begin operating in 2019, while the Andina Plant Reallocation, now about 57% completed, will allow the future expansion of the company's production volumes in

2020. Beyond 2020, the current project investments will be key in supporting stable production levels, which are expected to peak around 2020-22 and remain relatively flat thereafter, based on current board-approved projects only, with upward potential from other projects in the long-term pipeline.

### High level of proven government support funds investment needs and provides liquidity in a less robust pricing environment

The Chilean government's consistent and proven support to CODELCO is illustrated both through direct capital injections and the allowance of profit retention. The stress scenario endured in 2015-16 further demonstrated and underscored CODELCO's resilience, combined with the government's established capacity and willingness to support the company in a challenging operating environment. As a result, the company has a strong capacity to withstand future stress scenarios, even with a historically large government take in terms of export taxes, royalties and dividends representing close to 100% of net income.

As evidence of ongoing support, the government approved \$200 million profit retention for the company in June 2014 and \$225 million in 2015. In October 2014, Chile's congress also approved Law Nº 20.790, a \$4 billion multiyear capitalization bill for 2014-18 that further reinforced CODELCO's importance to Chile's economy and support for the significant capital investment needs while simultaneously easing pressure from weaker copper prices on its credit metrics. Again in October 2015, the government authorized a \$600 million capital increase as part of the capitalization bill.

In December 2016, the government announced a \$975 million capitalization. Part of the proceeds (\$500 million) had already been authorized by the prior capitalization bill from 2015 (\$4 billion), but an additional \$475 million came from the resources of Chile's Copper Reserve Law (Ley Reservada de Cobre Nº13.196). The funds were received in H1 2017. Resources available and authorized under the Copper Reserve Law amount to \$950 million, but with higher prices, the excess balance may not be tapped.

In December 2017, the government announced a \$520 million capitalization, under the capitalization bill, and in June 2018, another \$1 billion, which will be disbursed by February 2019. With that, the total equity contribution under the capitalization law will amount to \$2.6 billion.

Exhibit 11

#### Government support - Authorized and Received/Announced

US\$ millions	Authorized	Received/Announced
Capital Injection	\$ 3,000	\$ 2,620
Retained Earnings	\$ 1,000	\$ 200
Δ Export tax over pre-tax profit	\$ 950	\$ 475
<b>Total (US\$m)</b>	<b>\$ 4,950</b>	<b>\$ 3,295</b>

Source: CODELCO's presentation

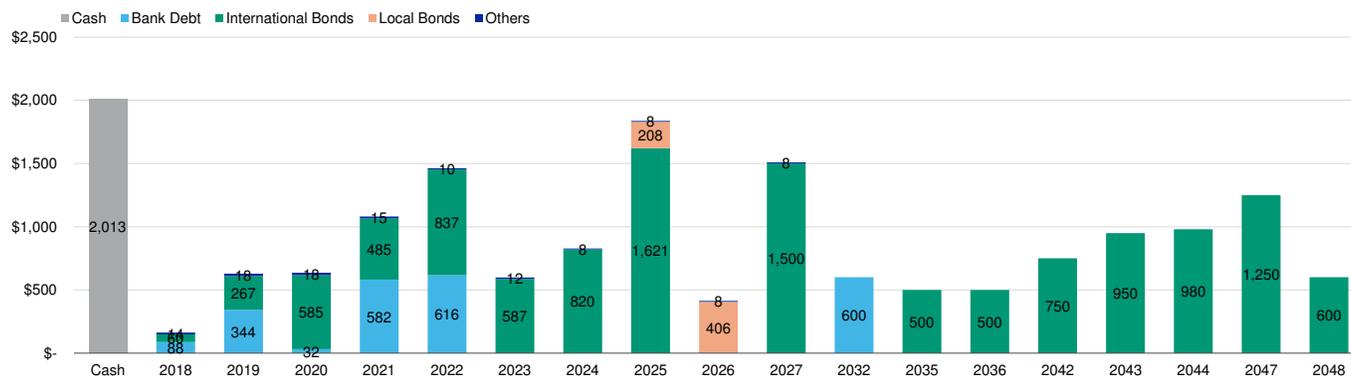
### Liquidity analysis

CODELCO's internally generated funds and an average cash balance of \$1 billion in the last few years reflect adequate liquidity. The company had \$2 billion in cash as of June 2018, with no major upcoming debt maturities through 2020. Following recent refinancing, CODELCO has a more comfortable maturity profile for 2019-21, leaving 84% of its total debt outstanding due only after 2021. In July 2017, the company issued \$2.75 billion and refinanced upcoming maturities from 2019-25 of cross-border bonds for a total of \$2.4 billion. More recently, in April 2018, the company issued \$600 million in the Formosa, Taiwan, market to refinance its short- and medium-term debt. As a result, the company now has more flexibility to finance capital spending plans and will not need to refinance major debt until 2020 to meet its current investment goals.

Exhibit 12

**Debt maturity profile as of June 2018**

USD millions



Source: CODELCO's financial statements

Based on our midpoint scenario at \$2.5/lb of the rangebound prices, we expect persistent negative free cash flow because of high levels of capital spending. However, if prices were to continue increasing to around \$3/lb or above, the company could generate positive free cash flow.

CODELCO has no committed revolving credit facilities that would provide alternative liquidity, but it has solid access to bank debt and capital markets, as illustrated by the recent 2018 and 2017 issuances for \$3.35 billion and past transactions. In 2015, the company issued \$2 billion in 10-year bonds as part of its liability management strategy. In August 2016, the company raised about \$406 million in local notes in Chile, using proceeds partially for liability management. All the issuances helped lengthen the company's debt amortization schedule and improve its liquidity profile.

Furthermore, CODELCO's liquidity position is reinforced by the capitalization from the Chilean government through 2019, to be disbursed as needed. Under the capitalization law, the company will have up to \$3 billion (\$1.6 billion received and \$1 billion to be received by February 2019) in equity and up to \$1 billion in retained earnings (\$200 million already executed). In addition, the export tax paid under the reserve law is now disbursed annually, in December, rather than monthly, which improves the company's working capital management.

## Rating methodology and scorecard factors

### Mapping to rating methodology grid

CODELCO's ownership by the Chilean State and the required 100% payout of its net income, together with the export, royalty and income taxes paid, result in the company's financial profile not being directly reflected in our Mining rating methodology grid.

Exhibit 13

## Corporacion Nacional del Cobre de Chile's rating factors

Mining Industry Grid	Current LTM 6/30/2018		Moody's 12-18 Month Forward View As of 10/26/2018	
	Measure	Score	Measure	Score
<b>Factor 1 : Scale (20%)</b>				
a) Revenues (USD Billion)	\$16.1	Baa	\$14.4	Ba
<b>Factor 2 : Business Profile (25%)</b>				
a) Business Profile	Ba	Ba	Ba	Ba
<b>Factor 3 : Profitability and Efficiency (10%)</b>				
a) EBIT Margin (EBIT / Revenue)	15.8%	Baa	12.8%	Ba
<b>Factor 4 : Leverage and Coverage (30%)</b>				
a) EBIT / Interest Expense	3.8x	Ba	2.9x	B
b) Debt / EBITDA	3.3x	Ba	3.6x	B
c) Debt / Total Capital	50.9%	Ba	47.0%	Baa
d) (CFO - Dividends) / Debt	27.6%	Ba	22.9%	Ba
<b>Factor 5 : Financial Policy (15%)</b>				
a) Financial Policy	Ba	Ba	Ba	Ba
<b>Rating:</b>				
a) Indicated Outcome from Scorecard		Ba1		Ba2
b) Actual Rating Assigned				A3
<b>Government-Related Issuer</b>	<b>Factor</b>			
a) Baseline Credit Assessment	baa3			
b) Government Local Currency Rating	A1			
c) Default Dependence	High			
d) Support	High			
e) Final Rating Outcome	A3			

All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations. This represents Moody's forward view, not the view of the issuer, and unless noted in the text, does not incorporate significant acquisitions and divestitures.

Forecast assumes a copper price assumption of \$2.50/lb.

Source: Moody's Financial Metrics™

## Appendix

Exhibit 14

## Peer comparison table

(in US millions)	Corporacion Nacional del Cobre de Chile			BHP Billiton Limited			Freeport-McMoRan Inc.			Anglo American plc			First Quantum Minerals Ltd		
	A3 Stable			(P)A3 Positive			Ba2 Stable			(P)Baa3 Positive			B3 Negative		
	FYE Dec-16	FYE Dec-17	LTM Jun-18	FYE Jun-16	FYE Jun-17	FYE Jun-18	FYE Dec-16	FYE Dec-17	LTM Jun-18	FYE Dec-16	FYE Dec-17	LTM Jun-18	FYE Dec-16	FYE Dec-17	LTM Jun-18
Revenue	\$11,537	\$14,642	\$16,078	\$30,912	\$36,135	\$43,638	\$14,830	\$16,403	\$19,387	\$21,378	\$26,243	\$27,819	\$2,673	\$3,310	\$3,696
EBITDA	\$2,713	\$4,711	\$4,884	\$12,549	\$19,391	\$23,403	\$3,665	\$5,429	\$7,347	\$5,847	\$8,318	\$8,574	\$933	\$1,100	\$1,426
Total Debt	\$16,100	\$15,737	\$16,143	\$33,642	\$29,558	\$25,875	\$17,245	\$14,145	\$12,146	\$16,564	\$14,759	\$12,623	\$6,902	\$8,522	\$9,428
EBIT Margin	5.0%	16.5%	15.8%	11.0%	36.2%	38.4%	6.7%	22.3%	28.5%	16.6%	21.7%	21.2%	10.7%	6.1%	14.0%
EBIT/Avg. Tang. Assets	1.7%	6.8%	7.0%	2.9%	11.4%	14.7%	2.4%	9.9%	14.9%	7.4%	11.6%	12.2%	1.5%	1.0%	2.5%
EBIT / Int. Exp.	0.9x	3.7x	3.8x	3.6x	13.2x	16.5x	1.1x	3.8x	5.9x	4.5x	9.3x	9.5x	0.7x	0.4x	0.9x
Debt / EBITDA	5.9x	3.3x	3.3x	2.7x	1.5x	1.1x	4.7x	2.6x	1.7x	2.8x	1.8x	1.5x	7.4x	7.7x	6.6x
Total Debt/Capital	55.5%	51.2%	50.9%	33.2%	29.7%	27.7%	57.3%	49.0%	42.6%	40.2%	32.3%	29.9%	39.4%	44.9%	45.9%
(CFO - Dividends) / Debt	8.5%	24.5%	27.6%	20.1%	45.8%	45.9%	17.5%	32.1%	42.2%	29.4%	45.1%	42.8%	6.4%	3.4%	6.3%

All figures and ratios are calculated using Moody's estimates and standard adjustments.

Source: Moody's Financial Metrics™

Exhibit 15

## Moody's-adjusted EBITDA breakdown

(in US Millions)	FYE Dec-13	FYE Dec-14	FYE Dec-15	FYE Dec-16	FYE Dec-17	LTM Ending Jun-18
<b>As Reported EBITDA</b>	<b>4,780.2</b>	<b>4,333.8</b>	<b>-540.4</b>	<b>2,014.3</b>	<b>4,373.1</b>	<b>4,502.2</b>
Operating Leases	282.0	238.9	181.9	230.5	228.1	228.1
Interest Expense – Discounting	-76.6	-82.3	-73.0	-62.5	-47.1	-56.5
Unusual	-116.7	-357.6	2,849.3	432.5	274.7	283.1
Non-Standard Adjustments	-444.1	-248.0	62.2	98.5	-118.2	-73.2
<b>Moody's-Adjusted EBITDA</b>	<b>4,424.8</b>	<b>3,884.8</b>	<b>2,480.0</b>	<b>2,713.2</b>	<b>4,710.7</b>	<b>4,883.7</b>

All figures and ratios are calculated using Moody's estimates and standard adjustments.

Source: Moody's Financial Metrics™

Exhibit 16

## Moody's-adjusted debt breakdown

(in US Millions)	FYE Dec-13	FYE Dec-14	FYE Dec-15	FYE Dec-16	FYE Dec-17	LTM Ending Jun-18
<b>As Reported Debt</b>	<b>12,001.8</b>	<b>13,830.3</b>	<b>15,030.6</b>	<b>15,112.3</b>	<b>14,882.3</b>	<b>15,288.3</b>
Operating Leases	1,533.3	1,669.5	1,818.8	987.3	854.4	854.4
<b>Moody's-Adjusted Debt</b>	<b>13,535.1</b>	<b>15,499.8</b>	<b>16,849.4</b>	<b>16,099.6</b>	<b>15,736.7</b>	<b>16,142.7</b>

All figures and ratios are calculated using Moody's estimates and standard adjustments.

Source: Moody's Financial Metrics™

## Ratings

Exhibit 17

Category	Moody's Rating
<b>CORPORACION NACIONAL DEL COBRE DE CHILE</b>	
Outlook	Stable
Senior Unsecured	A3

Source: Moody's Investors Service

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