MOODY'S
INVESTORS SERVICE

CREDIT OPINION
20 October 2017

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.

Contacts

Barbara Mattos, CFA 55-11-3043-7357
VP-Sr Credit Officer
barbara.mattos@moodys.com

Whitney Leavens 52-55-1253-5748
Associate Analyst
whitney.leavens@moodys.com

Marianna Waltz, CFA 55-11-3043-7309
MD-Corporate Finance
marianna.waltz@moodys.com

CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454

Corporacion Nacional del Cobre de Chile

Update following change in outlook to stable

Summary

As a government related Issuer ("GRI"), CODELCO's A3 rating is based upon the following inputs: (i) the company´s baseline credit assessment (BCA) at ba1, a measure of its intrinsic risk regardless of its controlling entity; (ii) the Chilean Government's Aa3 bond rating; and (iii) our assumptions of high support from the government of Chile and high dependence between CODELCO and the government. The government support provides four notches of uplift to CODELCO's BCA.

CODELCO's ba1 BCA reflects its position as the world's largest copper producer (approximately 1.77 million metric tons for the twelve months ended June 2017 including its share of El Abra and Anglo American Sur) and the second largest molybdenum producer, its competitive cost position (currently positioned within the second industry quartile) and its substantial reserve base. The company's multiple-mine operating profile, which reduces the degree of operational risk, together with its vertical integration, which encompasses SX/EW and conventional smelting facilities, further support its BCA ranking. This footprint contributes to robust operating performance in a strong copper market and acceptable performance during cyclical downturns.

The BCA also incorporates the ongoing large investment requirements to increase production and improve falling ore grades, requiring the issuance of incremental debt while generating sustained negative free cash flow. The capitalization law enacted in October 2014 by the Chilean Congress is a $4 billion plan which includes $3 billion in direct capital injections of which the remaining $1.9bn will likely be dispersed through 2019. We estimate annual capital expenditures ranging between $3.5 billion and $4.5 billion annually over the 2017-19 period, mostly directed to key structural projects, namely Chuquicamata, El Teniente and Andina. The company's current investment plans, combined with a competitive cost position and stable production levels, will be key to a strengthening credit profile.

The change in outlook to stable from negative on CODELCO's ratings and the higher BCA reflect sustained improvement in the company's credit profile due to strengthening operating performance, and a more robust liquidity position. CODELCO has benefited from the recovery in copper prices in the past 12 months, but also cost-reduction initiatives in combination with operational adjustments. The company's more efficient operational profile is further complemented by a limited risk of a market downturn in the near term. Lower copper supply levels should keep supply-demand in balance with the potential for a small deficit, promoting longer-term operating stability.

Credit challenges related to high capital spending needs to maintain production volumes and market volatility remain. However, both the ongoing capitalization from the government and

a greater capacity to direct cash flows toward capex following recent liability management initiatives will promote operating stability even in a scenario leading to a weaker pricing environment.

Credit strengths

» Strong business profile as the largest copper producer globally with significant molybdenum production and a long-lived reserve base

» Multiple mine profile diversifies risk of impact from operational disruptions

» High level of proven government support backs investment needs through down cycles

Credit challenges

» High capital spending requirements to maintain production volumes under lower pricing conditions, leading to an increasing debt burden and negative free cash flow

» Margins pressured by weaker copper prices compared to historical periods

» High 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, a more efficient operating profile and limited risk of a market downturn in the near term. Credit challenges related to high capital spending needs to maintain production volumes are also taken into consideration next to ongoing capitalization from the government and CODELCO's capacity to direct cash flows toward investment projects together with ongoing liability management. 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. CODELCO's BCA could be raised with stronger credit metrics such that leverage (adjusted gross debt to EBITDA) remains below 3.0x, with interest coverage (adjusted EBIT/Interest expense) maintained above 4.0x and adjusted EBIT margins sustained above 8%.

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. A lower BCA could be considered if its leverage ratio (adjusted gross debt to EBITDA) does not trend back towards 3.5x, and interest coverage (adjusted EBIT/interest expense) remains below 3.5x or if EBIT margins falls to levels below 7%, all on a sustainable basis. A marked deterioration in the company's liquidity position could also precipitate a downgrade. Any indication of a decline in the level of support from the government of Chile would also put downward pressure on the company´s ratings.

Key indicators

Exhibit 1

Corporacion Nacional del Cobre de Chile

US Millions	Dec-12	Dec-13	Dec-14	Dec-15	Dec-16	LTM (Jun-17)	2017p	2018p	2019p
Revenue	15,860.4	14,956.3	13,826.7	11,693.5	11,536.8	12,120.4	14,200.0	13,030.0	13,700.0
EBIT Margin (3 Yr Avg)	38%	32%	27%	12%	6%	6%	8%	11%	15%
EBIT/Avg Tang Assets (3 Yr Avg)	26%	19%	12%	4%	2%	2%	3%	4%	5%
EBIT / Interest Expense (3 Yr Avg)	16.9x	12.9x	8.6x	3.0x	1.3x	1.1x	1.5x	2.4x	3.3x
Debt / EBITDA (3 Yr Avg)	1.2x	1.6x	2.3x	4.2x	5.6x	5.6x	5.1x	4.2x	3.6x
Debt / Book Capitalization	43%	46%	50%	57%	55%	54%	48%	48%	46%
(CFO-Div) / Debt (3-yr Avg)	14%	14%	15%	16%	14%	15%	19%	17%	22%

All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.
Source: Moody's Financial Metrics™ (historical); 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 an approximate 9% share of mined copper production. The company also ranks as one of the top two global molybdenum (moly) producers (as a by-product of copper production) with a market share of approximately 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 operation in Chile and is part of a joint venture with Mitsui & Co. Ltd that owns a 29.5% interest in Anglo American Sur - and CODELCO owns, through this joint venture, 20% of Anglo American Sur. Revenues for the 12 months ending June 30, 2017 were around $12.1 billion.

Detailed credit considerations

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

With reserves of roughly 51 million tons of fine copper in 2016, 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 expected to achieve production levels going forward that will offset the impact of declining ore grades and maintain at least maintain current levels.

Exhibit 2

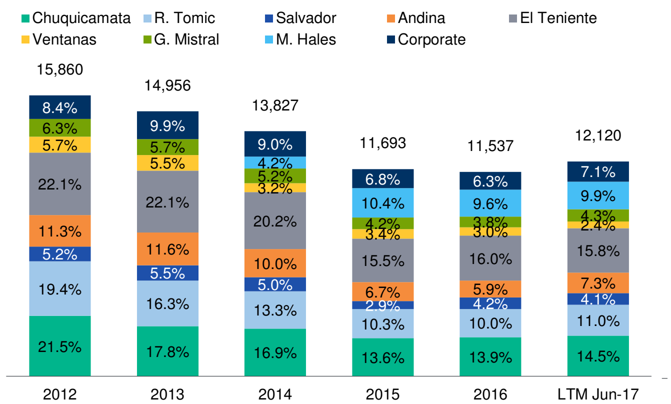
Key operational figures for CODELCO

	2014	2015	2016
Annual Output (000 Tons)	1,841	1,891	1,827
Reserves (Million Tons)	61	57	51
Number of Operating Copper Mines	9	9	9
Number of Projects under Construction	3	3	3
Ore Grade (%)	0.79	0.76	0.71
Total Net Cash Cost ($/lb)	150 cents	139 cents	126 cents

Source: Moody's Financial Metrics™; company financial statements

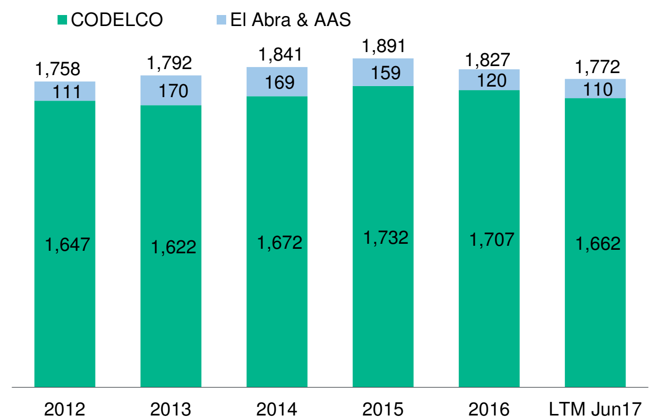
CODELCO's key products include refined copper (in the form of cathodes), copper concentrates, blister and anode copper, and by-products such as molybdenum, anode slime and sulfuric acid. Through an associate company, CODELCO also manufactures wire rods in Germany. Additionally, the company has shares of joint ventures with El Abra and Anglo American Sur, which collectively produced 109,526 thousand feet (mft) of copper through the twelve months ended June 2017, considering CODELCO's share only. During the first half of 2017, 37% of CODELCO's sales came from China, 30% from the Americas and 15% from Europe, with the rest of Asia and other regions representing the remaining 18%.

Exhibit 3
CODELCO revenue breakdown demonstrates strong mine diversification
$ billions



Source: Company financial statements; Moody's Financial Metrics™

Exhibit 4
CODELCO's copper production breakdown
mft thousands



Source: Company financial statements; Moody's Financial Metrics™

Partial rebound in copper prices support improvement in earnings and credit metrics; exposure to high market volatility remains

Our expectation for a more stable operating environment incorporates a market supported by lower copper supply levels, keeping supply-demand in balance with the 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 US post-election expectations for more infrastructure investment. Spot LME prices for copper averaged $2.21/lb in 2016, roughly a 29% drop from the 2014 average, while 2017 average prices as of the first half of October are $2.73/lb, 27% higher than the same period the prior year.

Higher copper prices in 2017 compared to 2015-16 reflect a lack of concentrate export from Freeport McMoRan's (B1 positive) Indonesian operations for roughly the first four months of 2017, as well as supply disruptions from a strike at Minera Escondida (Baa2 stable) in Chile and certain mining sites in Peru during February-March 2017. There may be further production disruptions as labor negotiations continue, and with limited new production starting up in 2017-18, copper supplies may stay roughly balanced with demand through 2018, or even slightly short, which limits downside risk for copper prices. Even though we believe that the extreme price deterioration for base metals has likely bottomed, we expect prices to remain range-bound, between $2.25 and $2.75 per pound, through 2018.

Exhibit 5
Historical copper prices and Moody's range-bound sensitivities

Note: We apply a range of pricing sensitivities to help inform our view of potential future credit metrics for the purpose of ratings consistency in the commodity sector. We use the mid-point of the range to gauge 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 rate to any one single price because we recognize the inherent volatility of the commodity markets.
Source: LME; Moody's Investors Service

China accounts for 40%-50% of global copper demand, making it a key driver in the behavior of prices in the copper markets. Metal price recent improvements from the lows reflect the favorable impact of various Chinese government stimulus actions taken to offset the decelerating GDP trajectory, including easing of credit, reduction in reserve requirements, and increased infrastructure spending. The extent to which current higher prices last will depend on whether China's actions so far were enough to stabilize or grow the economy, or if further stimulus measures are necessary to achieve the country's target GDP growth. China's annual 6.9% growth rate in the first semester of 2017 and 6.8% in third quarter was within the target 6.5%-7% range and exceeded market expectations.

High capital spending will continue to be funded by debt but credit profile will strengthen through 2018

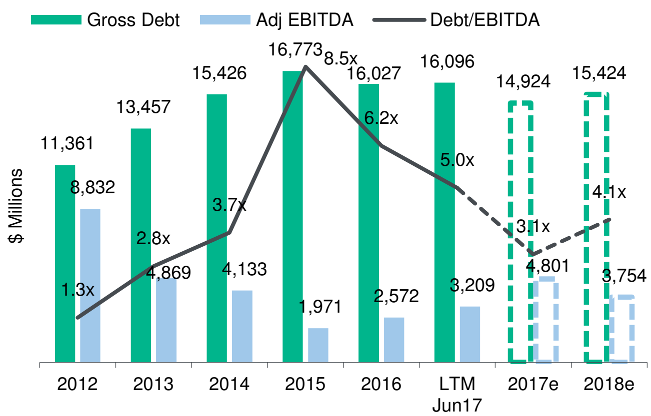
CODELCO's credit profile is strengthening and we expect steady performance through 2018. Recent improvements mostly reflect a recovery in copper prices, but also ongoing cost cutting initiatives. The company has a cost and productivity agenda aiming to increase productivity by 20% by 2020 while achieving cost savings of $2.2 billion over the 2014-2020 period. By the end of 2017, $1.3 billion, almost 60% of the goal, is planned to materialize. Although credit challenges related to high capital spending needs and market volatility remain, both ongoing capitalization from the government and a more certain capacity to direct cash flows toward capital spending needs without jeopardizing liquidity following recent liability management will support operating stability and provide cushion in a downside metals price scenario.

CODELCO's gross leverage has steadily declined in recent quarters, reflecting stronger EBITDA generation and as well as some debt reduction. After reaching a peak at 9.9x for the twelve months ended September 2016, leverage fell to 6.2x at year end 2016 and 5.0x as of June 2017. Based on the mid-point estimate of $2.50 per pound of copper in our range-bound price assumptions, leverage would fall to under 4.0x and remain between 3.5x-4.0x in 2017-18, even with some incremental debt to fund capital spending, and complemented by ongoing and direct capitalization from the Chilean government through 2019.

Exhibit 6

CODELCO's Gross Leverage Breakdown

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

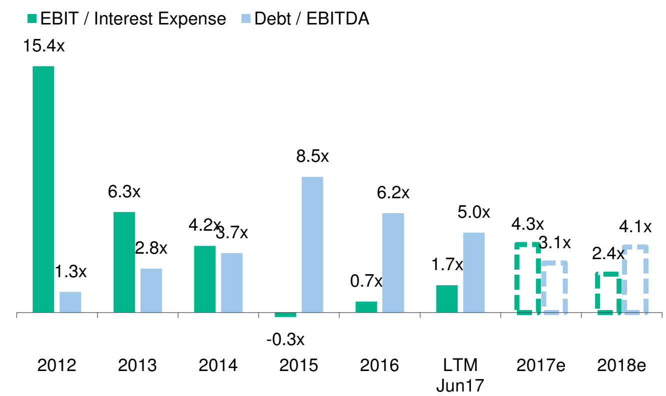


Note: Forecast assumes copper price assumption of $2.50/lb
Source: Moody's Financial Metrics™; LME, Moody's Investors Service (forecast)

Exhibit 7

CODELCO's adjusted debt protection metrics

Recovery from 2015 pressures on credit profile is under way



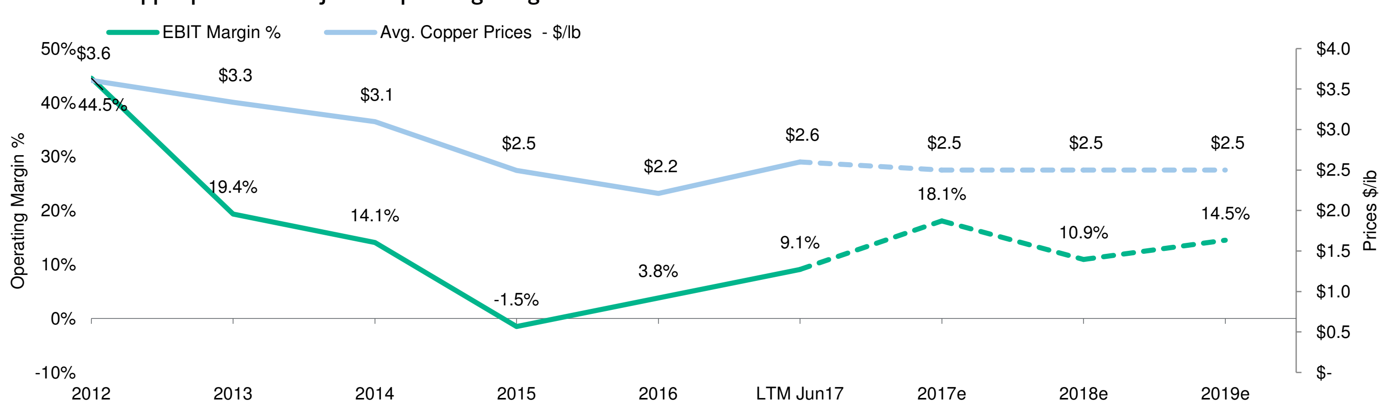
Note: Forecast assumes copper price assumption of $2.50/lb
Source: Moody's Financial Metrics™; LME, Moody's Investors Service (forecast)

Incorporated in the gross debt levels is the Mitsui loan, which had a balance of about $736 million as of June 30, 2017, is non-recourse to CODELCO. Per our methodologies, this amount is reflected in our credit metrics because it is consolidated in CODELCO's financial statements. We view the investment in Anglo Sur as providing 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.

Profitability has returned to more robust levels, with EBIT margins reaching 9.1% for the last twelve months as of June 2017, compared to just 3.8% during 2016 and -1.5% in 2015. In our base case scenario, margins will trend toward at least 15% by 2019. Cash costs have declined by close to 8% annually since 2013 (to an average $1.26/lb in 2016 and $1.32/lb in June 2017, well under the $1.63/lb in 2013). The decline reflects both lower input prices as well as the results of the ongoing cost and productivity agenda. Despite an increase in underlying efficiencies, a slight upward movement in 2017 could result from some pressure on energy costs as well as foreign exchange movements combined with relatively flat production levels. 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 8

Evolution of copper prices and adjusted operating margins



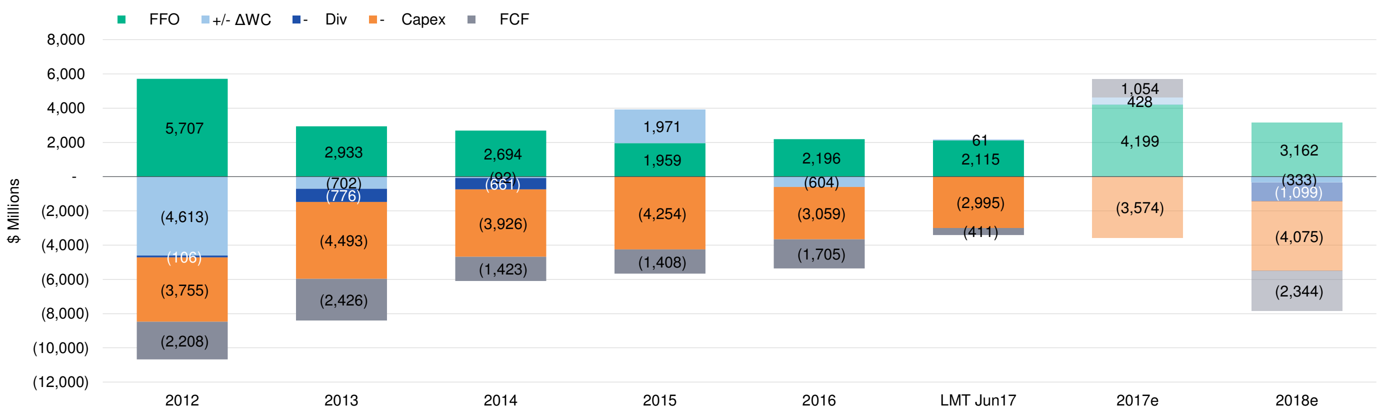
Note: Forecast assumes copper price assumption of $2.50/lb
Source: Moody's Financial Metrics™; LME, Moody's Investors Service (forecast)

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 2018-19 as it continues to invest heavily. Despite lower capital intensity in 2016 and during the last twelve months ended in June 2017, with levels close to $3 billion, capital spending is set to increase in 2018 and 2019 to around $3.5-4.5 billion. Higher capital spending will nonetheless be supported by stronger copper prices and a more comfortable liquidity position following recent liability management. CODELCO has some flexibility to reduce capital expenditures depending on copper price levels.

Exhibit 9

CODELCO Cash Flows

Higher capital spending in 2018 and 2019 will pressure free cash flow generation



Note: Forecast assumes copper price assumption of $2.50/lb

Source: Moody's Financial Metrics™ (historical); Moody's Investors Service (forecast)

CODELCO's free cash flow generation is limited (see Exhibit 9) 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 expenditures.

CODELCO will prioritize spending to continue to develop the key structural projects, including El Teniente, Chiquicamata and Andina. The El Teniente project, which CODELCO expects to complete by 2023, will maintain current production levels. Meanwhile, CODELCO expects the Chuquicamata underground project, now about 50% completed, to begin operating in 2019, while the Andina Reallocation, now about 40% completed, will allow future expansion of CODELCO's production volumes. Beyond 2020, 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 evidenced both through direct capital injections 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 multi-year 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 as of the first half of 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.

Exhibit 10
Government Support - Authorized and Executed

US$ millions	Authorized	Received	Remaining	Potential Capitalization (2017-2019)
Capital Injection	$ 3,000	$ 1,100	$ 1,900	$ 1,900
Retained Earnings	$ 1,000	$ 200	$ 800	$ 800
Δ Export tax over pre-tax profit	$ 950	$ 475	$ 475	$ -
Total (US$m)	**$ 4,950**	**$ 1,775**	**$ 3,175**	**$ 2,700**

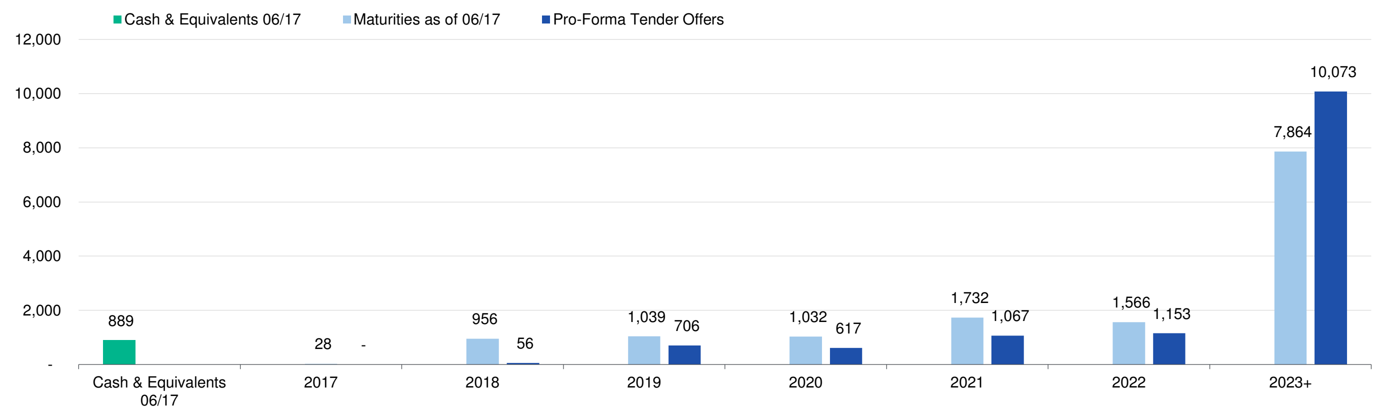
Note: Potential capitalization of retained earnings from 2017-18 is based on projected net income, per Moody's forecast.
Source: CODELCO Company Presentation

Liquidity analysis

CODELCO's internally generated funds and an average cash balance of $1 billion during the last few years reflect adequate liquidity. The company had $889 million in cash as of June 2017, with no major upcoming debt maturities through 2018 expected following pro-forma liability management and prepayments planned for the second half of the year.

Following recent refinancing, CODELCO has a more comfortable maturity profile for the 2019-2021 period, leaving 80% of total debt outstanding coming due only after 2021. In July 2017, CODELCO issued $2.75 billion and refinanced upcoming maturities of cross-border bonds for a total of $2.4 billion. As a a result, the company now has more flexibility to finance capital spending plans, and will not need to refinance debt until 2019 to meet current investment goals.

Exhibit 11
Debt Maturity Profiles as of June 2017 and Pro-Forma for December 2017
$ millions



Source: CODELCO Financial Statements

Based on our mid-point scenario at $2.5 per pound of the range-bound prices, we expect persistent negative free cash flow due to high levels of capital spending. However, if prices were to continue at current levels as seen year to date, the company could generate positive free cash flow.

The company has no committed revolving credit facilities that would provide alternative liquidity, but it has solid access to bank debt and capital markets as evidenced by the recent 2017 issuance for USD 2.75 billion and past transactions. In 2015, CODELCO issued $2 billion in 10-year bonds as part of its liability management strategy. In August 2016, CODELCO raised about $406 million in local notes in Chile, using proceeds partially for liability management. All the issuances helped lengthen CODELCO's debt amortization schedule and improve its liquidity profile.

Rating Methodology and Scorecard Factors

MAPPING TO RATING METHODOLOGY GRID

CODELCO's ownership by the Chilean State and the required 100% payout of net income, together with the export, royalty and income taxes paid results in the company's financial profile not being directly reflected in Moody's rating methodology grid for the global mining industry.

Exhibit 12

Corporacion Nacional del Cobre de Chile

Mining Industry Grid [1][2]	Current LTM 6/30/2017		Moody's 12-18 Month Forward View As of 10/18/2017 [3]	
Factor 1 : Scale (20%)	**Measure**	**Score**	**Measure**	**Score**
a) Revenues (USD Billion)	$12.1	Baa	$17.7	Baa
Factor 2 : Business Profile (20%)				
a) Business Profile	Ba	Ba	Ba	Ba
Factor 3 : Profitability and Efficiency (15%)				
a) EBIT Margin (3 Year Avg)	5.6%	Ba	14.6%	A
b) Return on Average Tangible Assets (3 Year Avg)	2.0%	Caa	5.4%	Ba
Factor 4 : Leverage and Coverage (35%)				
a) EBIT / Interest Expense (3 Year Avg)	1.1x	Caa	3.3x	Ba
b) Debt / EBITDA (3 Year Avg)	5.6x	Caa	3.6x	Ba
c) Debt / Total Capital	53.8%	Ba	46%	Baa
d) (CFO - Dividends) / Debt (3 Year Avg)	14.9%	B	21.7%	Ba
Factor 5 : Financial Policy (10%)				
a) Financial Policy	Ba	Ba	Ba	Ba
Rating:				
a) Indicated Rating from Grid		Ba3		Ba1
b) Actual Rating Assigned				A3
Government-Related Issuer	**Factor**			
a) Baseline Credit Assessment	ba1			
b) Government Local Currency Rating	Aa3			
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.
Source: Moody's Financial Metrics™

Ratings

Exhibit 13

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

Source: Moody's Investors Service

REPORT NUMBER 1089270

CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454