

(Incorporated in Hong Kong with limited liability under the Companies Ordinance) Stock Code: 01258

# 2016 ANNUAL REPORT



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# **REGISTERED OFFICE**

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# PRINCIPAL PLACE OF BUSINESS IN ZAMBIA

32 Enos Chomba Road Kitwe, Zambia

# **COMPANY'S WEBSITE**

www.cnmcl.net

# **STOCK CODE**

1258

# DIRECTORS

# **Executive Directors**

Mr. Xinghu Tao (Chairman and President) Mr. Xingeng Luo (Vice President) Mr. Chunlai Wang (Vice President) Mr. Wei Fan (Vice President) Mr. Kaishou Xie (Vice President)

# Non-Executive Director

Mr. Diyong Yan (Vice Chairman)

# **Independent Non-Executive Directors**

Mr. Chuanyao Sun Mr. Jingwei Liu Mr. Huanfei Guan



A general view of the exterior of Chambishi Copper Smelter



# **CORPORATE INFORMATION (CONTINUED)**

# THE COMMITTEES OF THE BOARD

# Audit Committee

Mr. Jingwei Liu (*Chairman*) Mr. Diyong Yan Mr. Huanfei Guan

# **Nomination Committee**

Mr. Chuanyao Sun *(Chairman)* Mr. Diyong Yan Mr. Jingwei Liu

### **Remuneration Committee**

Mr. Huanfei Guan *(Chairman)* Mr. Diyong Yan Mr. Chuanyao Sun

# **Compliance Committee**

Mr. Xinghu Tao *(Chairman)* Mr. Chuanyao Sun Mr. Huanfei Guan

# JOINT COMPANY SECRETARIES

Mr. Aibin Hu Mr. Tin Wai Lee *CPA* 

# **LEGAL ADVISER**

Davis Polk & Wardwell The Hong Kong Club Building 3A Chater Road Hong Kong

# AUDITOR

Deloitte Touche Tohmatsu *Certified Public Accountants* 35/F., One Pacific Place 88 Queensway Hong Kong

# HONG KONG SHARE REGISTRAR

Computershare Hong Kong Investor Services Limited Shops 1712-1716, 17th Floor Hopewell Centre, 183 Queen's Road East Wanchai, Hong Kong



# **CHAIRMAN'S STATEMENT**



Chairman of the Board Xinghu Tao



# **CHAIRMAN'S STATEMENT (CONTINUED)**

On behalf of the Board of Directors, I hereby present to all Shareholders the annual report of China Nonferrous Mining Corporation Limited and its subsidiaries for the year ended 31 December 2016.

In the Year, the Group recorded a revenue of US\$1,313.3 million, representing an increase of 10.4% as compared with the same period of last year; the profit attributable to owners of the Company was US\$11.8 million, representing an increase of US\$291.7 million as compared with a loss of US\$279.9 million in 2015; and the basic earnings per share attributable to owners of the Company were approximately US\$0.34 cents, representing an increase of US\$8.36 cents from the basic losses per share of US\$8.02 cents in 2015. The Group managed to achieve such remarkable results despite of a year-on-year decrease of 11% in the price of copper metal, the principal product of the Group, primarily thanks to the strengthened management of the subsidiaries, increases in sales and production volume of products, the relatively stable exchange rate of the Zambian Kwacha, and the decrease in depreciation charge (the provision for impairment of fixed assets US\$343 million made at the end of 2015).

Over the past year, thanks to the concerted efforts of the Board, the management and all staff, the Group had overcome the adverse factors including insufficient electricity supply, and realized an overall increase in the production volumes of principal products. The Group produced 206,217 tonnes of blister copper, 523,906 tonnes of sulphuric acid and 75,903 tonnes of copper cathodes, representing an increase of 11.0%, 8.8% and 10.9% as compared with last year, respectively. During the last year, we further expanded the production capacities of Muliashi and Chambishi Leach Plant through expediting their construction; we further secured resources for Huachin Leach and CNMC Huachin Mabende through acquisition; meanwhile, we enhanced the integration of materials procurement and products sale in Zambia and DRC in order to further expand the marketing market; and the completion of the projects under plan such as the integrated exploration and construction project of the Chambishi Southeast Mine with an investment amount of US\$830 million, will cement a solid foundation for the Group to further develop its business in future.

Looking forward, despite many challenges the world economy faces, the United States, as the largest economy, is expected to maintain a stable improvement due to the abatement of tax and its policy on increasing investment in infrastructure construction as implemented by the U.S. government. China, as one of the growth drivers of the world economy, maintains a moderate size of investment in infrastructure construction. With the progress of the "Thirteenth Five-Year" Plan and the deepening of supply-side structural reform, it is expected that the economy will maintain a stable and proper growth. The bulk commodity market has experienced an in-depth adjustment for five years, and the prices of copper and other base metals started to pick up at the end of 2016. The economic ascent and improvement of supply and demand provide strong driving forces for the rise of copper prices, which are still promising in the long run.



# **CHAIRMAN'S STATEMENT (CONTINUED)**

In the future, facing both opportunities and challenges, we will enhance confidence and capitalise on various opportunities arising from the low-speed-growth period of the economy. While further prioritizing the interest of Shareholders and attaching great importance to the stakeholders such as employees, suppliers and communities, we will follow the development strategy as a rapidly growing vertically integrated copper producer with mining, ore processing, leaching and smelting capacities in the future and unremittingly consolidate management foundation. More efforts will be put to ensure operational regulatory compliance, so as to improve the level and efficiency of our corporate governance. Meanwhile, we will highly focus on capitalising on the opportunities, fully utilise the financing function of the capital market, speed up resources exploration and acquisition, press forward with adjustments of products and organization structure, optimize the management of supply chain and price chain to promote the integration of production, supply and sale in the same region and accelerate the construction of pipeline projects so as to continuously improve the production capacities of existing in-operation mines and the smelting and leaching businesses, and give play to the advantages of our vertically integrated operation, so as to elevate the profitability and improve results and market performance of the Group.

Finally, on behalf of the Board of Directors, I sincerely express thanks to all shareholders, business partners and people from all walks of life for their longstanding support and care of the Group, and to all management and staff for their assiduous work during this year.

Xinghu Tao Chairman China Nonferrous Mining Corporation Limited

Hong Kong, 30 March 2017



# **RESULTS HIGHLIGHTS**

# **OPERATING RESULTS**

In 2016, the Group recorded revenue of US\$1,313.3 million, representing an increase of 10.4% as compared with 2015.

In 2016, the Group recorded profit attributable to owners of the Company of US\$11.8 million, representing an increase of US\$291.7 million as compared with 2015.

# **CHANGES IN PRODUCT OUTPUT**

In 2016, the Group produced 206,217 tonnes of blister copper, representing an increase of 11.0% year-on-year.

In 2016, the Group produced 75,903 tonnes of copper cathodes, representing an increase of 10.9% year-on-year.

In 2016, the Group produced 523,906 tonnes of sulphuric acid, representing an increase of 8.8% year-on-year.





# **RESULTS HIGHLIGHTS (CONTINUED)**

# STEADY PROGRESS IN PROJECT DEVELOPMENT

The integrated exploration and construction project of the Chambishi Southeast Mine of NFCA is under development. As at the end of December 2016, approximately 41.6% of the total investment had been completed. The project is expected to be completed in the third quarter of 2018.

The Mwambashi strip mine project of SML comprises a strip mine with designed capacity of 600,000 tonnes of ores per annum and a processing plant with a daily capacity of 2,000 tonnes. The strip mine completed construction and commenced formal production at the end of June 2016. Instead of building a new plant, the processing plant would be built by reconstructing and expanding another plant with a daily capacity of 1,000 tonnes. The reconstruction and expansion project commenced in April 2016 and it is expected to be completed and put into operation in August 2017.

CCS has two projects under progress, namely the high grade cobalt matte metallurgy project and the liquid sulphur dioxide project.

- The high grade cobalt matte metallurgy project completed construction and commenced formal production in September 2016.
- The liquid sulphur dioxide project produces liquid sulphur dioxide with smelting by-products and existing public facilities. The construction period is one year. The project was approved by the Board in September 2016 and is currently under construction.

In addition, the Group currently conducts research on the development of new mining exploration, mining projects and smelting projects in the DRC to actively promote its resource reserves and enhance its smelting production capacity, so as to secure a continuous growth of the Group.



# **MANAGEMENT DISCUSSION AND ANALYSIS**

# **FINANCIAL REVIEW**

# **Results of Operations**

The following table sets forth sales volume, average selling price, revenue and percentage contribution to total revenue of the products of the Group during the years indicated.

			For t	he year ende	ed 31 Decem	ber				
		20	16		2015					
	Sales	Average		% of		Average		% of		
	Volume	Selling		Total	Sales	Selling		Total		
	(Note)	Price	Revenue	Revenue	Volume	Price	Revenue	Revenue		
		(US\$ per				(US\$ per				
	(Tonnes)	tonne)	(US\$'000)	(%)	(Tonnes)	tonne)	(US\$'000)	(%)		
Blister copper	206,380	4,571	943,461	71.8	185,217	4,708	871,993	73.3		
Copper cathodes	77,672	4,318	335,409	25.5	66,301	4,300	285,116	24.0		
Sulphuric acid	297,476	116	34,421	2.7	283,727	113	32,055	2.7		
Total			1,313,291	100.0	$\langle \rangle \rangle$		1,189,164	100.0		

*Note:* The sales volumes of all the products (except for sulphuric acid) are on a contained-copper basis.



Leach solution from spray leaching of Muliashi Project



### Revenue

The revenue of the Group increased by 10.4% from US\$1,189.2 million in 2015 to US\$1,313.3 million in 2016. In 2016, the Group's revenue from blister copper, copper cathode and sulphuric acid accounted for 71.8%, 25.5% and 2.7%, respectively, of the total revenue.

The revenue from blister copper increased by 8.2% from US\$872.0 million in 2015 to US\$943.5 million in 2016, mainly due to the increase in sales volume of blister copper in 2016 to 206,380 tonnes, 11.4% up from 2015, partially offset by the decline in international copper prices.

The revenue from copper cathode increased by 17.6% from US\$285.1 million in 2015 to US\$335.4 million in 2016, mainly due to the increase in sales volume and decrease in mineral royalty rates in Zambia, and partially offset by the decline in international copper prices. Sales volume of copper cathode increased by 17.2% from 66,301 tonnes in 2015 to 77,672 tonnes in 2016.

The revenue from sulphuric acid increased by 7.2% from US\$32.1 million in 2015 to US\$34.4 million in 2016, primarily attributable to the increase in the production volume of blister copper in 2016 as compared with that in 2015, which in turn increased the production volume and the sales volume of sulphuric acid, a by-product generated during the production of blister copper, by 4.8% from 283,727 tonnes in 2015 to 297,476 tonnes in 2016. At the same time, the unit selling price of sulphuric acid increased by 2.7% from US\$113 in 2015 to US\$116 in 2016.

# **Cost of sales**

The following table sets forth the costs of sales, unit costs of sales, gross profits and gross profit margins of the products of the Group during the periods indicated.

			For the	he year end	led 31 Decem	ber		
		20	16					
				Gross				Gross
	Cost of	Unit cost	Gross	profit	Cost of	Unit cost	Gross	profit
	sales	of sales	profit	margin	sales	of sales	profit	margin
		(US\$ per				(US\$ per		
	(US\$'000)	tonne)	(US\$'000)	(%)	(US\$'000)	tonne)	(US\$'000)	(%)
Blister copper	833,145	4,037	110,316	11.7	820,203	4,428	51,790	5.9
Copper cathodes	270,379	3,481	65,030	19.4	234,015	3,530	51,101	17.9
Sulphuric acid	9,854	33	24,567	71.4	9,337	33	22,718	70.9
Total	1,113,378		199,913	15.2	1,063,555		125,609	10.6



The cost of sales of the Group increased by 4.7% from US\$1,063.6 million in 2015 to US\$1,113.4 million in 2016, primarily due to the increased total costs as a result of the increased sales volume of blister copper, copper cathode and sulphuric acid.

The cost of sales of blister copper increased by 1.6% from US\$820.2 million in 2015 to US\$833.1 million in 2016, primarily due to the increase in the sales volume of blister copper, and partially offset by lower purchase price of copper concentrate attributable to the decrease in international copper prices.

The cost of sales of copper cathode increased by 15.6% from US\$234.0 million in 2015 to US\$270.4 million in 2016, primarily due to a significant increase of 17.2% in the sales volume of copper cathode.

The cost of sales of sulphuric acid increased by 6.5% from US\$9.3 million in 2015 to US\$9.9 million in 2016, primarily due to the increase of 4.8% in sales volume of sulphuric acid.

# Gross profit and gross profit margin

The Group recorded a gross profit of US\$199.9 million in 2016, representing an increase of 59.2% from US\$125.6 million in 2015. The gross profit margin increased from 10.6% in 2015 to 15.2% in 2016. The increase in the gross profit margin was mainly due to increase in the gross profit margin of blister copper.

The gross profit margin of blister copper increased from 5.9% in 2015 to 11.7% in 2016, primarily attributable to the decrease in unit cost of sales.

The gross profit margin of copper cathode increased from 17.9% in 2015 to 19.4% in 2016, primarily due to the decrease in mineral royalty rates and decrease in unit cost of sales.

The gross profit margin of sulphuric acid increased from 70.9% in 2015 to 71.4% in 2016, primarily due to the increase in the average selling price of sulphuric acid.

### **Distribution and selling expenses**

The distribution and selling expenses of the Group increased by 71.5% from US\$16.5 million in 2015 to US\$28.3 million in 2016. This is mainly because more sulphuric acid in the year were sold to the DRC due to an intensified competition in Zambia sulphuric acid market, which resulted in a substantial increase in freight.



### Administrative expenses

The administrative expenses of the Group decreased by 3.9% from US\$48.2 million in 2015 to US\$46.3 million in 2016, primarily due to the decrease in expenses as a result of suspension of production of Baluba Center Mine and Slag Copper Recovery Project and the decrease in expenses denominated in Zambian Kwacha as a result of the depreciation of the average Zambian Kwacha exchange rate as compared with that in 2015.

### **Finance costs**

The finance costs of the Group increased by 12.0% from US\$20.0 million in 2015 to US\$22.4 million in 2016, primarily due to increased financing scale.

### **Other Expenses**

Other expenses of the Group mainly included maintenance expenses due to the suspension of production of the Baluba Mine of Luanshya in 2016.

### Other gains and losses

Other gains and losses of the Group increased significantly by US\$408.7 million from a net loss of US\$405.6 million in 2015 to a net gain of US\$3.1 million in 2016, mainly due to the provision for impairment loss of US\$343.2 million in property, plant and equipment and the exchange losses of US\$54.2 million in 2015. In 2016, no further impairment provision was made for property, plant and equipment of the Group as a result of rebounding international copper price during the year ended 31 December 2016. In addition, the Group recorded an exchange gain of US\$3.4 million in 2016, mainly arising from the retranslation of VAT receivables which are denominated in ZMK, which had a slight appreciation against US dollar in 2016, comparing to a significant depreciation against US dollar in 2015.

### Income tax expense (credit)

The income tax expenses of the Group increased by US\$61.8 million from a credit of US\$38.1 million in 2015 to an expense of US\$23.7 million in 2016. In 2015, provision for impairment loss caused the deferred income tax credit of US\$57.5 million.

### Profit (loss) and net profit margin attributable to owners of the Company

As a result of the foregoing, the profit attributable to owners of the Company increased significantly by US\$291.7 million from a loss of US\$279.9 million in 2015 to a profit of US\$11.8 million in 2016. The profit margins attributable to owners of the Company (being the profit attributable to the owners of the Company as a percentage of revenue) were -23.5% in 2015 and 0.9% in 2016, respectively.



# LIQUIDITY AND CAPITAL RESOURCES

# **Cash flows**

The following table sets forth certain information regarding the consolidated statements of cash flows of the Group for the periods indicated:

	For the year ended 3	1 December
	2016	2015
	US\$′000	US\$'000
	XOLAGI	
NET CASH FROM OPERATING ACTIVITIES	121,946	261,925
NET CASH USED IN INVESTING ACTIVITIES	(56,257)	(191,023)
NET CASH FROM FINANCING ACTIVITIES	59,684	2,425
NET INCREASE IN CASH AND CASH EQUIVALENTS	125,373	73,327
CASH AND CASH EQUIVALENTS AT BEGINNING OF THE YEAR	560,246	501,145
Effect of foreign exchange rate changes on the balance of		
cash held in foreign currencies	(292)	(14,226)
CASH AND CASH EQUIVALENTS AT END OF THE YEAR		
Represented by:		
Bank balances and cash	685,327	560,246

Net cash flows generated from operating activities

Cash inflows generated from operating activities are primarily attributable to the sales revenue of copper and sulphuric acid products and cash outflows are primarily attributable to various operating expenses. Net cash flows generated from the operating activities of the Group decreased by 53.5% from US\$261.9 million in 2015 to US\$121.9 million in 2016, primarily attributable to the increase in the trade receivables of the Group.



### Net cash flows used in investing activities

Cash outflows used in investing activities are mainly for the purchase of properties, plants and equipment for copper production. The net cash flows used in investing activities of the Group decreased by 70.5% from US\$191.0 million in 2015 to US\$56.3 million in 2016, primarily attributable to recovery of the matured fixed-term deposits and decreased investments in construction in progress.

### Net cash flows generated from financing activities

The cash inflows generated from financing activities primarily consist of new bank borrowings and other borrowings. The cash outflows from financing activities primarily consist of repayments for bank borrowings, payments of dividends and interest payments. The net cash flows generated from financing activities of the Group increased by US\$57.3 million from US\$2.4 million in 2015 to US\$59.7 million in 2016, primarily due to increase in bank borrowings.

### Bank balances and cash

The Group's bank balances and cash (including cash, time deposits and demand deposits) increased by US\$125.1 million from US\$560.2 million as at 31 December 2015 to US\$685.3 million as at 31 December 2016.

### **Trade receivables**

The trade receivables of the Group increased by US\$108.9 million from US\$115.3 million as at 31 December 2015 to US\$224.2 million as at 31 December 2016, which was due to increase in sales volume of blister copper and the rises in the international copper prices at the end of 2016.

### Inventories

The inventories held by the Group increased by US\$10.4 million from US\$306.4 million as at 31 December 2015 to US\$316.8 million as at 31 December 2016, primarily due to the inventories of raw materials and spare parts and consumables of the Group as at 31 December 2016 increased by US\$37.1 million as compared with that of 31 December 2015 to meet production plans and changes in the market.



# Significant investments held, material acquisitions and disposals of subsidiaries and future plans for material investments or acquisition of capital asset

Saved as disclosed in this annual report, there were no other significant investments held, material acquisitions or disposals of subsidiaries during the year ended 31 December 2016. Apart from those disclosed in this annual report, there was no plan approved by the Board for other material investments or acquisition of capital assets as at the date of this annual report.

### Charge on assets

As at 31 December 2016 and 2015, no assets of the Group were pledged.

### **Gearing ratio**

As at 31 December 2016, the gearing ratio was 66.4% (as at 31 December 2015: 65.1%) which is calculated by the net debts (being bank and other borrowings minus bank balances and cash, and restricted bank balances) divided by the total equity attributable to owners of the Company.

### **Contingent liabilities**

As at 31 December 2016, the Group was the defendant for various claims involving alleged unfair/unlawful termination or breach of employment contracts, wrongful calculation of wages/benefits and compensation for injuries.

As at 31 December 2016, the Group has made relevant provision for the potential liabilities of US\$300,000 (2015: US\$300,000), which the Directors opined is adequate based on the present assessments by the Group's legal advisers.

### Bank and other borrowings

Details of bank and other borrowings as at 31 December 2016 are included in note 26 to the audited consolidated financial statements of this annual report. Except for the loan from CNMC in the amount equivalent to US\$1,077,000 is made in RMB, other loans of the Group are made in US\$. Save for the loan from a fellow subsidiary of US\$300,000,000 which has a fixed interest rate, other loans of the Group do not have fixed interest rate.



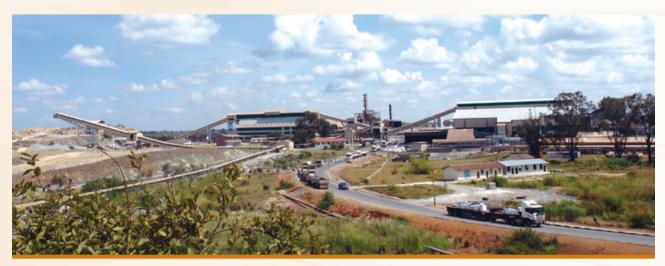
# **Trade payables**

Trade payables of the Group increased by US\$117.9 million from US\$158.1 million as at 31 December 2015 to US\$276.0 million as at 31 December 2016, mainly due to the increase in the payables arising from procurement of copper concentrate.

### **Capital expenditure**

	For the year of 31 Decemb	per
	2016 (US\$'000)	2015 (US\$'000)
Mining and ore processing facilities at Chambishi Southeast Mine of NFCA	83,849	80,589
Other mining and ore processing facilities of NFCA	3,796	12,689
Mining and ore processing facilities at Luanshya (Baluba Center Mine)	1,576	15,171
Mining and leaching facilities at Luanshya (Muliashi Project)	9,971	17,749
Smelting facilities at CCS	4,122	19,700
Leaching facilities at SML	1,916	11,252
Leaching facilities at Huachin Leach	2,366	752
Mining rights and leaching facilities at CNMC Huachin Mabende	5,967	15,426
Total	113,563	173,328

The total capital expenditure of the Group decreased by US\$59.7 million from US\$173.3 million in 2015 to US\$113.6 million in 2016, mainly due to the declined investments as a result of completion of certain projects.



Panorama of Chambishi Copper Mine processing plant



### **Financial policies**

During the year ended 31 December 2016, the Group had in place the Financial Budget Management System, the Funds Management System, the Inventories Management System, the Fixed Assets Management System, the Financial Information Disclosure Management System, Management Measures on Approval Procedures and Permissions of Financial Income and Expenses of the Central Office and other financial policies, which aim to regulate and enhance internal control of relevant activities of the Group to ensure the safety of the Group's assets, protect investors' interests and improve operation and management level for compliance with relevant laws and regulations of Hong Kong as well as the Listing Rules.

Please also refer to note 35 to the audited consolidated financial statements contained in this annual report for the financial instruments (which include the financial risk management objectives and policies).

### Principal risks and uncertainties

Although we have established the risk management system to identify, analyse, evaluate and respond to risks, our business activities are subject to the following risks, which could have material effects on our strategy, operations, compliance and financial condition. We urge you to carefully consider the risks described below.

### Copper price affects the business, cash flow and profit of the Group

The sharp fluctuation of copper price mainly reflects the change in supply and demand of copper products, market uncertainty and other factors out of control of the Group, including but not limited to the overall economic situation, political unrest, armed conflicts and terrorist acts, economic condition and acts of major copper producing countries, availability of other metals, regulations of governments both at home and abroad, natural disasters and weather conditions. Price fluctuation will have a material impact on the business, cash flow and revenue of the Group.

Low copper price may have a negative impact on the business, revenue and profit of the Group, which will lead the Group to write off reserve and other assets with high cost, or to reduce the production volume of economic copper and terminate the existing contracts no longer earning profit. The sluggish copper price in the long run will affect the long-term project investment strategy and operation capacity of the Group.

# **Commodity price risk**

The Group's commodity price risk is mainly the exposure to fluctuations in the market price of copper which affect the prices of the major commodities purchased, produced and sold by the Group. To mitigate this risk, the Group has entered into copper futures contracts and provisional price arrangement to manage its exposure in relation to forecasted sales of copper products, forecasted purchase of copper concentrate, inventories and the Group's commitment to sell its copper products.



### Foreign currency exchange risk

The Group operates business in Zambia and the DRC and most of its sales and purchases in the past were denominated in US dollar, its functional currency, while certain sales and purchases were settled in currencies other than its functional currency (mainly ZMK and RMB), which exposed the Group to foreign currency risk. To mitigate such risk, the Group engaged in foreign currency exchange hedging activities through various methods including locking the signing and settlement currency and speeding up tax rebates.

### Interest rate risk

The Group is exposed to interest rate risk of cash flow under the impact of interest rates changes of interest-bearing financial assets and liabilities which mainly include interest-bearing restricted bank balances, bank balances and bank and other borrowings at variable interest rates. The Group currently does not have any interest rate hedging policy. However, the Directors will consider hedging significant interest rate risk should the need arise.

# **OVERVIEW**

In 2016, despite slow recovery of global economy and a weak market demand for base metals, the Group overcame challenges from, inter alia, insufficient electricity supply, increase in electric charge and decrease in market demand for sulphuric acid while insisting on accelerating development and paying effort to increase revenue and reduce cost. Business development remained steady.

During the reporting period, the production and sales of blister copper, copper cathodes and sulphuric acid, the main products of the Group, further increased. The revenue increased by 10.4% to US\$1,313.3 million over the same period last year.

During the reporting period, the profit attributable to owners of the Company amounted to US\$11.8 million, representing an increase of US\$291.7 million over the same period last year, mainly due to the Group's strengthened management, increases in sales and production volumes, the relatively stable exchange rate of the Zambia Kwacha, and the decrease in depreciation charge due to the provision for impairment of property, plant and equipment made at the end of 2015.

Meanwhile, along with the construction of the planned projects including Chambishi Southeast Mine with an investment of US\$830 million, a solid foundation for the Group's business growth will be laid.



# **BUSINESS REVIEW**

The Group is a leading, fast growing and vertically integrated copper producer focusing on mining, ore processing, leaching, smelting and sales of copper, based in Zambia and DRC. The main products of the Group are blister copper and copper cathodes. The Group also produces sulphuric acid, the byproducts generated during the blister copper smelting process.

The businesses of the Group are carried out mainly through the following companies: NFCA, Luanshya, CCS and SML located in Zambia as well as the two subsidiaries of SML, namely Huachin Leach and CNMC Huachin Mabende located in the DRC.

In addition, CNMHK completed acquisitions of equity interests of Huachin Leach and CNMC Huachin Mabende in the DRC held by SML on 30 June 2016. Since 1 July 2016, Huachin Leach and CNMC Huachin Mabende in the DRC became the subsidiaries of CNMHK.

In 2016, blister copper and sulphuric acid produced by the Group amounted to 206,217 tonnes and 523,906 tonnes, representing an increase of 11.0% and 8.8% over the same period last year, respectively. Copper cathodes produced amounted to 75,903 tonnes in total, representing an increase of 10.9% over the same period last year. Revenue of the Group increased by 10.4% from US\$1,189.2 million in 2015 to US\$1,313.3 million in 2016.



Central office building of NFCA in the green bush



# **RESOURCES AND RESERVES**

### Assumptions adopted for the annual update of resources and/or reserves

The same assumptions as those applied in the 2012 prospectus in accordance with the JORC Code were adopted for the annual update of resources and/or reserves in this report. Relevant updates were made according to our new exploration and based on the historical data used by technical consultants.

The main changes in resources and/or reserves were attributable to the adjustments arising from production wastage and intensified exploration.

As at 31 December 2016, the Group's mineral resources and ore reserves reported in accordance with the JORC Code were as follows:

### (1) Resources

Chambishi Main Mine

		31 Decemb Average		31 December 2015 Average grade				
JORC category	Ore ( <i>Mt</i> )	Total copper	Oxide copper	Cobalt	Ore ( <i>Mt</i> )	Total copper	Oxide copper	Cobalt
Measured	8.46	2.21%	$\leq 1$	-	8.73	2.24%	_	_
Indicated Inferred	6.89 13.85	2.32% 2.26%		-	7.11 14.78	2.41% 2.27%	-	_

*Note:* In 2016, 438,000 tonnes of ore was mined from Chambishi Main Mine.



Spray leaching operations in the No.1 stockpile of heap leaching system of Muliashi Project

Leach solution from spray leaching of Muliashi Project



# Chambishi West Mine

		31 Decembe Average g			31 Decembe Average o			
JORC		Total	Oxide			Total	Oxide	
category	Ore	copper	copper	Cobalt	Ore	copper	copper	Cobalt
	(Mt)		2 Sto	100	(Mt)			
Oxide ore								
Measured	4.51	<b>1.94%</b>	0.95%		3.64	2.03%	1.00%	-
Indicated	0.98	1.84%	0.90%		1.46	1.83%	0.96%	-
Inferred	0.32	2.08%	1.03%	0-1-	1.45	2.32%	1.10%	-
Sulphide Ore								
Measured	10.08	2.16%			8.55	2.22%		
								_
Indicated	6.61	2.14%	/ -/		7.09	2.33%	-	-
Inferred	6.52	2.24%		1 -	10.81	2.32%	-	-

*Note:* In 2016, 1,026,000 tonnes of ore was mined from Chambishi West Mine.

Chambishi Southeast Mine

		31 December 2015 Average grade						
JORC		Total	Oxide			Total	Oxide	
category	Ore	copper	copper	Cobalt	Ore	copper	copper	Cobalt
	(Mt)				(Mt)			
Measured	1.95	1.90%	-	0.11%	1.95	1.90%	-	0.11%
Indicated	28.60	1.90%	-	0.11%	28.60	1.90%	-	0.11%
Inferred	117.78	1.88%	-	0.10%	117.78	1.88%	-	0.10%

*Note:* In 2016, no mining activity was carried out in Chambishi Southeast Mine.



# Mwambashi Mine

		31 Decemb Average		31 December 2015 Average grade					
JORC		Total	Oxide			Total	Oxide		
category	Ore	copper	copper	Cobalt	Ore	copper	copper	Cobalt	
	(Mt)		100		(Mt)		2		
Measured	1.29						-	_	
Indicated	6.99	2.02%	0.82%		7.38	2.02%	0.82%	-	
Inferred	3.31	2.06%	0.48%		3.31	2.06%	0.48%	-	

*Note:* Mwambashi Mine produced ore of 415,700 tonnes in 2016.

Chambishi Tailings and Ore Piles

	31 December 2016 Average grade					31 December 2015 Average grade				
JORC		Total	Oxide			Total	Oxide			
category	Ore	copper	copper	Cobalt	Ore	copper	copper	Cobalt		
	(Mt)	$\geq$	$\langle \cdot \rangle$		(Mt)					
Measured	-	-	-	-	-	-	-	-		
Indicated	-	-	-		-	-	-	_		
Inferred	0	_	-	_	0.38	0.36%	0.25%	_		

*Note:* Mining for the year of 2016 has completed.



Baluba Center Sulphide Mine

				31 December 2015 Average grade				
JORC		Total	Oxide			Total	Oxide	
category	Ore	copper	copper	Cobalt	Ore	copper	copper	Cobalt
	(Mt)		2 St	1	(Mt)		1.	
	0A		X >					9
Oxide ore								
Measured				2 - E -	× -^	- /		-
Indicated	6.56	1.65%	1.14%	0.12%	6.56	1.65%	1.14%	0.12%
Inferred	1.62	1.70%	0.93%	0.10%	1.62	1.70%	0.93%	0.10%
Sulphide Ore								
Measured	4.05	2.20%	0.08%	0.16%	4.05	2.20%	-	0.16%
Indicated	7.29	2.10%	0.08%	0.14%	7.29	2.10%	-	0.14%
Inferred	3.62	1.47%	0.06%	0.09%	3.62	1.47%	-	0.09%

*Note:* No exploration or mining activities were carried out in 2016.

Muliashi North Mine

		31 December 2015 Average grade						
JORC		Total	Oxide			Total	Oxide	
category	Ore	copper	copper	Cobalt	Ore	copper	copper	Cobalt
	(Mt)				(Mt)			
Measured	19.99	1.12%	0.48%	0.02%	22.93	1.13%	0.50%	0.02%
Indicated	16.61	1.03%	0.40%	0.02%	17.57	1.03%	0.41%	0.02%
Inferred	21.18	1.01%	0.34%	0.02%	21.23	1.01%	0.37%	0.02%

Note:

Muliashi North Mine consumed geological ore of approximately 3,530,000 tonnes with TCu grade of 1.23% in 2016.



# Muliashi South Oxidize Mine

		31 Decemb	er 2016		31 December 2015				
		Average	grade			Average g	grade		
JORC		Total	Oxide			Total	Oxide		
category	Ore	copper	copper	Cobalt	Ore	copper	copper	Cobalt	
100 V	(Mt)	2.00	1	Val	(Mt)				
Oxide ore									
Measured	1.17	2.02%	1.23%	0.01%	1.57	1.96%	1.23%	0.02%	
Indicated	0.87	<b>1.59%</b>	0.69%	0.01%	1.01	1.58%	0.69%	0.01%	
Inferred	0.17	1.25%	0.46%	0.02%	0.18	1.26%	0.48%	0.01%	
Sulphide Ore									
Measured			×	-	-	-	-	-	
Indicated	0.60	2.48%	-	-	0.60	2.48%	-	-	
Inferred	0.08	2.50%	<u> </u>		0.08	2.50%	-	-	

*Note:* Muliashi South Oxidize Mine consumed geological ore of approximately 450,000 tonnes with TCu grade of 1.78% in 2016.

### Mashiba Mine

		31 December Average			31 December 2015 Average grade			
JORC		Total	Oxide			Total	Oxide	
category	Ore	copper	copper	Cobalt	Ore	copper	copper	Cobalt
	(Mt)				(Mt)			
Measured	3.17	1.89%	0.24%	0.02%	3.17	1.89%	0.24%	_
Indicated	5.67	1.96%	0.22%	0.03%	5.67	1.96%	0.22%	-
Inferred	4.97	1.67%	0.43%	0.04%	4.97	1.67%	0.43%	-

*Note:* No exploration or mining activities were carried out in 2016.



Baluba East Mine

JORC		31 Decemb Average	grade		er 2015 grade			
JORC		Total	Oxide			Total	Oxide	
category	Ore	copper	copper	Cobalt	Ore	copper	copper	Cobalt
	(Mt)				(Mt)			
Measured	6.40	1.90%	1.00%	0.02%	6.40	1.90%	1.00%	0.02%
Indicated	27.64	0.77%	0.31%	0.03%	27.64	0.77%	0.31%	0.03%
Inferred	3.27	1.03%	0.37%	0.04%	3.27	1.03%	0.37%	0.04%

*Note:* No exploration or mining activities were carried out in 2016.

# (2) Reserves

Chambishi Main Mine

		31 Decemb Average		31 December 2015 Average grade					
JORC	Total		Oxide			Total	Oxide		
category	Ore	copper	copper	Cobalt	Ore	copper	copper	Cobalt	
	(Mt)				(Mt)				
Proved	4.00	1.69%	///		5.08	1.55%	-	-	
Probable	2.08	1.63%	/ -/-		2.70	1.43%	-	-	

*Note:* The Chambishi Main Mine produced ore of 438,000 tonnes in 2016.

# Chambishi West Mine

		31 Decemb	er 2016		31 December 2015				
		Average	grade			Average grade			
JORC		Total	Oxide			Total	Oxide		
category	Ore	copper	copper	Cobalt	Ore	copper	copper	Cobalt	
100 V	(Mt)	2.00	1		(Mt)				
Oxide ore									
Proved	2.12	1.80%	0.87%		2.05	1.76%	-	-	
Probable	0.64	1.78%	0.81%		2.21	1.64%	-	-	
Sulphide Ore									
Proved	4.24	2.02%		-	4.49	1.92%	-	-	
Probable	8.31	1.96%	$\sim$	-	13.19	1.99%	-	-	

*Note:* The Chambishi West Mine produced ore of 1,026,000 tonnes in 2016.

# Chambishi Southeast Mine

		31 Decemb Average			31 December 2015 Average grade			
JORC		Total	Oxide			Total	Oxide	
category	Ore	copper	copper	Cobalt	Ore	copper	copper	Cobalt
	(Mt)				(Mt)			
Proved	-	_		-	-	-	-	_
Probable	37.72	1.81%	-	0.08%	37.72	1.81%	_	0.08%

Baluba Center Sulphide Mine

		31 Decemb Average				31 Decembe Average g		
JORC		Total	Oxide			Total		
category	Ore	copper	copper	Cobalt	Ore	copper	copper	Cobalt
	(Mt)				(Mt)			
Proved	2.30	1.39%	0.06%	0.04%	2.30	1.38%	0.06%	0.04%
Probable	3.58	1.24%	0.11%	0.09%	3.58	1.25%	0.11%	0.09%



Muliashi North Mine

		31 Decemb Average			31 December 2015 Average grade				
JORC		Total	Oxide			Total	Oxide		
category	Ore	copper	copper	Cobalt	Ore	copper	copper	Cobalt	
	(Mt)				(Mt)				
	S OA	ZAV	X 7	$\langle \emptyset \rangle$	6			7/ 0	
Proved	16.18	1.13%	0.48%	0.02%	18.51	1.11%	0.49%	0.02%	
Probable	11.12	0.99%	0.41%	0.02%	11.75	0.98%	0.49%	0.02%	

Muliashi South Mine

JORC		31 Decemb Average Total			31 December 2015 Average grade Total Oxide			
category	Ore (Mt)	copper	copper	Cobalt	Ore (Mt)	copper	copper	Cobalt
Dural	0.00	2 24 9/	4 560/	0.020/	1.04	1.00%	1.200/	
Proved Probable	0.68 0.26	2.21% 1.72%	1.56% 1.09%	0.02 <i>%</i> 0.01%	1.04 0.40	1.99% 1.61%	1.39% 0.93%	-

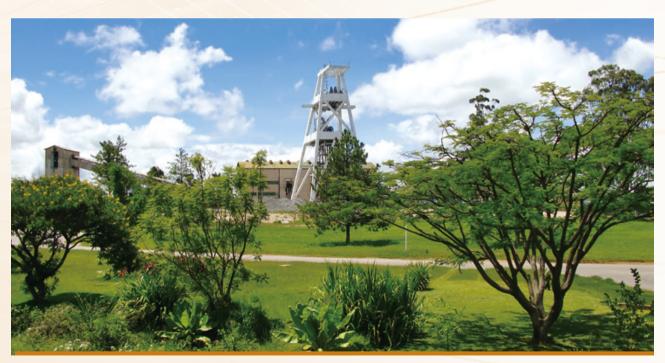


A bird view of the mining and processing project of Chambishi Southeast Mine



Baluba East Mine

		31 Decemb Average				cember 2015 rage grade		
JORC		Total	Oxide			Total	Oxide	
category	Ore	copper	copper	Cobalt	Ore	copper	copper	Cobalt
1001	(Mt)				(Mt)			
Proved	6.38	1.81%	0.95%	0.02%	6.38	1.81%	0.95%	0.02%
Probable	27.57	0.73%	0.30%	0.03%	27.57	0.73%	0.30%	0.03%



Main shaft of Chambishi Copper Mine



Mashiba Mine

		31 Decemb Average			er 2015 grade					
JORC		Total	Oxide		Total Oxide					
category	Ore	copper	copper	Cobalt	Ore	copper	copper	Cobalt		
	(Mt)		1.10	1.00	(Mt)		. /	1		
		ZN	X7	$\langle 0 \rangle$	K do	L A		7/ 6		
Proved	2.66	1.35%	0.17%	S. and	2.66	1.35%	0.17%	-		
Probable	4.76	1.40%	0.16%	2.7-0	4.76	1.40%	0.16%	-		

Mwambashi Mine

		31 December 2016 Average grade				31 December 2015 Average grade Total Oxide Ore copper copper ( <i>Mt</i> ) 7.38 2.02% 0.82%		
JORC category	Ore ( <i>Mt</i> )	Total copper	Oxide copper	Cobalt				Cobalt
Proved Probable	6.99 3.31	2.02% 2.06%	0.82% 0.48%		7.38 3.31	2.02% 2.06%	0.82% 0.48%	-



Electrode workshop of Muliashi Project



# **PRODUCTION OVERVIEW**

# NFCA

NFCA mainly operates two mines, namely the Chambishi Main Mine and the Chambishi West Mine, and the ancillary processing plants.

In 2016, copper contained in copper concentrates produced by NFCA amounted to 26,870 tonnes, representing an increase of 3.2% over the same period in the previous year. Such increase in production volume was primarily attributable to the increase in ore grade and recovery in ore processing.

The Chambishi Main Mine and Chambishi West Mine of NFCA produced ore of 0.438 million tonnes and 1.026 million tonnes, respectively, during the year.

# Luanshya

Luanshya operates three copper mines under production, namely the Baluba Center Mine, the Muliashi North Mine, the Muliashi South Mine, and also operates Muliashi Leach Plant.

Baluba Center Mine remained under maintenance and suspension of production in 2016 due to inadequate electricity supply and low copper price (for more details, please refer to the announcement of the Company dated 8 September 2015 on suspension of production of Baluba Center Mine and Slag Copper Recovery Project of Luanshya due to inadequate electricity supply).

The Muliashi Project produced 34,507 tonnes of copper cathode, representing an increase of 4.2% over the same period in the previous year, mainly attributable to the increase of heap leaching, leading to continuous improvement in the output capacity of the system.

The Muliashi North Mine and the Muliashi South Mine produced ore of 3.53 million tonnes and 0.45 million tonnes, respectively, during the year.



Settling pond for leaching



# CCS

CCS mainly operates the Chambishi Smelting Plant.

In 2016, blister copper and sulphuric acid produced by CCS amounted to 206,217 tonnes and 523,906 tonnes, respectively, representing an increases of 11.0% and 8.8%, respectively, over the same period in the previous year. This increase was primarily attributable to the incomplete release of production capacity of blister copper and sulphuric acid market in Zambia in 2015. In 2016, the Group endeavored to enhance the integration of materials procurement and products sale in Zambia and DRC, as such, the production of blister copper and sulphuric acid market.

CCS did not produce bismuth in 2016 due to the decrease of bismuth contained in smoke as a result of the changes in mineral components of raw materials.

# SML

SML mainly operates Mwambashi Mine and the Chambishi Leach Plant, the CNMC Huachin Leach Project through Huachin Leach from 1 January 2016 to 30 June 2016 and the Mabende Project through CNMC Huachin Mabende from 1 January 2016 to 30 June 2016.

Copper cathode produced by SML in 2016 totaled 5,216 tonnes, representing an increase of 20.8% over the same period in the previous year. Processing plants under SML produced 1,566 tonnes of copper contained in copper concentrates in 2016, representing an increase of 237.9% over the same period in the previous year, mainly attributable to the guaranteed supply of raw materials as a result of the commencement of supply of Mwambashi Mine.

# **CNMC Huachin Mabende**

The CNMC Huachin Mabende project produced 24,126 tonnes of copper cathodes, representing an increase of 28.0% over the same period in the previous year, mainly attributable to the on-going improvement in supply of raw materials, the stable power supply and increase in capacity.



# **Huachin Leach**

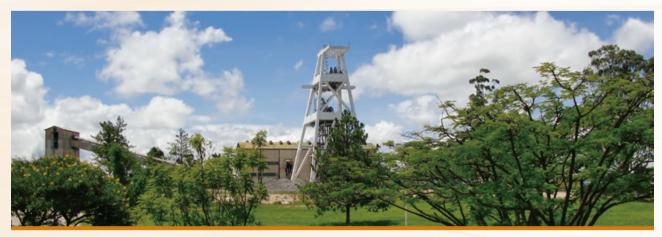
The Huachin Leach project accumulatively produced 12,054 tonnes of copper cathodes, representing a decrease of 1.1% over the same period in the previous year, basically flat as compared to that of the previous year.

The table below sets forth the production volume of the products of the Group and the year-on-year growth for the periods indicated.

	Production volume for 2016 (Tonnes)	Production volume for 2015 (Tonnes)	Year-on-year growth/ (decrease)	
	(Tonnes)	(TOTITIES)	(%)	
Copper concentrate	28,436	37,876	(24.9%)	
Blister copper	206,217	185,698	11.0%	
Copper cathodes	75,903	68,464	10.9%	
Sulphuric acid	523,906	481,364	8.8%	
Bismuth		40	-	

Notes:

- (1) The production volumes of all the products are on a contained-copper basis, except for sulphuric acid and bismuth.
- (2) The production of copper concentrates decreased considerably on a year-on-year basis, mainly due to suspension of production of Baluba Mine since September 2015 (reasons for which are set out above).



3# shaft of Chambishi Copper Mine



# EXPLORATION, DEVELOPMENT AND MINING COST OF THE GROUP

Expenses of exploration, development, and mining activities of the Group for the year ended 31 December 2016 are set out below:

	NFCA			Luanshya		SML		
Unit: Million US dollars	Chambishi Main Mine	Chambishi West Mine	Chambishi Southeast Mine	Baluba Center Sulphide Mine	Muliashi North Mine	Muliashi South Mine	Mwambashi Mine	Total
Exploration activities								
Drilling and analysis	_	1.16	1.64		/ _	· .	0.33	3.13
Others	/ /_	-	0.02	× _			-	0.02
Sub-total		1.16	1.66	-	×		0.33	3.15
Development activities								
(including mine construction)								
Purchases of assets and equipment	0.89	20.56	4.04	· / -	1.23	- / -	-	26.72
Civil work for construction of								
tunnels and roads	-	-	52.82	-	12.55	0.07	-	65.44
Staff cost	-	-	2.51	-	/-/-	-	-	2.51
Others	-		26.89	-	4.33	0.43	-	31.65
Sub-total	0.89	20.56	86.26	-	18.11	0.50	-	126.32
Mining activities (excluding								
ore processing)								
Staff cost	2.53	1.23	-	-	0.26	-	0.07	4.09
Consumables	-	-	-	-	1.20	0.10	-	1.30
Fuel, electricity, water								
and Others services	6.26	4.40	-	-	-	-	-	10.66
On-site and remote system management								
Non-income taxes, royalties and other	-	-	-	-	-	-	-	-
government expenses	-	_	_	_	9.40	1.71	_	11.11
Others	2.53	5.91	_	_	J.+0	-	0.19	8.63
Sub-contracting charges	15.48	40.44		_	9.91	1.66	3.33	70.82
Depreciation	3.34	4.36	_	_	42.82	1.00	0.39	52.62
Sub-total	30.14	56.34	-	-	63.59	5.18	3.98	159.23



# MINING EXPLORATION, MINING DEVELOPMENT AND ORE MINING ACTIVITIES

# **Mining Exploration**

During the year, NFCA and Luanshya, subsidiaries of the Company, conducted mining exploration for production and exploration purposes, respectively.

All explorations in the Chambishi Southeast Mine were in-pit exploration. The design hole depth of drilling in the pit of Chambishi Southeast Mine was 7,500m and 76 holes were actually completed with the drilling footage of 7,206.9m.

Luanshya conducted exploration, drilling and platform trenches. In particular, supplemental drilling was conducted at Luoan extension and Baluba East Minewith, of which 6 drilling holes (75mm end hole caliber) and drilling footage of 389.5m were completed. At Muliashi North Open-pit Mine, 18 platform trenches ( $1m \times 2m$ ) for production and exploration purposes were completed with a total length of 1,612m and a total capacity of 2,418m<sup>3</sup>. At Muliashi South Strip Mine, 14 platform trenches ( $1m \times 2m$ ) for production and exploration purposes were completed with a total length of 1,258m and a total capacity of 1,887m<sup>3</sup>.

# **Mining Development**

For details of mining development please refer to "Projects Under Progress" on pages 36 to 38 of this annual report.

# **Mining Activities**

For details of mining activities, please refer to "Production Overview" on pages 30 to 32 of this annual report.



Panorama of copper smelting company



# Infrastructure projects, subcontracting arrangements and procurement of equipment

During the year, the new contracts entered into by the Group are as follows:

NFCA

The new infrastructure contracts engaged in the year amounted to approximatively US\$48.4 million.

No subcontracting arrangements were entered into by the Group during the year\*.

During the year, contracts which amounted to approximately US\$6.2 million were entered into by the Group for purchase of equipment related to mining exploration, mining development and mining activities, including equipment for mining, transportation, processing, drainage, soil discharge, electricity, laboratory, etc.

\* Subcontracting arrangement refers to an arrangement made between one party to a contract and a third party, pursuant to which the third party shall fulfill all or part of the obligation of that party under the said contract. For example, it refers to the circumstance where the Group wins a project as a contractor and then transfers the entire project or subcontracts in part the project to a third party.



Central auxiliary shaft of Chambishi West Mine



## **PROJECTS UNDER PROGRESS**

### NFCA

The Integrating Exploration and Construction Project of the Chambishi Southeast Mine

This project is currently under development and is one of the key development mine projects of the Group with a designed ore processing capacity of 3,300,000 tonnes per annum and a production capacity of copper contained in copper concentrates of approximately 63,000 tonnes per annum. Its aggregate investments amounted to US\$830 million. In 2016, underground and overground constructions of the project has fully commenced and made smooth progress, with the shaft capacity of 153,000m<sup>3</sup>. The completed investments for the year amounted to US\$83.849 million, among which, an accumulated investment of US\$344.969 million had been completed as at the end of December 2016, representing approximately 41.6% of the total investment. The project is expected to complete in the third quarter of 2018. The designed hole depth of drilling in the pit of Chambishi Southeast Mine was 7,500m and 76 holes were actually completed with the drilling footage of 7,206.9m.



Workers of Mabende Project hoisting copper cathode products



#### SML

#### Mwambashi Strip Mine project

This project comprises a strip mine with designed capacity of 600,000 tonnes of ores per annum and a processing plant with a daily capacity of 2,000 tonnes. The construction commenced in September 2013. The total investment amount is US\$71.570 million. Since May 2015, the strip mine started trial production with parallel arrangement of stripping and mining and it completed construction and commenced formal production at the end of June 2016, with the stripping capacity of 5,113,000m<sup>3</sup> by the end of 2016. Instead of building a new plant, the processing plant with a daily capacity of 2,000 tonnes would be built by reconstructing and expanding another processing plant with a daily capacity of 1,000 tonnes, thus the aggregate investment amount was adjusted to US\$57.39 million. The reconstruction and expansion project commenced in April 2016 and began the pouring of concrete in November and it is expected to be completed and put into operation in August 2017. Investments made by the end of December 2016 amounted to US\$38.261 million, representing 66.7% of the total investment.

#### CCS

#### The High Grade Cobalt Matte Metallurgy Project

This project has a scale of processing 50,000 tonnes of high grade cobalt matte per annum and an annual output of 35,000 tonnes of copper concentrate (which contains 39.1% copper). The project commenced on 6 April 2015, started trial production on 30 May 2016 and completed construction and commenced formal production in September 2016. The aggregate project investments amounted to US\$32.64 million, among which, an accumulated investment of US\$9.006 million had been completed as at the end of December 2016.



Surface mine of Muliashi Project



### The Liquid Sulphur Dioxide Project

This project produces liquid sulphur dioxide with smelting by-products and existing public facilities. It has a scale of an annual output of 16,500 tonnes of liquid sulphur dioxide with an aggregate investment of US\$9.58 million and a construction period of one year. The project was approved by the Board in September 2016 and is currently under construction.

In addition, the Group currently conducts research on the development of new mining exploration, mining projects and smelting projects in the DRC to actively promote its resource reserves and enhance its smelting production capacity, so as to secure a continuous growth of the Group.



Managerial members of NFCA participating the mine rescue drilling contest



First-aid team of the mine



## **HUMAN RESOURCES**

As of 31 December 2016, the Group employed a total of 5,651 employees (as of 31 December 2015: 6,690 employees), which comprised 522 foreign and 5,129 local employees in Zambia and the DRC. Employees' remuneration was determined by the Group based on their performance, experience and the prevailing market practice. For the year ended 31 December 2016, the total cost of employees reflected in the consolidated statement of profit or loss and other comprehensive income amounted to approximately US\$67.2 million (2015: US\$79.4 million).

## 2017 OUTLOOK

In 2017, despite many challenges the world economy faces, the United States, as the largest economy, is expected to maintain a stable improvement due to the abatement of tax and its policy on increasing investment in capital construction as implemented by the government led by Trump. China, as one of the growth drivers of the world economy, maintains a significant size of investment in capital construction. With the progress of the "Thirteenth Five-Year" Plan and the deepening of supply-side structural reform, it is expected that the economy will maintain a stable and proper growth. The bulk commodity market has experienced an in-depth adjustment for five years, and the prices of copper and other base metals started to pick up at the end of 2016. The economic ascent and improvement of supply and demand provide strong driving forces for the rise of copper prices, which are still promising in the long run.

In 2017, the Group will continue to increase investments in geological exploration and development, pay high attention to and more efforts in expanding the exploration area, as well as exploring the surrounding areas and in the depth of the existing mines. Meanwhile, the Group will continue to identify suitable acquisition targets in regions with rich copper resources such as Zambia and the DRC, with an aim to increase the Group's resources.

The Group will continue to optimise internal management, intensify cost control and improve operation efficiency, so as to continuously enhance its profitability. The Group will continue to pay due efforts in its mining activities in underground mines (including Chambishi Main Mine and Chambishi West Mine) and the Muliashi Open-pit Mine and Mwambashi Strip Mine Project, so as to increase the production volume of copper concentrate and oxide ore from its own mines. Great efforts will be put in the management of the technology of CCS, Muliashi Leaching and Smelting, SML, Huachin Leach and CNMC Huachin Mabende so as to improve the output and quality of blister copper, copper cathode and sulphuric acid, with a view to further increase the operating efficiency and profit from existing production capacity.

Meanwhile, the Group will continue to promote the adjustment of product and organisation structure, optimisation of management on supply chain and value chain and facilitate the regional integration of production, supply and sale, so as to increase the self-sufficiency rate of our smelting plants, expand the leaching and smelting capacity, and thus leverage the advantages of vertical integration to improve profitability.



# **DIRECTORS AND SENIOR MANAGEMENT BIOGRAPHIES**

## **BOARD OF DIRECTORS**

Our Board of Directors is responsible for the management and conduct of our business and consists of nine Directors, including five executive Directors, one non-executive Director and three independent non-executive Directors. The table below sets forth certain information in respect of the members of the Board of Directors:

Name	Age	Position/Title
	XX	A CARLON CARLON
Xinghu Tao	59	Chairman, Executive Director and President
Diyong Yan	52	Vice Chairman and Non-executive Director
Xingeng Luo	54	Executive Director and Vice President
Chunlai Wang	56	Executive Director and Vice President
Wei Fan	42	Executive Director and Vice President
Kaishou Xie	61	Executive Director and Vice President
Chuanyao Sun	72	Independent Non-executive Director
Jingwei Liu	49	Independent Non-executive Director
Huanfei Guan	59	Independent Non-executive Director

Xinghu Tao (陶星虎), aged 59, is the chairman, executive Director and president of our Company and was appointed to our Board on 18 July 2011 and appointed as chairman on 20 April 2015. He has been the vice general manager of CNMC since November 2007. Mr. Tao currently also serves as the chairman of NFCA, CCS, SML, Luanshya, China Nonferrous Mining Hong Kong Holdings Limited, China Nonferrous Mining Hong Kong Investment Limited (中色 礦業香港投資有限公司) and MPongwe, the vice chairman of ZCCZ and a director of China Nonferrous Mining Development Limited and China Nonferrous Mining Holdings Limited. Mr. Tao has 35 years of experience in the mining industry. He became the general manager of ZCCZ and NFCA in June 2006 and September 2002, respectively. Mr. Tao worked in Zhongtiaoshan Nonferrous Metals Group Co., Ltd. (中條山有色金屬集團有限公司) ("Zhongtiaoshan") from 1982 to 2002, during which he also served as the mine manager of Tongkuangyu Mine and the general manager and director of Zhongtiaoshan, etc.. Mr. Tao graduated from the Beijing Steel and Iron Institute (北京鋼鐵學院) (currently the University of Science and Technology Beijing (北京科技大學)) in 1982 with a major in mining engineering. He completed graduate studies in economic management from the Party School of the Central Committee of the Communist Party of China (中共中央黨校) in January 2005. Mr. Tao was recognised as a State Council Special Allowance Expert in 2004 and was recognised as a Senior Mining Engineer (professor level) in 1999.



**Diyong Yan (嚴弟勇)**, aged 52, is the vice chairman and a non-executive Director of our Company and was appointed to our Board on 20 April 2015. Mr. Yan served as a deputy director of Human Resources Department and Personnel Training Department of China National Nonferrous Metals Industry Corporation, director of Personnel (Party Committee) General Office of State Bureau of Nonferrous Metal Industry, deputy officer of Taiwan Affairs Office, manager of External Affairs Office of Human Resources Department of China Nonferrous Metal Mining and Construction Group Co Ltd., assistant to general manager, manager of Human Resources Department, officer of External Affairs Office of China Nonferrous Metal Mining and Construction Group Co Ltd., assistant to general manager, manager of Human Resources Department, officer of External Affairs Office of China Nonferrous Metal Mining and Construction Group Co Ltd., assistant to general manager, manager of Human Resources Department, officer of External Affairs Office of China Nonferrous Metal Mining and Construction Group Co Ltd., assistant to general manager of China Nonferrous Metal Mining Group Co Ltd., assistant to general manager of China Nonferrous Metal Mining Group Co Ltd. and deputy general manager of China Nonferrous Metal Mining Group Co Ltd., wr. Yan has 30 years of experience in non-ferrous metal industry and acted as the chief organiser for the listing of the Company; he has extensive and practical experience in corporate governance and operation of listed company. Mr. Yan obtained the bachelor's degree from Central South University of Technology in 1987 and master's degree in Engineering Management in 1996.

**Xingeng Luo (**駱新耿**)**, aged 54, is an executive Director and a vice president of our Company. He was appointed to our Board on 12 April 2012. Mr. Luo has 32 years of experience in the mining industry. He has been the general manager and director of Luanshya, a director of SML and the general manager of NFCA since September 2009, May 2008 and May 2007, respectively. He has also been the assistant to the general manager of CNMC since March 2016 and resigned as the general manager and director of Luanshya. Prior to joining NFCA in April 2004, Mr. Luo worked at Zhongtiaoshan Nonferrous Metals Group Co., Ltd. (中條山有色金屬集團有限公司) ("Zhongtiaoshan") from July 1984 and became the mine manager of the Hujiayu Mine under Zhongtiaoshan in August 1998. He was appointed as chief engineer of Zhongtiaoshan in May 2001. Mr. Luo received a bachelor's degree in mining from Jiangxi University of Science and Technology (江西理工大學) in 1984. He was recognised as a State Council Special Allowance Expert in 2005 and was recognised as a Senior Mining Engineer (professor level) in 2002.

**Chunlai Wang (王春來)**, aged 56, is an executive Director and a vice president of our Company primarily in charge of Luanshya. He was appointed to our Board on 12 April 2012. Mr. Wang has 36 years of experience in the mining industry. He currently is the general manager of Luanshya. He served as the deputy general manager of NFCA from 2005 to 2009 and became its executive director in 2007, and was transferred from the managing director of NFCA to the managing director of Luanshya on 24 March 2016. From 1981 to 2005, Mr. Wang worked in the Dongguashan Copper Mine of Tongling Nonferrous Metals Group Co., Ltd. (銅陵有色金屬集團股份有限公司) (a company listed on the Shenzhen Stock Exchange, SZ000630) during which period he served as a mining engineer, assistant to the mine manager, deputy mine manager and mine manager. Mr. Wang graduated from Anhui Metallurgy College (安徽冶金專科學校) in 1981 with a major in mining and obtained a Master of Business Administration degree from the School of Business of Nanjing University (南京大學工商管理學院) in 2005. Mr. Wang was recognised as a State Council Special Allowance Expert in 2002 and was recognised as a Senior Mining Engineer (professor level) in 2007.

Wei Fan (范巍), aged 42, is an executive Director and a vice president of our Company primarily in charge of CCS. He was appointed to our Board on 28 July 2015. From June 2006 to February 2012, Mr. Fan successively served as an assistant to general manager and as deputy general manager in Chambishi Copper Smelter Limited ("CCS", a subsidiary of the Company). From April 2011 to December 2014, Mr. Fan served as deputy officer of production department in 雲南銅業集團有限公司 (Yunnan Copper Industry (Group) Co., Ltd\*), ("Yunnan Copper Group", a substantial shareholder of CCS and the holding company of Yunnan Copper). From October 2001 to June 2006 and from April 2013 to July 2015, Mr. Fan also successively served as senior engineer, officer and manager of Sale & Operation Management Department of 雲南銅業股份有限公司 (Yunnan Copper Industry Co., Ltd\*) ("Yunnan Copper", a company listed on the Shenzhen Stock Exchange, SZ00878). Mr. Fan has more than 16 years of experience in the metal industry. He has extensive and practical experience in the operation of listed group companies. Mr. Fan obtained a master's degree in business administration from Kunming University of Science and Technology in 2007.

Kaishou Xie (謝開壽), aged 61, is an executive Director and a vice president of the Company. He was appointed to the Board on 12 April 2012 and is currently a director and the general manager of China Nonferrous Mining Hong Kong Holdings Limited. Mr. Xie served as the general manager of SML and Chambishi Sulphuric Acid Plant Zambia Limited\* (贊比亞謙比希硫磺制酸公司) since 2006 and 2008 respectively. He served as an executive director and the general manager of SML and Chambishi Sulphuric Acid Plant Zambia Limited\* from 2008 to 2012, and served as the chairman of the Board in Huachin Leach and CNMC Huachin Mabende from 2012 to 2016. On 24 March 2016, Mr. Xie resigned as a director and the general manager of SML to serve as a director and the general manager of CNMC DRC Company and China Nonferrous Mining Hong Kong Holdings Limited. Mr. Kaishou Xie resigned as a director and the general manager of China Nonferrous Mining Hong Kong Holdings Limited on 21 March 2017 and as the chairman of the board of directors of Huachin Leach and CNMC Huachin Mabende on 14 April 2017. He served as director and general manager of Kunming Jinsharen Cemical Co., Ltd. (昆明金沙人化工有限公司) from 2003 to 2006, the workshop director, assistant to the factory director, vice factory director and chief engineer of Dongchuan Aluminum Factory (東川鋁廠) from 1991 to 1998, and the deputy general manager of Dongchuan Aluminum Co., Ltd. (東川鋁業有限公司) from 1998 to 2003. He worked in the Tangdan Mine of Dongchuan Copper Mines Administration (東川礦務局) from 1972 to 1991. Mr. Xie graduated from the Southwest University of Science and Technology (西南 科技大學) with a degree in law.

Chuanyao Sun (孫傳堯), aged 72, is an independent non-executive Director of the Company, the chairman of the Nomination Committee and a member of the Compliance Committee and the Remuneration Committee and was appointed to join the Board on 27 April 2012. He has 48 years of experience in the mining industry. Mr. Sun currently serves as an independent non-executive director of Jiamusi Electric Machine Company Limited (哈爾濱電氣集團佳木 斯電機股份有限公司) (a company listed on the Shenzhen Stock Exchange, SZ000922), China Aluminum International Engineering Corporation Limited (中鋁國際工程股份有限公司) (a company listed on the Hong Kong Stock Exchange, HK: 2068) and Jiangxi Copper Company Limited (HK: 00358). Mr. Sun joined the Beijing General Research Institute of Mining and Metallurgy (北京礦冶研究總院) ("BGRIMM") in 1981 and served as its dean from February 1988 to February 2007. He worked at the Xinjiang Keketuohai Ore Processing Plant (新疆可可托海礦業加工廠) from December 1968 and became its deputy factory director in October 1976. Mr. Sun graduated from Northeastern Institute of Technology (東北工學院) (currently known as Northeastern University (東北大學)) in 1968 and was awarded a master degree in BGRIMM (北京礦冶研究總院) with a major in ore processing in 1981. Mr. Sun is an associate of Chinese Academy of Engineering (中國工程院) and St Petersburg Academy of Engineering and Science in Russia (俄羅斯聖彼德 堡工程科學院), a council member of International Council on Mineral Processing (國際礦物加工大會理事會), deputy director of Committee of Experts of China Nonferrous Metal Industry Association (中國有色金屬工業協會專家委員會), the director of the Ore Processing Academic Committee of the Nonferrous Metals Society of China (中國有色金屬學會 選礦學術委員會) and the director of Key Laboratory of Mineral Processing of the State (國家礦物加工重點實驗室).



Jingwei Liu (劉景偉), aged 49, is an independent non-executive Director of our Company, the chairman of the Audit Committee and a member of the Nomination Committee, and was appointed to our Board on 27 April 2012. He currently serves as a partner of Shinewing Certified Public Accountants (信永中和會計師事務所). Mr. Liu previously served as a director and general manager of Beijing Jincheng Gardening Co., Ltd. (北京金城園林公司). He has also served as an independent director of Jinxi Axle Co., Ltd. (晉西車軸股份有限公司) (a company listed on the Shanghai Stock Exchange, SH600495) since 2010 and of Chongqing Fuling Zhacai Group Co., Ltd. (重慶市涪陵榨菜集團股份有限公司) (a company listed on the Shenzhen Stock Exchange, SZ002507) since 2008. Mr. Liu was previously an independent director of Ningxia Orient Tantalum Industry Co., Ltd. (寧夏東方鉏業股份有限公司) (a company listed on the Shenzhen Stock Exchange, SZ000962) from 2005 to April 2011. He was appointed as an independent director of Xuzhou Kerong Environmental Resources Co., Ltd. (SZ300152) in July 2016 and of Guiyang Longmaster Information & Technology Co., Ltd. (SZ300288) in February 2017. Mr. Liu graduated from the School of Economics of Beijing Forestry University (北京林業大學經濟管理學院) in 1989 and from Shanghai Advanced Institute of Finance with a master's degree in 2016 and is a PRC Certified Public Accountant.

Mr. Huanfei Guan (關浣非), aged 59, is an independent non-executive Director of our Company, chairman of the Remuneration Committee, a member of the Audit Committee and the Compliance Committee, and was appointed to our Board on August 28, 2014. Mr. Guan has been a part-time researcher of the Insurance Research Centre of Fudan University since 2004. He has also been appointed as a part-time lecturer of professional degree of Fudan University since 2013. Mr. Guan has extensive experience in the finance and insurance industry in Hong Kong and the PRC. He served various senior managerial positions in the People's Insurance Company of China (Jilin Branch) (中國 人民保險公司吉林省分公司), the business department of Hong Kong and Macao Regional Office of China Insurance Group (中國保險港澳管理處), Ming An Insurance Company (Hong Kong) Limited (香港民安保險有限公司) and China Pacific Insurance Co., (HK) Ltd. (中國太平洋保險 (香港) 有限公司). Mr. Guan also held offices at the Bank of Communications, including the deputy chairman of the risk asset management committee (風險資產管理委員會副 主任委員), deputy chairman of credit asset management committee (信貸資產管理委員會副主任委員), chairman of loan verification committee (貸款審查委員會主任委員), deputy general manager of the Bank of Communications Hong Kong Branch, the director of Bank of Communications Trustee Limited (交通銀行信託有限公司), the chairman and chief executive of China BOCOM Insurance Co., Ltd. (中國交銀保險有限公司) and an executive director and general manager of BoCommLife Insurance Company Limited. Mr. Guan is also an economic and technical consultant of Jilin Provincial Government (吉林省人民政府經濟技術顧問). Mr. Guan is now an executive director of CCT LAND HOLDINGS LIMITED and an independent non-executive director of Sunwah Kingsway Capital Holdings Limited (shares of both companies are listed on the main board of the Stock Exchange). He has been appointed as the chairman emeritus of Culturecom Holdings Limited (a company listed in Hong Kong) and the chairman of the board of directors of UCAN.COM Group Limited, a subsidiary of Culturecom Holdings Limited, since July 2013. Mr. Guan was an independent non-executive director of Silver Base Group Holdings Limited (the shares of which are listed on the main board of the Stock Exchange) for the period from March 2008 to January 2011. He was re-designated as an executive director and president of that company from January 2011 to December 2012. He has been engaged as a senior consultant of that company since January 2013. Mr. Guan obtained a doctor's degree in Economics in 2000 from Wuhan University and was a post-doctoral researcher in Theoretical Economics with Fudan University from 2000 to 2002.



## SENIOR MANAGEMENT

**Xinghu Tao (**陶星虎**)** is the president of our Company. Please refer to the paragraph headed "Board of Directors" for his biographical background.

**Xingeng Luo (**駱新耿**)** is a vice president of our Company. Please refer to the paragraph headed "Board of Directors" for his biographical background.

**Chunlai Wang (王春來)** is a vice president of our Company primarily in charge of Luanshya. Please refer to the paragraph headed "Board of Directors" for his biographical background.

Wei Fan (范巍) is a vice president of our Company primarily in charge of CCS. Please refer to the paragraph headed "Board of Directors" for his biographical background.

Kaishou Xie (謝開壽) is a vice president of our Company. Please refer to the paragraph headed "Board of Directors" for his biographical background.

Jinjun Zhang (張晉軍), aged 48, is a vice president of the Company. He was appointed and engaged in the senior management of the Company on 24 March 2016 and was in charge of NFCA. He is the current director and general manager of NFCA and the director of SML. Mr. Zhang has 28 years of experience in the mining industry and acted as the mining manager and the vice general manager of NFCA in 2009 and 2015, respectively, and was also appointed as the executive director of NFCA. He joined NFCA to act as the manager of production technology department from 2006 to 2009. From 1988 to 2006, Mr. Zhang worked in the Hujiayu Copper Mine under Zhongtiaoshan Nonferrous Metals Group Co., Ltd. and successively acted as the technology director, pit director and the mining manager assistant. Mr. Zhang graduated from Changsha Non-ferrous College (長沙有色金屬專科學校) in 1988 with a major in mining and obtained a master degree of mining engineering in University of Science & Technology Beijing in 2015. Mr. Zhang was recognised as a Senior Mining Engineer (professor level) in 2015.

Peiwen Zhang (張培文), aged 49, is a vice president of the Company who is in charge of SML. He was appointed and joined the senior management of the Company on 24 March 2016 and currently acts as a director and the general manager of SML and a director of CNMC Huachin Mabende. Mr. Zhang has 27 years of experience in the mining industry and acted as the vice general manager of SML from 2005 to 2016. In 2004, he was appointed as the technology director of Kunming Rui Yuan Ju Corporation (昆明瑞源巨公司), the 2,000-tonne hydrometallurgical plant of Yunnan Jinsha Corporation (雲南金沙公司). From 2001 to 2004, he acted as the vice director, director, the assistant to the head of and deputy head of the metallurgical research institute of former Yunnan Dongchuan Copper Mines Administration (雲南東川礦務局) and the director of 500-tonne hydrometallurgical plant. Mr. Zhang graduated from Changsha Non-ferrous College (長沙有色金屬專科學校) in 1989 with a major in non-ferrous metal metallurgy and was recognised as a metallurgical engineer in 1998.



**Aibin Hu (胡愛斌)**, aged 48, is the chief compliance officer and joint company secretary of our Company with over 20 years of experience in the mining industry. He was appointed and joined the senior management of the Company on 27 April 2012 and was appointed as a director of CNMHKI in 2016. Mr. Hu joined Luanshya in November 2009 and served as the board secretary and assistant to the general manager of Luanshya. He served as the deputy manager of the Administrative Department of NFCA from January 2007 to October 2009. Mr. Hu served as the office secretary of Tongling Nonferrous Metals Group Holdings Co., Ltd. (安徽銅陵有色金屬集團控股公司) from June 2001 to October 2003 and was seconded to the reorganisation group of the SASAC from November 2003 to December 2006. Mr. Hu graduated from Anhui Normal University (安徽師範大學) with a bachelor's degree in science in 1994 and received a Master of Business Administration degree from Beijing Jiaotong University (北京交通大學) on 2008. Mr. Hu is a qualified enterprise legal adviser in the PRC and a senior economist and concurrently the enterprise legal adviser.

**Xinghua Liu (劉興華)**, aged 48, is the chief financial officer of our Company with 25 years of experience in financial management. Mr. Liu was appointed as a director of CNMHKI in 2016 and joined China 15th Metallurgical Construction Group Company Limited ("15th MCC") (中國十五冶金建設有限公司) (a subsidiary of CNMC) in 1992 and once served as the financial manager of the Fuzhou management team of the 15th MCC. He joined NFC Africa Mining PLC (a subsidiary of our Company) in 2002 and had successively served as the deputy manager of its Financial Department, the deputy CFO and assistant CEO. He joined our Company in 2016 and has served as chief financial officer ever since. Mr. Liu graduated from North China University of Technology with a bachelor degree in accounting in 1992, and obtained a master degree of engineering from University of Science and Technology Beijing in 2016. He also obtained the title of senior accountant in 2002.

Note: Mr. Hong Han (韓紅), the former chief financial officer of our Company who had resigned on 25 January 2016, and Mr. Xinghua Liu (劉興華) was appointed as the chief financial officer of the Company on the same day.

## JOINT COMPANY SECRETARIES

**Aibin Hu (**胡愛斌**)**, aged 48, is the joint company secretary and chief compliance officer of our Company. Please refer to the paragraph headed "Senior Management" above for his biographical background.

**Tin Wai Lee (**李天維**)**, aged 42, was appointed as a joint secretary of the Company on 15 December 2013. Mr. Lee is a member of the Hong Kong Institute of Certified Public Accountants and has over 11 years of experience in auditing, taxation and company secretarial industries. He is also a partner of a local accounting firm.



# **CORPORATE GOVERNANCE REPORT**

## **CORPORATE GOVERNANCE PRACTICES**

The Board of Directors and the management of the Group are committed to achieving and maintaining high standards of corporate governance, which they consider to be critical in safeguarding the integrity of the Company's operations and maintaining investors' trust in the Company. Except for deviation from code provision A.2.1 of the CG Code, which is explained in paragraph headed "Chairman and Chief Executive" below, none of the Directors is aware of any information which would reasonably indicate that the Company has not, for any part of the year ended 31 December 2016, complied with the code provisions as set out in the CG Code.

The Company has applied the principles of the CG Code to its corporate governance structure.

## CODE OF CONDUCT REGARDING SECURITIES TRANSACTIONS BY DIRECTORS

The Company has adopted a code of conduct regarding securities transactions by directors on terms no less exacting than the required standard of dealings as set out in the Model Code for Securities Transactions by Directors of Listed Issuers ("**Model Code**") as contained in Appendix 10 of the Listing Rules.

The Company had made specific enquiry to all the Directors and confirmed that all of them have complied with the Model Code for the year ended 31 December 2016.

## **BOARD OF DIRECTORS**

As at 31 December 2016, the Board comprised five executive Directors, namely Mr. Xinghu Tao, Mr. Xingeng Luo, Mr. Chunlai Wang, Mr. Wei Fan and Mr. Kaishou Xie; one non-executive Director, namely Mr. Diyong Yan; and three independent non-executive Directors, namely Mr. Chuanyao Sun, Mr. Jingwei Liu and Mr. Huanfei Guan. Mr. Xinghu Tao is the chairman of the Board.

Save as disclosed in this annual report, to the best knowledge of the Company, there are no financial, business, family or other material relationships among members of the Board.



For the year ended 31 December 2016, all the members of the Board and board committees actively attended relevant meetings. The attendances at the meetings of the Board and its committees and the annual general meeting held in person or through other electronic means of communication are as follows:

	Number of meetings held for the year ended 31 December 2016					
		Audit	Nomination	Remuneration	Compliance	
В	loard	Committee	Committee	Committee	Committee	AGM
Mr. Xinghu Tao	4/4	N/A	N/A	N/A	2/2	1/1
Mr. Diyong Yan	2/4	1/2	1/1	1/2	N/A	0/1
Mr. Xingeng Luo	3/4	N/A	N/A	N/A	N/A	1/1
Mr. Chunlai Wang	4/4	N/A	N/A	N/A	N/A	1/1
Mr. Wei Fan	3/4	N/A	N/A	N/A	N/A	1/1
Mr. Kaishou Xie	3/4	N/A	N/A	N/A	N/A	1/1
Mr. Chuanyao Sun	4/4	N/A	1/1	2/2	2/2	1/1
Mr. Jingwei Liu	4/4	2/2	1/1	N/A	N/A	1/1
Mr. Huanfei Guan	4/4	2/2	N/A	2/2	2/2	1/1

The Board shall meet at least four times a year at approximately quarterly intervals. The Audit Committee shall meet not less than twice a year to review and discuss the interim and annual consolidated financial statements. The Compliance Committee shall meet at least two times a year to review the Company's internal control policies and corporate management. Both of the Nomination Committee and the Remuneration Committee shall meet at least once a year. In addition, the chairman of the Board shall meet with non-executive Directors (including independent non-executive Directors) without the attendance of executive Directors at least once a year. The Company was in compliance with all the requirements in respect of meetings of Board committee throughout the year of 2016.

The Board is responsible for leading, supervising and managing the Company. Its main duties include but are not limited to: (i) formulating and reviewing the corporate governance policies and practice of the Company; (ii) reviewing and inspecting trainings and continuing development of Directors and senior management; (iii) reviewing and monitoring relevant policies and rules of the Company in relation to compliance with laws and regulations; (iv) developing, reviewing and monitoring the code of conduct and compliance manual applicable to employees and directors; and (v) reviewing the Company's compliance with Corporate Governance Code and the disclosure of relevant information in the Corporate Governance Report. The Board supervises the business, strategy and decision making as well as performance of the Group, in a bid to achieve sound growth momentum to improve shareholder value. Each Director executes his duties in good faith and make objective decisions in compliance with requirements of applicable laws and regulations. The Board delegates day-to-day operations of the Company to the management of the Group and also instructs the management to implement the Board's decisions and resolutions. The delegated functions are periodically reviewed. Approval has to be obtained from the Board prior to any significant transaction being entered into. Non-executive Directors and independent non-executive Directors actively participated in the meetings of the Board and its committees to exercise their independent judgment on issues of strategy, policy, performance, accountability, resources, key appointments and standards of conduct of the Company. All of the non-executive Directors and independent non-executive Directors made positive contributions to the strategy and policies of the Company's development through independent, constructive and informed comments. In addition, the Board has also delegated various responsibilities to the Audit Committee, the Nomination Committee, the Remuneration Committee and the Compliance Committee.

The Board also has a balance of skills and experience appropriate for the requirements of the Company's business and it ensures that changes to its composition can be managed without undue disruption. There is a sufficient number of non-executive Directors for their views to carry weight. As not less than one-third of the Board shall be made up of independent non-executive Directors, there is also a strong independent element on the Board, which facilitates the exercise of independent judgment by the Board. One of the independent non-executive Directors, Mr. Jingwei Liu, holds the appropriate professional qualifications as required under Rule 3.10(2) of the Listing Rules.

Directors are provided in a timely manner with appropriate information in the form and quality to enable them to make an informed decision and perform their duties and responsibilities.

Each newly appointed director receives formal, comprehensive and tailored induction on the first occasion of his appointment, so as to ensure that he understands the business and operations of the Company and that he is fully aware of his responsibilities and obligations under the Listing Rules and other relevant regulatory requirements.

The Directors are continually provided with information relating to the developments in the legal and regulatory regime and the business and market environments to facilitate the execution of their responsibilities. Continuing briefings and professional development for the directors were arranged by the Company and its professional advisers.



During the year ended 31 December 2016, all the Directors have taken continuous professional development trainings in order to refresh their knowledge and skills and have provided their records to the Company.

The types of trainings in which all Directors participated in during the year are as follows:

	Type of Trainings
Executive Directors	
Mr. Xinghu Tao	А, В
Mr. Xingeng Luo	А, В
Mr. Chunlai Wang	А, В
Mr. Wei Fan	А, В
Mr. Kaishou Xie	А, В
Non-Executive Director	
Mr. Diyong Yan	A
Independent Non-Executive Directors	
Mr. Chuanyao Sun	A
Mr. Jingwei Liu	A
Mr. Huanfei Guan	A

A: attending seminars, conferences and/or expert briefings relevant to the business or directors' duties

B: paying visits to the Group's local management and facilities

Pursuant to Rule 3.13 of the Listing Rules, the Company has received written annual confirmation from each independent non-executive Director of his independence and considers that all independent non-executive Directors are independent in accordance with the guidelines set out in the Listing Rules.

The Company has arranged appropriate insurance cover in respect of legal action against all the Directors.



## CHAIRMAN AND CHIEF EXECUTIVE

Mr. Xinghu Tao serves as the Chairman and President of the Company with effect from 20 April 2015. This is at variance with code provision A.2.1 of the Corporate Governance Code, which provides that the roles of Chairman and chief executive should be separate and should not be performed by the same individual. The division of responsibilities between the Chairman and chief executive should be clearly established and set out in writing.

In view of the ever-changing business environment in which our Group operates, the Chairman and President must be proficient in the mining industry and be sensitive to market changes in order to promote the businesses of the Group. The Board thus considers that a segregation of the role of the Chairman and President may create unnecessary costs for the daily operation of the Group.

Besides, all major decisions have been made in consultation with members of the Board and appropriate committees, as well as the senior management team. Chief officers and senior executives are invited to attend Board meetings from time to time to make presentations and answer Board's enquiries. In addition, Directors are encouraged to participate actively in all Board and committee meetings of which they are members, and the Chairman ensures that all issues raised are properly briefed at the Board meetings, and together with the senior management, provide adequate, accurate, clear, complete and reliable information to members of the Board in a timely manner. Further, the Chairman ensures that adequate time is available for discussion for all items at the Board meetings.

The Board is therefore of the view that there are adequate balance of power and safeguards in place. Nevertheless, the Board will continue to regularly monitor and review the Company's current structure and to make necessary changes at an appropriate time.

## APPOINTMENT AND RETIREMENT OF DIRECTORS

In accordance with the article 102 of the Articles of Association, at each annual general meeting, one-third of the Directors or, if their number is not three (3) or a multiple of three (3), the number which is nearest to and is at least one-third, shall retire from office by rotation at least once every three (3) years. A retiring director shall be eligible for re-election. In compliance with this provision, Mr. Chuanyao Sun, Mr. Jingwei Liu and Mr. Huanfei Guan, being one-third of the Directors, shall retire at the forthcoming annual general meeting. They are eligible for re-election and will offer themselves for re-election.

The Nomination Committee is responsible for reviewing the Board composition, developing and formulating the relevant procedures for nomination and appointment of Directors, monitoring the appointment and succession planning of Directors and assessing the independence of independent non-executive Directors.



Each of the executive Directors has signed a service agreement and a supplemental service agreement with the Company for an initial term of three years and to renew for 3 years automatically (subject to termination in certain circumstances as stipulated in the relevant service agreement). Each of the non-executive Directors (including three independent non-executive Directors) has signed a letter of appointment and a supplemental letter of appointment with the Company for an initial term of three years and to renew for 3 years automatically (subject to termination in certain circumstances as stipulated in the relevant letters of appointment).

Save as disclosed herein, none of the Directors has or is proposed to have entered into any service agreement or letter of appointment with any member of the Group (excluding agreements expiring or determinable by any member of the Group within one year without the payment of compensation other than statutory compensation).

## PRACTICES OF BOARD MEETINGS

Notices of regular Board meetings are given to all the Directors at least 14 days before the meetings. Schedules and agenda of each meeting are made available to the Directors in advance. All the Directors are given an opportunity to include matters in the agenda for regular Board meetings. For other Board and committee meetings, notices are given within reasonable time in advance. Minutes of all Board meetings and committee meetings are kept by the joint company secretaries and open for the Directors' inspection. Draft and final version of minutes are circulated to the Directors for their comments and records within a reasonable time after the Board meeting is held. Minutes of the meetings of the Board and Committees recorded sufficient details of the matters considered and decisions reached at relevant meetings, including any concerns raised by Directors or dissenting views expressed.

The Directors, upon reasonable request, will be provided with independent professional advice, at the Company's expense, to assist them perform their duties. They may also have access to the senior management whenever necessary. Senior management would attend all regular Board meetings as and whenever necessary to report and advise the Board on business developments, financial and accounting matters, statutory and regulatory compliance, corporate governance and other major aspects of the Company. All Directors are entitled to have access to Board papers and related materials. The Company shall provide prompt and full responses to queries raised by the Directors as soon as it possibly can.

Pursuant to the provision of the Company's Articles of Association, a Director shall not vote nor be counted in the quorum at the Board meeting on any resolution approving any contract or arrangement or concerning a matter in which he or any of his associate(s) has, directly or indirectly, a material interest (other than an interest in shares, debentures or other securities of, or otherwise in or through, the Company) unless his interest arises because of specified matters set out in the Articles.

## **BOARD COMMITTEES**

The Board has established the Audit Committee, the Nomination Committee, the Remuneration Committee and the Compliance Committee to oversee particular aspects of the affairs of the Company. Each of these committees is set up with specific written terms of reference and the same has been published on the website of Hong Kong Stock Exchange. Each committee is delegated with authorities and duties within its terms of reference. The agenda of Board committees and relevant documents will be sent to all Directors at least three days before the intended date of relevant meetings. Each committee shall report to the Board according to its terms of reference.

## AUDIT COMMITTEE

The Audit Committee consists of three members. As at 31 December 2016, the Audit Committee members are Mr. Jingwei Liu, Mr. Diyong Yan and Mr. Huanfei Guan. The chairman of the Audit Committee is Mr. Jingwei Liu, who holds the appropriate professional qualifications as required under Rules 3.10(2) and 3.21 of the Listing Rules. The primary duties of the Audit Committee include, but are not limited to, being in charge of matters related to external auditors, assisting the Board by providing an independent view of the effectiveness of the financial process, internal control and risk management system of the Group, overseeing the audit process, reviewing the financial information of the Company and performing other duties and responsibilities assigned by the Board.

The Audit Committee is also responsible for overseeing and monitoring the risk management and internal control systems of the Company on an ongoing basis and review with our external auditors and management periodically, not less than annually, the scope, adequacy and effectiveness of the Company's corporate accounting and financial controls, risk management and internal control systems and any related significant findings regarding risks or exposures, and consider recommendations for improvement of such controls. The review should cover all material controls, including financial, operational and compliance controls. In conducting annual review, the Audit Committee should, in particular, consider the factors including (a) the changes, since the last annual review, in the nature and extent of significant risks, and the issuer's ability to respond to changes in its business and the external environment; (b) the scope and quality of management's ongoing monitoring of risks and of the internal control systems, and where applicable, the work of its internal audit function and other assurance providers; (c) the extent and frequency of communication of monitoring results to the board which enables it to assess control of the issuer and the effectiveness of risk management; (d) significant control failings or weaknesses that have been identified during the period. Also, the extent to which they have resulted in unforeseen outcomes or contingencies that have had, could have had, or may in the future have, a material impact on the issuer's financial performance or condition; and (e) the effectiveness of the issuer's processes for financial reporting and Listing Rule compliance.

The Audit Committee is also responsible for reviewing the Company's internal audit function, ensuring co-ordination within the Group and between the Company's internal and external auditors, and ensuring that the internal audit function is adequately resourced and has appropriate standing within the Company and to review and monitor its effectiveness.

The Company's and the Group's audited financial statements for the year ended 31 December 2016 have been reviewed by the Audit Committee, who was of the opinion that these statements complied with the applicable accounting standards, the Listing Rules and the legal requirements, and that adequate disclosures had been made.

The Audit Committee had also reviewed the unaudited financial statements of the Group for the six months ended 30 June 2016.



For the year under review, the Audit Committee held two meetings and the attendance records of individual members are set out below:

Name of Directors	Number of meetings attended/held
Mr. Jingwei Liu Mr. Diyong Yan	2/2 1/2
Mr. Huanfei Guan	2/2

## NOMINATION COMMITTEE

The Nomination Committee consists of three members. As at 31 December 2016, the Nomination Committee members are Mr. Chuanyao Sun, Mr. Diyong Yan and Mr. Jingwei Liu. The chairman of the Nomination Committee is Mr. Chuangyao Sun. The Company has adopted the board diversity policy on 30 August 2013. The primary functions of the Nomination Committee include, but are not limited to, reviewing the structure, size, diversity (including but not limited to gender, age, culture and educational background), and composition of the Board of Directors, assessing the independence of independent non-executive Directors and making recommendations to the Board on matters relating to the appointment of Directors. The Nomination Committee is authorised by the Directors to obtain advice from external counsel or other independent professional consultants if necessary. It may invite external individuals with relevant experience and professional knowledge to attend the meeting when needed. The Nomination Committee will be provided adequate resources to perform its duties.

The Nomination Committee has fulfilled the primary duties mentioned above. At the meeting held by the Nomination Committee in 2016, it reviewed the structure, size, composition and diversity of the Board to ensure that the Board has a balance of expertise, skills and experience appropriate for the business of the Company, and assessed the independence of the independent non-executive Directors. The Nomination Committee reviewed the appointment of each Director prior to that Director seeking re-election at the forthcoming annual general meeting and was pleased to recommend the re-election of all the three eligible Directors to the Board.

For the year under review, the Nomination Committee held one meeting and the attendance records of individual members are set out below:

Name of Directors	Number of meetings attended/held
Mr. Chuanyao Sun	1/1
Mr. Diyong Yan	1/1
Mr. Jingwei Liu	1/1



## **REMUNERATION COMMITTEE**

The Remuneration Committee consists of three members. As at 31 December 2016, the Remuneration Committee members are, Mr. Huanfei Guan and Mr. Chuanyao Sun, being independent non-executive Directors, and Mr. Diyong Yan, being a non-executive Director. The Remuneration Committee is chaired by Mr. Huanfei Guan, an independent non-executive Director. The primary duties of the Remuneration Committee include, but are not limited to, the following: (i) making recommendations to the Board on the Company's policy and structure for all remuneration of the Directors (including executive Directors) and senior management and on the establishment of a formal and transparent procedure for development policy on such remuneration; and (ii) reviewing and approving performance-based remuneration Committee is authorised by the Directors to obtain advice from external counsel or other independent professional consultants if necessary. It may invite external individuals with relevant experience and professional knowledge to attend the meeting when needed. The Remuneration Committee is provided with adequate resources to perform its duties.

The remuneration payable to each of the directors is determined by the Remuneration Committee with reference to his contribution of time, effort and expertise on the Company's matters.

The Remuneration Committee of the Company has performed the primary duties mentioned above.

For the remuneration of the Directors for the year ended 31 December 2016, please refer to note 13 to the audited consolidated financial statements of this annual report.

Please see below for the remuneration of the senior management of the Company by band for the year ended 31 December 2016:

#### Number of senior management

HK\$500,001 to HK\$1,000,000	4
HK\$1,000,001 to HK\$1,500,000	2
HK\$1,500,001 to HK\$2,000,000	1

For the year under review, the Remuneration Committee held two meetings and the attendance records of individual members are set out below:

Name of Directors	Number of meetings attended/held
Mr. Huanfei Guan	2/2
Mr. Diyong Yan	1/2
Mr. Chuanyao Sun	2/2



## **COMPLIANCE COMMITTEE**

The Compliance Committee consists of three members. As at 31 December 2016, the Compliance Committee members are Mr. Xinghu Tao, Mr. Chuanyao Sun and Mr. Huanfei Guan. The chairman of the Compliance Committee is Mr. Xinghu Tao. The primary functions of the Compliance Committee include, but are not limited to, overseeing and monitoring the compliance status of the Company's business and operations based on the applicable legal and regulatory requirements as well as the Company's own internal control policies and procedures; reviewing regular and special reports submitted by the compliance principal in each subsidiary and requiring such compliance principals to prepare specific reports dealing with particular internal control or compliance issues for review; holding regular meeting to discuss, investigate and make plans for the legal and compliance matters; formulating and reviewing the Company's policies and practice on corporate government and making recommendations to the Board; and reviewing the Company's compliance with the Corporate Governance Code set out in the Listing Rules and disclosure in the Corporate Governance Report.

The Compliance Committee has performed the primary duties mentioned above.

For the year under review, the Compliance Committee held two meetings and the attendance records of individual members are set out below:

Name of Directors	Number of meetings attended/held
Mr. Xinghu Tao	2/2
Mr. Chuanyao Sun	2/2
Mr. Huanfei Guan	2/2

## INDEPENDENT AUDITOR

The Group's independent external auditor is Deloitte Touche Tohmatsu ("Deloitte"). Deloitte is responsible for presenting independent opinions on the consolidated financial statements of the Group in accordance with the results of their auditing work, and reporting to the Shareholders on the same. Apart from the statutory audit of the annual consolidated financial statements, Deloitte was also engaged to perform a review of the interim consolidated financial statements of the Group for the six months ended 30 June 2016 and to provide assurance service on continuing connected transactions.

The remuneration paid to Deloitte in respect of audit services and other non-auditing services (those are, review of the interim consolidated financial statements of the Group, tax consulting services for subsidiaries located in Zambia and Ireland and consulting services in respect of risk management, internal control and compliance of the Environmental, Social and Governance Reporting Guide) for the year ended 31 December 2016 amounted to US\$840,000 (RMB2,880,000 and US\$407,000) and US\$363,000 (RMB1,980,000, HKD250,000 and US\$33,000) respectively.



## **COMPANY SECRETARIES**

Mr. Aibin Hu and Mr. Tin Wai Lee are the joint company secretaries of the Company.

Mr. Lee's primary corporate contact person at the Company is Mr. Aibin Hu. The joint company secretaries have taken no less than 15 hours of relevant professional training during the year. Joint secretaries of the Company shall report to chairman of the Board and/or chief executive.

## FINANCIAL REPORTING

The Directors acknowledge their responsibility for preparing the consolidated financial statements of the Group, which were prepared in accordance with statutory requirements and applicable accounting standards. The management has provided detailed explanation and information to the Board, which will enable the Board to make informed assessment on the financial and other information put before the Board for approval. Updated information has been provided by the management to members of the Board on a monthly basis, containing fair and understandable assessment on performance, financial condition and prospect of the Group.

The auditor's report for the consolidated financial statements for the year ended 31 December 2016 is set out on pages 109 to 113 of this annual report.

## **RISK MANAGEMENT AND INTERNAL CONTROL**

The Group is dedicated to maintaining and establishing quality corporate governance. Pursuant to code provisions of the Corporate Governance Code set out in Appendix 14 of Listing Rules on basic standards, guidelines for evaluation as well as other requirements under relevant laws and regulations, the Group has conducted self-evaluation on the effectiveness of its internal control in respect of design and operation. As at 31 December 2016, the internal control for businesses and matters involved in self-evaluation has been established and has operated effectively. Thus the internal control objective of the Group was achieved and the internal control of the Group was sound and effective.

The Board recognises its responsibility for maintaining an adequate and sound internal control system and assesses its effectiveness of internal control on a regular basis. Through the Audit Committee, the Compliance Committee and an external firm of qualified accountants providing internal control services, the Board conducts reviews on the effectiveness of these systems at least annually, covering all material controls, including financial, operational and compliance controls, and risk management functions. In addition, the review also considers the adequacy of resources, staff qualifications and experience, training programmes and budget of the Group's accounting and financial reporting function.



We note that risk management and internal control shall be in line with the Group's operation scale, business scope, competition and risk level, and shall be adjusted in a timely manner according to changes in circumstances. During the year; 1) we further set up the comprehensive management system and mechanism for statutory and compliant works and successively formulated and improved "China Nonferrous Mining Corporation Limited Confidential Work System", "China Nonferrous Mining Corporation Limited Management Measures on Financial files" and "China Nonferrous Mining Corporation Limited Corporate Management Measures"; 2) we engaged Deloitte Touche Tohmatsu CPA Ltd. to organize and conduct two special auditing programs, namely "Risk Management and Internal Control System" and "Environmental, Social and Corporate Governance", being an independent assessment of risk management, internal control system, environmental, social and corporate governance of the Group, thus laying a solid foundation for the improvement of governance structure and level of the Group; 3) we strengthened training to improve management level. In 2016, the Board has reviewed the risk management and internal control of the Group. The Compliance Committee held two meetings to study and arrange statutory and compliance management works. In addition to the training provided by Davis Polk & Wardwell to Directors, senior management and compliance management personnel, in relation to risk management, internal control, environmental, social and corporate governance, the company secretary and other compliance management personnel also attended the various professional trainings provided by the Hong Kong Institute of Chartered Secretaries, Beijing Corporate Counsel Association (北京市法律顧問協會) and SASAC Bureau of Legislation (國資委法制局), with an aim to continuously improve the awareness for compliance and prevention of legal risks and operational capabilities of themselves and the compliance staff involved in legal matters of the Company.

## **RISK MANAGEMENT AND INTERNAL CONTROL REPORT**

### I. Responsibilities

The Board is fully responsible for maintaining sound and effective risk management and internal control system, while the management is responsible for the design and implementation of the internal control system to manage the risks. A sound and effective internal control system is designed to identify and manage, rather than eliminate, the risk of failure to achieve business objectives, and only makes reasonable, but not absolute, assurance against material misstatement or loss.

#### II. Risk Management Structure of the Group

The Board is responsible for the Group's risk management and internal control system and reviews its effectiveness periodically. The Audit Committee and the Compliance Committee assist the Board in monitoring the Group's risk tolerance level, the designs of the risk management and internal control system and their operational effectiveness.



The Audit Committee will continuously supervise and monitor the Group's risk management and internal control system, and will review with external auditors and senior management of the Group responsible of the relevant matters on a regular basis (at least once a year) the scope, adequacy and effectiveness of the Group's accounting and financial monitoring, risk management and internal control systems, as well as any significant findings related to risks or disclosure, and make recommendations for improvement of such controls. The matters that the Audit Committee is responsible for include, but are not limited to, the following:

- (a) assessing the changes, since the last annual review, in the nature and extent of significant risks, and the Group's ability to respond to changes in its business and the external environment;
- (b) supervising the scope and quality of the continuous monitoring of risk management and internal control system by senior management, as well as internal audit functions and works of other internal and external staff responsible for risk management and control;
- (c) reporting on the extent and frequency of communication of monitoring results to the Board to enable the Risk Management Committee to assess control of the Group and the effectiveness of risk management;
- (d) assessing significant control failings or weaknesses that have been identified during the reporting period and the extent to which they have resulted in unforeseen outcomes or contingencies that have had, may have or may in the future have, a material impact on the Group's financial performance;
- (e) assessing the effectiveness of the Group's procedures on financial reporting and the compliance of the Listing Rules;
- (f) assessing and discussing the risk management and internal control system with senior management in order to ensure the proper establishment and maintenance of effective systems by senior management in the performance of its duties. The discussion should include the adequacy of resources, staff qualifications and experience, training programmes and budget of the Group's accounting, internal control and financial reporting functions;
- (g) considering major findings from investigation on risk management and internal control matters as delegated by the Board or on its own initiative and considering management's response to these findings;



- (h) reviewing the internal audit function, to ensure co-ordination between the internal and external auditors of the Group, to ensure that the internal audit function is adequately resourced and has appropriate standing within the Group, and to review and monitor its effectiveness;
- (i) reporting to the Board of any actions that have been noted and which, depending on their severity, should be brought to the attention of the Board in respect of any alleged fraud, non-compliance, failure of risk management and internal control system, or alleged violations and irregularities, and to review the internal investigation findings of any alleged fraud, non-compliance, failure of risk management and internal control system, or alleged fraud, non-compliance, failure of risk management and internal control system, or alleged fraud, non-compliance, failure of risk management and internal control system, or alleged violations and irregularities in financial reporting;
- (j) reporting to the shareholders in the Corporate Governance Report its annual review of the effectiveness of risk management, internal control system and internal audit functions, or whether additional internal audit functions are required and explain why this function is not available (as the case may be), in order to make sure that the Group has complied with the disclosure requirements for risk management and internal control in the Corporate Governance Code and Corporate Governance Report under the Listing Rules.

The responsibilities of the Compliance Committee in risk management and internal control shall include, but are not limited to:

- (a) devising mechanisms and procedures and making recommendations on improving the risk management and internal control system;
- (b) revising and reviewing the effectiveness of the Group's risk management and internal control policies and making recommendations on their improvement;
- (c) overseeing and monitoring the compliance of the Group's business and operations with applicable legal and regulatory requirements as well as with the Group's own risk management and internal control policies and procedures;
- (d) fostering a conducive compliance and risk culture within the Group and considering key risk and compliance issues and activities in relation to the Group's commercial activities.



### **Risk Management Structure of the Group**

	Board	Audit Committee	Compliance Committee
Top-down: monitor, identify, assess and control the risks at corporate level	<ul> <li>Fully responsible for the Group's risk management and internal control system</li> <li>Set up strategic objectives to review the effectiveness of the Group's risk management and internal control system</li> <li>Assess and define the nature and extent of the risks</li> <li>Provide guidance on the importance of risk management and promote the risk management culture</li> </ul>	<ul> <li>Continuously monitor the Group's risk management and internal control system and regularly review the scope, adequacy and effectiveness of the Group's accounting and financial monitoring, and risk management and internal control system</li> </ul>	<ul> <li>Assist the Board in improving and checking the effectiveness of the Group's risk management and internal control policies and make recommendations for their improvement</li> </ul>
$\land$	Management	Internal audit	
Bottom-up: identify, assess and control the	<ul> <li>Design, implement and monitor risk management and internal control system</li> <li>Assess the risks to the Group and its control measures</li> </ul>	Assist the Audit Co the effectiveness of management and i system	
risks of business units at operations level	Business units at	operations lev	/el
and the scope of the functions	Identify, evaluate and manage business risks		nagement procedures I measures within each nctional scope

#### III. Internal Control Model

The internal control model of the Group is based on the model set down by the Committee of Sponsoring Organisations of the U.S. Treadway Commission ("COSO"), and has five components, namely: internal environment, risk assessment, control activities, information and communication, and internal supervision. In developing our internal control model based on the COSO principles, the Group has taken into consideration its organisation structure and nature of business activities.



**Internal Environment** – This creates suitable conditions for the risk management and internal control of the Group. The Group formed a management style focusing on corporate governance, and built a corporate culture with good professional ethics and accountability. The Group has formulated the Code on Corporate Governance Practices and promoted it to all employees. The Internal Control Management Manual of the Group has full coverage of the organisational structure, development strategies, human resources, social responsibility, corporate culture and other internal environment aspects, aims to build risk awareness and internal control responsibility into our culture and is regarded as the foundation of the Group's internal controls system.

**Risk Assessment** – The Group formed a risk management system for risk identification, risk analysis, risk assessment and risk response. The Board, management and all employees work together for continuing promotion of risk management. A law and compliance department was established by the Group to regularly follow up on risk management work, to prepare a compliance report every month so as to track the risk situation of the enterprise and to integrate the risk management function into the daily management work and the scope of business operation and functions of each enterprise.

**Control Activities** – The Group's core businesses of mining, ore processing, smelting and sales of copper have all established mature operational processes. The Company and its subsidiaries have formed a sound system covering every production and business activity at the business and financial level.

**Information and Communication** – The Company and its subsidiaries continue to improve the information communication mechanism, for example, China Nonferrous Mining Corporation Limited promulgated the "Management System of Information Disclosure of China Nonferrous Mining Corporation Limited" and the "Management System of Financial Information Disclosure of China Nonferrous Mining Corporation Limited", set up a periodic reporting mechanism of monthly compliance information including statutory matters, internal control system, legal cases and related party transactions, and the Group continuously supervises and controls the financial information and compliance information of its subsidiaries.

**Internal Supervision** – The supervision procedure is organised by the Board, the Audit Committee and the Compliance Committee, and performed by the Legal and Compliance Department and the internal auditor. The Audit Committee and the Compliance Committee shall hold at least two meetings a year, to continuously monitor the risk management and internal control system. At management level, the Group has a complaint channel to carry out anti-fraud monitoring work, and the Legal and Compliance Department will arrange reviews on the risk management and internal control system annually.

#### IV. Review on the Effectiveness of the Risk Management and Internal Control System in 2016

The Group has organised an overall review on the risk management and internal control system. As of 31 December 2016, the Board considered that the risk management and internal control system is effective and sufficient and did not identify any significant issues that may affect the Group's financial monitoring, operational monitoring, compliance monitoring and risk management functions.

During the course of review, the Board considered that the resources available to, qualifications of and experience of staff responsible for the Group's accounting and financial reporting, training and budget were sufficient.



#### V. Further Reinforce the Group's Risk Management and Internal Control System

The Group has further reinforced its risk management and internal control system, with focus on the following:

#### Risk Assessment – Reinforcement of Significant and Potential Risks Control

In order to further reinforce the monitoring of significant and potential risks, the Board will take the lead on, and the management will identify and follow up on, the distribution of risks. The Chief Executive Officer will discuss the risk management status, including strategic risk, operational risk, financial risk, market risk and legal risk, with various departments through executive office meetings. In view of the ever-changing global and local environment, the Group will focus mainly on monitoring significant and potential risks.

#### **Control Activities – Policies and Procedures**

Control activities aim to identify and implement new policies to respond to changing regulatory environments, such as by advancing the implementation of environmental, social and corporate governance systems. In order to further improve the Group's system, the Group has revised and improved the corresponding rules of various functional management systems, and has continuously inspected and optimised the policies and procedures.

#### Information and Communication – Consolidation and Improvement of the Information System

The subsidiaries of the Company have actively promoted the improvement of the information transmission mechanism. CNMC Luanshya Copper Mines PLC has implemented the connection and integration of the information systems of operation and business, financial management and function management. NFCA has carried out upgrades to the integrated information system, and Chambishi Copper Smelter Limited has integrated the warehousing management departments and systems to ensure the comprehensiveness and timeliness of information transmission in operation and management.

#### Internal Supervision – Fully Implementation of Evaluation on Internal Control System

On the basis of the conventional annual internal control evaluation, the Law and Compliance Department organised a special evaluation on risk management and internal control system in 2016 in order to carry out thorough and holistic evaluation of the risk management and internal control system of the Company and its subsidiaries.

#### VI. Future Development

Developing a risk management system that will be used by each operating unit to manage and control risks is an ongoing process. The Group will continue to enhance its risk management and control capabilities, improve its internal control structure, and strive to integrate risk management and internal control into its business processes.



## VII. Risk Factors of the Group

As a basis for the risk management policy, the Group should be aware of the risk factors and risk changes it is currently exposed to. The following table sets out the nature and risk changes of some of the significant risks to the Group.

Risks	Description of risks change	Risks change in 2016
Political environment	• The government situation in the DRC remains turbulent, and the presidential election increases uncertainty to the Group's operation. However, since the ruling party and the opposition party reached an agreement on the election arrangements at the end of the year, the situation has stabilised.	Maintained
Product price	<ul> <li>Although the copper price rebounded significantly since the end of November 2016, the average price for the year was still lower than that in 2015, which had a negative impact on the Group's production and operation.</li> <li>Competition of sulphuric acid market in Zambia is still fierce.</li> </ul>	Maintained
Sales management	• In order to cope with the impact of adverse factors such as the decline in copper price, the shortage of power supply and the hit on the sulphuric acid sales market, the enterprises have enhanced the level of operation and management, optimised the industrial structure, increased the proportion of the cathode copper which has higher profitability, and further optimised protection of the raw materials supply and the development of the product sales system, which led to the increase in operating income, and the profit exceeding the expected target.	Reduced
Production management	• The lack of electricity and its tariffs increased in Zambia and in Congo, which had an adverse impact on the Group's production and operation.	Maintained

Risks	Description of risks change	Risks change in 2016
	<ul> <li>As the enterprises enhanced their cost management and control, mining and smelting costs continued to decline, while production efficiency and technical and economic indicators continued to improve, and production capacity has further improved.</li> </ul>	Reduced
Asset management	• Impairment of assets was mainly affected by copper price. At the end of November 2016, copper prices rebounded and the risk of asset impairment of the Group declined.	Reduced
Foreign exchange management	• The exchange rate of ZMK against the US dollar rebounded in 2015, which had a positive impact on the enterprises.	Reduced
Legal litigation	The cases are well-managed, but the number of litigation cases has increased.	Maintained

## COMMUNICATION WITH SHAREHOLDERS AND INVESTORS

The Group emphasises the importance of maintaining good communication with the Shareholders and investors, so as to increase the Group's transparency and facilitate the performance of undertaking by the Shareholders. The annual general meeting provides a useful forum for Shareholders to exchange views with the Board. The chairman of the Board will attend and invite the chairmen of the Audit Committee, the Remuneration Committee and the Nomination Committee to attend the annual general meetings. The members of the Board are pleased to answer Shareholders' questions. To foster two-way communication amongst the Group, its Shareholders and potential investors, the Group has assigned personnel in respect of investor relations to respond to enquiries from Shareholders and the public. In the event that a Shareholder wishes to put forward a proposal to the Board, he may put forth his enquiry in writing to the investor relations personnel who will handle the same accordingly. The Group is also willing to maintain communication with shareholders and investors on a continuous basis through individual and group meetings. In addition, the Group is committed to maximising the use of its website as a channel to provide updated information in a timely manner and strengthen the communication with both the Shareholders and the public.



Outstanding Listed Company Award granted by IFAPC in 2013



President's Award granted by the Community Chest of Hong Kong



Pursuant to code provision E.1.3 of CG Code, the Company shall arrange for the notice to shareholders to be sent for annual general meetings at least 20 clear business days before the meeting and to be sent at least 10 clear business days for all other general meetings.

Pursuant to Articles of Association, any extraordinary general meeting at which the passing of a special resolution is to be considered shall be called by notice of not less than 21 clear days. All other extraordinary general meetings may be called by notice of not less than 14 clear days but if permitted by the Articles of Association, a general meeting may be called by shorter notice.

In addition, in accordance with the provisions of the Articles of Association, an extraordinary general meeting may be convened on requisition as provided by the Companies Ordinance. According to the Companies Ordinance, the directors are required to call a general meeting if the company has received requests to do so from shareholders of the company representing at least 5% of the total voting rights of all the shareholders having a right to vote at general meeting. Such meeting must be held on a date not more than 28 days after the date of the notice convening the meeting. The directors also have a duty to circulate a resolution proposed as a written resolution by a shareholder (together with any statement of not more than 1,000 words on the subject of the resolution proposed by the shareholder) if the company has received such requests from the shareholders of the company representing not less than 5% of the total voting rights of all the shareholders entitled to vote on the resolution.

Shareholders may at any time send their enquiries and concerns to the Board in writing to the Company at Room 1201, Allied Kajima Building, 138 Gloucester Road, Wanchai, Hong Kong.

All resolutions put forward at a general meeting will be taken by poll pursuant to the Listing Rules except where the chairman, in good faith, decides to allow a resolution which relates purely to a procedural or administrative matter to be voted on by a show of hands. In addition, the poll results will be posted on the websites of the Company and the Hong Kong Stock Exchange after the relevant shareholders' meeting.

## **INVESTOR RELATIONS**

There has been no changes to the Company's Articles of Association during the year ended 31 December 2016.

The Group strongly believes that investor relations are an integral part of maintaining good corporate governance of a listed company. During the reporting period, the Group has been actively maintaining contact with investors and keeping them abreast of the latest industry updates, corporate communications and business development in a timely manner, so as to establish a platform for fair, open and transparent information disclosure. One of the joint company secretaries, Mr. Aibin Hu, is responsible for the investor relations of the Group with the full support from the Board and the senior management. Mr. Hu can be contacted by email at huab@cnmc.com.cn, by telephone at +86 10 8442 6886 and by fax at +86 10 8442 6376, Ms. Wang Yiran, the manager of general affairs department, can be contacted by email at wangyr@cnmc.com.cn and by telephone at +86 10 8442 6082. During the reporting period, the Group actively participated in various investor relations activities and provided on-time information to investors through its company website.



## CONTINUOUS IMPROVEMENT OF INVESTOR RELATIONS

The Group published interim and annual results and disclosed discloseable inside information promptly in strict compliance with guidelines of Securities and Futures Commission and Hong Kong Stock Exchange, to provide financial performance, operating strategies and future prospects of the Company to the public in an accurate and effective manner.

The Group maintained close relationships with certain institutions including professional media outlets and investment banks, in a view to learn about the market recognition and expectation to the Group through various channels such as the media and analysts. In the meantime, the Group provided updates to the public in a bid to increase the Group's publicity.

The Company's website is considered to be one of the quickest means to communicate with investors. Through on-going information dissemination, the Group's website (www.cnmcl.net) serves as a platform to communicate with the public. The Group regularly updates the website contents, disseminates the latest updates, so as to enable the public to obtain such information in a timely manner. In addition, the Group also swiftly responds to different enquiries made by the Shareholders, investors, analysts and media by means of email, facsimile and telephone. The Group also published announcements, press releases and other latest updates on the development of the Group, so as to strengthen the effectiveness of information dissemination.



Chambishi Leaching Office area in Lubumbashi in DRC



# **ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT**

The Group believes that sound environmental, social and governance performance has a decisive influence on the future sustainable development of CNMC, achievement of our long-term goals and creation of long-term value for shareholders. While improving financial performance, the Group also pays close attention to the discharge of corporate social responsibility and sustainable development.

The Group prepares the Environmental, Social and Governance (the "**ESG**") Report (the "**Report**") in accordance with the ESG Reporting Guide as set out in Appendix XXVII to the Rules Governing the Listing of Securities on the Main Board of The Stock Exchange of Hong Kong Limited.

The Report covers the head office of the Group and its subsidiaries including NFCA, Luanshya, CCS, SML, Huachin Leach and CNMC Huachin Mabende as well as the sales of copper and sulfuric acid products, the main source of revenue of the Group, in relation to ESG in the period from 1 January 2016 to 31 December 2016 (the "**Reporting Period**"). The main stakeholders including business departments and management participated in the evaluation of importance and identification of material ESG policies in relation to the Group for inclusion in the Report.

Subject areas set out in the Environmental, Social and Governance Reporting Guide	Material environmental, social and governance matters of the Group
A. Environmental	
A1 Emissions	Environmental management
A2 Use of Resources	Use of Resources
A3 Environment and Natural Resources	Environmental management, environmental protection
	activities
B. Social	
31 Employment	Employment of staff, care for staff
32 Health and Safety	Construction of a safety management system, safe
	operation
33 Development and Training	Development of staff
34 Labour Standards	Employment of staff
35 Supply Chain Management	Win-win cooperation
B6 Product Responsibility	Quality and efficiency enhancement
37 Anti-corruption	Integrity operation
38 Community Investment	Community communication, community development



## **1 OVERSEAS VALUE**

Upholding the idea of "Sino-foreign cooperation for common development", the Group is the first PRC firm to invest in Zambia's cooper assets since the privatization of the industry, and invests in development of copper smelting projects in the Democratic Republic of the Congo. We insist on integrity operation with the focus placed on quality, and leverage our rich experience in development of overseas projects to fully create corporate overseas value to repay shareholders and the society.

#### 1.1 Integrity operation

The Group abides by laws and regulations in operation. It continuously optimises the corporate governance structure and improves the operation management system, and is committed to building an honest and fair corporate culture. During the Reporting Period, there was no litigation or corresponding penalty against the Group caused by corruption, embezzlement, bribery and other violations of local laws and regulations.

#### Overseas compliant operation

As China's forerunner of investment in Africa, the Group, on the premise of compliant operation, strictly complies with local laws and regulations as well as market rules and business ethics, and optimises corporate governance structure to prevent operational risks, to assist the Group's compliant and stable development.

- Strict compliance with local laws and regulations in relation to compliant operation, e.g. Mines and Minerals Development Act No. 11 of 2005, Factories Act Chapter 441 of the Laws of Zambia, etc.
- Setting an enterprise legal adviser and a legal and compliance department
- Preparation and strict implementation of the Rules of Procedure of the General Meeting, the Board of Directors and the President Office of China Nonferrous Mining Corporation Limited (《中國有色礦業有限公司股東大會、董事會暨總裁辦公會議事規則》) and the Administrative Rules of the General Meetings and Board of Directors of Investors of China Nonferrous Mining Corporation Limited (《中國有色礦業有限公司出資企業股東會、董事會管理規則》)
- Optimisation of corporate governance structure, implementation of general manager responsibility system under the leadership of the board of directors, and election of directors and supervisors in accordance with the specified procedures



- Preparation and strict implementation of the Guidelines on Legal and Compliance Management of China Nonferrous Mining Corporation Limited (《中國有色礦業有限公司法律與合規管理工作 指引》), the Guidance for Law Compliance Review of Rules and Regulations, Economic Contracts and Important Decisions 《中國有色礦業有限公司規章制度、經濟合同與重要決策法律審核工作 指引》 and other policy documents and assessment measures
- Establishment of a daily compliance regulatory system and proactive acceptance of irregular inspection by relevant departments of local government and regulators

#### Anti-corruption and anti-bribery

The Group starts from the actual operation and management to strengthen internal governance and external control, to proceed with anti-corruption and anti-bribery operations in a systematic and normalized way and prevent risk of violations.

- Improvement of internal control systems and issue of CNMC Related Party Transaction Management System, CNMC Whistle-blowing and Complaints Management System and other documents to ensure anti-corruption and anti-bribery operations in a systematic way
- Improvement of the bidding process for procurement, and setting relevant terms in procurement contracts to prevent the risk of corruption in the procurement process
- Strict control and supervision of the authorities of management organisations, and clarification of responsibilities of staff at all levels
- Setting complaint telephone and other ways of anonymous whistle-blowing, and investigation, verification and treatment of cases
- Organisation of study on anti-corruption and anti-bribery related policies and documents, carrying out incorruption education, admonishing meetings and other activities, and maintaining the above measures normalised and long-standing



#### 1.2 Quality and efficiency enhancement

The Group attaches importance to product quality and efficiency, and precisely controls the whole process covering products procurement, production and sales by means of technological innovation, establishment of a modern enterprise management system, implementation of quality management processes and other measures, to improve product quality, increase product efficiency, and help enterprises to embark on fast development. During the reporting period, there was no litigation or corresponding punishment against the Group due to product quality.

- Encouragement of technological innovation and introduction of new technology and new equipment to improve product quality and efficiency
- Establishment of a modern enterprise management system, improvement of assessment system and cost indicators, and implementation of meticulous management
- Preparation and implementation of quality management processes, including quality management of raw ore for plants, production process and product sales
- Encouragement of management and front-line staff to conduct analysis, conclusion and improvement for process optimisation and other practical issues
- Proactive engagement in publicity for quality and efficiency enhancement and improvement of staff's awareness of quality and efficiency and capacity
- Improvement of information management processes, classification of authorities of personnel and protection of customer information

#### Case: Enhancement of quality management to guarantee products pass rate

Since its construction, Luanshya Leach Plant has been targeted on high standard and quality products. Over the years, by improving process conditions, properly coordinating Muliashi North Mine and Muliashi South Mine and their ore blending proportion of hard/soft rock, accurately adjusting additions of sulphuric acid and extraction solvent in extraction system, the plant avoided unsteady indexes arising from sharp fluctuation in ore grades and increased the purity of feed liquid after agitation leaching, and hence optimized extraction indexes and decreased electrolyte pollution. In 2016, the pass rate of copper cathodes reached 99.9973%.



#### Case: Improvement of product recovery relying on technological innovation

Focusing on R&D of new products and technological innovation, CCS registered USD1.6 million in costsaving and profit-increasing in 2016 by transforming and upgrading table feeder, conducting R&D and practice of onsite activation process of molecular sieve oxygen making, transforming and upgrading automatic solvent feeding system, as well as adopting techniques to extending useful life of imported ZERCOR alloy acid accumulator trap.

#### 1.3 Win-win cooperation

Following the principles of openness and transparency, the Group intensified supply chain management and focused on strengthening cooperation with local suppliers. While increasing efforts to localise procurement, the Group also reduced procurement costs, to achieve mutual benefit and common development with suppliers.

#### Supply chain management

The Group proactively identifies environmental and social risks in the supply chain, prepares and strictly enforces the access standards for suppliers, and executes dynamic management for the suppliers selected to ensure efficient operation of supply chain.

- Preparation and enforcement of strict access standards for suppliers, assessment of suppliers from the perspectives of environmental risk, morality, corruption and other social risks, and execution of dynamic management for suppliers selected
- Suppliers are required to comply with the Group's basic requirements and give full play to corporate awareness of social responsibility in product production, packaging and transportation
- Preparation and implementation of the Measures for Contract Management of China Nonferrous Mining Corporation Limited to safeguard the legitimate interests of the Group and its suppliers
- Investment of special funds in invitation of suppliers to provide guidance and training for staff of the Group and reduction of equipment damage and other risks caused by misoperation





DD422I EHC Smart Drill Jambo

LH514 Automatic Carry-scraper

#### Case: Industrial cooperation to promote mine development

On 28 June 2016, NFCA and SANDVIK entered into a strategic cooperation agreement for joint investigation of advanced and representative mining companies in developed countries relying on the international platform of SANDVIK, and study and optimisation of mining methods for Southeast Mine based on the actual conditions of the natural resources of NFCA Southeast Mine, introduction of world advanced mining equipment, and provision of all-round trainings on knowledge and skills for management and operators, so as to create better economic benefits for the Company.

#### Localised procurement

The Group continuously increases efforts for localised procurement and establishes long-term stable cooperative relationship with local suppliers, to achieve joint development and mutual benefits and work together to promote the development of local economy and society.

- Preferential selection of local suppliers on the premise of meeting product and service requirements
- Proactive engagement in technical cooperation and business cooperation, to help local suppliers to enhance management and product and service quality and reduce procurement costs



#### **Case: Localised procurement**

NFCA is committed to establishment of long-term stable cooperative relationship with local suppliers. The company has entered into long-term supply contracts with about 20 local suppliers including AEL, SANDVIK, PUMA and SPECTRA, covering fuel, lubricants, explosives, cement, lime, drilling tools and other production materials and office supplies, labour protection appliance and other materials. In addition, since June 2016, the company has built a consignment sales and inventory management model with major local suppliers to achieve common management of inventory by both parties and significantly strengthen the long-term stable cooperative relationship of both parties. In 2016, the company's procurement from 152 Zambian suppliers amounted to USD26.66 million, representing 91% of the total amount of procurement.

### 2 SAFE DEVELOPMENT

The Group regards safety as corporate life and the top priority in production and operation. By adherence to the principles of zero liability accidents and zero personal injury, we have established a safety management system that focuses on prevention and is improved continuously, striving to achieve the corporate vision of safety and harmony. During the reporting period, there was no litigation or corresponding punishment against the Group due to violation of safety related laws and regulations.

### 2.1 Construction of safety management system

The Group strictly abides by local laws and regulations on production safety and strengthens the construction of a safety management system to promote systematic, normalized, standard and scientific safety management and effectively facilitate virtuous cycle of production safety to prevent major accidents.

Production safety responsibility system	The general manager should be the primary person in charge of production safety. It is required to clarify the production responsibilities of the persons in charge of safety at all levels
Production safety performance assessment	Establishment of production safety performance system and assessment mechanism for persons in charge of units at all levels, and setting important indicators of performance assessment
Production safety supervision system	Establishment of a safety and environmental protection department as the special safety management agency, and allocation of a reasonable number of full-time safety management personnel to form a relatively independent production safety supervision system that is subject to uniform management

Production safety reporting system	Safety management personnel are responsible for accident investigation and safety rectification, and issuance of written reports. In case of material accidents, it is required to immediately organise treatment and make a report to the superior
Safety training system	Establishment of a "three-tier" safety training system consisting of enterprise, workshop and shift to provide pre-job safety training for new, transferred and re-employed staff; regular trainings for on-the- job staff; and regular qualification inspection, assessment and issuance of certificate for special operation personnel
Security emergency system	Establishment of a mine rescue team equipped with professional first aid equipment, setting up clinics and provision of professional trainings for rescue members, according to the scope of production and operation

### 2.2 Safe operation

The Group continuously strengthens safe operation. Risk identification and risk management are intensified in terms of production safety, traffic safety and contractor safety to avoid accidents in production and create a healthy and safe working environment for staff.

Production safety

 Architectural design meets local occupational health and safety standards in terms of fire prevention, safety, ventilation and sunshine.
 Establishment of a mechanism for improvement of working conditions and living environment to provide a healthy and safe working environment for staff

- Use of advanced, mature and reliable process and equipment, implementation of occupational hazard analysis and preventive measures for production processes including "mining, dressing and smelting", strict implementation of standard operating procedures and safety emergency plan, and performance of regular on-site simulation drill
- Regular or irregular meetings on safety and safety inspections, and prompt implementation of corrective measures to the minimize potential safety hazards
- Setting eye-catching safety signs for the areas and equipment prone to accidents or endangering the safety and health of personnel



	• Staff is strictly required to wear qualified labour protection appliance
	• A meeting is held before changing shift to explain key safety points to enhance staff's safety awareness
	• Special operation files should be reviewed and it is required to check staff's qualification and equipment safety
c safety	• Critical review of staff's driving qualification and provision of driving training for drivers on a regular basis
	• Setting vehicle speed limit and route for vehicles, and installation of speed limit monitor, GPS and other equipment for vehicles
	Regular or irregular detection of alcohol, etc.
	Publicity of typical cases to improve drivers' safety awareness
actor safety	• Strict implementation of pre-construction review acceptance system and completion acceptance system
	• Assistance with contractors in preparation of risk assessment report and clarification of safety responsibility to be assumed by contractors
	• Implementation of safety supervision and evaluation by way of safety guality check for critical sections, vicit to contractors, site, etc.
	<ul> <li>Critical review of staff's driving qualification and provision of driving training for drivers on a regular basis</li> <li>Setting vehicle speed limit and route for vehicles, and installation of speed limit monitor, GPS and other equipment for vehicles</li> <li>Regular or irregular detection of alcohol, etc.</li> <li>Publicity of typical cases to improve drivers' safety awareness</li> <li>Strict implementation of pre-construction review acceptance system and completion acceptance system</li> <li>Assistance with contractors in preparation of risk assessment report and clarification of safety responsibility to be assumed by contractors</li> </ul>

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#### Case: Creation of a safe and healthy work environment

In May 2016, in construction of the Southeast Mine, NFCA conducted optimisation and modification for the ventilation system of north air shaft. The original soft ventilating tube in the shaft was dismantled and replaced with two  $\varphi$  800mm rigid ventilating tubes. Fresh air was supplied to the wind pool in the shaft through two 3,175KW draught fans on the surface and Rigid Ventilating Tube then to the working face by two draught fans in the wind pool, and a 2,145KW draught fan was installed to discharge the waste wind, to form ventilation in combination of forced and exhaust ways. The total length of rigid ventilating tube installed exceeded 4,000m. Upon transformation, the temperature of working face decreased from the previous 40  $^{\circ}$  to approximately 30  $^{\circ}$ . The operating conditions have been significantly improved, which effectively guarantees the construction safety, quality and progress of subsequent engineering.



#### Case: Holding first aid competition to improve rescue capability

On 20 August 2016, to enhance the emergency rescue handling capacity of the mining enterprise in Zambia, CCS, with the support of Chamber of Mines Zambia Council for First Aid, successfully undertook the "Zambia Mine Rescue Drill Competition" at the sports stadium of Chambishi, Copperbelt with participating teams from 21 mining enterprises. The fierce competition was organised in a rigorous and orderly manner and local media conducted follow-up report thereon. Meanwhile, the competition was spoken highly by the sponsor Chamber of Mines Zambia Council for First Aid as well as Mines Safety Department and Chamber of Mines: "It will help the mining enterprises in our country to save more lives in future accidents. Although we have rated awards of several grades, it is a competition without loser and we are all winners today".

The Mine Rescue Drill Competition provides a platform for mutual exchange and study among enterprises to achieve the purpose of promoting study, practice and application with competition. It enhances staff's recognition of the importance of emergency rescue and finds out the shortcomings and defects in emergency rescue system. In addition, the normalisation of rescue process and strengthened cooperation among departments as achieved through the competition played a proactive promotion role in the enhancement of overall rescue level of mining enterprises in Zambia.

In the competitions held in previous years, both NFCA and Luanshya won championships in several occasions.





Management grant awards to the award-winning teams

### **3** STAFF HAPPINESS

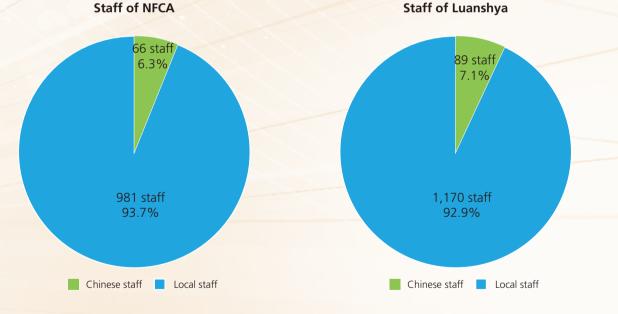
Staff is the greatest wealth of CNMC and of strategic importance for the Group's overseas operations. The Group adheres to the idea of "people-oriented, harmonious and joint advancement, and common development" and improves staff's happiness and loyalty through safeguarding staff's legitimate interests, promoting staff development and caring staff's life to guarantee corporate long-term development.

#### 3.1 Staff employment

The Group follows the principle of creating more jobs for the local place and implements localisation of employment to boost localised management. We strictly abide by local laws and regulations relating to employment and adopt non-discriminatory human resources policy to safeguard the legitimate interests of staff. During the reporting period, the Group had no material violation of employment-related laws and regulations.

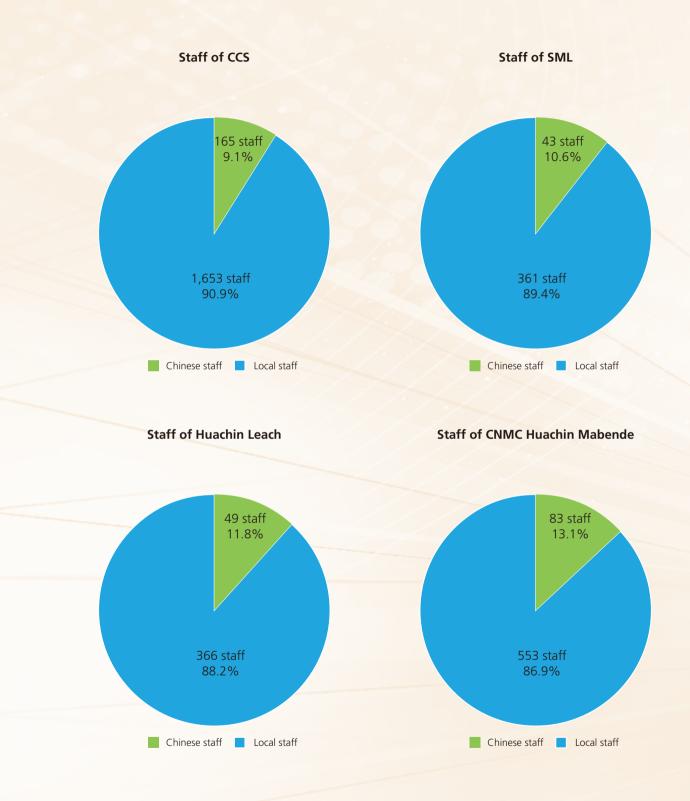
• The Group strictly abides by local laws and regulations related to employment including Employment Act Chapter 268 of the Laws of Zambia, Occupational Health and Safety Act No.36 of 2010 and Workers Compensation Act No.10 of 1999

- Implementation of equal and non-discriminatory employment policy to give equal treatment for staff of different nationalities, races and genders, and giving priority to local staff in respect of employment
- Entering into labor contracts to clarify matters in relation to entering into and termination of contracts; the Group has entered into a labour contract with each and every staff
- Establishment of a market-competitive remuneration system and a rational incentive mechanism
- Provision of a variety of benefits for staff including pension, basic medical, housing and education allowance, transportation allowance, etc.
- Guarantee of staff's reasonable working hours, including 44 hours per week for management personnel and 48 hours per week for general staff, and entitlement to local statutory holidays



Prohibition of employment of child labour and forced labour







USD0.10 million worth of generators donated by NFCA to local community

#### **Case: Localised employment**

The Group proactively conducts localised employment to enhance localised operation. We recognise the work value of local staff, give full play to the advantages in respect of their familiarity with local politics, economy and customs, and promote local staff's full participation in the operation and management of administrative units, front line of mines and workshops to promote the Group's better, faster and more harmonious overseas development.

Localised employment improves the living conditions of local staff and their families, promotes social harmony and stability, and provides the Group with excellent local talents. The average localisation rate of staff in the Group's subsidiaries in Zambia is approximately 90.76%, and the management officers of safety and environmental protection department, human resources department and external affairs department are basically local staff.

#### 3.2 Staff development

The Group vigorously develops a long-standing talent selection mechanism and smooth career channels and a multi-level staff training system, and organises rich training activities to provide high quality resources and a broad platform for the long-term development of staff.

- Establishment of a fair and transparent talent selection mechanism and a smooth promotion
   channel
- Establishment of a complete training system and characteristics training mechanism and organisation of rich training activities to enhance staff's professional quality and moral character
- Convening regular staff forums, setting up a general manger reception date and discussion of staff development





Technological learning and exchange of Chinese and Zambian staff



Intensive training class for electricians



High voltage operation training exam



Automation equipment operation training

#### **Case: Vocational education for CCS**

On 22 November 2016, a teaching team consisting of over 20 Chinese teachers officially held classes at CCS to provide skill trainings for local staff of CNMC in Zambia, marking a milestone progress of the joint implementation of "going out" pilot program by vocational education and enterprise. Local staff was proactive and thirsty for knowledge and good training effects were obtained. Through the vocational education and training, local staff's professional skills were improved and a more professional staff team was built.

#### Case: Provision of staff training to improve staff quality

Luanshya continuously carried out various training activities. In 2016, the company provided induction safety training for 202 person times, various operation skill training for 207 person times, professional safety management training for 11 person times, accident rescue knowledge training for 136 person times and other trainings for 152 person times, totaling 708 person times. These trainings improved the company's competitiveness and staff's comprehensive quality and cohesion, laying a solid foundation for staff's long term development.



#### Case: Selection of annual excellent staff

NFCA annually selects annual excellent staff and grants bonus and certificates to staff who have served the company for a long time. In 2016, the company commended 18 "annual excellent staff", and granted "long term service award" for over 120 staff who have served the company for 5 or 10 years.



Photo of award ceremony

### 3.3 Care for staff

The Group cares for staff and proactively carries out activities for publicity on prevention of occupational diseases and illnesses and rich staff activities to safeguard staff's physical and psychological health and improve staff's happiness and loyalty.

- Proactive organisation of activities for publicity on check and prevention of occupational disease and regular physical examination for staff; all staff have passed physical examination
- Popularisation of knowledge on prevention of malaria, dengue, AIDS and other disease, intensified efforts for monitoring, prevention and treatment of epidemics, and storage of treatment medicines to increase medical guarantee
- Construction of basketball court, football field, table tennis room, swimming pool and other fitness and entertainment facilities
- Organisation of holidays and festivals celebration activities, basketball games, badminton games, tug-of-war, chess and card games, e-sports games, etc.
- Care for staff with difficulties to help them solve difficulties in life





Staff participating in the activities on International Women's Day



Basketball game of staff

Tug-of-war of staff

#### Case: Sound medical guarantee

SML fully stresses care for staff. The company and the Sino-Zambia Friendship Hospital entered a contract, pursuant to which all staff and their family members within the scope of guarantee were registered and each staff was entitled to free medical security for his/her spouse and four children, to really achieve guaranteed medical treatment. In 2016, SML paid medical expenses amounting to USD0.18 million for its staff.



Health professionals from China are performing cataract operation for local people at the Sino-Zambia Friendship Hospital



### 4 ENVIRONMENTAL PROTECTION

The Group attaches great importance to environmental protection. Under the guidance of "environmental protection and long-term development", the Group proactively promotes environmental management and resources utilization and carries out environmental protection activities to build a "green enterprise making contributions to clear water and blue sky". During the reporting period, there was no material event causing litigation or corresponding punishment against the Group due to violation of laws in respect of environment.

#### 4.1 Environmental management

The Group strictly complies with local environmental laws and regulations including Environmental Management Act No. 12 of 2011, and has established a long-standing environmental protection mechanism featured by "prevention first, protection priority and comprehensive treatment" and set up an agency specialized in environmental management. The Group has started from daily management to continuously improve its environmental management and guarantees up-to-standard discharge of emissions to minimize effects on environment.

System guarantee	Preparation of a series of rules and regulations including Measures for Management of Environmental Protection of CNMC
Setting of organisations	• Setting an environmental protection department to be responsible for environmental protection under the leadership of production safety committee and mine manager
Management of environmental effects	• Setting energy consumption indicators and strengthening management of electricity and fuel consumption to reduce energy consumption and reduce greenhouse gas emission
	Recycling of wastewater of processing and metallurgical industry to
	achieve zero discharge of industrial wastewater; regular sampling and inspection of water surrounding plants, contrastive analysis on emission standards by reference to those of project operation places, and issuance of analysis reports
	• Strengthening production process control, stabilising smelting furnace conditions, reduction of smoke leakage; strengthening control over preparation of strong sulphuric acid and up-to-standard exhaust gas emission; regular monitoring of air quality
	• Strict design of professional smelting slag tailings pond, provision of efficient tailings management; recycling of usable materials including gypsum residue and handling unavailable materials to professional companies for treatment
	• Setting a dedicated muffler device for high noise equipment and keeping away from the surrounding living quarters of residents and staff to prevent noise pollution
	<ul> <li>Conducting environmental impact assessment for development of new projects, effective management and control of the effects of mine field and infrastructures on the environment, and preparation of provide field and price classical and preparation.</li> </ul>

mine field plan and mine closure plan





Awards of Exemplary Organization for Promoting China-Zambia Friendship and Excellent Chinese Enterprise in Zambia granted to NFCA and Luanshya by the Chinese Embassy in Zambia

#### Case: Comprehensive utilisation to save water resources

From the perspective of environmental protection, the wastewater of laboratory, equipment cooling water, workshop floor flushing water, and other wastewater produced by Huachin Leach are not discharged to the environment and should be returned to the production system for recycling after treatment in the settling pond. The sewage from staff's offices and life is not discharged to the environment and should be used for watering, dust fall and greening irrigation on construction site after being delivered to the settling pond via the comprehensive pipe network and standing in the settling pond, to save the precious water resources.

#### Case: Building "green" tailings pond

Luanshya lays emphasis on treatment of tailings, and has invested a lot of funds in reinforcement and improvement of Muliashi tailings pond and used the abundant topsoil stripped from the strip mine to cover the dam body to make it a "green" tailings pond. In the construction of Muliashi project, the company, following the idea of "new starting point, new standards", has invested approximately USD7 million in laying 2mm HDPE slabs throughout the pond area and establishing a seepage diversion and observation system, making it one of the tailings dams of the highest standard in Zambia.



#### 4.2 Resources utilisation

The Group cherishes the limited natural resources. In process design, it fully exerts the collaboration among subsidiaries, and improves comprehensive utilisation of resources in mining, processing and smelting through technological innovation, process optimisation and other measures to reduce the consumption of energy and water resources and maximise the resource utilisation value.

# Case: Collaboration to improve utilisation of minerals

The copper concentrate produced by NFCA and Luanshya are sent to CCS for smelting. Mine tailings are used as raw material of SML and the chats are used as building materials for construction of new projects of Luanshya or sold to local enterprises to solve the problem of shortage in building materials. The collaboration among subsidiaries effectively improves the utilisation of mineral resources to achieve mutual benefits and win-win development.



NFCA

Continuous increase in full milltailings backfilling and classified milltailings backfilling. The milltailings backfilling was approximately 70,000m<sup>3</sup> per year, the waste rock filling was approximately 30,000m<sup>3</sup> per year, and the barren rock processed and sold was approximately 400,000 tonnes per year. The comprehensive utilisation of mining wastes significantly improved ore recovery ratio and prolonged mine's service life.

- Transformation of energy-saving LED lights for mine area and stations, and installation of light-operated switch, time control switch and other intelligent switches. The monthly electricity saved is approximately 100,000 kWh.
- Monitoring, fault diagnosis and improvement of pump performance and state to significantly improve pump efficiency and reduce electricity consumption
- All workshops adopt natural lighting. The office lighting uses natural light as much as possible. For the offices with poor natural lighting, we require that the employee who leaves last should turn off lights. For outdoor lighting, a person is specially assigned to be responsible for turning on it late and turning off it early.
- The company issued the Measures for Assessment of Auxiliary Vehicle Consumption, pursuant to which the vehicles that are not used in accordance with actual production situation will be stored and the consumption indicators of vehicles are adjusted, resulting in a substantial decrease of approximately 62.7% in fuel consumption in 2016 as compared with the same period of 2015.

Luanshya

ccs •	The company strengthened maintenance of waste heat power station and prepared the tripping operation instructions for waste heat generators based on the grid fluctuations in Zambia. Through adjustment, the shutdown frequency of generators significant reduced; meanwhile, the adjustments to the intake pressure of generators allowed generators to operate at full load, reducing purchase of electricity. In 2016, the company's waste heat power generation was 3,519.5MKw.h, representing an increase of 962.5MKw.h as compared with 2015.
SML •	The company strengthened the control over re-smelting of starting sheet of extraction-electrowinning workshop. In 2016, the re-smelting amount was 3.6 tonnes and the electricity saved was approximately 13,000 kWh.
	The change of three fine selections into two in the flotation area resulted in a decrease of motor's electricity consumption by approximately 100,000 kWh in 2016.
•	A GPS device was installed for 12 ore transfer vehicles to effectively monitor the routes of vehicles and reduce fuel consumption. In 2016, the fuel saved was 137 tonnes.
Huachin Leach •	The company prepared the Tentative Measures of Award for Repair of Certain Obsolete Parts and Utilisation of Certain Waste Parts of Huachin Leach and carried out activities for repair of obsolete parts and utilisation of waste parts. In 2016, the company repaired 30 pump cases, impellers and guard boards, thus saving approximately RMB213,000; the company entered into an OEM agreement with a steel ball plant in relation to processing of waste lining plates and obtained steel ball of 20 tonnes, giving rise to a profit of RMB131,000.
·	The production workshop reasonably controlled the underflow concentration of dehydrating thickener to reduce the consumption of new water and controlled the amount of cooling water of various equipment. The acid-containing liquids are separated from acid-free liquids, which are used for watering roads, cleaning workshop floor, etc.
CNMC Huachin Mabende •	The worn pump parts were repaired with healants allowing repeated use of pump parts, saving the costs for replacement of new parts.



#### 4.3 Environmental Protecting Activities

The Group bolsters up the cause of environmental protection consistently and participates in various environmental protection activities proactively, with a view to promoting the development of regional environmental protection by virtue of our own efforts.

- Placing emphasis on reduction of environmental damages to the utmost in plant construction and on emission reduction and resource recycling in production and undertaking land reclamation by timely payment of the environmental funds in strict accordance with laws and regulations.
- Conducting environmental survey on a regular basis and assessing the operation effects of its subsidiaries.
- Endorsing employees' environmental friendly innovations in technologies and processes to reduce impacts on the environment.
- Disseminating the environmental protection philosophy and systems of the Group among employees and the communities to dispel their concerns on the environment.
- Organizing tree planting and other environmental protection activities to landscape surroundings of the plants and relevant premises.

# Example: creating environmental friendly new look

Huachin Leach proactively engaged its employees in tree planting to create a nice working and living condition. In 2016, the Company organized a total of two tree planting activities, involving 20 employees, growing over 650 trees in aggregate in the surroundings of the plant and the tailings pond, and establishing 11 flowerbeds, thus effectively increasing the green coverage of the plant and providing a green and comfortable working environment.





### 5 COMMUNITY ENGAGEMENT

Community engagement is an important part of the corporate social responsibilities and is closely connected with the sustainable development of enterprises. Therefore, the Group enhanced its communication with the community and assumed its corporate social responsibilities through full support for local educational and cultural causes as well as other activities for social benefits and charities.

#### 5.1 Communication with the Community

The Group is committed to enhancing communication with the community and has come to a close reach to members of the community and established a friendly and harmonious relationship with such through diversified communication channels.

- Setting up a special public relation department for management of public relation matters
- Enhancing communication and contacts with local governmental authorities, regulatory departments and members of the community on its own accord through visiting, press conference and routine reporting as well as other means.
- Showing due respect to local religions and cultural traditions and sending employees in Zambia to Confucius Institute for language learning to facilitate communication between the Chinese employees and local residents.

#### **Example: Invitation of Confucius Institute to the Company**

Upon preparation and trial operation, the Luanshya Confucius Classroom was officially established at the end of 2015 at the Luanshya Trust School under CNMC Lunanshya Copper Mines PLC, which was set up by the Company in collaboration with the Confucius Institute under University of Zambia with the mission to:

- deepen the time-honored friendship between the Zambians and the Chinese and disseminate the Chinese civilization and culture
- promote exchanges on humanities and cultures between Zambia and China, especially among the teenagers

Over the past year since opening for classes, the Confucius Classroom has had a total of 16 classes for 632 pupils and middle school students to learn Chinese and the Chinese culture. In addition to wide acclaim and favorable reception from the parents and all sectors of the society, the successful operation of Confucius Classroom broadened the presence of Chinese-invested enterprises in Zambia, improved the reputation of the Company in local communities and deepened the harmonious relationship with local residents.



In the future, the Company plans to introduce the Confucius Classroom incorporating contents of employee annual trainings to Luanshya Vocational and Technical School under the Company and arrange evening classes for miners, enabling more youngsters and employees of the Company to know Chinese culture, thus contributing to the building of bond and bridge for friendship between China and Zambia.



Voluntary Chinese teaching in Luanshya trust school

#### 5.2 Development of the Community

The Group holds fast to the principle of developing and progressing together with the community and formulates development plan for the community to promote its development in full consideration of our corporate strength and the local demands in reality. Meanwhile, we earnestly assume our corporate social responsibilities through actively undertaking and participating in local public charity activities.

- Formulating proper development plans for the community to contribute to community improvement with regard to the infrastructure, culture and education, health care as well as other aspects.
- Contributing capital to develop power facilities and improve local power supply. All enterprises are required to build power facilities in line with relevant standards on their own and transfer such to local power distribution enterprises upon recovery of investment through subsequent electric charges
- Energetically supporting and participating in health and epidemic prevention projects organized by local government and communities; giving aid to the construction of hospitals and clinics, the purchase of advanced medical equipment and the introduction of superb medical technology to improve the medical and sanitation conditions; and formulating policies for prevention and treatment of AIDS, malaria and other diseases.



- Aiding students through donations, supporting the multi-layered causes of education and trainings and helping to improve the educational standard and vocational skills by engaging local residents in project construction and operation and vesting them with life-subsisting skills; providing scholarships for local universities
- Contributing funds for construction of roads, agricultural product market, bus shelters and public sports facilities
- Bolstering up the development of local small and medium enterprises and the mining concomitant projects aiming for cultivating local business forces that can function and operate independently.



Unveiling of completion of construction of donated Zambian fences

Grader (engineering vehicles) and construction fences donated by NFCA to the local city hall

cure for the drinking water supply of the orphanage in August 2016.

NFCA •	The Company donated to the local hospital in Chambishi a well- equipped ambulance to transport referrals with critical illness and an engine to ensure stable power supply
Luanshya •	The Company funded local college students and farmers on an ongoing basis, supported the operation of the hospital, schools and the football team and proactively improved the operational conditions of Luanshya Trust School and Luanshya Vocational and Technical School by adding and repairing certain teaching and living facilities. In addition, the Company also maintained the swimming pool, the stadium and security boxes as well as other community facilities.
ccs .	Since 2015, The Company has been subsidizing an orphanage named BUSH FIRE, which is a non-governmental children's house with around 95 orphans from communities in total. On hearing the inadequate supply of drinking water for children due to the faulted drinking water system of the orphanage, the Company purchased and installed a water pump for the orphanage to effect a permanent

SML	• The Company contributed various school supplies and sporting requisites to the school at Chambishi Town to enrich the extracurricular activities of the children of the Zambian employees. The Company also proactively assisted the development of community activities through financial donations.
Huachin Leach	• The Company installed heaters for purified water at the gate and channeled domestic water from the Company's residential quarters to gate by water conduit installations for local residents.
	The Company paid attention to local education and donated 2 tonnes     cements and USD1,000 for classroom construction
CNMC Huachin Mabende	• The Company contributed USD3.3 million in aggregate from 2013 to the end of 2016 for the maintenance of the 30 miles long unsurfaced road in Mabende so as to provide convenient pass for residents in the neighborhood.
	• Each year, when the dry season begins, the Company will arrange 2

sprinklers to deliver water to villagers nearby to solve their drinking water shortage. Besides, the Company also sprays water against the roads in a timely manner to relieve impacts of the dust on the physical health of the villagers around the road.



Award of Advanced Central Enterprise to CCS granted by the Ministry of Human Resources and Social Security of the People's Republic of China and the State-owned Assets Supervision and Administration Commission of the State Council



Compliance Taxpaying Cup granted to SML by Zambia Revenue Authority



# **REPORT OF THE DIRECTORS**

The Directors present the annual report and the audited consolidated financial statements of the Group for the year ended 31 December 2016.

### **PRINCIPAL ACTIVITIES**

The Company is an investment holding company. The Group is principally engaged in exploration, mining, ore processing, leaching, smelting and sale of copper cathodes, blister copper and sulphuric acid. There has been no significant change in the Group's principal activities for the year ended 31 December 2016.

### USE OF PROCEEDS FROM THE GLOBAL OFFERING

The Company was listed on the Hong Kong Stock Exchange on 29 June 2012. Net proceeds from the Global Offering have been and will continue to be used by the Group for the operations in Zambia, such as exploration and development of mines, construction of smelting plants, repayment of bank loans and replenishment of working capital, which are in compliance with the intended use of proceeds as disclosed in the section headed "Future Plans and Use of Proceeds" in the Prospectus.

In accordance with the intended usages as set out in the section headed "Future Plans and Use of Proceeds" in the Prospectus, the application of such proceeds as at 31 December 2016 was as follows:

	Net Proceeds (US\$'000)		
Items	Available	Utilised	Unutilised
	///.		
Exploration and development of			
the Chambishi Southeast Mine	72,000	72,000	-
Expansion of the Chambishi Copper Smelter	48,000	48,000	-
The Muliashi Project	12,000	12,000	-
Development of the Mwambashi Project	12,000	12,000	_
Acquisitions of companies with existing			
exploration rights and additional mining assets	37,000	-	37,000
Repayment of certain existing loans	36,000	36,000	-
Working capital and other general corporate purposes	30,770	30,770	-
Total	247,770	210,770	37,000



### RESULTS

The Group's operating results for the year ended 31 December 2016 and the financial position of the Group as at 31 December 2016 are set out on pages 114 to 209 in the audited consolidated financial statements contained in this annual report.

### DIVIDENDS

The Board does not recommend the payment of final dividend for the year ended 31 December 2016.

### SUMMARY OF FINANCIAL INFORMATION

A summary of the consolidated results, assets and liabilities of the Group for the last five financial years, as extracted from the audited consolidated financial statements of the Group and the Prospectus, is set out on page 210 in this annual report.

### **BUSINESS REVIEW**

### **Overview and Performance of the Year**

A review of the business of the Group and analysis of the Group's performance using financial key performance indicators is provided in the Results Highlights and the Management Discussion and Analysis sections on pages 7 to 8 and pages 9 to 39 of this annual report.

#### **Environmental Policies and Performance**

The Group attaches great importance to environmental protection. Under the guidance of "environmental protection and long-term development", the Group proactively promotes environmental management and resources utilization and carries out environmental protection activities to build a "green enterprise making contributions to clear water and blue sky". During the reporting period, there was no material event causing litigation or corresponding punishment against the Group due to violation of laws in respect of environment.

Particulars in relation to the Group's environmental policies and performance are set out on pages 67 to 92 in the "Environmental, Social and Governance Report" section in this annual report.



#### **Compliance with relevant Laws and Regulations**

Relevant laws and regulations that have a significant impact on the Group mainly include:

- (1) Mines and Minerals Development Act No. 11 of 2005;
- (2) Environmental Management Act No. 12 of 2011;
- (3) Employment Act Chapter 268 of the Laws of Zambia;
- (4) Explosives Act Chapter 115 of the Laws of Zambia and Explosives Regulations;
- (5) Factories Act Chapter 441 of the Laws of Zambia;
- (6) Occupational Health and Safety Act No. 36 of 2010; and
- (7) Workers Compensation Act No. 10 of 1999.

The Group has established and improved the manual for internal control in relation to overall business chains and management processes with subsequent monthly and annual supervision and review to ensure compliance with the relevant laws and regulations. For the year ended 31 December 2016, the Group had complied with relevant laws and regulations which had significant impact on the businesses and operations of the Group in all material aspects. As of 31 December 2016, the Group has not been subject to any penalty due to violation of the aforesaid laws, regulations and other public policies.

Except for deviation from code provision A.2.1 of the CG Code, which is explained in paragraph headed "Chairman and Chief Executive" in this annual report, the Group has complied with the requirements under the Companies Ordinance, the Listing Rules, the SFO and the CG Code for, among other things, the disclosure of information and corporate governance. The Group has adopted the Model Code.

#### **Key Relationships with Stakeholders**

The support and trust of our stakeholders is integral to the Group's growth and success. Our stakeholders include shareholders and creditors, employees and employee organisations, governments and regulatory authorities, the public communities, charities and non-government organisations (NGOs) and clients. We place emphasis on communications with our stakeholders and have established an open and transparent communication channel for each category of stakeholders to understand their expectations and requests.



We continued to strengthen the quality and effectiveness of information disclosure, comply with applicable laws and regulations, and actively participate in public welfare activities, with the purpose of achieving mutual development and value sharing with our stakeholders. We have also formulated key indicators based on the focuses and concerns of different stakeholders to reflect our management performance on the above subject matters. Some of our key indicators include return on equity and payout ratio for shareholders and creditors; employee training frequency and turnover rate for employees and employee organisations; violations of laws and regulations and safety and environment performance concerned by the government; public opinion and corporate image concerned by the public; response rate on enquiries for charities and NGOs; satisfactory reports for clients etc.. Going forward, we will endeavor to improve our current policies, strive to maximise our stakeholders' value and achieve a mutually beneficial outcome.

#### **Key Risks and Uncertainties**

A description of principal risks and uncertainties that the Group may be facing is provided on pages 17 to 18 in the "Management Discussion and Analysis" and "Corporate Governance Report" sections of this annual report.

#### Prospects

Please refer to the Chairman's Statement on pages 4 to 6 and page 39 in the "Management Discussion and Analysis" section of this annual report.

#### **Subsequent Event**

Slag Copper Recovery Project of Luanshya resumed its production on 10 April 2017.

Except for disclosed above, there are no other important events affecting the Group that have occurred since 31 December 2016.

### **BANK AND OTHER BORROWINGS**

Details of bank borrowings of the Group during the year ended 31 December 2016 are set out in note 26 to the consolidated financial statements.



### **CHARITABLE DONATIONS**

Charitable donations made by the Group during the year ended 31 December 2016 amounted to US\$169,000.



Donation of food to the infants of the locals area by Luanshya



Donation of the waiting hall of Kitwe

Donation of children's entertainment facilities in Chambishi Village

### PROPERTY, PLANT AND EQUIPMENT

Details of movements in the property, plant and equipment of the Group during the year ended 31 December 2016 are set out in note 16 to the consolidated financial statements.

As at 31 December 2016, the Group did not own any properties for investment purposes or held for development and/ or sale where one or more percentage ratios (as defined under Rule 14.04(9) of the Listing Rules) exceed 5%.

### RESERVES

Details of change in the reserves of the Group during the year ended 31 December 2016 are set out in the consolidated statement of changes in equity.



### DISTRIBUTABLE RESERVES

As at 31 December 2016, the Company had distributable reserves amounting to US\$72,928,000.

### SHARE CAPITAL

There was no change in the share capital of the Company during the year ended 31 December 2016.

### **PRE-EMPTIVE RIGHTS**

There is no provision for pre-emptive rights under the Company's Articles of Association and there is no restriction against such rights which would oblige the Company to offer new Shares on a pro-rata basis to existing Shareholders.

### PURCHASE, REDEMPTION OR SALE OF LISTED SECURITIES OF THE COMPANY

Neither the Company nor any of its subsidiaries purchased, redeemed or sold any of the Company's listed securities during the year ended 31 December 2016.

### MAJOR CUSTOMERS AND SUPPLIERS

During the year ended 31 December 2016, sales to the Group's five largest customers accounted for 97.0% of the Group's total sales, and sales to its largest customer, being the Retained Group, accounted for 68.0% of the Group's total sales. The second largest customer was Yunnan Copper Group.

During the year ended 31 December 2016, purchases from the Group's five largest suppliers in aggregate accounted for approximately 64.6% of the total purchases, and purchases from the largest supplier accounted for approximately 31.2% of total purchases. The second largest supplier was the Retained Group.

Save as disclosed above, none of the Directors, their associates or any shareholders of the Company (which, to the best knowledge of the Directors, own more than 5% of the Company's issued share capital) had any interest in the Group's five largest customers and suppliers during the year ended 31 December 2016.

### **CONTRACT OF SIGNIFICANCE**

Save as disclosed in "Connected Transactions" and a loan contract of US\$300,000,000 entered into between the Company and a fellow subsidiary, no contract of significance was entered into between the Company or any of its subsidiaries, and a controlling shareholder or any of its subsidiaries during the year ended 31 December 2016.



### MANAGEMENT CONTRACTS

No contracts concerning the management and administration of the whole or any substantial part of the business of the Company were entered into or existed during the year ended 31 December 2016.

### DIRECTORS

The Directors during the year and up to the date of this report were as follows:

#### **Executive Directors**

Mr. Xinghu Tao Mr. Xingeng Luo Mr. Chunlai Wang Mr. Wei Fan Mr. Kaishou Xie

#### **Non-Executive Director**

Mr. Diyong Yan

#### Independent Non-Executive Directors

Mr. Chuanyao Sun Mr. Jingwei Liu Mr. Huanfei Guan

In accordance with article 102 of the Articles of Association, at each annual general meeting, one-third of the directors or, if their number is not three (3) or a multiple of three (3), the number which is nearest to and is at least one-third, shall retire from office by rotation at least once every three (3) years. A retiring director shall be eligible for re-election. Pursuant to article 103 of the Articles of Association, the directors to retire by rotation shall be those who have been longest in office since their last appointment or reappointment, but as between persons who became or were last reappointed directors on the same day, those to retire shall (unless they otherwise agree among themselves) be determined by lot. In compliance with the provisions of the Articles, Mr. Chuanyao Sun, Mr. Jingwei Liu and Mr. Huanfei Guan shall retire at the forthcoming annual general meeting and, being eligible, will offer themselves for re-election.

The Company has received annual confirmation of independence from the three independent non-executive Directors in accordance with Rule 3.13 of the Listing Rules and considers them to be independent.

The names of all Directors who have served on the boards of the subsidiaries of the Company during the year ended 31 December 2016 or during the period from 1 January 2017 to 30 March 2017 are set out below and those marked with an asterisk\* are Directors as at 30 March 2017:

Xinghu Tao\* Anne Flood\* Changheng Qi Liang Zhou\* Jianqiang Wu\* Wei Fan\* Weimin Xu\* Yunsheng Li Haiyang Li\* Tembwe G Katongo\* Qujian Lin\* Peiwen Zhang\* Guobin Hu\* Ran Guo Xinghua Liu\* Xingeng Luo\* Jinjun Zhang\* Jingjing Zhang Mufingwe Ng'ambi\* Baosen Zan\* Xi Yi\* Xiliang Xu\* Jingjun Wang\* Fawu Shi\* Muyangwa Kakenenwa\* Siu Kam Peter Ng\* Moukachar Abu Chebib\* Wenyan Xu\* Yan Wang \* Chunlai Wang\* Jinghe Zhu\* Donghong Zhang\* Larry Phiri\* Rongting Li\* Kaishou Xie\* Jian Guo\* Yuanyuan Liu\* Tamara S Ngoma\* Yaolin Li\* Siu Hong Ng\* Zhimin Chen\* Chengyi Fang\* Aibin Hu\*

### DIRECTORS AND SENIOR MANAGEMENT

The biographies of the Directors and senior management are set out on pages 40 to 45 in this annual report.

# DIRECTORS' INTERESTS IN TRANSACTION, ARRANGEMENT AND CONTRACT OF SIGNIFICANCE

No Directors and their connected entities had an interest, either directly or indirectly, in any transactions, arrangements or contract of significance to the business of the Group to which the Company, or any of its holding companies, subsidiaries or fellow subsidiaries was a party during the year ended 31 December 2016.

None of the Directors proposed for re-election at the forthcoming annual general meeting has a service contract with the Company which is not terminable by the Company within one year without payment of compensation, other than statutory compensation.



### **DIRECTOR' S PERMITTED INDEMNITY PROVISION**

Pursuant to the Company's Articles of Association, every Director or other office of the Company shall be entitled to be indemnified out of the assets of the Company against all costs, charges, expenses, losses and liabilities which he may sustain or incur in or about the execution of the duties of his office or otherwise in relation thereto. The Company has arranged appropriate directors' and officers' liability insurance coverage for the Directors and officers of the Group during the year ended 31 December 2016, and such coverage remained in full force as of the date of this report.

### **DIRECTOR'S INTERESTS IN COMPETING BUSINESS**

None of the Directors of the Company had engaged in any business or had any interest in business which competes or may constitutes competition directly or indirectly (within the meaning of the Listing Rules) with the business of the Group during the year ended 31 December 2016.

### DIRECTORS' RIGHTS TO ACQUIRE SHARES OR DEBENTURES

The Company or any of its subsidiaries did not have any arrangement in place at any time during the period whereby the Directors or their respective spouse or minor children can obtain benefit by acquiring shares of the Company or other body corporate.

## DIRECTORS' AND CHIEF EXECUTIVE'S INTERESTS AND SHORT POSITIONS IN SHARES AND UNDERLYING SHARES

As at 31 December 2016, none of the Directors or chief executive had any interests or short positions in the shares, underlying shares and debentures of the Company or any of its associated corporations (within the meaning of Part XV of the Securities and Futures Ordinance of Hong Kong (Chapter 571 of the Laws of Hong Kong) (the "**SFO**")) which would fall to be disclosed to the Company and The Stock Exchange of Hong Kong Limited (the "**Stock Exchange**") pursuant to Division 7 and 8 at the Part XV of the SFO; or interest or short positions required to be recorded in the register kept by the Company pursuant to Section 352 of the SFO; or interests or short positions which fall to be disclosed to the Stock Exchange pursuant to the Model Code.

## EMOLUMENTS OF THE DIRECTORS, SENIOR MANAGEMENT AND THE FIVE HIGHEST PAID INDIVIDUALS

Please refer to note 13 to the consolidated financial statements on pages 160 to 163 for details of the emoluments of the Directors, senior management and the five highest paid individuals of the Company.



### SUBSTANTIAL SHAREHOLDERS' AND OTHER PERSONS' INTERESTS AND SHORT POSITIONS IN SHARES AND UNDERLYING SHARES

As of 31 December 2016, so far as it is known to the Director and chief executive of the Company, interests or short positions which would fall to be disclosed to the Company and the Stock Exchange pursuant to the provisions of Division 2 and 3 under the Part XV of the SFO is as follows:

Substantial shareholder	Capacity/Nature of interest	Long/short position	Number of shares	Approximate percentage of shareholdings
China Nonferrous Mining Development Limited <sup>(Note)</sup>	Registered owner	Long position	2,600,000,000	74.52%
CNMC	Interest in a controlled corporation	Long position	2,600,000,000	74.52%

*Note:* China Nonferrous Mining Development Limited is a wholly-owned subsidiary of CNMC and therefore, by virtue of the SFO, CNMC is deemed or taken to be interested in all the shares which are owned by China Nonferrous Mining Development Limited.

As at 31 December 2016, each of the following entities were directly or indirectly interested in 10% or more of the nominal value of any class of share capital carrying rights to vote in all circumstances at general meeting of any other members of the Group:

Member of th <mark>e Group</mark>	Entity with 10% or more interest (other than member of the Group)	Percentage of that entity's interest
NFCA	Zambia Consolidated Copper Mines Investments Holdings Plc (" <b>ZCCM-IH</b> ")	15%
Luanshya	ZCCM-IH	20%
CCS	Yunnan Copper Industry (Group) Co., Ltd* (雲南銅業集團有限公司)	40%
SML	Hong Kong Zhongfei Mining Investment Limited ("Hong Kong Zhongfei")	30%
Huachin Leach	Huachin SARL	32.5%
CNMC Huachin Mabende	Huachin SARL	35%
СММНК	Hong Kong Zhongfei	30%

Save as disclosed above and in the paragraph headed "Directors' and Chief Executive's Interests and Short Positions in Shares and Underlying Shares", as at 31 December 2016, no person had registered an interest or short position in the shares or underlying shares of the Company that was required to be recorded pursuant to Section 336 of the SFO.

\* Translation of English terms for reference purposes only



### **RETIREMENT BENEFIT SCHEMES**

Details of the retirement benefit schemes of the Group are set out in note 37 to the consolidated financial statements.

### **SHARE OPTION SCHEME**

The Group has not adopted any share option scheme.

### **EQUITY-LINKED AGREEMENT**

Save as disclosed in this annual report, there was no equity-linked agreement entered into by the Company during the year ended 31 December 2016.

### **CONNECTED TRANSACTIONS**

During the year, the Group carried out the following transactions which constituted continuing connected transactions under Chapter 14A of the Listing Rules and were subject to annual review.

### 1. CNMC Copper Supply Framework Agreement

On 18 November 2014, the Company entered into the CNMC Copper Supply Framework Agreement with CNMC pursuant to which the Company agreed to sell, or procure its subsidiaries to sell, copper products including blister copper and copper cathode to the Retained Group, subject to the approval of the Independent Shareholders. The Independent Shareholders approved the CNMC Copper Supply Framework Agreement and the proposed annual caps at the extraordinary general meeting ("EGM") held on 29 December 2014. The duration of CNMC Copper Supply Framework Agreement lasts from 1 January 2015 to 31 December 2017. Details of the CNMC Copper Supply Framework Agreement were disclosed in the announcement and circular of the Company dated 18 November 2014 and 8 December 2014 respectively.

During the year ended 31 December 2016, the revenue and gains from the sale of copper products (including income and gain on change in fair value) to the Retained Group amounted to US\$927,507,000, which is below the annual cap amount of US\$1,776,727,280.

CNMC held 100% and 74.52% of the Company's issued share capital before and after the Listing, respectively. The Retained Group consists of CNMC and its subsidiaries, excluding the Group. Both CNMC and the Retained Group constitute connected persons of the Company under the Listing Rules.



#### 2. Yunnan Copper Supply Framework Agreement

On 18 November 2014, the Company entered into the Yunnan Copper Supply Framework Agreement with Yunnan Copper Group pursuant to which the Company agreed to sell, or procure its subsidiaries to sell, copper products including blister copper and copper cathode to the Yunnan Copper Group and its subsidiaries. The duration of Yunnan Copper Supply Framework Agreement lasts from 1 January 2015 to 31 December 2017. Details of the Yunnan Copper Supply Framework Agreement were disclosed in the announcement of the Company dated 18 November 2014.

During the year ended 31 December 2016, the revenue and gains from the sale of copper products (including income and gain on change in fair value) to Yunnan Copper Group and its subsidiaries amounted to US\$183,933,000, which is below the annual cap amount of US\$704,000,000.

Yunnan Copper Group is a substantial shareholder of CCS holding 40% of the issued share capital of CCS. Yunnan Copper Group and its subsidiaries constitute connected persons of the Company under the Listing Rules.

#### 3. Huachin Ore Supply Framework Agreement

On 18 November 2014, the Company entered into the Huachin Ore Supply Framework Agreement with Mabende Mining pursuant to which the Company agreed to buy, or procure its subsidiaries to buy, copper ores mined by Mabende Mining. The duration of Huachin Ore Supply Framework Agreement lasts from 1 January 2015 to 31 December 2017. Details of the Huachin Ore Supply Framework Agreement were disclosed in the announcement of the Company dated 18 November 2014.

During the year ended 31 December 2016, the Group purchased ores amounting to US\$9,927,000 from Mabende Mining, which is below the annual cap amount of US\$42,087,550.

Huachin Leach and CNMC Huachin Mabende are 32.5% and 35%, respectively, indirectly owned by Mr. Ng Siu Kam, who also owns 70% interest in Mabende Mining. Mabende Mining constitutes a connected person of the Company under the Listing Rules.



#### 4. Mutual Supply Framework Agreement

On 18 November 2014, the Company entered into the Mutual Supply Framework Agreement with CNMC (as supplemented by a supplemental agreement dated 4 December 2014) pursuant to which both parties agreed to provide, or procure their respective subsidiaries to provide certain raw materials, products and services to each other, and CNMC agreed to provide, or procure its subsidiaries to provide transportation and logistics services to the Group, subject to the approval of the Independent Shareholders. The Independent Shareholders approved the Mutual Supply Framework Agreement and the proposed annual caps at the EGM held on 29 December 2014. The duration of Mutual Supply Framework Agreement lasts from 1 January 2015 to 31 December 2017. Details of the Mutual Supply Framework Agreement were disclosed in the announcement and circular of the Company dated 18 November 2014 and 8 December 2014 respectively.

During the year ended 31 December 2016, the amount paid by the Group for the provision of raw materials, products and services provided by the Retained Group amounted to US\$188,824,000, and the revenue from the provision of raw materials, products and services to the Retained Group amounted to US\$1,677,000, both of which are below the annual caps of US\$311,045,640 and US\$8,028,310, respectively.

#### 5. Properties Leasing Framework Agreement

On 18 November 2014, the Company entered into the Properties Leasing Framework Agreement with CNMC pursuant to which CNMC has agreed to lease the Leased Properties to the Group for general business and ancillary purposes. The duration of Properties Leasing Framework Agreement lasts from 1 January 2015 to 31 December 2017. Details of the Properties Leasing Framework Agreement were disclosed in the announcement of the Company dated 18 November 2014.

During the year ended 31 December 2016, the rentals paid to the Retained Group amounted to US\$6,073,000, which is below the annual cap amount of US\$7,753,910.



#### 6. CNMC Guarantee Fees Framework Agreement

On 18 November 2014, the Company entered into the CNMC Guarantee Fees Framework Agreement with CNMC pursuant to which subsidiaries of the Company agreed to reimburse CNMC for any guarantee fees that it will pay to third party financial institutions for the unconditional irrevocable letters of guarantee to be issued. The duration of CNMC Guarantee Fees Framework Agreement lasts from 1 January 2015 to 31 December 2017. Details of the CNMC Guarantee Fees Framework Agreement were disclosed in the announcement of the Company dated 18 November 2014.

During the year ended 31 December 2016, the aggregate amount of guarantee fees paid by the Group to CNMC amounted to US\$1,652,000, which is below the annual cap amount of US\$5,100,000.

For related party transactions disclosed in note 36 to the consolidated financial statements which constituted connected transactions under the Listing Rules, the Company has complied with all the relevant disclosure requirements under Chapter 14A of the Listing Rules.

The independent non-executive Directors have reviewed the nature and process of the business transactions, discussed the pricing policies of those transactions, and have confirmed that these continuing connected transactions of the Group have been entered into: (i) in the ordinary and usual course of business of the Group; (ii) on normal commercial terms; and (iii) in accordance with the relevant agreements governing them on terms that are fair and reasonable and in the interests of the Shareholders of the Company as a whole.

The Company has designated the Compliance Committee to continuously monitor the continuing connected transactions with the abovementioned connected persons. The Compliance Committee continuously traces and regularly monitors the progress of the continuing connected transactions and reports to management of the Company. The Compliance Committee reviews the continuing connected transactions with the finance department to ensure that annual caps are not exceeded. The heads of different departments of the Company will also be informed on a periodic basis in relation to the terms and pricing policies of the continuing connected transactions. The Compliance Committee will communicate with the Audit Committee, management and the Board of Directors, monthly or as needed, to report the progress of the continuing connected transactions, and request for approval of new changes of existing transaction terms. The Audit Committee and the Compliance Committee have also assigned the independent internal audit team the task to ensure that the Company's internal control measures in respect of the continuing connected transactions remain effective and complete. With these measures, the independent non-executive Directors could therefore assess and give the confirmations in the preceding paragraph.

The Company's auditor has been engaged to report on the continuing connected transactions of the Group in accordance with Hong Kong Standard on Assurance Engagements 3000 "Assurance Engagements Other Than Audits or Reviews of Historical Financial Information" and with reference to Practice Note 740 "Auditor's Letter on Continuing Connected Transactions under the Hong Kong Listing Rules" issued by the Hong Kong Institute of Certified Public Accountants. The auditor has issued its letter containing its findings and conclusions, in respect of the above-mentioned continuing connected transactions disclosed by the Company in this annual report in accordance with Rule 14A.56 of the Listing Rules.



In respect of the continuing connected transactions disclosed (the "Disclosed Continuing Connected Transactions"), the Company's auditor confirmed that:

- a. nothing has come to its attention that causes them to believe that the Disclosed Continuing Connected Transactions have not been approved by the Company's board of directors;
- b. for transactions involving the provision of goods or services by the Group, nothing has come to its attention that causes them to believe that the transactions were not, in all material respects, in accordance with the pricing policies of the Group;
- c. nothing has come to its attention that causes them to believe that the transactions were not entered into, in all material respects, in accordance with the relevant agreements governing such transactions;
- d. with respect to the aggregate amount of each of the continuing connected transactions set out in the letter, nothing has come to its attention that causes it to believe that the Disclosed Continuing Connected Transactions have exceeded the maximum aggregate annual value disclosed in the announcement of the Company dated 18 November 2014 made by the Company in respect of each of the Disclosed Continuing Connected Transactions.

A copy of the auditor's letter has been provided by the Company to the Hong Kong Stock Exchange.

### NON-COMPETITION UNDERTAKING

As disclosed in the Prospectus, the independent non-executive Directors will review, on an annual basis, the compliance by CNMC and its associates with the Non-Competition Undertaking under the Deed of Non-Competition Undertaking, including whether to pursue any business opportunities which may be referred or offered to the Company by the Retained Group. The Company has received an annual confirmation from CNMC in respect of its compliance with the Non-Competition Undertaking. The independent non-executive Directors of the Company have reviewed the status of compliance of the Non-Competition Undertaking for the year ended 31 December 2016 and confirmed that all the undertakings under the Deed of Non-Competition Undertaking have been complied with by CNMC.

### COMPLIANCE WITH PROVISIONS OF THE CORPORATE GOVERNANCE CODE

Save as disclosed in the 2016 interim report of the Company, Mr. Xinghu Tao serves as the Chairman and President of the Company with effect from 20 April 2015 which is at variance with code provision A.2.1 of the Corporate Governance Code, none of the Directors is aware of any information which would reasonably indicate that the Company has not, for the year ended 31 December 2016, complied with the code provisions as set out in the Corporate Governance Code and Corporate Governance Report ("**CG Code**") contained in Appendix 14 of the Listing Rules.

As to the deviation from code provisions A.2.1 of the CG Code, the Board will continue to review the current structure from time to time and shall make necessary changes when appropriate and inform the shareholders accordingly.



## **REPORT OF THE DIRECTORS (CONTINUED)**

## SUFFICIENCY OF PUBLIC FLOATING

Based on the information that is publicly available to the Company and as far as the Directors are aware, the Company has maintained at least 25% of public float as at the date of this annual report.

## AUDIT COMMITTEE

The Company has an audit committee ("**Audit Committee**") which was established with written terms of reference in compliance with Rules 3.22 of the Listing Rules and paragraph C3 of the Corporate Governance Code and Corporate Governance Report contained in Appendix 14 of the Listing Rules. The primary duties of the Audit Committee are to supervise the financial reporting process and internal control and risk management systems of the Group. The Audit Committee consists of three members, being Mr. Diyong Yan (non-executive Director), Mr. Jingwei Liu (independent non-executive Director) and Mr. Huanfei Guan (independent non-executive Director). The Group's financial statements for the year ended 31 December 2016 have been reviewed by the Audit Committee, which was of the opinion that such statements complied with the applicable accounting standards, the Listing Rules and legal requirements, and that adequate disclosures had been made.

## AUDITOR

A resolution for the re-appointment of Deloitte as auditor of the Company is to be submitted at the forthcoming annual general meeting.

Approved on behalf of the Board of Directors Xinghu Tao Chairman

30 March 2017

## **INDEPENDENT AUDITOR'S REPORT**



#### TO THE MEMBERS OF CHINA NONFERROUS MINING CORPORATION LIMITED

(incorporated in Hong Kong with limited liability)

#### **OPINION**

We have audited the consolidated financial statements of China Nonferrous Mining Corporation Limited (the "**Company**") and its subsidiaries (collectively referred to as "the **Group**") set out on pages 114 to 209, which comprise the consolidated statement of financial position as at 31 December 2016, and the consolidated statement of profit or loss and other comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at 31 December 2016, and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with Hong Kong Financial Reporting Standards ("**HKFRSs**") issued by the Hong Kong Institute of Certified Public Accountants ("**HKICPA**") and have been properly prepared in compliance with the Hong Kong Companies Ordinance.

### **BASIS FOR OPINION**

We conducted our audit in accordance with Hong Kong Standards on Auditing ("**HKSAs**") issued by the HKICPA. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with HKICPA's Code of Ethics for Professional Accountants (the "**Code**"), and we have fulfilled our other ethical responsibilities in accordance with the Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### **KEY AUDIT MATTERS**

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

## **KEY AUDIT MATTERS (Continued)**

#### Key audit matter

How our audit addressed the key audit matter

#### Impairment assessment on mining properties and construction in progress

We identified the impairment assessment on mining properties and construction in progress included in the property, plant and equipment as a key audit matter due to the use of judgement and estimation in assessing their recoverable amounts.

As at 31 December 2016, owing to actual financial performance of the mining related operations below management's expectation set out in prior year, management identified impairment indicators for mining properties amounting to US\$181,319,000 and construction in progress amounting to US\$178,840,000 included in the property, plant and equipment. The calculation of the recoverable amounts of the associated cash generating units in management assessment incorporates significant estimates. Any changes in these estimates may have a significant impact on the consolidated financial statements.

No impairment loss was recognised for the year ended 31 December 2016 after the management's impairment assessment on the recoverable amount of the associated CGUs.

Details of the related key source of estimation uncertainty and management impairment assessment are disclosed in notes 4 and 16, respectively, to the consolidated financial statements. Our procedures in relation to impairment of mining properties and construction in progress included:

- Testing the key controls that management have in place to assess the recoverable amounts of mining properties and construction in progress;
- Evaluating the methodologies and calculation made by the management;
- Challenging the appropriateness of management's key assumptions and estimates;
- Comparing the current year actual results with the 2016 figures used in the prior year's impairment assessment;
- Assessing the reasonableness of the sensitivity analysis.

## **OTHER INFORMATION**

The directors of the Company are responsible for the other information. The other information comprises the information included in the annual report, but does not include the consolidated financial statements and our auditor's report thereon.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

## RESPONSIBILITIES OF DIRECTORS AND THOSE CHARGED WITH GOVERNANCE FOR THE CONSOLIDATED FINANCIAL STATEMENTS

The directors of the Company are responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with HKFRSs issued by the HKICPA and the Hong Kong Companies Ordinance, and for such internal control as the directors determine is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the directors are responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

## AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion solely to you, as a body, in accordance with section 405 of the Hong Kong Companies Ordinance, and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with HKSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

## AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

As part of an audit in accordance with HKSAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

## AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in the independent auditor's report is Patrick Cheng.

**Deloitte Touche Tohmatsu** *Certified Public Accountants* Hong Kong

30 March 2017

## CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

	Notes	2016 <i>US\$'000</i>	2015 US\$'000
Revenue	5, 6	1,313,291	1,189,164
Cost of sales	5,0	(1,113,378)	(1,063,555)
Gross profit		199,913	125,609
Other income	7	7,272	13,055
Distribution and selling expenses		(28,273)	(16,470)
Administrative expenses		(46,349)	(48,159)
Finance costs	8	(22,411)	(20,029)
Other expenses	9	(44,115)	-
Other gains and losses	10	3,060	(405,567)
Profit (loss) before tax		69,097	(351,561)
Income tax (expense) credit	11	(23,650)	38,052
Profit (loss) and total comprehensive			
income (expenses) for the year	6, 12	45,447	(313,509)
Profit (loss) and total comprehensive			
income (expenses) attributable to:			
Owners of the Company		11,832	(279,902)
Non-controlling interests		33,615	(33,607)
		45,447	(313,509)
Earnings (loss) per share			
– Basic (US cents per share)	15	0.34	(8.02)

## **CONSOLIDATED STATEMENT OF FINANCIAL POSITION**

AT 31 DECEMBER 2016

		2016	2015
	Notes	US\$'000	US\$'000
NON-CURRENT ASSETS			
Property, plant and equipment	16	905,087	906,353
Mining right	17	10,366	11,000
Interest in an associate	18	2,143	2,143
Finance lease receivables	19	1,089	1,024
Other assets	22	13,826	11,37
Restricted bank balances	23	6,027	6,482
Deferred tax assets	31	59,702	55,812
		998,240	994,191
CURRENT ASSETS			
Inventories	20	316,824	306,380
Finance lease receivables	19	2,447	6,66
Trade receivables	21	224,225	115,312
Prepayments and other receivables	22	163,578	110,974
Restricted bank balances	23	1,100	6,140
Bank deposits	23	38,000	69,35
Bank balances and cash	23	685,327	560,240
		1,431,501	1,175,076
CURRENT LIABILITIES			
Trade payables	24	275,985	158,136
Other payables and accrued expenses	25	33,885	72,08
Income tax payable		27,325	17,76
Bank and other borrowings			
– due within one year	26	58,000	362,50
Derivative, at fair value	27	8,233	18
		403,428	610,669
NET CURRENT ASSETS		1,028,073	564,40
TOTAL ASSETS LESS CURRENT LIABILITIES		2,026,313	1,558,598

## **CONSOLIDATED STATEMENT OF FINANCIAL POSITION (CONTINUED)**

AT 31 DECEMBER 2016

		2016	2015
	Notes	US\$'000	US\$'000
CAPITAL AND RESERVES			
Share capital	28	613,233	613,233
Retained profits		31,414	19,582
Equity attributable to owners of the Company		644,647	632,815
Non-controlling interests		198,999	154,656
TOTAL EQUITY		843,646	787,471
NON-CURRENT LIABILITIES			
Bank and other borrowings			
– due after one year	26	1,100,487	691,967
Deferred income	29	15,818	18,547
Provision for restoration, rehabilitation			
and environmental costs	30	19,863	20,544
Deferred tax liabilities	31	46,499	40,069
		1,182,667	771,127
		2,026,313	1,558,598

The consolidated financial statements on pages 114 to 209 were approved and authorised for issue by the board of directors on 30 March 2017 and are signed on its behalf by:

Xinghu Tao DIRECTOR Xingeng Luo DIRECTOR

## **CONSOLIDATED STATEMENT OF CHANGES IN EQUITY**

	Equity attributab	le to owners of	the Company		
	Share	Retained		Non- controlling	Total
	capital	profits	Sub-total	interests	equity
	US\$'000	US\$′000	US\$'000	US\$'000	US\$'000
Balance at 1 January 2015	613,233	309,358	922,591	200,263	1,122,854
Loss and total comprehensive					
expenses for the year	-	(279,902)	(279,902)	(33,607)	(313,509)
Dividend declared by a subsidiary	_	_	_	(12,000)	(12,000)
Dividend paid	-	(9,874)	(9,874)	_	(9,874)
Balance at 31 December 2015	613,233	19,582	632,815	154,656	787,471
Profit and total comprehensive	015,255	19,302	052,815	154,050	/0/,4/1
income for the year	_	11,832	11,832	33,615	45,447
Dividend declared by a subsidiary	-	_	-	(3,672)	(3,672)
Capital contribution by a non-					
controlling shareholder of a					
subsidiary	-	-	-	14,400	14,400
Balance at 31 December 2016	613,233	31,414	644,647	198,999	843,646

## **CONSOLIDATED STATEMENT OF CASH FLOWS**

	2016	2015
	US\$'000	US\$'000
OPERATING ACTIVITIES		
Profit (loss) before tax	69,097	(351,561)
Adjustments for:		
Loss on impairment of mining assets	-	343,237
Loss on impairment of trade receivables	2,325	_
Depreciation of property, plant and equipment	106,659	120,245
Amortisation of mining right	634	-
Release of premium for electricity supply	440	440
Deferred income recognised	(2,729)	(8,446)
Interest income	(1,484)	(2,969)
Net income earned under finance leases to a fellow subsidiary	(1,229)	(729)
Gain arising on fair value change of derivatives	(5,097)	(1,414)
Loss on disposal of property, plant and equipment, net	3,152	104
Foreign exchange loss	292	14,226
Finance costs	22,411	20,029
Operating cash flows before movements in working capital	194,471	133,162
(Increase) decrease in inventories	(10,444)	7,280
(Increase) decrease in trade and other receivables,		,
prepayments and other assets	(104,332)	156,576
Increase (decrease) in trade and other payables and accrued expenses	53,801	(16,622)
Cash generated from operations	133,496	280,396
	(11,550)	280,396 (18,471)
Income tax paid	(11,550)	(10,471)
NET CASH FROM OPERATING ACTIVITIES	121,946	261,925

## **CONSOLIDATED STATEMENT OF CASH FLOWS (CONTINUED)**

	2016 US\$'000	2015 <i>US\$'000</i>
INVESTING ACTIVITIES		
Purchase of property, plant and equipment	(102,546)	(142,029)
Net cash flow out on acquisition of a subsidiary	-	(11,000)
Proceeds from disposal of property, plant and equipment	210	686
Placement of restricted bank balances	(1,505)	(3,544)
Proceeds from release of restricted bank balances	7,006	7,669
Repayment of finance lease receivables from fellow subsidiaries	6,508	9,931
Finance income earned under finance leases to fellow subsidiaries received	1,229	729
Placement of bank deposits	(38,000)	(69,357)
Proceeds from release of bank deposits	69,357	-
Interest received	1,484	2,969
Receipts of government grants	-	12,923
NET CASH USED IN INVESTING ACTIVITIES	(56,257)	(191,023)
<b>FINANCING ACTIVITIES</b> Capital contribution by a non-controlling shareholder of a subsidiary	14,400	_
New bank and other borrowings raised	496,520	376,517
Repayment of bank and other borrowings	(392,505)	(327,000)
Dividends paid to shareholders	(7,358)	(2,516)
Dividends paid to non-controlling shareholders	(15,672)	(20,000)
Interest paid	(35,701)	(24,576)
NET CASH FROM FINANCING ACTIVITIES	59,684	2,425
NET INCREASE IN CASH AND CASH EQUIVALENTS	125,373	73,327
CASH AND CASH EQUIVALENTS AT THE BEGINNING OF YEAR	560,246	501,145
Effect of foreign exchange rate changes on the balance of	· · · <b>/</b>	,
cash held in foreign currencies	(292)	(14,226
CASH AND CASH EQUIVALENTS AT THE END OF YEAR		
Represented by: Bank balances and cash	685,327	560,246

### 1. GENERAL INFORMATION

The Company was incorporated in Hong Kong on 18 July 2011 and its shares are listed on The Stock Exchange of Hong Kong Limited. In the opinion of the directors of the Company (the "**Directors**"), the Company's immediate holding company is China Nonferrous Mining Development Limited, a private company incorporated in the British Virgin Islands and the Company's ultimate holding company is China Nonferrous Metal Mining (Group) Co., Ltd ("**CNMC**"), an enterprise established in the People's Republic of China (the "**PRC**") and wholly-owned by State-owned Assets Supervision and Administration Commission of the State Council. The registered office of the Company is located at Room 1201, Allied Kajima Building, 138 Gloucester Road, Wanchai, Hong Kong, and its principal place of business is located at 32 Enos Chomba Road, Kitwe, The Republic of Zambia ("**Zambia**").

The principal activity of the Company is investment holding. The Group's subsidiaries are principally engaged in exploration, mining, ore processing, leaching, smelting and sale of copper cathodes, blister copper and sulfuric acid. The activities of the subsidiaries of the Company are set out in the note 38.

The consolidated financial statements are presented in United States dollar ("**US\$**"), which is also the functional currency of the Company.

# 2. APPLICATION OF NEW AND REVISED HONG KONG FINANCIAL REPORTING STANDARDS ("HKFRSs")

In the current year, the Group has applied, for the first time, the following amendments to HKFRSs that are mandatorily effective for the current year:

Amendments to HKFRS 11	Accounting for Acquisitions of Interest in Joint Operations
Amendments to HKAS 1	Disclosure Initiative
Amendments to HKAS 16	Clarification of Acceptable Methods of Depreciation and Amortisation
and HKAS 38	
Amendments to HKAS 16	Agriculture: Bearer Plants
and HKAS 41	
Amendments to HKFRS 10,	Investment Entities: Applying the Consolidation Exception
HKFRS 12 and HKAS 28	
Amendments to HKFRSs	Annual Improvements to HKFRSs 2012–2014 Cycle

The application of the amendments to HKFRSs has had no material impact on the Group's consolidated financial statements, except for a certain disclosure change as described below.

## 2. APPLICATION OF NEW AND REVISED HONG KONG FINANCIAL REPORTING STANDARDS ("HKFRSs") (Continued)

#### Amendment to HKAS 1 Disclosure Initiative

The Group has applied the amendments to HKAS 1 Disclosure Initiative for the first time in the current year. The amendments to HKAS 1 clarify that an entity need not provide a specific disclosure required by an HKFRS if the information resulting from that disclosure is not material, and give guidance on the bases of aggregating and disaggregating information. However, the amendments reiterate that an entity should consider providing additional disclosures when compliance with the specific requirements in HKFRS is insufficient to enable users of financial statements to understand the impact of particular transactions, events and conditions on the entity's financial performance.

As regards the structure of the financial statements, the amendments provide examples of systematic ordering or grouping of the notes.

The Group has applied these amendments retrospectively. The grouping and ordering of restricted bank deposits and cash and cash equivalents have been revised to give prominence to the areas of the Group's activities that management considers to be most relevant to an understanding of the Group's financial performance and financial position. Specifically, information related to operating lease, capital commitment, financial instruments, and investment in subsidiaries was reordered to note 32, 33, 35 and 38. Other than the above presentation and disclosure changes, the application of the amendments to HKAS 1 has not resulted in any impact on the financial performance or financial position of the Group in these consolidated financial statements.

## 2. APPLICATION OF NEW AND REVISED HONG KONG FINANCIAL REPORTING STANDARDS ("HKFRSs") (Continued)

#### Amendment to HKAS 1 Disclosure Initiative (Continued)

The Group has not early applied the following new and amendments to HKFRSs that have been issued but are not yet effective:

HKFRS 9	Financial Instruments <sup>1</sup>
HKFRS 15	Revenue from Contracts with Customers and the related Amendements <sup>1</sup>
HKFRS 16	Leases <sup>2</sup>
Amendments to HKFRS 2	Classification and Measurement of Share-based Payment Transactions <sup>1</sup>
Amendments to HKFRS 4	Applying HKFRS 9 Financial Instruments with HKFRS 4 Insurance Contracts <sup>1</sup>
Amendments to HKFRS 10 and HKAS 28	Sale or Contribution of Assets between an Investor and its Associate or Joint Venture <sup>3</sup>
Amendments to HKAS 7	Disclosure Initiative <sup>4</sup>
Amendments to HKAS 12	Recognition of Deferred Tax Assets for Unrealised Losses <sup>4</sup>
Amendments to HKFRS	Annual Improvements to HKFRSs 2014–2016 Cycle <sup>5</sup>

<sup>1</sup> Effective for annual periods beginning on or after 1 January 2018

<sup>2</sup> Effective for annual periods beginning on or after 1 January 2019

<sup>3</sup> Effective for annual periods beginning on or after a date to be determined

<sup>4</sup> Effective for annual periods beginning on or after 1 January 2017

<sup>5</sup> Effective for annual periods beginning on or after 1 January 2017 or 1 January 2018, as appropriate

## 2. APPLICATION OF NEW AND REVISED HONG KONG FINANCIAL REPORTING STANDARDS ("HKFRSs") (Continued)

#### **HKFRS 9 Financial Instruments**

HKFRS 9 introduces new requirements for the classification and measurement of financial assets, financial liabilities, general hedge and impairment requirements for financial assets.

Key requirements of HKFRS 9 which are relevant to the Group are:

- All recognised financial assets that are within the scope of HKFRS 9 are required to be subsequently measured at amortised cost or fair value. Specifically, debt investments that are held within a business model whose objective is to collect the contractual cash flows, and that have contractual cash flows that are solely payments of principal and interest on the principal outstanding are generally measured at amortised cost at the end of subsequent accounting periods. Debt instruments that are held within a business model whose objective is achieved both by collecting contractual cash flows and selling financial assets, and that have contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding, are measured at fair value through other comprehensive income ("FVTOCI"). All other debt investments and equity investments are measured at their fair value at the end of subsequent accounting periods. In addition, under HKFRS 9, entities may make an irrevocable election to present subsequent changes in the fair value of an equity investment (that is not held for trading) in other comprehensive income, with only dividend income generally recognised in profit or loss.
- In relation to the impairment of financial assets, HKFRS 9 requires an expected credit loss model, as
  opposed to an incurred credit loss model under HKAS 39. The expected credit loss model requires an
  entity to account for expected credit losses and changes in those expected credit losses at each reporting
  date to reflect changes in credit risk since initial recognition. In other words, it is no longer necessary for
  a credit event to have occurred before credit losses are recognised.

Based on the Group's financial instruments and risk management policies as at 31 December 2016, the Company anticipates that the adoption of HKFRS 9 in the future may have impact on the classification and measurement of the Group's financial assets and financial liabilities set out below:

- The expected credit loss model may result in early provision of credit losses which are not yet incurred to the Group's financial assets measured at amortised cost;
- The trade receivables, which included embedded commodity derivatives arising from provisional priced sales and purchase arrangement, will be designated as fair value through profit or loss ("**FVTPL**").

However, it is not practicable to provide a reasonable estimate of the effect until a detailed review is performed.

## 2. APPLICATION OF NEW AND REVISED HONG KONG FINANCIAL REPORTING STANDARDS ("HKFRSs") (Continued)

#### HKFRS 15 Revenue from Contracts with Customers

HKFRS 15 was issued which establishes a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers. HKFRS 15 will supersede the current revenue recognition guidance including HKAS 18 Revenue, HKAS 11 Construction Contracts and the related interpretations when it becomes effective.

The core principle of HKFRS 15 is that an entity should recognise revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. Specifically, the standard introduces a 5-step approach to revenue recognition:

- Step 1: Identify the contract(s) with a customer
- Step 2: Identify the performance obligations in the contract
- Step 3: Determine the transaction price
- Step 4: Allocate the transaction price to the performance obligations in the contract
- Step 5: Recognise revenue when (or as) the entity satisfies a performance obligation

Under HKFRS 15, an entity recognises revenue when (or as) a performance obligation is satisfied, i.e. when 'control' of the goods or services underlying the particular performance obligation is transferred to the customer. Far more prescriptive guidance has been added in HKFRS 15 to deal with specific scenarios. Furthermore, extensive disclosures are required by HKFRS 15.

In 2016, HKICPA issued Classifications to HKFRS 15 in relation to the identification of performance obligations, principal versus agent considerations, as well as licensing application guidance.

The Directors anticipate that the application of HKFRS 15 in the future may have an impact on the timing and amounts of revenue recognition in respect of the Group's contracts with customers on sales of goods. Specifically, HKFRS 15 requires the allocation of total consideration to respective performance obligations based on relative fair values. Furthermore, revenue on sales of goods will be recognised when customers obtain control of goods under HKFRS 15 as compared to upon transfer of significant risks and rewards of ownership under HKAS 18. However, it is not practicable to provide a reasonable estimate of the effect of HKFRS 15 until the Group performs a detailed review. The application of HKFRS 15 in the future may also result in more disclosures in the consolidated financial statements.

## 2. APPLICATION OF NEW AND REVISED HONG KONG FINANCIAL REPORTING STANDARDS ("HKFRSs") (Continued)

#### **HKFRS 16 Leases**

HKFRS 16 introduces a comprehensive model for the identification of lease arrangements and accounting treatments for both lessors and lessees. HKFRS 16 will supersede HKAS 17 Leases and the related interpretations when it becomes effective.

HKFRS 16 distinguishes lease and service contracts on the basis of whether an identified assets is controlled by a customer. Distinctions of operating leases and finance leases are removed for lease accounting, and is replaced by a model where a right-of-use assets and a corresponding liability have to be recognised for all leases by lessees, except for short-term leases and leases of low value assets.

The right-of-use asset is initially measured at cost and subsequently measured at cost (subject to certain exceptions) less accumulated depreciation and impairment loss, adjusted for any remeasurement of the lease liability. The lease liability is initially measured at the present value of the lease payments that are not paid at that date. Subsequently, the lease liability is adjusted for interest and lease payments, as well as the impact of lease modifications, amongst orders. For the classification of cash flows, the Group currently presents operating lease payments as operating cash flows. Upon application of the HKFRS 16, lease payments in relation to lease liability will be allocated in to a principal and an interest portion which will be presented as financing and cash flows by the Group.

In contrast to lease accounting, HKFRS 16 substantially carries forward the lessor accounting requirements in HKAS 17, and continues to require a lessor to classify a lease either as an operating lease or a finance lease.

Furthermore, extensive disclosures are required by HKFRS 16.

As at 31 December 2016, the Group has non-cancellable operating lease commitments of US\$2,743,000 as disclosed in note 32. A preliminary assessment indicates that these arrangements will meet the definition of a lease under HKFRS 16, and hence the Group will recognise a right-of-use asset and a corresponding liability in respect of all these lease unless they qualify for low value or short-term leases upon the application of HKFRS 16. In addition, the application of new requirements may result changes in measurement, presentation and disclosure as indicated above. However, it is not practicable to provide a reasonable estimate of the financial effect until the directors of the Company complete a detailed review.

## 2. APPLICATION OF NEW AND REVISED HONG KONG FINANCIAL REPORTING STANDARDS ("HKFRSs") (Continued)

#### **Amendments to HKAS 7 Disclosure Initiative**

The amendments require an entity to provide disclosures that enable users of financial statements to evaluate changes in liabilities arising from financing activities including both changes arising from cash flows and non-cash changes. Specifically, the amendments require the following changes in liabilities arising from financing activities to be disclosed: (i) changes from financing cash flows; (ii) changes arising from obtaining or losing control of subsidiaries or other business; (iii) the effect of changes in foreign exchange rates; (iv) changes in fair values; and (v) other changes.

The amendments apply prospectively for annual periods beginning on or after 1 January 2017 with earlier application permitted. The application of the amendments will result in additional disclosures on the Group's financing activities, specifically, reconciliation between the opening and closing balances in the consolidated statement of financial position for liabilities arising from financing activities will be provided on application.

### 3. SIGNIFICANT ACCOUNTING POLICIES

The consolidated financial statements have been prepared in accordance with HKFRSs issued by the HKICPA. In addition, the consolidated financial statements include applicable disclosures required by the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited ("**Listing Rules**") and of the Hong Kong Companies Ordinance ("**CO**").

The consolidated financial statements have been prepared on the historical cost basis except for certain financial instruments that are measured at fair values at the end of each reporting period, as explained in the accounting policies set out below.

Historical cost is generally based on the fair value of the consideration given in exchange for good and services.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique. In estimating the fair value of an asset or a liability, the Group takes into account the characteristics of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at the measurement date. Fair value for measurement and/or disclosure purposes in these consolidated financial statements is determined on such a basis, except for share-based payment transactions that are within the scope of HKAS 17 Leases, and measurements that have some similarities to fair value but are not fair value, such as net realisable value in HKAS 2 Inventories or value in use in HKAS 36 Impairment of Assets.

## 3. SIGNIFICANT ACCOUNTING POLICIES (Continued)

In addition, for financial reporting purposes, fair value measurements are categorised into Level 1, 2 or 3 based on the degree to which the inputs to the fair value measurements are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date;
- Level 2 inputs are inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly; and
- Level 3 inputs are unobservable inputs for the asset or liability.

The principal accounting policies are set out below.

#### Basis of consolidation

The consolidated financial statements incorporate the financial statements of the Company and entities controlled by the Company and its subsidiaries. Control is achieved when the Company:

- has power over the investee;
- is exposed, or has rights, to variable returns from its involvement with the investee; and
- has the ability to use its power to affect its returns.

The Group reassesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control listed above.

Consolidation of a subsidiary begins when the Group obtains control over the subsidiary and ceases when the Group loses control of the subsidiary. Specifically, income and expenses of a subsidiary acquired or disposed of during the year are included in the consolidated statement of profit or loss and other comprehensive income from the date the Group gains control until the date when the Group ceases to control the subsidiary.

## 3. SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### **Basis of consolidation (Continued)**

Profit or loss and each component of other comprehensive income are attributed to the owners of the Company and to the non-controlling interests. Total comprehensive income of subsidiaries is attributed to the owners of the Company and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies into line with the Group's accounting policies.

All intragroup assets and liabilities, equity, income, expenses and cash flows relating to transactions between members of the Group are eliminated in full on consolidation.

#### Acquisition of a subsidiary not constituting a business

When the Group acquires a group of assets and liabilities that do not constitute a business, the Group identifies and recognizes the individual identifiable assets acquired and liabilities assumed by allocating the purchase price first to the financial assets and financial liabilities at the respective fair values, the remaining balance of the purchase price is then allocated to the other individual identifiable assets and liabilities on basis of their relative fair values at the date of purchase. Such a transaction does not give rise to goodwill or bargain purchase gain.

## 3. SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### Investments in associates

An associate is an entity over which the Group has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee but is not control or joint control over those policies.

The results and assets and liabilities of associates are incorporated in these consolidated financial statements using the equity method of accounting. The financial statements of associates used for equity accounting purposes are prepared using uniform accounting policies as those of the Group for like transactions and events in similar circumstances. Under the equity method, an investment in an associate is initially recognised in the consolidated statement of financial position at cost and adjusted thereafter to recognise the Group's share of the profit or loss and other comprehensive income of the an associate. When the Group's share of losses of an associate exceeds the Group's interest in that associate (which includes any long-term interests that, in substance, form part of the Group's net investment in the associate), the Group discontinues recognising its share of further losses. Additional losses are recognised only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of that associate.

An investment in an associate is accounted for using the equity method from the date on which the investee becomes an associate. On acquisition of the investment in an associate, any excess of the cost of the investment over the Group's share of the net fair value of the identifiable assets and liabilities of the investee is recognised as goodwill, which is included within the carrying amount of the investment. Any excess of the Group's share of the identifiable assets and liabilities over the cost of the investment, after reassessment, is recognised immediately in profit or loss in period in which the investment is acquired.

### 3. SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### Investments in associates (Continued)

The requirements of HKAS 39 are applied to determine whether it is necessary to recognise any impairment loss with respect to the Group's investment in an associate. When necessary, the entire carrying amount of the investment (including goodwill) is tested for impairment in accordance with HKAS 36 as a single asset by comparing its recoverable amount (higher of value in use and fair value less costs of disposal) with its carrying amount. Any impairment loss recognised forms part of the carrying amount of the investment. Any reversal of that impairment loss is recognised in accordance with HKAS 36 to the extent that the recoverable amount of the investment subsequently increases.

When a group entity transacts with an associate of the Group, profits and losses resulting from the transactions with the associate are recognised in the Group's consolidated financial statements only to the extent of interest in the associate that are not related to the Group.

#### **Revenue recognition**

Revenue is measured at the fair value of the consideration received or receivable and represents amounts receivables for goods sold in the normal course of business, net of allowances, applicable sales taxes and mineral royalty.

Revenue is recognised when the amount of revenue can be reliably measured: when it is probable that future economic benefits will flow to the Group and when specific criteria have been met for each of the Group's activities, as described below.

#### Sale of goods

Revenue from the sales of goods is recognised when the goods are delivered and titles have passed.

In most instances, sales revenue is recognised when the product is delivered to the destination specified by the customer, which is typically the vessel on which it is shipped, the destination port or the customer's premises.

For certain sales of the Group, the sales price is determined on a provisional basis at the date of sale, as the final selling price is subject to the grades of copper, gold and silver in the Group's copper products and movements in market prices up to the date of final pricing, normally ranging from 30 to 90 days after initial booking. Revenue on provisionally priced sales is recognised based on the estimated grades of copper, gold and silver in the Group's copper products and fair value of the total consideration receivable. The revenue adjustment mechanism embedded within provisionally priced sales arrangements has the character of a commodity derivative. Accordingly, the fair value of the final sales price adjustment is re-estimated continuously in trade receivables on the consolidated statement of financial position and changes in fair value are recognised in profit or loss. In all cases, fair value is estimated by reference to forward market prices.

## 3. SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### **Revenue recognition (Continued)**

#### Dividend and interest income

Dividend income from investments is recognised when the shareholders' right to receive payment has been established.

Interest income is accrued on a time basis, by reference to the principal outstanding and at the effective interest rate applicable, which is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset to that asset's net carrying amount on initial recognition.

#### Leasing

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases.

#### The Group as lessor

Amounts due from lessees under finance leases are recorded as receivables at the amount of the Group's net investment in the leases. Finance lease income is allocated to accounting periods so as to reflect a constant periodic rate of return on the Group's net investment outstanding in respect of the leases.

Rental income from operating leases is recognised on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased assets. Such costs are recognised on a straight-line basis over the lease term.

#### The Group as lessee

Operating lease payments, including the cost of acquiring land held under operating leases, are recognised as an expense on a straight-line basis over the lease term.

#### **Foreign currencies**

The functional currency of companies comprising the Group is US\$. In preparing the financial statements of each individual group entity, transactions in currencies other than the entity's functional currency (foreign currencies) are recognised at the rates of exchange prevailing on the dates of the transactions. At the end of the reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated.

Exchange differences arising on the settlement of monetary items, and on the retranslation of monetary items, are recognised in profit or loss in the period in which they arise.

## 3. SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### **Borrowing costs**

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale.

Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalization.

All other borrowing costs are recognised in profit or loss in the period in which they are incurred.

#### **Government grants**

Government grants are not recognised until there is reasonable assurance that the Group will comply with the conditions attaching to them and that the grants will be received.

Government grants are recognised in profit or loss on a systematic basis over the periods in which the Group recognises as expenses the related costs for which the grants are intended to compensate. Specifically, government grants whose primary condition is that the Group should purchase, construct or otherwise acquire non-current assets are recognised as deferred income in the consolidated statement of financial position and transferred to profit or loss on a systematic and rational basis over the useful lives of the related assets.

Government grants that are receivable as compensation for expenses or losses already incurred or for the purpose of giving immediate financial support to the Group with no future related costs are recognised in profit or loss in the period in which they become receivable.

#### **Employee benefits**

#### Retirement benefit costs

Payments to defined contribution retirement benefit plans are recognised as an expense when employees have rendered service entitling them to the contributions.

#### Short-term employee benefits

Short-term employees benefits are recognised at the undiscounted amount of the benefits expected to be paid as and when employees rendered the services. All short-term employee benefits are recognised as an expense unless another HKFRS requires or permits the inclusion of the benefit in the cost of an asset.

A liability is recognised for benefits accruing to employees (such as wages and salaries, annual leave and sick leave) after deducting any amount already paid.

## 3. SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### Taxation

Income tax expense represents the sum of the tax currently payable and deferred tax.

#### Current tax

The tax currently payable is based on taxable profit for the year. Taxable profit differs from 'profit before tax' as reported in the consolidated statement of profit or loss and other comprehensive income because of items of income or expense that are taxable or deductible in other years and items that are never taxable or deductible. The Group's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the end of the reporting period.

#### Deferred tax

Deferred tax is recognised on temporary differences between the carrying amounts of assets and liabilities in the consolidated financial statements and the corresponding tax bases used in the computation of taxable profit. Deferred tax liabilities are generally recognised for all taxable temporary differences. Deferred tax assets are generally recognised for all deductible temporary differences to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be utilised. Such deferred tax assets and liabilities are not recognised if the temporary difference arises from the initial recognition (other than in a business combination) of assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit.

Deferred tax liabilities are recognised for taxable temporary differences associated with investments in subsidiaries and associate, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments and interests are only recognised to the extent that it is probable that there will be sufficient taxable profits against which to utilise the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

## 3. SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### **Taxation (Continued)**

#### Deferred tax (Continued)

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which the liability is settled or the asset is realised, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period. The resulting deferred tax assets and liabilities due to a change in tax rates (and tax laws) is recognised in profit or loss, except to the extent that it relates to items previously recognised outside profit or loss.

#### Current and deferred tax for the year

Current or deferred tax for the year is recognised in profit or loss, except when they relate to items that are recognised in other comprehensive income or directly in equity, in which case, the current and deferred tax are also recognised in other comprehensive income or directly in equity respectively. Where current tax or deferred tax arises from the initial accounting for a business combination, the tax effect is included in the accounting for the business combination.

#### Property, plant and equipment

Property, plant and equipment including buildings held for use in the production or supply of goods or services, or for administrative purpose (other than construction in progress as described below), are stated in the consolidated statement of financial position at cost, less subsequent accumulated depreciation and subsequent accumulated impairment losses, if any.

Properties in the course of construction for production, supply or administrative purposes are carried at cost, less any recognised impairment loss. Cost includes professional fees and, for qualifying assets, borrowing costs capitalised in accordance with the Group's accounting policy. Such properties are classified to the appropriate categories of property, plant and equipment when completed and ready for intended use. Depreciation of these assets, on the same basis as other property, plant and equipment, commences when the assets are ready for their intended use.

Depreciation is recognised so as to write off the cost of assets other than properties under construction less their residual values over their estimated useful lives, using the straight-line method or the unit-of-production method.

Mining properties in the course of development or construction are included under construction in progress and are not depreciated. Capitalised mining properties costs are depreciated once commercial production commences, as described in "Property, plant and equipment – mining properties".

## 3. SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### Property, plant and equipment (Continued)

Depreciation for other property, plant and equipment (other than construction in progress) is calculated using the straight-line method to allocate their cost to their residual values over their estimated useful lives, as follows:

Land and buildings	10 to 30 years
Machinery and equipment	3 to 10 years
Motor vehicles	5 years

The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in estimate accounted for on a prospective basis.

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on the disposal or retirement of any item of property, plant and equipment is determined as the difference between the sales proceeds and the carrying amount of the asset and is recognised in profit or loss.

#### Mining properties

The costs of mining properties, which include the costs of acquiring and developing mining properties, are firstly capitalised as property, plant and equipment under the heading of "Construction in progress" in the year in which they are incurred and then reclassified to the heading of "Mining properties" when they are ready for commercial production.

When a decision is taken that a mining property is viable for commercial production, all pre-production primary development expenditure other than land, buildings, plant and equipment, etc. is capitalised as part of the cost of the mining property until the mining property is capable of commercial production. From that point, capitalised mining properties costs are depreciated on a unit-of-production basis over the total estimated remaining commercial reserves of each property or a group of properties.

Stripping costs incurred in the development of a mine (or pit) before the production commences are capitalised as part of the cost of constructing the mine (or pit) and subsequently amortised over the life of the mine (or pit) on a unit of production basis. Stripping costs and secondary development expenditure, mainly comprising costs on blasting, haulage, excavation, etc. incurred during the production stage of an ore body, to the extent that the benefit from these activities is realised in the form of improved access ore, is recognised as a non-current asset ("**Mining properties**") when certain criteria are met, whereas the costs of normal on-going operational stripping activities are accounted for in accordance with HKAS 2 Inventories.

## 3. SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### Property, plant and equipment (Continued)

#### Mining properties (Continued)

In circumstances where a mining property is abandoned, the cumulative capitalised costs relating to the property are written off in the period.

Commercial reserves are proved and probable reserves. Changes in the commercial reserves affecting unit of production calculations are dealt with prospectively over the revised remaining reserves.

#### **Mining rights**

The cost of mining rights either as an individual asset purchase or as part of a business combination is capitalised and represents the asset's fair value at the date of acquisition.

Subsequent to initial recognition, mining rights are reported at costs less accumulated amortisation and any accumulated impairment losses. The costs of mining rights are amortised or depreciated on a unit-of-production basis over the total estimated remaining commercial reserves of each mine.

A mining right is derecognised on disposal, or when no future economic benefits are expected from use or disposal. Gains and losses arising from derecognition of a mining right, measured as the difference between the net disposal proceeds and the carrying amount of the asset, are recognised in profit or loss when the asset is derecognised.

#### Impairment of property, plant and equipment and mining rights

At the end of each reporting period, the Group reviews the carrying amounts of its property, plant and equipment and mining rights to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any). Where it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs. Where a reasonable and consistent basis of allocation can be identified, corporate assets are also allocated to individual cash-generating units, or otherwise they are allocated to the smallest group of cash-generating units for which a reasonable and consistent allocation basis can be identified.

Recoverable amount is the higher of fair value less costs of disposal and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

## 3. SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### Impairment of property, plant and equipment and mining rights (Continued)

If the recoverable amount of an asset (or a cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (or the cash-generating unit) is reduced to its recoverable amount. In allocating the impairment loss, the impairment loss is allocated to the other assets on a pro-rata basis based on the carrying amount of each asset in the unit. The carrying amount of an asset is not reduced below the highest of its fair value less costs of disposal (if measurable), its value in use (if determinable) and zero. The amount of the impairment loss that would otherwise have been allocated to the asset is allocated pro rata to the other assets of the unit. An impairment loss is recognised immediately in profit or loss.

Where an impairment loss subsequently reverses, the carrying amount of the asset (or cash generating unit) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (or cash-generating unit) in prior years. A reversal of an impairment loss is recognised immediately in profit or loss.

#### Inventories

Inventories are stated at the lower of cost and net realisable value.

Costs of inventories are determined on the following bases:

- Purchased copper concentrates and all other materials, including spare parts and consumables, are valued on weighted average basis.
- Finished products are valued at raw material cost plus costs of conversion, comprising labor costs and an attributable proportion of manufacturing overheads based on normal levels of activity.

Net realisable value represents the estimated selling price for inventories less all estimated costs of completion and costs necessary to make the sale.

## 3. SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### Provisions

Provisions are recognised when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that the Group will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

The amount recognised as a provision is the best estimate of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation. When a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows (where the effect of the time value of money is material).

#### **Environmental rehabilitation**

An obligation to incur restoration, rehabilitation and environmental costs arises when environmental disturbance is caused by the development or ongoing production of a mine or production facilities. Costs arising from facility decommissioning and dismantling; removal or treatment of waste materials; site and land rehabilitation, discounted to net present value, are provided for and a corresponding amount is capitalised at the start of each project, as soon as the obligation to incur such costs arises. These costs are charged to profit or loss over the life of the operation through the depreciation of the asset and the unwinding of the discount on the provision. The cost estimates are reviewed periodically and are adjusted to reflect known developments which may have an impact on the cost estimates or life of operations. The cost of the related asset is adjusted for changes in the provision due to factors such as updated cost estimates, new disturbance and revisions to discount rates. The adjusted cost of the asset is depreciated prospectively over the lives of the assets to which they relate. The unwinding of the discount is shown as a finance cost in profit or loss.

Costs for restoration of subsequent site damage which is caused on an ongoing basis during production are provided for at their net present values and charged to profit or loss as extraction progresses. Where the costs of site restoration are not anticipated to be significant, they are expensed as incurred.

#### **Financial instruments**

Financial assets and financial liabilities are recognised when a group entity becomes a party to the contractual provisions of the instrument.

Financial assets and financial liabilities are initially measured at fair value. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets and financial liabilities at fair value through profit or loss) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at fair value through profit or loss are recognised immediately in profit or loss.

## 3. SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### **Financial instruments (Continued)**

#### Financial assets

Financial assets are classified into the following specified categories: financial assets at FVTPL and loans and receivables. The classification depends on the nature and purpose of the financial assets and is determined at the time of initial recognition. All regular way purchases or sales of financial assets are recognised and derecognised on a settlement date basis. Regular way purchases or sales are purchases or sales of financial assets that require delivery of assets within the time frame established by regulation or convention in the marketplace.

#### Effective interest method

The effective interest method is a method of calculating the amortised cost of a debt instrument and of allocating interest income over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts (including all fees and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the debt instrument, or, where appropriate, a shorter period, to the net carrying amount on initial recognition.

Interest is recognised on an effective interest basis for debt instruments other than those financial assets classified as at FVTPL.

#### Financial assets at FVTPL

Financial assets are classified as at FVTPL when the financial asset is either held for trading or it is designated as at FVTPL.

A financial asset is classified as held for trading if:

- it has been acquired principally for the purpose of selling it in the near term; or
- on initial recognition it is part of a portfolio of identified financial instruments that the Group manages together and has a recent actual pattern of short-term profit-taking; or
- it is a derivative that is not designated and effective as a hedging instrument.

Financial assets at FVTPL are stated at fair value, with any gains or losses arising on remeasurement recognised in profit or loss. The net gain or loss recognised in profit or loss is included in "other gains and losses" for other line items, as appropriate. Fair value is determined in the manner described in note 35.

## 3. SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### Financial instruments (Continued)

Financial assets (Continued)

Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. Loans and receivables (including trade and other receivables (excluding the embedded commodity derivative component), bank deposit, restricted bank balances, bank balances and cash) are measured at amortised cost using the effective interest method, less any impairment (see accounting policy on impairment loss on financial assets below).

Interest income is recognised by applying the effective interest rate, except for short-term receivables when the recognition of interest would be immaterial.

Impairment of financial assets

Financial assets, other than those at FVTPL, are assessed for indicators of impairment at the end of each reporting period. Financial assets are considered to be impaired when there is objective evidence that, as a result of one or more events that occurred after the initial recognition of the financial asset, the estimated future cash flows of the financial assets have been affected.

For financial assets, objective evidence of impairment could include:

- significant financial difficulty of the issuer or counterparty; or
- breach of contract, such as a default or delinquency in interest or principal payments; or
- it becoming probable that the borrower will enter bankruptcy or financial re-organisation.

Objective evidence of impairment for a portfolio of receivables could include the Group's past experience of collecting payments, an increase in the number of delayed payments in the portfolio past the average credit period, as well as observable changes in national or local economic conditions that correlate with default on receivables.

For financial assets that are carried at amortised cost, the amount of the impairment loss recognised is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted at the financial asset's original effective interest rate.

## 3. SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### Financial instruments (Continued)

Financial assets (Continued)

Impairment of financial assets (Continued)

The carrying amounts of financial assets is reduced by the impairment loss directly for all financial assets with the exception of trade and other receivables, where the carrying amount is reduced through the use of an allowance account. Changes in the carrying amount of the allowance account are recognised in profit or loss. When trade and other receivables are considered uncollectible, they are written off against the allowance account. Subsequent recoveries of amounts previously written off are credited to profit or loss.

For financial assets measured at amortised cost, if, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognised, the previously recognised impairment loss is reversed through profit or loss to the extent that the carrying amount of the investment at the date the impairment is reversed does not exceed what the amortised cost would have been had the impairment not been recognised.

#### Financial liabilities and equity instruments

Debt and equity instruments issued by a group entity are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangements and the definitions of a financial liability and an equity instrument.

#### Equity instruments

An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments issued by the Company are recognised at the proceeds received, net of direct issue costs.

#### Effective interest method

The effective interest method is a method of calculating the amortised cost of a financial liability and of allocating interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments (including all fees and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the financial liability, or, where appropriate, a shorter period, to the net carrying amount on initial recognition.

Interest expense is recognised on an effective interest basis other than financial liabilities classified as at FVTPL.

## 3. SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### **Financial instruments (Continued)**

Financial liabilities and equity instruments (Continued)

Financial liabilities at FVTPL

Financial liabilities are classified as either financial liabilities at FVTPL or other financial liabilities.

A financial liability is classified as held for trading if:

- it has been acquired principally for the purpose of repurchasing it in the near term; or
- on initial recognition it is a part of a portfolio of identified financial instruments that the Group manages together and has a recent actual pattern of short-term profit-taking; or
- it is a derivative that is not designated and effective as a hedging instrument.

Financial liabilities at FVTPL are measured at fair value, with any gains or losses arising on remeasurement recognised in profit or loss. The net gain or loss recognised in profit or loss is included in the "Other gains and losses" line item. Fair value is determined in the manner described in note 35.

Financial liabilities at amortised cost

Financial liabilities including trade and other payables, bank overdrafts, bank and other borrowings are subsequently measured at amortised cost using the effective interest method.

## 3. SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### **Financial instruments (Continued)**

#### Derivative financial instruments

The Group uses derivative financial instruments to hedge its commodity price risk. The Group's derivative financial instruments mainly include copper future contracts (mainly standardised copper cathode future contracts in London Metal Exchange ("**LME**")) and those embedded in provisional price arrangements.

Derivatives are initially recognised at fair value at the date when derivative contracts are entered into and are subsequently remeasured to their fair value at the end of the reporting period. The resulting gain or loss is recognised in profit or loss immediately unless the derivative is designated and effective as a hedging instrument, in which case the timing of the recognition in profit or loss depends on the nature of the hedge relationship.

#### Embedded derivatives

Derivatives embedded in non-derivative host contracts are treated as separate derivatives when they meet the definition of a derivative, their risks and characteristics are not closely related to those of the host contracts and the host contracts are not measured at FVTPL. The embedded derivatives are presented in the same line item as the host contract.

## 3. SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### **Financial instruments (Continued)**

Derivative financial instruments (Continued)

#### Derecognition

The Group derecognises a financial asset (including finance lease receivables) only when the contractual rights to the cash flows from the asset expire.

On derecognition of a financial asset (including finance lease receivables), the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognised in profit or loss.

The Group derecognises financial liabilities when, and only when, the Group's obligations are discharged, cancelled or expire. The difference between the carrying amount of the financial liability derecognised and the consideration paid and payable is recognised in profit or loss.

# 4. CRITICAL ACCOUNTING JUDGMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY

In the application of the Group's accounting policies, which are described in note 3, the Directors is required to make judgments, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and underlying assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

The following are the key assumptions concerning the future, and other key sources of estimation uncertainty at the end of the reporting period, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year.

## 4. CRITICAL ACCOUNTING JUDGMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY (Continued)

#### Impairment of property, plant and equipment

In determining whether an asset is impaired or the event previously causing the impairment no longer exists, the Group has to exercise judgement particularly in assessing: (1) whether an event has occurred that may affect the asset's value or such event affecting the asset's value has not been in existence; (2) whether the carrying value of an asset can be supported by its recoverable amount, which is the higher of an assets or the CGU fair value less cost to sell and its value in use; (3) the appropriate key assumptions to be applied in preparing cash flow projections including whether these cash flow projections are discounted using an appropriate rate. When it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the CGU to which the assets belongs.

Changes in estimations of the cash flow projections, such as the change in discount rates or the future copper price assumptions, may materially affect the amount of recoverable amount derived for impairment test purpose, which would then result in further recognition or reversal of impairment loss.

As at 31 December 2016, the carrying amount of property, plant and equipment is US\$905,087,000 (2015: US\$906,353,000).

As at 31 December 2016, owing to actual financial performance of the mining related operations below management's expectation set out in prior year, management identified impairment indicators for mining properties amounting to US\$181,319,000 and construction in progress amounting to US\$178,840,000 included in the property, plant and equipment at 31 December 2016. The calculation of the recoverable amounts of the associated cash generating units in management assessment incorporates significant estimates. Any changes in these estimates may have a significant impact on the consolidated financial statements. Details of management impairment assessment and related recoverable amount calculation are disclosed in Note 16.

#### Depreciation of mining right and properties

Mining right and properties costs are depreciated using the unit of production method (the "**UOP**"). The calculation of the UOP rate of depreciation, and therefore the annual depreciation charge to operations, can fluctuate from initial estimates. This could generally result when there are significant changes in any of the factors or assumptions used in estimating mine reserves, notably changes in the geology of the reserves and assumptions used in determining the economic feasibility of the reserves. Such changes in reserves could similarly impact the useful lives of assets depreciated on a straight-line basis, where those lives are limited to the life of the project, which, in turn is limited to the life of the proved and probable mineral reserves. Estimates of proved and probable reserves are prepared by experts in extraction, geology and reserve determination. Assessments of UOP rates against the estimated reserve base and the operating and development plan are performed regularly.

# 4. CRITICAL ACCOUNTING JUDGMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY (Continued)

#### Restoration, rehabilitation and environmental costs

Provision is made for costs associated with restoration and rehabilitation of mining sites and certain production facilities of the Group as soon as the obligation to incur such costs arises. Such restoration and closure costs are typical of mining, leaching and smelting industries and they are normally incurred at the end of the life of the mine and production facilities. The costs are estimated on the basis of mine/plant closure plans and the estimated discounted costs of dismantling and removing these facilities and the costs of restoration are capitalised when incurred reflecting the Group's obligations at that time. A corresponding provision is created on the liability side.

The capitalised asset is charged to profit or loss over the life of the asset through depreciation over the life of the operation and the provision is increased each period via unwinding the discount on the provision. Management estimates are based on local legislation. The actual costs and cash outflows may differ from estimates because of changes in laws and regulations, changes in prices, analysis of site conditions and changes in restoration technology.

The Group provides for such costs in accordance with statutory requirements.

#### **Income taxes**

The Group is subject to taxes in a number of jurisdictions. Significant judgement is required in determining the tax position and the estimates and assumptions in relation to the provision for taxes, the progressive tax rate applicable for deferred tax provisions and the recovery of deferred tax assets, having regard to the nature and timing of their origination and compliance with the relevant tax legislation.

As at 31 December 2016, deferred tax assets of US\$59,702,000 (2015: US\$55,812,000) in relation to the unused tax losses, impairment of property, plant and equipment and impairment loss on excess and obsolete inventories have been recognised in the consolidated statement of financial position (see Note 31). Deferred tax assets are recognised only if it is probable that future taxable profits will be available to utilise those temporary differences and losses, and the tax losses continue to be available having regard to the nature and timing of their origination and compliance with the relevant tax legislation associated with their recoupment. In addition, the applicable tax rate used in recognising deferred tax assets is determined by the forecast proportion of assessable income against gross sales and the timing of the usage of tax losses when the entity was granted income tax incentives.

## 5. REVENUE

An analysis of the Group's revenue from sale of goods for the year is as follows:

	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
Blister copper	943,461	871,993
Copper cathodes	335,409	285,116
Sulfuric acid	34,421	32,055
	1,313,291	1,189,164

## 6. SEGMENT INFORMATION

The Group's operating segments are identified on the basis of internal reports about components of the Group that are regularly reviewed by the chief operating decision maker, being the Operating Management Committee (the "**CODM**"), in order to allocate resources to the segments and to assess their performance.

Information reported to the CODM for the purposes of resource allocation and assessment of segment performance focuses on the types of goods produced. The Group's operating and reportable segments in current year under HKFRS 8 Operating Segments are as follows:

- Leaching Production and sale of copper cathodes (including exploration and mining of oxide copper mines) which are produced using the solvent extraction-electrowinning technology; and
- Smelting Production and sale of blister copper (including exploration and mining of sulfuric copper mines), bismuth and sulfuric acid which are produced using ISA smelting technology. Bismuth and sulfuric acid are by-products in the production of blister copper.

No operating segments have been aggregated to be derived from the reportable segments of the Group.

## 6. SEGMENT INFORMATION (Continued)

#### Segment revenue and results

The following is an analysis of the Group's revenue and results by reportable and operating segment.

	Leaching US\$'000	Smelting US\$'000	Consolidated US\$'000
For the year ended 31 December 2016			
Revenue from external customers Inter-segment sales	335,409 5,338	977,882 19,314	1,313,291 24,652
Total segment revenue	340,747	997,196	
Elimination		_	(24,652)
Revenue for the year		-	1,313,291
Segment profit	34,932	20,184	55,116
Unallocated income* Unallocated expenses <sup>#</sup>		_	922 (10,591)
Profit for the year		_	45,447

## 6. SEGMENT INFORMATION (Continued)

#### Segment revenue and results (Continued)

	Leaching <i>US\$'000</i>	Smelting <i>US\$'000</i>	Consolidated US\$'000
For the year ended 21 December 2015			
For the year ended 31 December 2015 Revenue from external customers	285,116	904,048	1,189,164
Inter-segment sales	697	18,727	19,424
Total segment revenue	285,813	922,775	1,208,588
Elimination		_	(19,424)
Revenue for the year		_	1,189,164
Segment profit (loss)	19,757	(327,910)	(308,153)
Unallocated income*			826
Unallocated expenses <sup>#</sup>			(6,182)
Loss for the year		_	(313,509)

- \* The unallocated income mainly represents the interest income arising from the bank deposits and bank balances of the Company, China Nonferrous Mining Holdings Limited ("**CNMH**"), a directly wholly-owned subsidiary of the Company which directly holds the Group's shareholdings in the subsidiaries in Zambia, China Nonferrous Mining Hong Kong Holdings Limited ("**CNMHK**"), a directly controlling subsidiary of the Company which directly holds the Group's shareholdings in the subsidiaries in Democratic Republic of Congo ("**DRC**"), and China Nonferrous Mining Hong Kong Investment Limited ("**CNMHKI**") (collectively referred to as the "**Holding Companies**").
- <sup>#</sup> The unallocated expenses mainly represent the administrative expenses, interest expenses and income tax expenses of the Holding Companies.

The accounting policies of the operating and reportable segments are the same as the Group's accounting policies described in note 3. Segment profit represents the profit for the year earned by each segment. This is the measure reported to the chief operating decision maker for the purposes of resource allocation and assessment of segment performance.

Inter-segment sales are charged at prevailing market rates.

## 6. SEGMENT INFORMATION (Continued)

Segment assets and liabilities

	2016 <i>US\$'000</i>	2015 US\$'000
Segment assets		
– Leaching	767,561	739,118
– Smelting	1,403,571	1,214,085
Total segment assets	2,171,132	1,953,203
Unallocated assets*	267,824	237,015
Elimination	(9,215)	(20,951)
Consolidated total assets	2,429,741	2,169,267
Segment liabilities		
– Leaching	659,697	576,500
– Smelting	806,129	552,335
Total segment liabilities	1,465,826	1,128,835
Unallocated liabilities*	129,484	273,912
Elimination	(9,215)	(20,951)
Consolidated total liabilities	1,586,095	1,381,796

\* The unallocated assets and liabilities mainly represent those of the Holding Companies.

For the purposes of monitoring segment performance and allocating resources between segments, all assets and liabilities, except for certain assets and liabilities of the Holding Companies, are allocated to reportable and operating segments.

## 6. SEGMENT INFORMATION (Continued)

#### Other segment information

Amounts included in the measure of segment profit and segment assets:

	Leaching US\$'000	Smelting US\$'000	Unallocated <i>US\$'000</i>	Consolidated <i>US\$'000</i>
For the year ended 31 December 2016				
Addition to non-current asset <sup>#</sup>	20,220	93,343	_	113,563
Interest income*	68	848	568	1,484
Finance cost	15,431	4,669	2,311	22,411
Finance income earned under finance				
leases to fellow subsidiaries	1,229	-	-	1,229
Gain arising on change in fair value of				
derivatives	25,289	(20,192)	-	5,097
Income tax expense	6,592	5,911	11,147	23,650
Depreciation of property, plant and				
equipment	62,162	44,497	-	106,659
Write-down of inventories	-	13,827	-	13,827
	Leaching <i>US\$'000</i>	Smelting US\$'000	Unallocated US\$'000	Consolidated US\$'000
For the year ended 31 December 2015				
Addition to non-current asset <sup>#</sup>	45,115	128,213	_	173,328
Interest income*	20	2,123	826	2,969
Finance cost	11,993	4,853	3,183	20,029
Finance income earned under finance				
leases to a fellow subsidiary	729	_	-	729
Gain arising on change in fair value of				
derivatives	-	1,414	-	1,414
Income tax expense/(credit)	4,129	(46,341)	4,160	(38,052)
Depreciation of property, plant and				
equipment	56,760	63,485	-	120,245
Losses on impairment of property,				
plant and equipment	45,571	297,666	-	343,237
Write-down of inventories	395	2,250	-	2,645

\* Unallocated interest income represents interest income earned from bank balances of the Holding Companies.

# Excluding financial instruments and deferred tax assets.

## 6. SEGMENT INFORMATION (Continued)

#### **Revenue from major products**

The Group's revenue from its major products is set out in note 5.

#### **Geographical information**

The Group's operation is mainly in Zambia and US\$822,436,000 (2015: US\$814,095,000) and US\$108,986,000 (2015: US\$116,778,000) of its non-current assets (other than financial instruments and deferred tax assets) are in Zambia and DRC, respectively, by location of assets.

The Group's revenue from external customers by their geographical locations which are based on the destination of shipments is detailed below:

	2016	2015
	US\$'000	US\$'000
PRC	891,101	772,940
Hong Kong	173,054	-
Australia	-	202,176
Switzerland	136,696	94,769
Singapore	15,781	57,550
Africa	27,226	17,227
Luxemburg	69,433	44,502
	1,313,291	1,189,164

#### Information about major customers

Revenue from customers individually contributing over 10% of the total revenue of the Group are as follows:

	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
Customer A – Leaching – Smelting	221,534 669,567	208,297 564,829
Customer B – Smelting	173,054	201,990

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## 7. OTHER INCOME

	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
Interest income	1,484	2,969
Government grant	3,372	8,709
Net income earned under finance leases to fellow subsidiaries	1,229	729
Net income from sale of spare parts and other materials	559	192
Others	628	456
	7,272	13,055

## 8. FINANCE COSTS

	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
Interest on bank and other borrowings	35,701	24,576
Unwinding of the discount (Note 30)	524	352
	36,225	24,928
Less: Amounts capitalised in the cost of qualifying assets	(13,814)	(4,899)
	22,411	20,029
The weighted average capitalisation rate used to determine the amount of borrowing costs arose on general borrowing pool eligible for capitalisation (per annum)	3.49%	2.23%

### 9. OTHER EXPENSES

	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
Expense on suspension of production (Note)	32,608	_
Penalty arising from tax audit	3,837	_
Others	7,670	
	44,115	_

*Note:* The amount represented the operating expenses, including depreciation of property, plant and equipment, incurred during the year in relation to the Baluba Center Mine of CNMC Luanshya Copper Mines PLC ("**Luanshya**"), which has been suspended as a result of the force majeure event that Zambia has reduced the power supply.

## 10. OTHER GAINS AND LOSSES

	2016 US\$'000	2015 US\$'000
Foreign exchange gains (losses), net*	3,440	(54,245)
Loss on disposal of property, plant and equipment, net	(3,152)	(104)
Loss on impairment of trade receivables	(2,325)	_
Losses on impairment of property, plant and equipment (Note 16)	_	(343,237)
Gain arising on change in fair value of derivatives	5,097	1,414
Others	-	(9,395)
	3,060	(405,567)

\* The amount included exchange gains arose from the retranslation of Value Added Tax ("**VAT**") receivables denominated in Zambia Kwacha ("**ZMK**") to US\$ amounting to US\$5,667,000 during the current year (2015: US\$48,801,000 (losses)).

## 11. INCOME TAX EXPENSE (CREDIT)

Income tax expense (credit) recognised in profit or loss:

	2016	2015
	US\$'000	US\$'000
Current tax:		
– Income Tax in Zambia	9,914	13,105
– Income Tax in DRC	9,268	4,085
– Income Tax in Ireland	1,928	2,250
	21,110	19,440
Deferred tax (Note 31)		
– Current year	2,540	(148,640)
- Attributable to a change in tax rate	_	91,148
	2,540	(57,492)
Total income tax expense (credit)	23,650	(38,052)

Income Tax in The Republic of Ireland ("**Ireland**") is calculated at 12.5% (2015: 12.5%) on the estimated assessable income.

Income Tax in DRC is calculated at 30% (2015: 30%) on the estimated assessable income.

Income Tax in Zambia is calculated at 35% (2015: 35%) on the assessable income, except for that arising from mining activities which is stated as below.

On 23 December 2014, the Parliament of Zambia enacted "An Act to amend the Income Tax Act", effected from 1 January 2015, there were certain amendments to the Income Tax Act that include, inter alia, to change the applicable tax rates on the assessable income from mineral processing and mining operations to 30% and 0%, respectively. On 14 August 2015, the Parliament of Zambia enacted Income Tax (Amendment) Act, 2015 ("**New Tax Amendment**") with effect from 1 July 2015. According to the New Tax Amendment, the applicable tax rate on assessable income from mineral processing is increased from 30% to 35%, whereas the applicable tax rate on income from mining operation is increased from 0% to 1) 30% where the assessable income does not exceed 8% of gross sales; 2) variable tax rate up to 15% plus 30% where the assessable income exceed 8% of gross sales.

## 11. INCOME TAX EXPENSE (CREDIT) (Continued)

Accordingly, from 1 January 2015 to 30 June 2015, the applicable tax rate on the assessable income from leaching and smelting operation of Sino-metals Leach Zambia Limited ("**SML**") and Chambishi Copper Smelter Limited ("**CCS**"), respectively, is 30% whereas the applicable tax rate on the assessable income from the mining operations of NFC Africa Mining PLC ("**NFCA**") and Luanshya is 0%. From 1 July 2015 to 31 December 2016, the applicable tax rate on the assessable income of CCS and SML is 35%, and the applicable tax rate on the assessable income of NFCA and Luanshya ranges from 30% to 45%.

The Group enjoyed the following income tax incentives:

- CCS is eligible for the tax exemption for the first five profitable years; 50% income tax relief for the next three years thereafter; and 25% of income tax relief for the next two years thereafter. The tax incentives are applicable to the assessable profit generated from the two different phases of production facilities of CCS with different dates of commencement of the tax incentives. One of the phases of production facilities of CCS is under the second year of 50% income tax relief during the current year (2015:50%). The remaining phase of production facilities of CCS is still under the tax holiday during the current year.
- SML was also granted ten-year income tax incentives of zero rate income tax for the first five profitable years; 50% of income tax relief for the next three years thereafter; and 25% of income tax relief for the remaining two years. The applicable tax rate for SML for the year ended 31 December 2016 was 26.25% (2015:17.5%).

Certain dividend income of CNMH from Zambian subsidiaries may be subject to Income Tax in Ireland at 12.5%.

In the opinion of the Company's Zambian counsel, pursuant to the Convention between the Republic of Zambia and Ireland for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with respect to Tax on Income, distribution of dividends to CNMH, a wholly owned subsidiary of the Company and an investment holding company incorporated under the laws of Ireland, from its Zambian subsidiaries is exempt from withholding tax save for instances where CNMH has a permanent establishment in Zambia. The Directors confirm that CNMH has no permanent establishment in Zambia, and therefore are of the view that no provision for withholding tax on the undistributed profit of the Zambian subsidiaries is required to be made for 2015.

According to the new Convention between the Republic of Zambia and Ireland for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with respect to Tax on, which is effective on 1 January 2016, certain dividend paid by a company which is a resident of Zambia to a resident of Ireland may be taxed in Zambia according to tax law of Zambia, but as the beneficial owner of the dividends is a resident of Ireland, the tax so charged shall not exceed 7.5% of the gross amount of the dividends in Zambia.

Certain dividend income of CNMHK from DRC subsidiaries may be subject to Income Tax in DRC at a withholding tax rate of 10%.

## 11. INCOME TAX EXPENSE (CREDIT) (Continued)

At the end of the reporting period, deferred tax liability of US\$28,915,000 (2015: US\$20,311,000) has been provided for temporary differences associated with undistributed earnings of these subsidiaries (see note 31) while the aggregate amount of temporary differences associated with undistributed earnings of subsidiaries for which deferred tax liabilities have not been recognised amounting to US\$ nil (2015: US\$19,391,000).

The income tax credit for the year can be reconciled to the profit (loss) before tax per the consolidated statement of profit or loss and other comprehensive income as follows:

	2016 <i>US\$'000</i>	2015 US\$'000
Profit (loss) before tax	69,097	(351,561)
Tax at Income Tax rate in Ireland		
– for operations at 12.5%	1,928	2,250
Tax at Income Tax rate in DRC		
- for operations at 30%	13,092	5,522
– withholding tax for dividend at 10%	615	-
Tax at Income Tax rate in Zambia		
- for operations at 30%	(13,489)	(131,175)
- for operations at 35%	25,235	20,954
	27,381	(102,449)
Tax effect of expenses not deductible for tax purpose	8,130	6,706
Withholding tax on undistributed earnings	8,604	1,910
Tax effect of tax losses not recognised	-	4,164
Effect of deferred taxation of deductible temporary differences		
not recognised	4,028	_
Effect of tax incentives granted to the Group	(23,880)	(20,829)
Recognised deferred taxation of tax losses previously not recognised	-	(2,710)
Utilisation of tax losses previously not recognised	(613)	-
Recognised deferred taxation of deductible temporary differences		
previously not recognised	-	(15,992)
Effect on deferred taxation due to amendments to Income Tax Act of		
Zambia enacted during the year	_	91,148
Income tax expense (credit) for the year	23,650	(38,052)

## 11. INCOME TAX EXPENSE (CREDIT) (Continued)

#### Other taxes

The Group is also subject to other non-income taxes as below:

The Group is subject to VAT at 16% on purchases and sales in Zambia and DRC whereas VAT is exempted on export, and relevant input VAT paid for purchases supported by valid VAT invoices could be refunded by the ZRA and DRC to the extent total input VAT paid on purchases exceeds total output VAT payable on domestic sales.

On 23 December 2014, the Parliament of Zambia enacted "An Act to amend the Mines and Minerals Development Act, 2008" with effect from 1 January 2015, which included to change a mineral royalty at 20% for open cast mining operations and 8% for underground mining operation of the norm value of the base metals or precious metals produced or recoverable under the license.

On 14 August 2015, the Parliament of Zambia enacted Mines and Minerals Development Act, 2015, effective 1 July 2015, which included, inter alia, to change a mineral royalty at the rate of 9% (20% before amendments) for open cast mining operations and 6% (8% before amendments) for underground mining operation of the norm value of the base metals or precious metals produced or recoverable under the license.

On 7 June 2016, the Parliament of Zambia enacted "An Act to amend the Mines and Minerals Development Act, 2015" with effect from 1 June 2016, which included, to change a mineral royalty at the rate of 4% when the norm price of copper is less than US\$4,500 per tonne, 5% when the norm price of copper is US\$4,500 per tonne or greater but less than US\$6,000 per tonne and 6% when the norm price of copper is US\$6,000 per tonne or greater. The mineral royalty rates are applicable for both open cast mining operations and underground mining operations.

## 12. PROFIT (LOSS) FOR THE YEAR

Profit (loss) for the year has been arrived at after charging (crediting):

	2016 <i>US\$'000</i>	2015 US\$'000
Depreciation of property, plant and equipment	106,659	120,245
Amortisation of mining right	634	
Total depreciation and amortisation	107,293	120,245
Less: capitalised in inventories	95,236	115,345
capitalised in construction in progress	656	1,184
	11,401	3,716
Auditor's remuneration	1,203	1,295
Staff costs (including Directors' remuneration as disclosed in Note 13):		
Salaries, wages and welfare	63,881	74,527
Retirement benefit schemes contributions	6,309	7,918
Total staff costs	70,190	82,445
Less: capitalised in inventories	40,685	59,309
capitalised in construction in progress	3,038	2,990
	26,467	20,146
Cost of inventories recognised as an expense	1,124,198	1,063,555
Donations	169	310
Minimum lease payments in respect of		
– Land and buildings	6,219	6,243
<ul> <li>Machinery and equipment</li> </ul>	11	12

## 13. DIRECTORS', CHIEF EXECUTIVE'S AND EMPLOYEES' EMOLUMENTS

#### Directors

Details of the emoluments paid or payable to the Directors are as follows:

			2016		
	_	C	ther emolumen	ts	
		Salaries Discretionary and other performance Fees allowances bonus*	-	Retirement benefit schemes	Total
Name of director	Fees		-	contributions	emoluments
	US\$′000	US\$′000	US\$′000	US\$′000	US\$′000
Executive Directors					
Mr. Xinghu Tao	-	-	-	-	-
Mr. Xingeng Luo	-	30	28	2	60
Mr. Chunlai Wang	-	114	-	10	124
Mr. Wei Fan	-	121	31	7	159
Mr. Kaishou Xie	-	86	75	-	161
	-	351	134	19	504
Non-Executive Director					
Mr. Diyong Yan	_	_	-		
Independent					
Non-executive					
Directors					
Mr. Chuanyao Sun	36	-	-	-	36
Mr. Jingwei Liu	36	-	-	-	36
Mr. Huanfei Guan	36	-	-	-	36
	108	-	-	-	108
Total					612

## 13. DIRECTORS', CHIEF EXECUTIVE'S AND EMPLOYEES' EMOLUMENTS (Continued)

#### **Directors (Continued)**

			2015		
	_	C	ther emoluments	i	
				Retirement	
		Salaries	Discretionary	benefit	
		and other	performance	schemes	Tota
Name of director	Fees	allowances	bonus*	contributions	emoluments
	US\$′000	US\$′000	US\$′000	US\$'000	US\$'000
Executive Directors					
Mr. Xinghu Tao	_	_	_	_	-
Mr. Xingeng Luo	_	136	18	16	170
Mr. Chunlai Wang	_	209	_	16	225
Mr. Xinguo Yang (i)	_	91	67	9	167
Mr. Wei Fan <i>(ii)</i>	_	28	_	4	32
Mr. Kaishou Xie		95	47	_	142
	-	559	132	45	736
Non-Executive Director					
Mr. Tao Luo <i>(iii)</i>	_	_	_	_	-
Mr. Diyong Yan <i>(iv)</i>	_	_	_	_	-
	-	_	_	_	-
Independent					
Non-executive Directors					
Mr. Chuanyao Sun	39	_	_	_	39
Mr. Jingwei Liu	39	_	_	_	39
Mr. Huanfei Guan	39	_	-	_	39
	117	_	_	_	117
Total					853

## 13. DIRECTORS', CHIEF EXECUTIVE'S AND EMPLOYEES' EMOLUMENTS (Continued)

#### **Directors (Continued)**

- (i) Mr. Xinguo Yang was resigned as executive director of the Company with effect from 28 July 2015.
- (ii) Mr. Wei Fan was appointed as executive director of the Company with effect from 28 July 2015.
- (iii) Mr. Tao Luo was resigned from the post of the chairman of the Board and non-executive director of the Company, effective 20 April 2015.
- (iv) Mr. Diyong Yan was appointed as non-executive director of the Company with effect from 20 April 2015.
- \* Certain executive directors of the Company are entitled to bonus payments which are determined based on operation results of the subsidiary for which the director is in charge.

The executive directors' emoluments shown above were mainly for their services in connection with the management of the affairs of the Company and the Group.

The independent non-executive directors' emoluments shown above were mainly for their services as directors of the Company.

No Directors waived any emoluments in the year ended 31 December 2016 (2015: Nil).

Mr. Xinghu Tao, the chairman of the Board and the President of the Company, assumes the role as a chief executive and his emoluments for services rendered by him to the Group have been borne by CNMC.

Mr. Xingeng Luo has resigned from general manager of one of the subsidiaries of the Group and assumed a role in CNMC from April 2016. His emoluments for services rendered by him to the Group have been borne by CNMC from then on.

## 13. DIRECTORS', CHIEF EXECUTIVE'S AND EMPLOYEES' EMOLUMENTS (Continued)

#### Employees

Of the five individuals with the highest emoluments in the Group, two (2015: two) were Directors whose emoluments are included in the disclosure above. The emoluments of the remaining three (2015: three) individuals were as follows:

	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
Salaries, other allowances and bonus	277	412
Discretionary performance bonus	187	138
Retirement benefit schemes contributions	16	34
	480	584

The emoluments of the above employees were within the following bands:

	2016	2015
	Number of	employees
HK\$1,500,001 to HK\$2,000,000	_	2
HK\$1,000,001 to HK\$1,500,000	5	3

### 14. DIVIDENDS

	2016 US\$'000	2015 <i>US\$'000</i>
Dividends recognised as distribution during the year: 2014 Final, paid – US¢0.28 per share	-	9,874

No dividend was paid, declared or proposed during the year ended 31 December 2016.

## 15. EARNINGS (LOSS) PER SHARE

	2016	2015
Profit (loss) for the year attributable to owners of the Company		
for the purpose of basic earnings per share (in US\$'000)	11,832	(279,902)

During the years ended 31 December 2016 and 2015, there was no potential ordinary share outstanding. Accordingly, no diluted earnings per share is presented.

## 16. PROPERTY, PLANT AND EQUIPMENT

			Machinery			
	Mining	Land and	and	Motor	Construction	
	properties	buildings	equipment	vehicles	in progress	Total
	US'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
Cost						
At 1 January 2015	383,798	382,915	659,074	59,003	239,626	1,724,416
Additions	10,441	802	17,716	5,173	128,196	162,328
Transfer from construction in progress	16,399	25,271	10,120	-	(51,790)	-
Disposals	-	_	(1,037)	(761)	-	(1,798)
At 31 December 2015	410,638	408,988	685,873	63,415	316,032	1,884,946
Additions	7,353	186	8,064	3,830	91,681	111,114
Transfer from construction in progress	32,435	21,643	15,227	-	(69,305)	-
Disposals	_	(5,296)	(12,590)	(10,379)	-	(28,265)
At 31 December 2016	450,426	425,521	696,574	56,866	338,408	1,967,795

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

FOR THE YEAR ENDED 31 DECEMBER 2016

## 16. PROPERTY, PLANT AND EQUIPMENT (Continued)

			Machinery			
	Mining	Land and	and	Motor	Construction	
	properties	buildings	equipment	vehicles	in progress	Total
	US'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
Depreciation and impairment						
At 1 January 2015	(129,803)	(81,080)	(263,610)	(41,626)	-	(516,119)
Depreciation	(21,642)	(20,028)	(70,565)	(8,010)	-	(120,245)
Impairment (Note)	(101,420)	(26,954)	(55,295)	-	(159,568)	(343,237)
Disposals	-	_	404	604	-	1,008
At 31 December 2015	(252,865)	(128,062)	(389,066)	(49,032)	(159,568)	(978,593)
Depreciation	(16,242)	(22,137)	(61,916)	(6,364)	-	(106,659)
Disposals	-	3,388	11,158	7,998	_	22,544
At 31 December 2016	(269,107)	(146,811)	(439,824)	(47,398)	(159,568)	(1,062,708)
Carrying amounts						
At 31 December 2016	181,319	278,710	256,750	9,468	178,840	905,087
At 31 December 2015	157,773	280,926	296,807	14,383	156,464	906,353

*Note:* As at 31 December 2016, owing to actual financial performance of the mining related operations below management's expectation set out in prior year, management identified impairment indications for mining properties amounting to US\$181,319,000 and construction in progress amounting to US\$178,840,000. Management performed an impairment assessment at 31 December 2016 on each of the associated CGUs to which these assets were allocated to, and determined that no impairment charge was required in 2016.

As at 31 December 2016, the recoverable amounts of the Group's mining properties and construction in progress along with the associated plant and equipment are determined based on the relevant CGU's future cash flow expected to be derived and represent each CGU's fair value less cost of disposal. The post-tax cash flows were determined based on cash flow projections which incorporate management's best estimates of latest mine reserves based on the most recent reserve report, future copper prices, production cost, capital expenditures and discount rates.

As a result of impairment assessment as at 31 December 2016, the Directors determined there was no further impairment to any CGUs.

## 16. PROPERTY, PLANT AND EQUIPMENT (Continued)

#### Note: (Continued)

As at 31 December 2015, due to declining copper price, the Group assessed the recoverable amount of each CGU using the same approach as above. The significant estimation and inputs used in calculating the CGU's cash flows included future copper price as summarised below, a discount rate of 11.52%, an applicable tax rate of 30% on the assessable income from mining operations, a mineral royalty at the rate of 9% for open cast mining operations and 6% for underground mining operation of the norm value (the change in tax rate and mineral royalty was discussed in note 11), and mine reserves based on the most recent reserve report.

	2016–2020		Long term
	2016 <i>US\$</i>	Average US\$	average US\$
Copper price (per ton)	5,269	5,620	6,939

Future copper price with reference to the market estimation taken into account the historical fluctuation.

When the recoverable amount of the CGU is less than the carrying amount of the unit, the impairment loss is allocated on a pro-rata basis to the relevant non-current assets of the CGU based on the carrying amounts.

Based on impairment assessment on the CGUs as at 31 December 2015, the Directors concluded that the following properties has estimated recoverable amount below their carrying amounts and impairment provision were required:

	2015							
		Impairment provision						
			Machinery					
	Mining	Land and	and	Construction		Recoverable		
	properties	buildings	equipment	in progress	Total	amount		
	US\$'000	US\$'000	US\$′000	US\$'000	US\$'000	US\$'000		
NFCA	86,247	16,961	34,890	159,568	297,666	183,233		
Luanshya	15,173	9,993	20,405	_	45,571	367,297		
	101,420	26,954	55,295	159,568	343,237	550,530		

## 16. PROPERTY, PLANT AND EQUIPMENT (Continued)

#### Note: (Continued)

The losses on impairment of mining properties of NFCA and Luanshya have been included in profit or loss in the "Other gains and losses" line item.

The key estimation of recoverable amount is most sensitive to copper price. It is estimated that a negative 5% change for the future copper price, while holding all other assumptions constant, would lead to the recognition of additional impairment provision as follows:

	2015 <i>US\$ '000</i>
NFCA	103,895
Luanshya	62,465
	166,360

The Group is in the process of obtaining land ownership certificates for certain parcels of its land for its tailing storage facility with a carrying amount of US\$581,000 as at 31 December 2016 (2015: US\$618,000), which in the opinion of the Directors, are not crucial to the operations of the Group.

### 17. MINING RIGHT

On 20 November 2015, the Group acquired 95% equity interest in Sylver Back Resources SARL ("**SBR**") at a consideration of US\$11,000,000 and the remaining 5% equity interest in SBR is attributed to the Democratic Republic of the Congo who has no obligation to invest, but shares 5% of profit of SBR. SBR is a company engaging on exploration and mining of copper in DRC. SBR held a mining right for copper in DRC and had not commenced any business at the date of acquisition. As a result, the transaction was accounted for acquisition of assets through acquisition of a subsidiary.

The asset acquired is as follows:

	Mining Right
	US\$ '000
Cost	
At 31 December 2015 and <b>2016</b>	11,000
Amortisation	
Addition	(634)
At 31 December 2016	(634)
Carrying amount	
At 31 December 2015	11,000
At 31 December 2016	10,366

The maturity of the mining rights is 30 years. The cost of the mining right is amortised on a UOP basis over the total estimated remaining commercial reserves.

## **18. INTEREST IN AN ASSOCIATE**

As at 31 December 2016 and 2015, the amount represents the Group's share of net assets of the associate, being the Group's cost of investment. During the year ended 31 December 2016 and 2015, the associate was involved in trading of copper ores in DRC resulting in insignificant profit.

Details of the associate of the Group as at the end of the reporting period are set out below:

	Place/Country of operations and date	Equity interest/ voting power attributable Issued and fully to the Company paid-up as at 31 December			
Name of company	of incorporation	ordinary capital	2016 %	2015 %	Principal activities
Huachin Minerals SARL	DRC 27 January 2012	US\$5,000,000	20.33	20.33	Mining, exploration and sale of copper ores

As the Group's interest in the associate is not significant, no further financial information of the associate is presented.

## **19. FINANCE LEASE RECEIVABLES**

The Group had purchased certain machinery and equipment which were leased out under finance leases to fellow subsidiaries. All interest rates inherent in the leases are fixed at the contract date over the lease terms.

	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
Analysed as:		
Current	2,447	6,661
Non-current	1,089	1,024
	3,536	7,685

## **19. FINANCE LEASE RECEIVABLES (Continued)**

	Minimu lease payn		Present va minimum lease	
	2016		2016	
	US\$'000	2015 <i>US\$'000</i>	US\$'000	2015 <i>US\$'000</i>
	03\$ 000	05\$ 000	03\$ 000	000 000
Finance lease receivables comprise:				
Within one year	2,635	6,701	2,447	6,661
In more than one year but not more				
than two years	857	1,265	789	1,024
In more than two years but not more				
than five years	320	_	300	
	3,812	7,966	3,536	7,685
Less: Unearned finance income	(276)	(281)	N/A	N/A
Present value of minimum lease payment				
receivables	3,536	7,685	3,536	7,685

During the year ended 31 December 2016, effective interest rates of the above finance leases range from 5.6% to 9.2% per annum (2015: 5.6% to 6.1% per annum).

In the event of default by the lessee, the Group has the right to sell the lease assets.

At the end of the lease term, the lease assets will be transferred to the fellow subsidiaries at nil consideration.

## **20. INVENTORIES**

	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
Raw materials	200,182	154,398
Spare parts and consumables	76,019	84,713
Work in progress	32,504	53,539
Finished goods	8,119	13,730
	316,824	306,380

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

FOR THE YEAR ENDED 31 DECEMBER 2016

### 21. TRADE RECEIVABLES

	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
Trade receivables	227,146	115,908
Less: Allowance of doubtful debts	(2,921)	(596)
	224,225	115,312

The following is an aged analysis of trade receivables, presented based on invoice dates, net of allowance for doubtful debts:

	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
0 to 30 days	183,925	92,779
31 to 90 days	29,160	19,221
91 to 180 days	6,726	60
181 to 365 days	3,410	55
1–2 years	1,004	3,197
	224,225	115,312

The Group sells blister copper and copper cathodes under provisional pricing arrangements where final grades of copper, gold and silver in copper products are agreed based on third-party examination and final prices are set at a specified date based on market prices. Revenues are recognised when the significant risks and rewards of ownership pass to the customer using past history of grades of copper, gold and silver in copper products based on internal examination statistics and forward prices for the expected date of final settlement.

Provisionally priced sales arrangements have the character of commodity derivatives which are included in the Group's trade receivables amounting to US\$27,024,000 (an asset) as at 31 December 2016 (2015: US\$4,815,000 (a liability)) and changes in fair value are recognised in profit or loss.

## 21. TRADE RECEIVABLES (Continued)

Age of receivables that are past due but not impaired is analysed as follows:

	2016	2015
	US\$'000	US\$′000
Overdue by:		
0 to 30 days	155,632	90,475
31 to 90 days	28,356	19,617
91 to 180 days	6,098	-
181 to 365 days	3,659	_
1–2 years	1,004	2,754
	194,749	112,846

The Group does not hold any collateral or other credit enhancements over these balances nor does it have a legal right of offset against any amounts owed by the Group to the counterparty.

The Group normally requires prepayments from customers before goods dispatch with the remainder to be settled not exceeding one month upon issuance of sales invoice. Allowances for doubtful debts are recognised against trade receivables based on estimated irrecoverable amounts determined by reference to past default experience of the counterparty and an analysis of the counterparty's current financial position.

Included in the Group's trade receivables are balances with the following related parties:

	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
Fellow subsidiaries	141,494	70.642
Subsidiaries of a non-controlling shareholder of a subsidiary	49,690	70,642 35,200
	191,184	105,842

The above balances with related parties are unsecured, interest-free and are repayable according to the relevant sales contracts.

## 21. TRADE RECEIVABLES (Continued)

In determining the recoverability of a trade receivable, the Directors consider any change in the credit quality of the trade receivable from the date credit was initially granted up to the end of the reporting period.

In the opinion of the Directors, the Group has concentration of credit risk because 86% (2015: 92%) of the trade receivables was due from the Group's two (2015: two) largest customers.

These two (2015: two) largest customers accounted for 81% (2015: 82%) of the Group's sales and are large and reputable in the market. They have been trading with the Group with good settlement history.

The movements in the allowance for doubtful debts during the year are as follows:

	2016	2015
	US\$'000	US\$'000
At beginning of the reporting period	596	1 6 2 2
At beginning of the reporting period		1,622
Impairment loss recognised receivables	2,921	-
Impairment loss reversed	(596)	-
Amounts written off as uncollectible	-	(1,026)
	2,921	596

## 22. PREPAYMENTS, OTHER RECEIVABLES AND OTHER ASSETS

	2016 <i>US\$'000</i>	2015 US\$'000
Non-current:		
Deposits for property, plant and equipment	946	1,335
Contributions to Environment Protection Fund (Note 30)	2,139	2,139
Premium for electricity supply (Notes (a) (b))	10,741	7,903
	13,826	11,377
Current:		
Prepayments for inventories and others	18,331	33,724
VAT recoverable (Note (c))	108,685	64,793
Deposits in futures margin accounts	29,915	7,680
Other receivables	6,647	4,777
	163,578	110,974

Notes:

(a) Pursuant to a power supply agreement (the "Luanshya Power Supply Agreement") and a connection agreement (the "Luanshya Connection Agreement") entered into between a subsidiary of the Group, Luanshya, and a power supply company, Copperbelt Energy Corporation Plc ("Copperbelt Energy"), in Zambia, Luanshya undertook to construct certain power supply network assets (the "Luanshya Network Assets") to enable Copperbelt Energy to supply the electricity to the mining/leaching project of Luanshya in Muliashi, Copperbelt Province of Zambia. According to the Luanshya Connection Agreement, Luanshya shall transfer the Luanshya Network Assets to Copperbelt Energy upon the completion of the construction for a consideration of US\$3,725,000 payable by Copperbelt Energy to Luanshya within the seventh anniversary from the date of transfer, subject to Luanshya's fulfillment of consumption of electricity prescribed in the Luanshya Connection Agreement.

The total construction cost of the Luanshya Network Assets is US\$9,442,000 and the construction of the Luanshya Network Assets completed in March 2012.

The Directors consider that the construction costs for the Luanshya Network Assets are, in substance, premium for electricity supply that will be amortised over the tenure of the Luanshya Power Supply Agreement (expiring in January 2025) upon the commencement of electricity consumption by Luanshya. The consideration of US\$3,725,000 has been collected in 2016. During the year ended 31 December 2016, premium for electricity supply released to profit or loss is amounting to US\$440,000 (2015: US\$440,000).

## 22. PREPAYMENTS, OTHER RECEIVABLES AND OTHER ASSETS (Continued)

Notes: (Continued)

(b) Pursuant to a connection agreement (the "NFCA Connection Agreement") entered into between a subsidiary of the Group, NFCA and Copperbelt Energy, NFCA undertook to construct certain power supply network assets (the "NFCA Network Assets") to enable Copperbelt Energy to supply the electricity to the Chambishi Southeast Mine Project, a new mining and metallurgical project to expand NFCA's operations at Chambishi, Copperbelt Province of Zambia. According to the NFCA Connection Agreement, NFCA shall transfer the NFCA Network Assets to Copperbelt Energy on the date which Copperbelt Energy issues a Taking-Over Certificate. A consideration of US\$4,695,000 will be paid by Copperbelt Energy to NFCA within the seventh anniversary from the date of transfer, subject to NFCA's fulfillment of consumption of electricity prescribed in the NFCA Connection Agreement.

The construction is still in progress and the cost of the NFCA Network Assets is US\$7,003,000 as at 31 December of 2016.

The Directors consider that the construction costs for the NFCA Network Assets are, in substance, premium for electricity supply that will be amortised over the estimated useful life of the NFCA Network Assets upon the commencement of electricity consumption by NFCA.

(c) In the opinion of the Directors, the VAT will be recoverable within one year after the end of the reporting period.

Included in the Group's prepayments and other receivables and other assets are balances with the following related parties:

	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
CNMC	41	41
Fellow subsidiaries	6,510	2,599
A subsidiary of a non-controlling shareholder of a subsidiary	6,898	15,544
An associate	-	1,610
	13,449	19,794

The above balances with related parties are unsecured, interest-free and are repayable on demand.

## 23. BANK DEPOSITS AND RESTRICTED BANK BALANCES/BANK BALANCES AND CASH

#### (i) Restricted bank balances

The Group's restricted bank balances are analysed as follows:

	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
Non-current restricted bank deposits for the banks' letters of		
guarantee to secure future restoration costs as required by		
the government of Zambia (Note 30)	6,027	6,482
Current restricted bank deposits for:		
– Custom clearance	460	460
– Issuing letters of credit	640	5,686
	7,127	12,628

The restricted bank balances carry interest at rates ranging from 0.1% to 1.2% (2015: 0.1% to 3.1%) per annum.

#### (ii) Bank deposits

The bank deposits of US\$38,000,000 (2015: US\$69,357,000) are with initial maturity of more than three months and carry interest at rates ranging from 1.4% to 3.0% (2015: 0.25% to 3.3%) per annum.

#### (iii) Bank balances and cash

Bank balances carry interest at market rates ranging from 0.1% to 0.3% (2015: 0.1% to 0.3%) per annum.

## 24. TRADE PAYABLES

The following is an aged analysis of trade payables, presented based on the invoice dates:

	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
0 to 30 days	51,855	91,006
31 to 90 days	58,740	16,012
91 to 180 days	79,213	20,687
181 to 365 days	53,360	11,494
1–2 years	21,263	18,937
2–3 years	11,554	
	275,985	158,136

The average credit period on purchases of certain goods is within 3 months and most payables are paid within the credit time frame.

The Group purchases copper concentrates under provisional pricing arrangements where final grades of copper, gold and silver in copper products are agreed based on third-party examination and final prices are set at the quotation period based on prevailing spot prices. According to industry practice, the purchase terms of metal in these contracts contain provisional pricing arrangements pursuant to which the purchase prices for metal in concentrate are based on prevailing spot prices at a specified future period after shipment by suppliers (the "**quotation period**"). Adjustments to the purchase price occur based on movements in quoted market prices up to the date of final settlement. The period between provisional invoicing and final settlement is within three months. Accordingly, for accounting purposes, the provisional price arrangement is required to be separated from the host contract for purchase of metal in concentrate once the significant risks and rewards of ownership has been transferred to the Group. The host contract is the purchase of metal in concentrate and the embedded derivative is the forward contract for which the provisional price is subsequently adjusted. The adjustment is re-estimated in trade payables on the consolidated financial position and changes in fair value are recognised in profit or loss. In all cases, fair value is estimated by reference to forward market price.

## 24. TRADE PAYABLES (Continued)

Provisionally priced purchase arrangements have the character of commodity derivatives which are included in the Group's trade payables amounting to US\$21,261,000 (a liability) as at 31 December 2016 (2015: US\$3,969,000 (an asset)) and changes in fair value are recognised in profit or loss.

Included in the Group's trade payables are balances with the following related parties:

	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
Fellow subsidiaries	63,453	38,096

The above balances with related parties are unsecured, interest-free and are repayable within the 3 months.

## 25. OTHER PAYABLES AND ACCRUED EXPENSES

	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
	2 276	F 222
Receipts in advance from customers	2,276	5,223
Payables for properties, plant and equipment	4,470	8,900
Dividend payable to shareholders	-	7,358
Dividend payable to non-controlling interests	_	12,000
Other tax payables	1,981	13,595
Accrued and other payables (note)	25,158	25,005
	33,885	72,081

*Note:* As at 31 December 2016, the Group was the defendant for various claims involving alleged unfair/unlawful termination or breach of employment contracts, wrongful calculation of wages/benefits and compensation for injuries. Accordingly, the Group has made relevant provision for the potential liabilities of US\$300,000 (2015: US\$300,000) which the Directors opined is adequate based on the present assessments by the Group's legal advisers.

Included in the Group's other payables and accrued expenses are balances with the following related parties:

	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
CNMC	1,600	1,888
Fellow subsidiaries	3,610	4,133
A non-controlling shareholder of a subsidiary	1,729	2,877
Dividend payable to non-controlling shareholders of subsidiaries	-	12,000
An associate	2,413	2,143
	9,082	23,041

The above balances with related parties are unsecured, interest-free and are repayable on demand.

## 26. BANK AND OTHER BORROWINGS

	Notes	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
			4 000 700
Bank borrowings, unsecured	(a)	857,410	1,030,790
Loan from a non-controlling shareholder of a subsidiary,			
unsecured	(b)	-	22,605
Loan from CNMC, unsecured	(c)	1,077	1,077
Loan from a fellow subsidiary, unsecured	(d)	300,000	
		1,158,487	1,054,472
Carrying amount repayable:*			
Within one year		58,000	292,505
More than one year, but not exceeding two years		572,077	48,000
More than two year, but not exceeding five years		528,410	643,967
		526,410	045,907
		1,158,487	984,472
The carrying amount of bank borrowings that are			
repayable on demand due to breach of loan			
covenants (shown under current liabilities)	(e)	_	70,000
		1,158,487	1,054,472
Less: Amounts shown under current liabilities		(58,000)	(362,505)
Non-current portion		1,100,487	691,967

\* The amounts due are based on scheduled repayment dates set out in the loan agreements.

## 26. BANK AND OTHER BORROWINGS (Continued)

Notes:

- (a) As at 31 December 2016, the unsecured bank loans comprised the following:
  - Bank loans of US\$627,410,000 (2015: US\$648,790,000) with corporate guarantees issued by CNMC in favor of the relevant banks.
  - Bank loans of US\$80,000,000 (2015: US\$80,000,000) with joint corporate guarantees issued by both CNMC and a non-controlling shareholder of a subsidiary in favor of the relevant banks.
  - Bank loans of nil (2015: US\$60,000,000) with corporate guarantees issued by a non-controlling shareholder of a subsidiary in favor of the relevant banks.
  - Unguaranteed bank loans of US\$150,000,000 (2015: US\$242,000,000).

The aforesaid bank loans as at 31 December 2016 bore interest at rates varied based on LIBOR ranging from 2.1% to 4.2% per annum (2015: 1.1% to 3.4% per annum).

- (b) The loan from a non-controlling shareholder of a subsidiary of nil (2015: US\$22,605,000) bore interest at a fixed rate of 8.0% and was repaid in May 2016.
- (c) The loan from CNMC of US\$1,077,000 bore interest at rate varies based on benchmark interest rate published by The People's Bank of China of 3.3% per annum (2015: 3.7%).
- (d) The loan from a fellow subsidiary of US\$300,000,000 bore interest at a fixed rate of 4.0% per annum (2015: nil).
- (e) In respect of bank loans with a carrying amount of US\$70,000,000 as at 31 December 2015, the Group could not meet the certain term of the bank loan, which was primarily related to consolidated tangible net worth. All the loans were repaid in 2016.

## 27. DERIVATIVES

	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
Copper futures contracts, at fair value	(8,233)	(182)

Details of the above futures contracts are analysed as follows:

	At December 31	
	2016	2015
Number of contracts		
– Sell	571	56
Notional amount (in US\$'000)	70,698	6,412
Exercise price (in US\$)	5,524–5,531	4,710
Maturity date	11 January 2017	2 March 2016
	–10 February 2017	

During the year, the Group entered into certain copper futures contracts to hedge its risk associated with the prices of its blister copper sold and recognised a loss of US\$6,291,000 (2015: a gain of US\$1,414,000) arising on change in fair value of derivatives in the profit or loss.

# Financial assets and financial liabilities subject to offsetting, enforceable master netting arrangements and similar agreements

The disclosures set out in the tables below include financial assets and financial liabilities that are subject to an enforceable master netting arrangement and similar agreement that covers similar financial instruments, irrespective of whether they are offset in the consolidated statement of financial position.

The Group recognised for the derivative financial assets and liabilities in respect of copper futures contracts do not meet the criteria for offsetting in the Group's statement of financial position since the right of set-off of the recognised amounts is only enforceable upon an event of default.

## 27. DERIVATIVES (Continued)

Financial assets and financial liabilities subject to offsetting, enforceable master netting arrangements and similar agreements (Continued)

Financial assets subject to offsetting, enforceable master netting arrangements and similar agreements

	Gross amounts recognised of financial assets		Gross amounts of recognised financial liabilities set off in the consolidated statement of financial position		Net amounts of financial assets presented in the consolidated statement of financial position	
	31 Dece	ember	31 December		31 December	
	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>	2016 <i>US\$'000</i>	2015 US\$000	2016 <i>US\$'000</i>	2015 US\$′000
Deposits in futures margin accounts	29,915	7,680	-	-	29,915	7,680

Net financial assets subject to enforceable master netting arrangements and similar agreements, by counterparty

		Related amo Net amount of set off in the consolic financial assets of the financia				ent			
	presentec consolidated of financial	statement	Financial derivative liability		ivative collateral		Net amount		
	31 Dece	mber	31 Decer	31 December 31 Dec		31 December		31 December	
	2016 US\$'000	2015 US\$'000	2016 US\$'000	2015 US\$000	2016 US\$'000	2015 US\$'000	2016 US\$′000	2015 US\$'000	
Counterparty A	29,915	7,680	(8,233)	(182)	-	_	21,682	7,498	

## 27. DERIVATIVES (Continued)

Financial assets and financial liabilities subject to offsetting, enforceable master netting arrangements and similar agreements (Continued)

Financial liabilities subject to offsetting, enforceable master netting arrangements and similar agreements

	Gross amounts recognised of financial liabilities		Gross amounts of recognised financial assets set off in the consolidated statement of financial position		Net amounts of financial liabilities presented in the consolidated statement of financial position	
	31 Dece	mber	31 December		31 December	
	2016 US\$'000	2015 US\$'000	2016 US\$′000	2015 US\$'000	2016 US\$'000	2015 US\$'000
Derivatives in respect of copper futures contracts	(8,233)	(182)	_	_	(8,233)	(182)

Net financial liabilities subject to enforceable master netting arrangements and similar agreements, by counterparty

	Net amo financial li		Related amounts not set off in the consolidated statement of the financial position						
	presented consolidated of financia	statement	Finan deriva asse	tive	Cas collat plede	eral	Ne amo		
	31 Dece	31 December		31 December		31 December		31 December	
	2016 US\$'000	2015 US\$'000	2016 US\$'000	2015 US\$000	2016 US\$'000	2015 US\$'000	2016 US\$'000	2015 US\$'000	
Counterparty A	(8,233)	(182)	-	_	8,233	182	-	_	

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

FOR THE YEAR ENDED 31 DECEMBER 2016

## 28. SHARE CAPITAL

	Number of	shares	Share ca	pital
	<b>2016</b> 2015		2016	2015
	<b>'000</b>	<i>'</i> 000	HK\$'000	HK\$′000
Issued and fully paid:				
At beginning and end of the year ordinary				
shares with no par value	3,489,036	3,489,036	4,775,319	4,775,319
			US\$'000	US\$′000
Presented in the consolidated financial				
statements as			613,233	613,233

### 29. DEFERRED INCOME

	2016 <i>US\$'000</i>	2015 US\$'000
Balance at beginning of year	18,547	26,851
Additions to the grants during the year	-	142
Recognised in profit or loss during the year	(2,729)	(8,446)
Balance at end of year	15,818	18,547

The above balances represented grants from Ministry of Finance of the PRC to subsidise the Group's capital expenditure and interest incurred in its copper mines development activities in Zambia which were capitalised under mining properties. These grants are recognised in profit or loss on a systematic and rational basis over the useful lives of the related assets.

# 30. PROVISION FOR RESTORATION, REHABILITATION AND ENVIRONMENTAL COSTS

	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
Balance at beginning of year	20,544	20,831
Provisions reversed	(1,205)	(639)
Unwinding of discount (Note 8)	524	352
Balance at end of year	19,863	20,544

The Group's provision for restoration, rehabilitation and environmental costs is related to the Group's subsidiaries in Zambia which are involved in mining, leaching and smelting operations. The provision represents the accrued cost required to provide adequate restoration and rehabilitation measured by qualified professionals in Zambia, as discounted at rates ranging from 2.4% to 3.2% per annum (2015: 2.1% to 3.5% per annum), upon the completion of their operations. These amounts will be settled when rehabilitation is undertaken, generally at the end of a project life, which ranges from 4 to 36 years.

The Group is required, under the prevailing regulations, to make an annual contribution equal to 5% to 20% of the estimated restoration costs into an Environmental Protection Fund which is administrated by the Government of the Republic of Zambia (Note 22). The regulations also require that the balance of the estimated restoration costs be secured using letters of guarantee. All companies in the Group have provided the relevant letters of guarantee as at 31 December 2016 and 2015 (Note 23 (i)), except for SML, which has not received a demand notice at the date of issuance of these consolidated financial statements.

The Directors opined that adequate provision has been made at the end of each reporting period.

### **31. DEFERRED TAXATION**

	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
Deferred tax assets	59,702	55,812
Deferred tax liabilities	(46,499)	(40,069)
	13,203	15,743

The following are the major deferred tax balances recognised and movements thereon during the current and prior years:

	Property, plant and equipment US\$'000	Undistributable profits of subsidiaries US\$'000	<b>Tax losses</b> US\$'000	<b>Total</b> US\$'000
Balance at 1 December 2015	(24,447)	(18,401)	1,099	(41,749)
Charge to profit or loss	134,464	(18,401)	16,086	148,640
Adjustments due to the amendments to the Income Tax Act and charge to profit	131,101	(1,510)	10,000	110,010
or loss (Note 11)	(193,406)	_	102,258	(91,148)
Balance at 31 December 2015	(83,389)	(20,311)	119,443	15,743
Charge to profit or loss	7,816	(8,604)	(1,752)	(2,540)
Balance at 31 December 2016	(75,573)	(28,915)	117,691	13,203

As at 31 December 2016, the Group has unused tax losses of US\$405,589,000 (2015: US\$413,180,000) in respect of the subsidiaries in Zambia and DRC available for offset against future profits. Deferred tax assets in respect of tax losses of US\$391,780,000 (2015: US\$397,620,000) have been recognised in respect of all the losses of these subsidiaries in Zambia and DRC. No deferred tax asset has been recognised in respect of the remaining US\$13,809,000 (2015: US\$15,560,000) due to the unpredictability of future profit streams. Subject to agreement with the relevant tax bureau in Zambia and DRC, the above tax losses of these subsidiaries are available to be carried forward up to a maximum of ten years from the year in which they are incurred for set off against future taxable profits from the same source of those subsidiaries.

## 32. OPERATING LEASE – THE GROUP AS LESSEE

At the end of the reporting period, the Group had commitments for future minimum lease payments under a non-cancellable operating lease in respect of buildings and properties of CNMC and a fellow subsidiary in the PRC and Zambia for general and ancillary purposes which fall due as follows:

	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
Within one year	2,743	5,624
In the second to fifth years inclusive	-	2,743
	2,743	8,367
CAPITAL COMMITMENTS		

2015

#### 2016 US\$'000 US\$'000 Capital expenditure contracted for but not provided for in respect of: - acquisition of property, plant and equipment 251.091 280.548

### 34. CAPITAL MANAGEMENT

The Group manages its capital to ensure that entities in the Group will be able to continue as a going concern while maximizing the return to stakeholders through the optimisation of the debt and equity balance. The Group's overall strategy remains unchanged from prior year.

The capital structure of the Group consists of net debt (which includes bank overdrafts, bank and other borrowings, restricted bank balances, bank balances and cash) and equity attributable to owners of the Company (comprising capital, share premium, other reserves and retained profits).

The Group is not subject to any externally imposed capital requirements.

## 34. CAPITAL MANAGEMENT (Continued)

#### **Gearing ratio**

The Group's management committee reviews the capital structure on a regular basis. As part of this review, the committee considers the cost of capital and the risks associated with each class of capital.

The gearing ratio of the Group at the end of the reporting period was as follows:

	Notes	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
Debts	(a)	1,158,487	1,054,472
Less: Bank deposits, restricted bank balances, bank balances and cash		(730,454)	(642,231)
Net debt		428,033	412,241
Equity	(b)	644,647	632,815
Net debt to equity ratio		66.4%	65.1%

Notes:

(a) Debt comprises non-current and current bank and other borrowings as detailed in note 26.

(b) Equity includes capital and retained profits attributable to owners of the Company.

### **35. FINANCIAL INSTRUMENTS**

#### **Categories of financial instruments**

	2016	2015
	US\$'000	US\$′000
Financial assets		
Loans and receivables	964,217	774,815
Derivatives	27,024	3,969
Financial liabilities		
Amortised costs	1,432,770	1,243,097
Derivatives	29,494	4,997

#### Financial risk management objectives and policies

The Group's major financial instruments include trade and other receivables, bank deposits, restricted bank balances, bank balances and cash, trade and other payables, bank and other borrowings and derivatives. Details of these financial instruments are disclosed in the respective notes. The risks associated with these financial instruments include market risk (currency risk, interest rate risk and price risk), credit risk and liquidity risk. The policies on how to mitigate these risks are set out below. The Directors manage and monitor these exposures to ensure appropriate measures are implemented on a timely and effective manner.

## 35. FINANCIAL INSTRUMENTS (Continued)

#### Financial risk management objectives and policies (Continued)

Market risk

(i) Currency risk

The Group's significant operations are in Zambia and most of its sales and purchases were denominated in US\$, the functional currency of the companies comprising the Group, while certain sales and purchases were settled in currencies (mainly ZMK and Renminbi ("**RMB**")) other than the functional currency of these group entities that expose the Group to foreign currency risk.

The carrying amounts of the Group's ZMK and RMB denominated monetary assets and liabilities which expose the Group the most foreign currency risk are as follows:

	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
ZMK denominated monetary assets	7,527	9,692
ZMK denominated monetary liabilities	(4,243)	(13,650)
RMB denominated monetary assets	13,744	20,202
RMB denominated monetary liabilities	(3,444)	(1,521)

The sensitivity analysis below has been determined based on the exposure to exchange rates of ZMK and RMB against US\$. For a 5%, 10%, 15% weakening of ZMK and RMB against US\$ and all other variables being held constant, there would have no impact on the Group's total equity apart from the retained profits and the effect on the Group's profit after tax are as follows:

## 35. FINANCIAL INSTRUMENTS (Continued)

#### Financial risk management objectives and policies (Continued)

Market risk (Continued)

(i) Currency risk (Continued)

	2016 <i>US\$'000</i> Increase/	2015 <i>US\$'000</i> <b>(Decrease)</b>
ZMK against US\$		
Weakening		
- 5%	(131)	73
- 10%	(262)	147
– 15%	(393)	220
RMB against US\$		
Weakening		
- 5%	(437)	(803)
- 10%	(875)	(1,605)
– 15%	(1,312)	(2,408)

For a 5%, 10%, 15% strengthening of ZMK and RMB against US\$, there would be an equal and opposite impact on the profit after tax.

## 35. FINANCIAL INSTRUMENTS (Continued)

#### Financial risk management objectives and policies (Continued)

Market risk (Continued)

#### (ii) Interest rate risk management

Apart from the fixed rate loan from a fellow subsidiary that expose the Group to fair value interest rate risk, the Group is also exposed to cash flow interest rate risk through the impact of rate changes on interest-bearing financial assets and liabilities, mainly interest-bearing restricted bank balances, bank deposits and balances and bank and other borrowings at variable interest rates. The Group currently does not have an interest rate hedging policy. However, the Directors will consider hedging significant interest rate risk should the need arise.

The sensitivity analysis below has been determined based on the exposure to variable rate bank and other borrowings at the end of each reporting period and assumed that the amount of liabilities outstanding at the end of each reporting period was outstanding for the whole year. The effect on restricted bank balances, bank deposits and bank balances, however, had been ignored as most of them bore interest at minimal rate at the end of each reporting period.

If interest rates on bank and other borrowings had been 100 basis points ("**BPs**") change and all other variables were held constant, there would have no impact on the Group's total equity apart from retained profits and the potential effect on profit after tax is as follows:

	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
Increase (decrease) in profit for the year		
- as the result of increase in interest rate	(5,573)	(9,470)
- as the result of decrease in interest rate	5,573	9,470

## 35. FINANCIAL INSTRUMENTS (Continued)

#### Financial risk management objectives and policies (Continued)

Market risk (Continued)

(iii) Commodity price risk

The Group's commodity price risk is mainly the exposure to fluctuations in the prevailing market price of copper which are the major commodities purchased, produced and sold by the Group. To minimise this risk, the Group enters into copper futures contracts and provisional price arrangement to manage the Group's exposure in relation to forecasted sales of copper products, forecasted purchases of copper concentrates, inventories and firm commitments to sell the Group's copper products.

Financial assets and liabilities of the Group whose fair value change in line with the fluctuations in the prevailing market price of copper mainly comprise copper futures contracts and provisional price arrangements. If all prices of copper futures had been increased by 10% and all other variables were held constant, there would have no impact on the Group's total equity apart from retained profits and the potential effect on profit after tax is as follows:

	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
Increase in profit after tax for the year	14,097	6,476

There would be an equal and opposite impact on the profit after tax for the year where there had been 10% decrease in all prices of copper futures.

## 35. FINANCIAL INSTRUMENTS (Continued)

#### Financial risk management objectives and policies (Continued)

#### Credit risk

The Group's maximum exposure to credit risk in the event of the counterparties failure to perform their obligations at the end of each reporting period in relation to each class of recognised financial assets is the carrying amount of those assets stated in the consolidated statement of financial position.

The Group's credit risk is primarily attributable to its trade and other receivables, and finance lease receivables. In order to minimise the credit risk, the Group's management continuously monitors the level of exposure to ensure that follow-up action is taken to recover overdue debts. In addition, the Group reviews the recoverable amount of each individual debt at the end of each reporting period to ensure that adequate impairment losses are made for irrecoverable amounts. In this regard, the Directors consider that the Group's credit risk is significantly reduced.

The credit risk on restricted bank balances and bank balances is minimal as such amounts are placed in banks with good reputation.

The Group has concentration of credit risk because 85% (2015: 92%) of the trade receivables was due from the Group's two (2015: two) largest customers.

Other than the above, the Group does not have significant concentration of credit risk.

#### Liquidity risk management

The Directors have built an appropriate liquidity risk management framework for the management of the Group's short, medium and long-term funding and liquidity requirements. The Group manages liquidity risk by maintaining banking facilities and by continuously monitoring forecast and actual cash flows and matching the maturity profiles of its financial assets and liabilities.

## 35. FINANCIAL INSTRUMENTS (Continued)

#### Financial risk management objectives and policies (Continued)

Liquidity risk management (Continued)

The following table details the Group's remaining contractual maturity for its financial liabilities. The table has been drawn up to reflect the undiscounted cash flows of non-derivative financial liabilities based on the earliest date on which the Group can be required to pay. The table includes both interest and principal cash flows. The interest payments are computed using contractual rates or if variable, based on the prevailing market rate at the end of each reporting period. For derivatives settled on a net basis, the table has been drawn up based on undiscounted contractual net cash flows.

	Weighted average interest rate %	On demand or less than 6 months US\$'000	Over 6 months but not more than1 year <i>US\$'000</i>	1 to 5 years <i>US\$'000</i>	More than 5 years <i>US\$'000</i>	Total undiscounted cash flows <i>US\$'000</i>	Carrying amounts US\$'000
31 December 2016							
Non-derivative financial liabilities							
Trade and other payables Other borrowings		273,293	-	-	-	273,293	273,293
– fixed rate	4%	6,325	6,000	312,000	_	324,325	300,325
– variable rate	3.33%	24	18	1,096	_	1,138	1,083
Bank borrowings at variable rate	3.17%	18,254	67,059	835,602	-	920,915	858,069
		297,896	73,077	1,148,698	-	1,519,671	1,432,770
Derivative financial liabilities							
<ul> <li>net settlement</li> </ul>							
Copper future contracts		8,233	-	-	-	8,233	8,233
Embedded derivatives		21,261	-	-	-	21,261	21,261
		29,494	-	-	-	29,494	29,494

## 35. FINANCIAL INSTRUMENTS (Continued)

#### Financial risk management objectives and policies (Continued)

Liquidity risk management (Continued)

			Over				
	Weighted	On demand	6 months			Total	
	average	or less than	but not more		More than	undiscounted	Carrying
	interest rate	6 months	than1 year	1 to 5 years	5 years	cash flows	amounts
	%	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
31 December 2015							
Non-derivative financial liabilities							
Trade and other payables		178,620	-	-	-	178,620	178,620
Dividend payables		19,358	-	-	-	19,358	19,358
Other borrowings							
– fixed rate	8%	23,745	-	-	-	23,745	23,126
– variable rate	3.68%	22	17	1,129	-	1,168	1,082
Bank borrowings at variable rate	2.54%	229,781	132,909	732,040	-	1,094,730	1,031,485
		451,526	132,926	733,169	-	1,317,621	1,253,671
Derivative financial liabilities							
– net settlement							
Copper future contracts		182	-	-	-	182	182
Embedded derivatives		4,815	-	-	-	4,815	4,815
		4,997	-	_	-	4,997	4,997

## 35. FINANCIAL INSTRUMENTS (Continued)

#### Financial risk management objectives and policies (Continued)

#### Fair value of financial instruments

The following table provides an analysis of financial instruments that are measured subsequent to initial recognition at fair value, grouped into Levels 1 to 3 based on the degree to which the fair value is observable:

	Level 1 <i>US\$'000</i>	Level 2 <i>US\$'000</i>	Level 3 <i>US\$'000</i>	Total <i>US\$'000</i>
31 December 2016				
Copper future contracts (note)	-	(8,233)	-	(8,233)
Embedded derivatives arising from				
sales under provisional pricing arrangement (note)	_	27,024	_	27,024
Embedded derivatives arising from		277024		27,024
purchases under provisional		<i></i>		<i>.</i>
pricing arrangement (note)	-	(21,261)	-	(21,261)
31 December 2015				
Copper future contracts (note)	-	(182)	-	(182)
Embedded derivatives arising from				
sales under provisional pricing arrangement (note)	_	(4,815)	_	(4,815)
Embedded derivatives arising from		(1,010)		(1,010)
purchases under provisional				
pricing arrangement (note)	_	3,969	_	3,969

*Note:* Calculate using discounted cash flow. Future cash flows are estimated based on the expected redemption amount that are discounted at a rate that reflects the credit risk of the counterparty.

There were no transfers between Level 1 and 2 in the year.

Except as detailed above, the Directors consider that the carrying amounts of financial assets and financial liabilities recorded at amortised cost recognised in the consolidated financial statements approximate their fair values.

## **36. RELATED PARTY TRANSACTIONS**

The Company is ultimately controlled by the PRC government and the Group operates in an economic environment currently predominated by entities controlled, jointly controlled or significantly influenced by the PRC government ("government-related entities").

Other than the transactions and balances with related parties disclosed elsewhere in these consolidated financial statements, during the year, the Group had the following significant transactions with related parties:

#### (1) Transactions with government-related entities

			2016	2015
	Notes	<b>Related parties</b>	US\$′000	US\$'000
Sales of:				
– Blister copper	(i)	Fellow subsidiaries	669,567	564,829
<ul> <li>Copper cathodes</li> </ul>	(i)	Fellow subsidiaries	221,534	208,297
– Other materials	(i)	Fellow subsidiary	401	372
Gain on change in fair value of	(i)	Fellow subsidiaries	36,406	_
embedded derivatives arising				
from sales under provisional				
pricing arrangements				
Services income	(i)	Fellow subsidiary	47	31
Finance income earned under	(i), (ii)	Fellow subsidiaries	1,229	729
finance leases				
Purchases of:				
<ul> <li>Plant and equipment</li> </ul>	(i)	Fellow subsidiaries	(15,779)	(20,534)
– Materials	(i)	Fellow subsidiaries	(85,375)	(47,208)
– Electricity	(i)	Fellow subsidiary	(15,917)	(15,952)
– Services	(i)	Fellow subsidiaries	(49,719)	(43,320)
<ul> <li>Freight and transportation</li> </ul>	(i)	Fellow subsidiaries	(15,621)	(1,258)
Loss on change in fair value of	(i)	Fellow subsidiary	(6,413)	-
embedded derivatives arising				
from purchase under provisional				
pricing arrangements				
Rental expenses	(i)	Fellow subsidiaries	(6,073)	(6,010)
Guarantee fees	(i)	CNMC	(1,652)	(2,696)

(a) Transactions with CNMC and its subsidiaries

## 36. RELATED PARTY TRANSACTIONS (Continued)

#### (1) Transactions with government-related entities (Continued)

(a) Transactions with CNMC and its subsidiaries (Continued)

Notes:

- (i) These transactions were conducted in accordance with terms of the relevant agreements.
- (ii) The finance income earned under finance leases arose from the finance leases to fellow subsidiaries.
   Details of the finance leases are set out in note 19.

In addition to the above, the Group also had the following transactions with CNMC and its subsidiaries:

- CNMC provided guarantees to banks, at nil consideration, for granting unsecured loans to the Group. Further details are set out in note 26.
- On 1 July 2009, a subsidiary of the Company, CCS, entered into an agreement with Fifteen MCC Africa Construction & Trade Ltd. ("Fifteen MCC Africa"), a fellow subsidiary, (the "Fifteen MCC Africa Agreement") pursuant to which that subsidiary agreed to provide certain living quarters to Fifteen MCC Africa on a free of charge basis. Fifteen MCC Africa shall pay for the use of water and electricity and other expenses such as repair and any applicable tax in Zambia. The Fifteen MCC Africa Agreement shall remain for as long as CCS is in existence. As Fifteen MCC Africa provides construction as well as equipment repair and maintenance services to CCS on an ongoing basis, it requires accommodation for its staff based in Zambia.

#### (b) Transactions with other government-related entities

			2016	2015
	Notes	Related parties	US\$′000	US\$′000
Sales of:				
– Blister copper	(i)	Subsidiaries of a non- controlling shareholder of a subsidiary	173,054	201,990
Gain on change in fair value of embedded derivatives arising from sales under provisional pricing agreements	(i)	Subsidiaries of a non- controlling shareholder of a subsidiary	10,879	-
Interest expense	(ii)	A non-controlling shareholder of a subsidiary	(411)	(1,808)

## 36. RELATED PARTY TRANSACTIONS (Continued)

#### (1) Transactions with government-related entities (Continued)

(b) Transactions with other government-related entities (Continued)

Notes:

- (i) These transactions were conducted in accordance with terms of the relevant agreements.
- (ii) The interest expense arose from unsecured loan from a non-controlling shareholder with significant influence over a subsidiary of the Group. Further details of the loans at the end of the reporting period are set out in note 26.

In addition to the above, the Group has entered into various transactions, amongst others, including deposit placements, borrowings and other bank facilities, with certain banks and financial institutions which are PRC government-related entities in its ordinary course of business. In view of the nature of these transactions, the Directors are of the opinion that separate disclosures would not be meaningful.

#### (2) Transactions with a non-controlling shareholder of a subsidiary

	Note	Related parties	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
Purchases of: – Materials	(a)	A Subsidiary of a non- controlling shareholder of a subsidiary	(9,927)	(13,451)

Note:

(a) These transactions were conducted in accordance with terms of the relevant agreements.

# (3) The details of remuneration of key management personnel, represents emoluments of the Directors, are set out in note 13.

### **37. RETIREMENT BENEFIT SCHEMES**

The employees of the Group's subsidiaries in Zambia are members of the state-managed retirement benefits scheme operated by the Zambia government. The subsidiaries are required to contribute a certain percentage of their payroll to the retirement benefits scheme to fund the benefits. Besides, certain employees of the Group are also members of the state-managed retirement benefits scheme operated by the PRC government. The Group also contributes a certain percentage of their payroll to the retirement benefits.

The only obligation of the Group with respect to the aforesaid retirement benefits schemes is to make the required contributions under the schemes.

### 38. PARTICULARS OF SUBSIDIARIES OF THE COMPANY

Details of the Group's subsidiaries at the end of the reporting period are set out below:

Name of company	Place/Country of operations and date of incorporation	Issued and fully paid-up ordinary share capital	Equity int attributat the Comp as at 31 Dec 2016	ole to Dany	Principal activities
			%	%	
CNMH (Note (a))	Ireland 23 September 2011	Euro171,152,002	100	100	Investment holding
CNMHK (Note (a))	Hong Kong 6 October 2015	HK\$10,000	70	70	Investment holding
CNMHKI <i>(Note (a))</i>	Hong Kong 2 December 2016	US\$20,000	100	_	Investment holding
NFCA (Note (b))	Zambia 5 March 1998	US\$9,000,001	85	85	Exploration and mining of copper and production of copper concentrates
CCS (Note (b))	Zambia 19 July 2006	US\$2,000	60	60	Production and sale of blister copper and sulfuric acid
SML (Notes (b), (c))	Zambia 3 December 2004	US\$1,000	67.75	67.75	Production and sale of copper cathodes

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

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## 38. PARTICULARS OF SUBSIDIARIES OF THE COMPANY (Continued)

	Place/Country of operations and date	Issued and fully paid-up ordinary share	Equity in attributa the Com as at 31 De	ble to pany	
Name of company	of incorporation	capital	2016 %	2015 %	Principal activities
Luanshya <i>(Note (b))</i>	Zambia 10 July 2003	US\$10,000,001	80	80	Exploration and mining of copper and production of copper concentrates and copper cathode
Kakoso Metals Leach Limited (" <b>Kakoso</b> ") <i>(Notes (b), (e))</i>	Zambia 18 August 2010	ZMK10,000,000	-	59.62	Inactive
Huachin Metal Leach SA <i>(Notes (b), (h))</i>	DRC 17 December 2010	US\$10,000,000	43.75	42.34	Production and sale of copper cathodes and sulfuric acid
CNMC Huachin Mabende Mining SA (" <b>CHM</b> ") <i>(Notes (b), (h))</i>	DRC 5 October 2012	US\$9,000,000	42	40.65	Production and sale of copper cathodes and sulfuric acid
Green Home Farm Limited (" <b>Green</b> <b>Home</b> ") (Notes (b), (d))	Zambia 12 July 2012	ZMK5,000,000	85	85	Farming
CCS Chinda Trade & Investment SARL (" <b>CCS Chinda</b> ") (Note (f))	DRC 10 April 2015	US\$2,000	60	60	Sale of sulfuric acid
SBR (Note (g))	DRC 23 May 2014	CDF717,005,314	39.9	38.62	Exploration and mining of copper

#### Notes:

(a) The ordinary share capital of these companies is directly held by the Company.

(b) The ordinary share capital of these companies is indirectly held by the Company.

(c) 55% and 15% of the issued and paid-up ordinary share capital of SML are directly held by CNMH and NFCA, respectively.

## 38. PARTICULARS OF SUBSIDIARIES OF THE COMPANY (Continued)

Notes: (Continued)

- (d) Green Home is a wholly-owned subsidiary of NFCA.
- (e) Incorporated by SML and a non-controlling shareholder, 88% of the issued and paid-up ordinary share capital of Kakoso is directly held and controlled by SML. Kakoso was deregistered with effect from 28 November 2016.
- (f) CCS Chinda is a wholly-owned subsidiary of CCS.
- (g) CHM acquired SBR on 20 November 2015 and 95% of the issued and paid-up ordinary share capital of SBR is directly held and controlled by CHM (see note 17 for details).
- (h) 62.5% and 60% of the issued and paid-up ordinary share capital of Huachin Metal Leach SA and CHM, respectively, are directly held and controlled by CNMHK.

#### Details of non-wholly owned subsidiaries that have material non-controlling interests:

The table below shows details of non-wholly-owned subsidiaries of the Group that have material non-controlling interests:

	Place/Country of operations and Principal place	Proportio ownership i and voting held interest controlling i	nterests ) rights s by non-	Profit allo non-cont intere	rolling	Accumula non-con inter	trolling
Name of company	of activities	2016	2015	2016	2015	2016	2015
		%	%				
NFCA	Zambia	15	15	(288)	(45,651)	(6,732)	(6,444)
CCS	Zambia	40	40	27,748	21,664	170,979	143,230
Subsidiaries with individually immaterial non-controlling							
interests						34,752	17,870
						198,999	154,656

Summarised financial information in respect of each of the Group's subsidiaries that has material non-controlling interests is set out below. The summarised financial information below represents amounts before intragroup eliminations.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

FOR THE YEAR ENDED 31 DECEMBER 2016

## 38. PARTICULARS OF SUBSIDIARIES OF THE COMPANY (Continued)

NFCA	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
Current assets	225,450	189,932
Non-current assets	307,391	224,434
Current liabilities	(167,149)	(106,878)
Non-current liabilities	(410,569)	(350,448)
Equity attributable to owners of the Company	(38,145)	(36,516)
Non-controlling interests	(6,732)	(6,444)
Revenue	106,355	92,631
Expenses	(108,272)	(396,973)
Profit and total comprehensive income for the year	(1,917)	(304,342)
Profit and total comprehensive income attributable to owners of the Company	(1,629)	(258,691)
Profit and total comprehensive income attributable to the non-controlling interests	(288)	(45,651)
Net cash inflow from operating activities	20,007	4,453
Net cash outflow from investing activities	(93,008)	(77,323)
Net cash inflow from financing activities	121,520	110,440
Effect of foreign exchange rate changes	170	(1,009)
Net cash inflow	48,689	36,561

## 38. PARTICULARS OF SUBSIDIARIES OF THE COMPANY (Continued)

ccs	2016 <i>US\$'000</i>	2015 <i>US\$'000</i>
Current assets	656,434	472,443
Non-current assets	201,804	224,432
Current liabilities	(236,065)	(216,004)
Non-current liabilities	(194,725)	(122,795)
Equity attributable to owners of the Company	256,469	214,846
Non-controlling interests	170,979	143,230
Revenue	1,040,129	937,523
Expenses	(970,759)	(883,363)
Profit and total comprehensive income for the year	69,370	54,160
Profit and total comprehensive income attributable to owners of the Company	41,622	32,496
Profit and total comprehensive income attributable to the non-controlling interests	27,748	21,664
Dividends paid to non-controlling interests	_	12,000
Net cash inflow from operating activities	23,699	137,501
Net cash outflow from investing activities	(18,752)	(5,014)
Net cash outflow from financing activities	(26,000)	(123,000)
Effect of foreign exchange rate changes	(287)	(11,756)
Net cash outflow	(21,340)	(2,269)

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

FOR THE YEAR ENDED 31 DECEMBER 2016

## 39. STATEMENT OF FINANCIAL POSITION AND RESERVES OF THE COMPANY

	2016	2015
	US\$'000	US\$'000
NON-CURRENT ASSETS	40	2.2
Equipment	18	22
Investment in subsidiaries	196,345	143,859
Receivable from a subsidiary	87,172	92,362
Loans to subsidiaries	85,000	257,000
	368,535	493,243
CURRENT ASSETS		
Other receivables	45	142
Loans to subsidiaries	162,000	176,075
Due from subsidiaries	9,787	44,128
Bank balances and cash	246,222	204,283
	418,054	424,628
CURRENT LIABILITIES		
Accrued expenses	428	8,831
Bank and other borrowings		
– due within one year	8,000	162,000
	8,428	170,831
NET CURRENT ASSETS	409,626	253,797
TOTAL ASSETS LESS CURRENT LIABILITIES	778,161	747,040

# **39. STATEMENT OF FINANCIAL POSITION AND RESERVES OF THE COMPANY** (Continued)

	2016	2015
	US\$'000	US\$'000
CAPITAL AND RESERVES		
Share capital	613,233	613,233
Retained profits	72,928	53,807
TOTAL EQUITY	686,161	667,040
NON-CURRENT LIABILITIES		
Bank and other borrowings		
– due after one year	92,000	80,000
	778,161	747,040

The Company's statement of financial position was approved and authorised for issue by the Board of Directors on 30 March 2017 and is signed on its behalf by:

Xinghu Tao DIRECTOR Xingeng Luo DIRECTOR

# **39. STATEMENT OF FINANCIAL POSITION AND RESERVES OF THE COMPANY** (Continued)

Movement in reserve of the Company

	<b>Retained profits</b> US\$'000
At 31 December 2014	183,228
Profit and total comprehensive income for the year	(119,547)
Dividend declared	(9,874)
At 31 December 2015	53,807
Profit and total comprehensive income for the year	19,121
At 31 December 2016	72,928

# **FIVE YEAR FINANCIAL SUMMARY**

A summary of selected items of the results and of the assets, liabilities and non-controlling interests of the Group for the last five financial years, as extracted from the published audited financial statements and the Prospectus, is set out below.

### RESULTS

	Year ended 31 December				
	2016	2015	2014	2013	2012
	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
Revenue	1,313,291	1,189,164	1,941,973	1,744,023	1,532,315
Gross profit	199,913	125,609	302,587	274,257	282,950
Profit (loss) before tax	69,097	(351,561)	169,493	176,179	192,750
Net profit (loss)	45,447	(313,509)	229,643	127,360	168,044
Profit (loss) attributable to owners of					
the Company	11,832	(279,902)	146,821	67,257	98,544

# ASSETS, LIABILITIES, NON-CONTROLLING INTERESTS AND EQUITY ATTRIBUTABLE TO OWNERS OF THE COMPANY

	At 31 December				
	2016	2015	2014	2013	2012
	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
Non-current assets	998,240	994,191	1,246,060	1,228,863	1,061,161
Current assets	1,431,501	1,175,076	1,230,082	1,098,333	787,112
Total assets	2,429,741	2,169,267	2,476,142	2,327,196	1,848,273
Current liabilities	403,428	610,669	591,124	433,671	292,468
Net current assets	1,028,073	564,407	638,958	664,662	494,644
Non-current liabilities	1,182,667	771,127	762,164	973,335	704,767
Equity attributable to owners of					
the Company	644,647	632,815	922,591	782,749	715,492
Non-controlling interests	198,999	154,656	200,263	137,441	135,546



In this annual report, unless the context otherwise requires, the following words and expressions shall have the following meanings.

"AGM"	the annual general meeting of the Company
"Articles of Association" or "Articles"	the articles of association of the Company that were adopted on 27 April 2012
"associate(s)"	has the meaning ascribed thereto under the Listing Rules
"Audit Committee"	the audit committee of the Board
"Board of Directors" or "Board"	the board of Directors of the Company
"BVI"	the British Virgin Islands
"CCS"	Chambishi Copper Smelter Limited (謙比希銅冶煉有限公司*), a company incorporated in Zambia on 19 July 2006 and a subsidiary of the Company
"CG Code" or "Corporate Governance Code"	code provisions set out in the Corporate Governance Code and Corporate Governance Report contained in Appendix 14 of the Listing Rules
"Chambishi Leach Plant"	the copper leaching plant located in the Copperbelt province in Zambia held by SML and where SML undertakes its leaching operations
"China" or "PRC"	the People's Republic of China. For the purpose of this report and for geographical reference only and except where the context requires, references to "China" and the "PRC" do not include Taiwan, the Macau Special Administrative Region and Hong Kong Special Administrative Region
"CNMC"	China Nonferrous Metal Mining (Group) Co., Ltd* (中國有色礦業集團有限 公司), a state-owned enterprise incorporated under the laws of the PRC in 1997 with operating history dating back to 1983, directly administered by SASAC, and the ultimate Controlling Shareholder of the Company
"CNMC Copper Supply Framework Agreement"	the copper supply framework agreement dated 18 November 2014 entered into between the Company and CNMC

"CNMC Huachin Mabende"	CNMC Huachin Mabende Mining SA (中色華鑫馬本德礦業股份有限公司*) (formerly known as "CNMC Mabende SPRL" (中色馬本德礦業有限公司*), a joint venture established in the DRC on 9 November 2012 by SML and Huachin SPRL, an associate of the Group
"CNMD"	China Nonferrous Mining Development Limited (中色礦業發展有限公司*), an investment holding company incorporated under the laws of the BVI on 12 July 2011, a wholly-owned subsidiary of CNMC and the Controlling Shareholder of the Company
"CNMH"	China Nonferrous Mining Holdings Limited (中色礦業控股有限公司*), an investment holding company incorporated under the laws of the Republic of Ireland on 23 September 2011 and a wholly-owned subsidiary of the Company
"CNMHK"	China Nonferrous Mining Hong Kong Holdings Limited (中色礦業香港控股有限公司), an investment holding company incorporated in Hong Kong on 6 October 2015 with limited liability under the Companies Ordinance, a directly controlling subsidiary of the Company
"CNMHKI"	China Nonferrous Mining Hong Kong Investment Limited (中色礦業香港投資有限公司), an investment holding company incorporated in Hong Kong on 2 December 2016 with limited liability under the Companies Ordinance, a directly controlling subsidiary of the Company
"Companies Ordinance"	the Companies Ordinance of Hong Kong (Chapter 622 of the laws of Hong Kong), as amended, supplemented or otherwise modified from time to time
"Company", "we", "us" or "our"	China Nonferrous Mining Corporation Limited (中國有色礦業有限公司), a company incorporated in Hong Kong on 18 July 2011 with limited liability under the Companies Ordinance and, except where the context otherwise requires, all of its subsidiaries or where the context refers to any time prior to its incorporation, the business which its predecessors or the predecessors of its present subsidiaries were engaged in and which were subsequently assumed by it
"Compliance Committee"	the compliance committee of the Board
"connected person(s)"	has the meaning ascribed thereto in the Listing Rules
"connected transaction(s)"	has the meaning ascribed thereto in the Listing Rules
"Controlling Shareholder"	has the meaning ascribed thereto under the Listing Rules



"Deed of Non-Competition Undertaking"	a deed of non-competition undertaking dated 14 May 2012 entered into between CNMC and the Company under which CNMC has given us certain undertakings in respect of the conduct of certain of its activities outside the PRC
"Director(s)"	director(s) of the Company
"DRC"	the Democratic Republic of the Congo
"Fifteen MCC Africa"	Fifteen MCC Africa Construction & Trade Ltd (中國十五冶非洲建築貿易公司*), a company incorporated under the laws of Zambia on 24 May 2007 and a fellow subsidiary of CNMC
"Global Offering"	the offering of the Shares of the Company for subscription by the public in Hong Kong and purchase by institutional and professional investors as described in the Prospectus
"Group", "we" or "us"	the Company and its subsidiaries or any of them, or where the context so requires, in respect of the period before the Company became the holding company of its present subsidiaries, the present subsidiaries of the Company
"HK\$" or "Hong Kong dollar(s)"	Hong Kong dollars, the lawful currency for the time being of Hong Kong
"HKFRS"	Hong Kong Financial Reporting Standard, as issued by the Hong Kong Institute of Certified Public Accountants
"Hong Kong" or "HK"	the Hong Kong Special Administrative Region of the People's Republic of China
"Hong Kong Stock Exchange"	The Stock Exchange of Hong Kong Limited
"Hong Kong Zhongfei"	Hong Kong Zhongfei Mining Investment Limited (香港中非礦業投資有限公司), a company incorporated under the Companies Ordinance in Hong Kong in January 2014 holding 30% of SML and 30% of CNMHK
"Huachin Leach"	Huachin Metal Leach SA (中色華鑫濕法冶煉股份有限公司*) (formerly known as Huachin Metal Leach SPRL (中色華鑫濕法冶煉有限公司*)), a company incorporated under the laws of the DRC on 17 December 2010 and a subsidiary of SML
"Huachin Minerals"	Huachin Minerals SARL (formerly known as Huachin Minerals SPRL) (華鑫礦 產有限責任公司*), a company incorporated under the laws of the DRC on 27 January 2011 and an associate of the Company

"Huachin Ore Supply Framework Agreement"	the ore supply framework agreement dated 18 November 2014 entered into between the Company and Mabende Mining
"JORC"	the Australasian Joint Ore Reserves Committee
"JORC Code"	the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves
"Kakoso Company"	Kakoso Metals Leach Limited, a company incorporated under the laws of Zambia on 18 August 2010, and a subsidiary of SML
"LIBOR"	London Interbank Offer Rate
"Listing"	the listing of the Shares on the Main Board of the Hong Kong Stock Exchange on 29 June 2012
"Listing Date"	the date the Shares were listed on the Main Board of the Hong Kong Stock Exchange, being 29 June 2012
"Listing Rules"	The Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited, as amended from time to time
"Luanshya"	CNMC Luanshya Copper Mines PLC (中色盧安夏銅業有限公司*), formerly Luanshya Copper Mines PLC, a company incorporated in Zambia on 10 July 2003 and a subsidiary of the Company
"Mabende Mining"	Mabende Mining SARL (formerly known as Mabende Mining SPRL) (馬本德 礦業有限責任公司*), a company incorporated under the laws of the DRC
"Mabende Project"	the project undertaken by SML through CNMC Huachin Mabende to construct and operate a leaching plant in the DRC
"Main Board"	the Main Board of the Hong Kong Stock Exchange
"Model Code"	the Model Code for Securities Transactions by Directors of Listed Issuers set out in Appendix 10 of the Listing Rules
"MPongwe"	CNMC MPongwe Mining Company Ltd (中色鵬威礦業有限公司*), a company incorporated in Zambia on 3 May 2010, and a subsidiary of CNMC
"Muliashi Project"	an integrated project involving the mining and leaching of copper oxide ores undertaken by Luanshya, including the Muliashi North Mine, the Muliashi Leach Plant and the planned Baluba East Mine



"Mutual Supply Framework Agreement"	the mutual supply framework agreement dated 18 November 2014 (as supplemented by a supplemental agreement dated 4 December 2014) entered into between the Company and CNMC
"NFCA"	NFC Africa Mining PLC (中色非洲礦業有限公司*), a company incorporated in Zambia on 5 March 1998, and a subsidiary of the Company
"Nomination Committee"	the nomination committee of the Board
"Non-Competition Undertaking"	the non-competition undertaking set out in the Deed of Non-Competition Undertaking
"PRC government" or "State"	the government of the PRC, including all governmental subdivisions (including provincial, municipal and other regional or local government entities)
"Properties Leasing Framework Agreement"	the properties leasing framework agreement dated 18 November 2014 entered into between the Company and CNMC
"Prospectus"	the prospectus dated 20 June 2012 issued by the Company in connection with the Global Offering and the Listing
"Remuneration Committee"	the remuneration committee of the Board
"Renminbi" or "RMB"	Renminbi yuan, the lawful currency for the time being of the PRC
"Retained Group"	CNMC and its subsidiaries (excluding the Group)
"SFO"	the Securities and Futures Ordinance of Hong Kong (Chapter 571 of the Laws of Hong Kong), as amended, supplemented or otherwise modified from time to time
"Share(s)"	ordinary share(s) in the share capital of the Company
"Shareholder(s)"	holder(s) of the Shares of the Company
"SML"	Sino-Metals Leach Zambia Limited (贊比亞謙比希濕法冶煉有限公司*),
	a company incorporated under the laws of Zambia on 3 December 2004 and a subsidiary of the Company



"substantial shareholder"	has the meaning ascribed thereto in the Listing Rules
"United States"	the United States of America, its territories, its possessions and all areas subject to its jurisdiction
"US¢" or "US cent(s)"	United States cents, the lawful currency for the time being of the United States
"US\$", "USD" or "US dollar(s)"	United States dollars, the lawful currency for the time being of the United States
"VAT"	value-added tax; all amounts are exclusive of VAT in this report except indicated otherwise
"Year"	year ended 31 December 2016
"Yunnan Copper"	Yunnan Copper Industry Co., Ltd* (雲南銅業股份有限公司), a company incorporated under the laws of the PRC on 15 May 1998 and a subsidiary of Yunnan Copper Group
"Yunnan Copper Group"	Yunnan Copper (Group) Co., Ltd.* (雲南銅業(集團)有限公司), a company incorporated under the laws of the PRC in April 1996 holding 40% of the issued share capital of CCS
"Yunnan Copper Supply Framework Agreement"	the copper supply framework agreement dated 18 November 2014 entered into between the Company and Yunnan Copper Group
"Zambia"	the Republic of Zambia
"ZCCM"	Zambia Consolidated Copper Mines Limited, a company incorporated in Zambia in 1982 and succeeded by ZCCM-IH
"ZCCM-IH"	Zambia Consolidated Copper Mines Investments Holdings Plc, the successor company to ZCCM, majority owned by the Government of Zambia
"ZCCZ"	Zambia-China Economic & Trade Cooperation Zone Development Ltd (贊比亞中國經濟貿易合作區發展有限公司*), a company incorporated in Zambia on 16 January 2007 and a subsidiary of CNMC

\* Translation of English or Chinese terms for reference purposes only.



