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CHINA ISOTOPE & RADIATION CORPORATION

中國同輻股份有限公司

(A joint stock company incorporated in the People's Republic of China with limited liability)

(Stock Code: 1763)

ANNOUNCEMENT OF INTERIM RESULTS FOR THE SIX MONTHS ENDED 30 JUNE 2022

RESULTS HIGHLIGHTS

The board (the “**Board**”) of directors (the “**Directors**” and each a “**Director**”) of China Isotope & Radiation Corporation (the “**Company**” or “**CIRC**”, together with its subsidiaries, the “**Group**” or “**we**”) is pleased to announce the unaudited condensed consolidated financial statements of the Group for the six months ended 30 June 2022 (the “**first half of 2022**” or the “**Reporting Period**”) together with unaudited comparative figures for the same period of 2021, as follows:

CONSOLIDATED STATEMENT OF PROFIT OR LOSS
for the six months ended 30 June 2022 – unaudited
(Expressed in Renminbi (“RMB”))

	Note	Six months ended 30 June	
		2022 RMB'000	2021 RMB'000
Revenue	3	2,619,579	2,057,856
Cost of sales		(1,086,787)	(730,638)
Gross profit		1,532,792	1,327,218
Other income	4	36,386	21,953
Selling and distribution expenses		(872,858)	(780,365)
Administrative expenses		(241,609)	(215,878)
Research and development costs		(116,556)	(80,140)
Impairment losses on trade and other receivables		(14,192)	(545)
Profit from operations		323,963	272,243
Finance costs	5(a)	(23,937)	(16,753)
Share of profits less losses of associates		4,442	2,651
Share of profits less losses of joint ventures		7,609	20,167
Profit before taxation	5	312,077	278,308
Income tax	6	(72,600)	(49,379)
Profit for the period		239,477	228,929
Attributable to:			
Equity shareholders of the Company		111,106	106,814
Non-controlling interests		128,371	122,115
Profit for the period		239,477	228,929
Earnings per share			
Basic and diluted (RMB)	7	0.35	0.33

CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

for the six months ended 30 June 2022 – unaudited

(Expressed in RMB)

	Six months ended 30 June	
	2022 RMB'000	2021 RMB'000
Profit for the period	239,477	228,929
Other comprehensive income for the period (after tax and reclassification adjustments):		
Item that may be reclassified subsequently to profit or loss:		
– exchange differences on translation of share of profits less losses of an associate	–	(152)
Items that will not be reclassified to profit or loss:		
– remeasurement of defined benefit liability	(6)	492
– equity securities designated at fair value through other comprehensive income – net movement in fair value reserve (non-recycling)	5,768	2,497
Other comprehensive income for the period	5,762	2,837
Total comprehensive income	245,239	231,766
Attributable to:		
Equity shareholders of the Company	116,868	109,455
Non-controlling interests	128,371	122,311
Total comprehensive income for the period	245,239	231,766

CONSOLIDATED STATEMENT OF FINANCIAL POSITION
at 30 June 2022 – unaudited
(Expressed in RMB)

		At 30 June 2022	At 31 December 2021
	<i>Note</i>	<i>RMB'000</i>	<i>RMB'000</i>
Non-current assets			
Property, plant and equipment	8	2,593,087	2,512,947
Investment property		19,169	19,670
Intangible assets		158,510	156,496
Goodwill	9	44,036	44,036
Interests in associates		75,743	52,500
Interests in joint ventures		597,867	594,252
Long-term receivables		38,087	37,176
Equity securities designated at fair value through other comprehensive income (FVOCI)		158,100	150,410
Deferred tax assets		222,276	214,445
Other non-current assets		5,696	35,255
		<u>3,912,571</u>	<u>3,817,187</u>
Current assets			
Inventories		844,419	691,923
Contract assets		25,518	29,424
Trade and bill receivables	10	3,207,807	2,821,153
Deposits and other receivables		139,155	153,733
Prepayments		249,871	212,358
Cash at bank and in hand	11	2,498,674	2,748,190
		<u>6,965,444</u>	<u>6,656,781</u>
Current liabilities			
Bank loans		73,193	118,084
Corporate bond		510,119	499,996
Trade payables	12	487,922	337,856
Accruals and other payables		2,960,780	2,816,406
Lease liabilities		49,530	53,368
Provisions		81,934	76,554
Income tax payable		72,891	69,398
		<u>4,236,369</u>	<u>3,971,662</u>
Net current assets		<u>2,729,075</u>	<u>2,685,119</u>
Total assets less current liabilities		<u>6,641,646</u>	<u>6,502,306</u>

CONSOLIDATED STATEMENT OF FINANCIAL POSITION (CONTINUED)
at 30 June 2022 – unaudited
(Expressed in RMB)

	At 30 June 2022 <i>RMB'000</i>	At 31 December 2021 <i>RMB'000</i>
Non-current liabilities		
Bank loans	155,750	144,680
Deferred income	53,870	43,875
Lease liabilities	46,292	40,500
Defined benefit retirement obligation	49,961	49,898
Deferred tax liabilities	19,114	17,347
Provisions	134,936	131,706
Other long-term payables	50,335	42,912
	<u>510,258</u>	<u>470,918</u>
Net assets	<u>6,131,388</u>	<u>6,031,388</u>
Capital and reserves		
Share capital	319,875	319,875
Reserves	3,855,403	3,859,415
Total equity attributable to equity shareholders of the Company	<u>4,175,278</u>	<u>4,179,290</u>
Non-controlling interests	<u>1,956,110</u>	<u>1,852,098</u>
Total equity	<u>6,131,388</u>	<u>6,031,388</u>

NOTES TO THE UNAUDITED INTERIM FINANCIAL REPORT

(Expressed in RMB unless otherwise indicated)

1 BASIS OF PREPARATION

This interim financial report has been prepared in accordance with the applicable disclosure provisions of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited, including compliance with International Accounting Standard (“IAS”) 34, Interim Financial Reporting, issued by the International Accounting Standards Board (“IASB”).

The interim financial report has been prepared in accordance with the same accounting policies adopted in the 2021 annual financial statements, except for the accounting policy changes that are expected to be reflected in the 2022 annual financial statements. Details of any changes in accounting policies are set out in Note 2.

The preparation of an interim financial report in conformity with IAS 34 requires management to make judgments, estimates and assumptions that affect the application of policies and reported amounts of assets and liabilities, income and expenses on a year to date basis. Actual results may differ from these estimates.

This interim financial report contains condensed consolidated financial statements and selected explanatory notes. The notes include an explanation of events and transactions that are significant to an understanding of the changes in financial position and performance of the Company and its subsidiaries (collectively referred to as the “Group”) since the 2021 annual financial statements. The condensed consolidated interim financial statements and notes thereon do not include all of the information required for a full set of financial statements prepared in accordance with International Financial Reporting Standards (“IFRSs”) issued by the IASB.

The interim results announcement has been reviewed by the Audit and Risk Management Committee.

2 CHANGES IN ACCOUNTING POLICIES

The Group has applied the following amendments to IFRSs issued by the IASB for this interim financial report for the current accounting period:

Amendment to IFRS 16	Covid-19-Related Rent Concessions beyond 30 June 2021
Amendments to IFRS 3	Reference to the Conceptual Framework
Amendments to IAS 16	Property, plant and Equipment: Proceeds before Intended Use
Amendments to IAS 37	Onerous Contracts – Cost of Fulfilling a Contract
Amendments to IFRSs	Annual Improvements to IFRSs 2018 – 2020 cycle

None of these amendments have had a material effect on how the Group’s results and financial position for the current or prior periods have been prepared or presented. The Group has not applied any new standard or interpretation that is not yet effective for the current accounting period.

3 REVENUE AND SEGMENT REPORTING

The Group is principally engaged in research, development, manufacturing and sale of a broad range of pharmaceuticals and radioactive source products, design, manufacturing, construction and installation of gamma ray irradiation facilities and medical protection facilities, provision of irradiation service for sterilization purpose, sale of medical devices as well as other services.

(a) Disaggregation of revenue

Disaggregation of revenue from contracts with customers by major products or service lines is as follows:

	Six months ended 30 June	
	2022	2021
	RMB'000	RMB'000
	(Unaudited)	(Unaudited)
Revenue from contracts with customers within the scope of IFRS 15		
Disaggregated by major products or services lines		
– sales of pharmaceuticals	1,764,175	1,589,812
– sales of radioactive source products	159,875	140,828
– sales of radiation therapy equipment	177,050	16,473
– irradiation services	73,994	60,155
– technical services	92,958	86,542
– revenue from construction contracts	11,379	15,795
– others	340,148	148,251
	2,619,579	2,057,856

Disaggregation of revenue from contracts with customers by the timing of revenue recognition is disclosed in Note 3(b).

(b) Segment reporting

The Group manages its businesses by divisions, which are mainly organised by business lines (products and services). In a manner consistent with the way in which information is reported internally to the Group's most senior executive management for the purposes of resource allocation and performance assessment, the Group has presented the following five reportable segments. No operating segments have been aggregated to form the following reportable segments.

Pharmaceuticals: manufacturing and sale of a range of imaging diagnostic and therapeutic radio pharmaceuticals imaging, UBT diagnostic kits and test analyzers, in vitro immunoassay diagnostic reagents and kits and other products.

Radioactive source products: sale of medical and industrial radioactive source products and technical services.

Irradiation: provision of irradiation services to manufacturers of medical facilities, pharmaceuticals, cosmetics and food in the PRC for sterilisation purposes, and also design, manufacturing and installation of gamma ray irradiation facilities to irradiation service providers.

Radiation therapy equipment and related services: sale of radiation therapy equipment, provision of related maintenance services, and also design, manufacturing and installation of medical protection facilities.

Other businesses: sale of medical devices and other miscellaneous services such as independent clinical laboratory.

(i) **Segment results, assets and liabilities**

For the purposes of assessing segment performance and allocating resources among segments, the Group's senior executive management monitors the results attributable to each reportable segment on the following basis:

Revenue and expenses are allocated to the reportable segments with reference to revenue generated by those segments and the expenses incurred by those segments. The measure used for reporting segment profit is gross profit. The Group's other income and expense items, such as other income, selling and distribution expenses, administrative and other operating expenses, and assets and liabilities, are not measured under individual segments. Accordingly, neither information on segment assets and liabilities nor information concerning capital expenditure, interest income and interest expenses is presented.

Disaggregation of revenue from contracts with customers by timing of revenue recognition, as well as information regarding the Group's reportable segments as provided to the Group's most senior executive management for the purposes of resource allocation and assessment of segment performance for the period is set out below.

	Six months ended 30 June 2022					
	Pharmaceuticals	Radioactive source products	Irradiation	Radiation therapy equipment and related services	Other businesses	Total
	<i>RMB'000</i>	<i>RMB'000</i>	<i>RMB'000</i>	<i>RMB'000</i>	<i>RMB'000</i>	<i>RMB'000</i>
	(Unaudited)	(Unaudited)	(Unaudited)	(Unaudited)	(Unaudited)	(Unaudited)
Disaggregated by timing of revenue recognition						
Point in time	1,764,175	171,964	68,440	257,919	340,148	2,602,646
Over time	-	-	5,554	11,379	-	16,933
Revenue from external customers	1,764,175	171,964	73,994	269,298	340,148	2,619,579
Inter-segment revenue	29,376	6,246	1,898	2,448	9,607	49,575
Reportable segment revenue	1,793,551	178,210	75,892	271,746	349,755	2,669,154
Reportable segment profit (gross profit)	1,278,806	53,594	37,139	48,227	123,566	1,541,332

Six months ended 30 June 2021

	Pharmaceuticals <i>RMB'000</i> (Unaudited)	Radioactive source products <i>RMB'000</i> (Unaudited)	Irradiation <i>RMB'000</i> (Unaudited)	Radiation therapy equipment and related services <i>RMB'000</i> (Unaudited)	Other businesses <i>RMB'000</i> (Unaudited)	Total <i>RMB'000</i> (Unaudited)
Disaggregated by timing of revenue recognition						
Point in time	1,594,786	155,237	60,155	26,423	138,302	1,974,903
Over time	–	–	2,571	80,382	–	82,953
Revenue from external customers	1,594,786	155,237	62,726	106,805	138,302	2,057,856
Inter-segment revenue	550	–	1,654	2,830	8,934	13,968
Reportable segment revenue	1,595,336	155,237	64,380	109,635	147,236	2,071,824
Reportable segment profit (gross profit)	1,132,723	71,630	34,045	34,304	55,429	1,328,131

(ii) Reconciliation of reportable segment profit (gross profit)

	Six months ended 30 June	
	2022 <i>RMB'000</i> (Unaudited)	2021 <i>RMB'000</i> (Unaudited)
Reportable segment profit (gross profit)	1,541,332	1,328,131
Elimination of inter-segment profit (gross profit)	(8,540)	(913)
Consolidated gross profit	1,532,792	1,327,218

(iii) Geographic information

All of the Group's operations are carried out and most of the Group's customers are located in the PRC. The Group's non-current assets, including property, plant and equipment, investment property, lease prepayments and intangible assets are all located or allocated to operations located in the PRC.

4 OTHER INCOME

	Six months ended 30 June	
	2022 <i>RMB'000</i> (Unaudited)	2021 <i>RMB'000</i> (Unaudited)
Government grants	10,993	4,475
Interest income	15,399	9,123
Rental income from operating leases	3,041	3,543
Others	6,953	4,812
	36,386	21,953

5 PROFIT BEFORE TAXATION

Profit before taxation is arrived at after charging (crediting):

(a) Finance costs

	Six months ended 30 June	
	2022 <i>RMB'000</i> (Unaudited)	2021 <i>RMB'000</i> (Unaudited)
Interests on bank loans and other borrowings	14,919	13,555
Interests on lease liabilities	1,568	1,662
Less: interest expense capitalised into construction in progress	3,106	2,324
	13,381	12,893
Net foreign exchange loss (gain)	6,588	(127)
Interest accretion on reclamation obligations, net	1,938	2,070
Interest cost on defined benefit retirement plans	837	891
Interest cost on long-term payables	1,193	1,026
	23,937	16,753

The borrowing costs have been capitalised at a rate of 4.64% (2021: 4.64%) per annum.

(b) Other items

	Six months ended 30 June	
	2022 <i>RMB'000</i> (Unaudited)	2021 <i>RMB'000</i> (Unaudited)
Cash settled share-based payment expenses		4,748
Depreciation		
– property, plant and equipment	96,796	87,895
– investment property	502	894
Amortisation		
– intangible assets	7,970	7,985
Impairment losses		
– trade and bill receivables	13,313	521
– deposits and other receivables	879	24
Research and development costs (other than amortisation costs)	108,818	77,969
Decrease in provisions for reclamation obligations	(5,380)	(5,452)
Cost of inventories	742,234	653,821

6 INCOME TAX

	For the six months ended 30 June	
	2022 RMB'000 (Unaudited)	2021 RMB'000 (Unaudited)
Current tax		
– Provision for the period	71,467	50,798
– Under-provision in respect of prior years	9,146	2,051
	80,613	52,849
Deferred tax		
– Origination and reversal of temporary differences	(8,013)	(3,470)
	72,600	49,379

Notes:

- (i) The Company and its subsidiaries established in the PRC are subject to PRC Corporate Income Tax rate of 25% (2021: 25%) for the six months ended 30 June 2022.
- (ii) Certain subsidiaries of the Group are approved High and New Technology Enterprises and are subject to a preferential PRC Corporate Income Tax rate of 15% during the approved period subject to fulfillment of recognition criteria.

7 EARNINGS PER SHARE

The calculation of basic earnings per share is based on the profit attributable to equity shareholders of the Company of approximately RMB111,106,000 (six months ended 30 June 2021: RMB106,814,000) and the weighted average number of ordinary shares in issue of 319,874,900 (six months ended 30 June 2021: 319,874,900) in issue during the interim period.

The Company did not have any potential dilutive shares in existence during the interim period. Accordingly, diluted earnings per share is the same as basic earnings per share.

8 PROPERTY, PLANT AND EQUIPMENT

- (a) During the six months ended 30 June 2022, the Group acquired items of plant and machinery with a cost of RMB147,446,000 (six months ended 30 June 2021: RMB231,409,000). Items of plant and machinery with a net book value of RMB15,510,000 were disposed of during the six months ended 30 June 2022 (six months ended 30 June 2021: RMB6,017,000), resulting in a gain on disposal of RMB189,000 (six months ended 30 June 2021: RMB482,000).
- (b) During the six months ended 30 June 2022, the Group entered into a number of lease agreements for use of plants and offices, and therefore recognised the additions to right-of-use assets of RMB32,193,000 (six months ended 30 June 2021: RMB9,518,000).

9 GOODWILL

	<i>RMB'000</i> (Audited)
Cost:	
At 1 January 2021	43,875
Acquisition of subsidiaries	<u>4,474</u>
At 31 December 2021, 1 January 2022 and 30 June 2022	----- 48,349
Accumulated impairment losses:	
At 31 December 2021, 1 January 2022 and 30 June 2022	----- (4,313)
Carrying amount	
At 30 June 2022	<u><u>44,036</u></u>
At 31 December 2021	<u><u>44,036</u></u>

Impairment tests for cash-generating units containing goodwill

Goodwill is allocated to the Group's cash-generating units identified according to operation and operating segment as follows:

	For the six months ended 30 June	
	2022 <i>RMB'000</i> (Unaudited)	2021 <i>RMB'000</i> (Unaudited)
Pharmaceuticals	38,478	38,478
Radiation therapy equipment and related services	4,474	4,474
Irradiation	1,084	1,084
	<u><u>44,036</u></u>	<u><u>44,036</u></u>

The recoverable amount of the goodwill is determined based on value-in-use calculations.

These calculations use cash flow projections based on financial budgets approved by management covering a five-year period. Cash flows beyond the five-year period are extrapolated using estimated weighted average growth rates and the cash flows are discounted using pre-tax discount rates as set out below.

	At 30 June 2022	At 30 June 2021
Pharmaceuticals		
Annual sales growth rate for the first five-year period	1% -50%	1%-44%
Annual sales growth rate beyond five-year period	0%	0%
Discount rate	7.90%, 12.00%	7.90%, 12.00%
Radiation therapy equipment and related services		
Annual sales growth rate for the first five-year period	7% -73%	0-31%
Annual sales growth rate beyond five-year period	0%	0%
Discount rate	10.91%	10.91%
Irradiation		
Annual sales growth rate for the first five-year period	1% -6%	3%-14%
Annual sales growth rate beyond five-year period	0%	0%
Discount rate	7.90%	7.90%

Management performed impairment assessments of the relevant cash-generating units to which goodwill has been allocated. The recoverable amounts of the cash-generating units (“CGUs”) were determined based on value-in-use calculations. These calculations use cash flow projections based on financial budgets approved by management covering a five-year period. These cash flow projections that adopted annual sales growth rates are changed for certain CGUs. Those growth rates are based on the Group’s historical experience with these operations and adjusted for other factors specific to each cash-generating unit, including the impact of COVID-19 which affected the financial results of certain CGUs.

10 TRADE AND BILL RECEIVABLES

	At 30 June 2022 <i>RMB'000</i> (Unaudited)	At 31 December 2021 <i>RMB'000</i> (Audited)
Bill receivables	86,093	90,876
Trade receivables due from		
– related parties under CNNC	45,862	37,867
– associates and a joint venture	19,877	29,943
– third parties	3,226,311	2,819,517
	<u>3,378,143</u>	<u>2,978,203</u>
Less: loss allowance	<u>(170,336)</u>	<u>(157,050)</u>
	<u><u>3,207,807</u></u>	<u><u>2,821,153</u></u>

All of the trade and bill receivables (net of impairment losses) are expected to be recovered within one year.

Aging analysis

As of the end of the reporting period, the ageing analysis of trade and bills receivables based on the invoice date (or date of revenue recognition, if earlier) and net of loss allowance, is as follows:

	At 30 June 2022 <i>RMB'000</i> (Unaudited)	At 31 December 2021 <i>RMB'000</i> (Audited)
Within 1 year	2,861,330	2,520,825
Between 1 to 2 years	285,161	231,773
Between 2 to 3 years	50,496	54,667
Over 3 years	10,820	13,888
	<u>3,207,807</u>	<u>2,821,153</u>

Trade and bills receivables are required to be settled in accordance with contract terms and are generally due immediately without credit period.

11 CASH AT BANK AND IN HAND

	At 30 June 2022 <i>RMB'000</i> (Unaudited)	At 31 December 2021 <i>RMB'000</i> (Unaudited)
Cash in hand		17
Cash at bank	578,925	519,456
Cash at CNNC Finance Company Ltd.	1,919,749	2,228,717
	<u>2,498,674</u>	<u>2,748,190</u>
Representing:		
Cash and cash equivalents in cash flow statement	1,942,306	2,141,450
Time deposits with original maturity over three months	526,002	573,002
Restricted deposits	30,366	33,738
	<u>2,498,674</u>	<u>2,748,190</u>

Restricted deposits mainly represent deposits for guarantee of letters of credit.

12 TRADE PAYABLES

All trade payables are expected to be settled within one year.

13 DIVIDENDS

Dividends payable to equity shareholders attributable to the previous financial year, approved during the interim period

	<u>Six months ended 30 June</u>	
	2022 <i>RMB'000</i> (Unaudited)	2021 <i>RMB'000</i> (Unaudited)
Final dividend in respect of the previous financial year, approved during the following interim period, of RMB37.79 cents per share (six months ended 30 June 2021: RMB18.03 cents per share)	<u>120,880</u>	<u>57,673</u>

The final dividend in respect of the previous financial year proposed during the reporting period has not been paid at the end of the reporting period.

MANAGEMENT DISCUSSION AND ANALYSIS

The Group is primarily engaged in the research, development, manufacturing and sale of diagnostic and therapeutic radiopharmaceuticals and radioactive source products for medical and industrial applications, the provision of irradiation service for sterilization purpose and EPC services for the design, manufacturing and installation of gamma ray irradiation facilities and the provision of services such as nuclear medical equipment and independent clinical laboratory services to hospitals and other medical institutions.

BUSINESS REVIEW

As of 30 June 2022, we have operated five business segments, namely pharmaceuticals, radioactive source products, irradiation, radiation therapy equipment and related services, and other businesses. In the first half of 2022, CIRC responded proactively to the impact of the COVID-19 pandemic, taking the initiative to seize the opportunities and taking a number of measures to stabilize growth, with various economic indicators improving. During the Reporting Period, the Group achieved revenue of RMB2,619.6 million, representing a year-on-year increase of 27.3%. Net profit for the year was RMB239.5 million, representing a year-on-year increase of 4.6%, and net profit attributable to equity shareholders of the Company was RMB111.1 million, representing a year-on-year increase of 4.0%.

Business Segments

1. *Pharmaceuticals*

CIRC is the leading manufacturer of diagnostic and therapeutic radiopharmaceuticals in China, primarily engaged in the research, development, manufacturing and sale of a wide range of diagnostic and therapeutic radiopharmaceuticals, UBT kits and analyzers and in vitro diagnostic reagents in China. During the Reporting Period, the pharmaceuticals business overcame difficulties and remained stable in spite of the repeated recurrence of the COVID-19 pandemic outbreak in China, and recorded an income of RMB1,764.2 million, representing an increase of 10.6% from the corresponding period in 2021.

During the Reporting Period, CIRC supported the “Demonstration base construction projects for the promotion of nuclear medicine application for medical diagnosis” of the nuclear medicine unit of Chinese Medical Association, strengthening the promotion of nuclear medicine diagnosis and treatment technology to clinical departments and other market development work to continue to promote the development of the existing industry. At the same time, we have been vigorously promoting academic research and further deepening the influence of the Gastric Helicobacter pylori Standardized Outpatient Clinic Teacher Training Centre (胃幽門螺桿菌規範化診治門診師範中心) project, we have introduced the yttrium (Y-90) glass microspheres to provide guarantee for the first pilot surgery in China to treat liver cancer with yttrium (Y-90) glass microspheres. CIRC further integrated the sales business of iodine-125 sealed sources products to improve sales level and market competitiveness. Overall sales of UBT products maintained an upward trend, with 1,764 new customers and over 19,000 cumulative customers by June 2022. CNNC Headway newly established a wholly-owned subsidiary Shenzhen Headway Pharmaceutical Co., Ltd. (深圳市海得威醫藥有限公司) as an incubation and landing platform for emerging businesses such as early screening and early diagnosis, and newly established Headway (Hong Kong) Bio-science and Technology Co., Limited (海得威科學(香港)生物科技有限公司) as the Company’s international platform, playing an important role in product export, international projects introduction, and international technology and capital cooperation.

2. *Radioactive source products*

CIRC is one of the largest manufacturers of medical and industrial radioactive sources products in China and also a producer with the most complete range of radioactive source product offerings in China, primarily engaged in the research, development, manufacturing and sale of various medical and industrial radioactive sources products as well as provision of related technical services. During the Reporting Period, the Group realized an income of RMB172.0 million from radioactive source business, representing an increase of 10.8% from the same period in 2021.

During the Reporting Period, the radioactive source segment of CIRC delivered the first batch of cobalt sources to TG Company in Malaysia, providing an important foundation for CIRC to provide an overall solution for irradiation station to overseas users. At the same time, we overcame the adverse impact of the spread and control of the epidemic in many places and completed the product launch with precise scheduling and seizing the gap of the epidemic, during which the sales income of gamma knife source increased by RMB7.0 million, representing a year-on-year increase of 72.4%. CNNC Tongxing entered into a cooperation agreement on cobalt-60 products with DIOXITEK of Argentina, which is another cooperation between China and Argentina in the field of nuclear technology after the nuclear cooperation, and is the first step in the cooperation between CIRC and DIOXITEK in the field of nuclear technology. It can alleviate the domestic demand for cobalt source supply, stabilize the domestic customer base, and facilitate market development.

3. *Irradiation*

The irradiation segment of CIRC is primarily engaged in providing irradiation service for sterilization purpose to manufacturers of medical devices, food, traditional Chinese medicine and cosmetics in China, and provide EPC services for the design, manufacturing and installation of irradiation facilities to irradiation service providers. During the Reporting Period, the income from irradiation processing services increased, mainly due to the increase in the irradiation processing of medical products. The irradiation segment realized an income of RMB74.0 million, representing a year-on-year increase of 18.0%.

4. Radiation therapy equipment and related services

During the Reporting Period, CIRC's radiation therapy equipment segment continued to maintain its leading position in the Category A market and further expanded its market share in Category B. It also pushed ahead in all respects with the implementation and pre-marketing of high-end domestic radiation therapy equipment. The research and development of new head-body gamma knife equipment has been carried out around technologies such as CBCT image guidance and high focus dose rate. The equipment research and development work has been completed, and the prototype has entered the type testing stage. During the Reporting Period, the segment of radiation therapy equipment and related services realized an income of RMB269.3 million, representing a year-on-year increase of 152.1%.

In January 2022, CNNC Accuray obtained the high and new technology enterprise certificate from Tianjin Municipal Science and Technology Bureau, Tianjin Municipal Finance Bureau and Tianjin Municipal Tax Service of the State Taxation Administration. The Company has set up a joint venture, Jiangsu Gaotong Equipment Co., Ltd. (江蘇高同裝備有限公司), which is committed to making technological progress in the medical equipment field, conducting technological research and development in the high-end intelligent manufacturing field, and providing systematic solutions for high-end equipment and intelligent manufacturing. The radiopharmaceuticals automatic dispensing and injection system developed by CNHE and the nuclear medicine experts at home and abroad is safe, precise and efficient, perfectly realizing functions of automatic loading – needle identification – dispensing – activity measurement – injection – cleaning, while providing more comprehensive protection for medical staff with its excellent protection performance, and at the same time effectively reducing the use and maintenance costs of the hospital by domestic production. CNHE has developed an intelligent radiation protection screen (TF-01-S) with experts at home and abroad, which can effectively reduce the radiation exposure of medical staff during radiopharmaceuticals injection and monitor the activity of radiopharmaceuticals injected into the human body in real time, and is suitable for most manual, semi-automatic and fully automatic dispensing and injection systems of radiopharmaceuticals currently available in the market.

5. Other businesses

In order to provide users with a full range of services, we also provide services such as trade and independent clinical laboratory services for nuclear technology industry applications and medical product applications. We primarily provide users with trade services for imported radioactive source, medical nuclides, imported radiopharmaceuticals, nuclear instruments and devices, medical equipment and other products. The Group is promoting the cooperation with international pharmaceutical companies to introduce advanced radiopharmaceuticals, intensive management services for hospital consumables, and import agency sales of medical devices. During the Reporting Period, the Group's trade services and other businesses achieved income of RMB340.1 million, representing a year-on-year increase of 145.9%.

The table below sets forth our revenue by business segment for the six months ended 30 June 2022 and for the six months ended 30 June 2021:

<i>(RMB in million, except in percentage)</i>	Six months ended 30 June 2022		Six months ended 30 June 2021	
	Amount	%	Amount	%
Pharmaceuticals	1,764.2	67.3	1,594.8	77.5
Radioactive source products	172.0	6.6	155.2	7.5
Irradiation	74.0	2.8	62.7	3.0
Radiation therapy equipment and related services	269.3	10.3	106.8	5.2
Other businesses	340.1	13.0	138.4	6.8
Total	<u>2,619.6</u>		<u>2,057.9</u>	

Marketing

During the Reporting Period, in order to cope with the requirements of the normal state of the pandemic, the Group's headquarters, together with its subsidiary CNNC Headway and CNNC Accuray continued working on online platforms such as "Isotope Technology Lecture Hall", "Headway Health Lecture Hall" and "Accuray Lecture Hall", and invited experts of their respective fields to conduct online teaching and academic promotions activities, as well as hosted the "Xiangshan Forum on Targeted therapy for bone metastases (香山論道——骨轉移瘤靶向治療論壇)" to help experts from Beijing Nuclear Medicine Branch (北京核醫學分會) and CSCO Expert Committee on Nuclear Medicine (CSCO 核醫學專家委員會) to conduct academic seminars. During the Reporting Period, the Group continued to support the work of the nuclear medicine unit of Chinese Medical Association in order to promote nuclear medicine diagnostic work and build the foundation of a demonstration base project which has been officially launched in Shenyang Fifth People's Hospital. Since its commencement, the project has been put into practice in 62 hospitals.

Scientific Research and Innovation

The Group has strong research and development strengths. Our scientific research team comprising 412 research and development personnel and assistants focuses on extensive researching and optimizing production technologies, the development of new products and the safety and efficacy upgrading of existing products. We have always actively conducted research and development work on various types of imaging diagnosis and therapeutic pharmaceuticals to fill the void of various fields of medical treatment and meet the medical needs of China. As of 30 June 2022, we had seven types of imaging diagnosis and therapeutic radiopharmaceuticals under research and development. Among them, two types of radiopharmaceuticals (i.e. iodine-131-MIBG injection and sodium fluoride-18 injection) were in clinical trial phase, one type of therapeutic radiopharmaceutical (i.e. palladium-103 sealed source) was awaiting approval for the clinical trial phase, and four types of imaging diagnosis and therapeutic radiopharmaceuticals were in various phases of research and development.

During the Reporting Period, the Group achieved remarkable results in the work on intellectual properties, with a total of 39 patents applied including 15 patents for inventions, 44 patents licensed including 8 patents for inventions, and 4 copyrights registered. As of 30 June 2022, the Group established six research and development centres under the CIRC Institute System, namely in vitro diagnosis technology, radioactive medicine, stable isotope and breath test technology, radioactive source and industrial application, irradiation application technology, and precision clinical examination. We will work with foreign and domestic outstanding enterprises to carry out innovations of the operational system and mechanism, adopt various methods including independent product development, alliance, entrustment, introduction or acquisition and merger, and gradually establish a high-level enterprise research and development centre covering various nuclear technology application fields.

International Business

During the Reporting Period, the Group has exported UBT analyzers, coronavirus test kits, RIA kits, gamma irradiation station, cobalt sources and other anti-epidemic materials to dozens of countries and regions, realizing a total export revenue of RMB31.0 million. During the Reporting Period, the Group has continued to implement the gamma irradiation station project in Malaysia, which was on track. At the same time, as the world's third largest supplier of cobalt sources, the Group continued to carry out the cobalt source export business. The Group kept promoting the overseas registration of radiopharmaceuticals to lay the foundation for the future development of overseas radiopharmaceuticals markets. The Group continued to expand business channels, actively promoted internal and external business synergies, and sent staff to work at IAEA. In addition to promoting direct trade exports of various products, it also actively participated in a number of tenders for foreign aid projects of the Ministry of Commerce and procurement projects of multilateral organizations around the world. In addition, in continuously strengthening the management of operations, the Group further improved its export risk management mechanism, conducted business training on international tendering, and strengthened the construction of internal management systems, which helped the Group to further improve its internationalized operation.

Capital Operation

Upholding the strategic objectives of “Becoming Larger, Stronger and Better”, the Group firmly follows the development concept of “Assetization and Globalization” to transform itself into a topnotch international organization and provider of nuclear technology application products and services. To implement the Group’s strategy and improve the Company’s financial gains, we have teamed up with CIRC Innovation Industrial Investment Fund to invest in various fields of nuclear technology applications, including nuclear medicine, medical device, in vitro diagnosis, industrial irradiation application and equipment manufacturing. These various projects have been underway as planned. During the Reporting Period, the Group has not acquired any enterprises.

As of 30 June 2022, the Company’s actual amount paid to the CIRC Fund was RMB480.0 million, and the total actual amount paid to the CIRC Fund was RMB1,600.0 million, so the Company’s proportion accounted for 30.0%. After evaluation, the net assets of CIRC Fund measured at fair value as of 30 June 2022 were RMB1,650.0 million. The Company’s net assets calculated based on the 30.0% shareholding percentage were RMB495.0 million, accounted for 4.6% of the Company’s total assets. In the first half of 2022, the Company’s investment income in CIRC Fund was RMB2.3 million, and the Company received dividends of RMB4.0 million.

Production Capacity

The manufacturing and production facilities of the Group have a wide geographical coverage in China. Up to now, the pharmaceutical centres that had been put into production by the Company were located in 23 regions including Beijing, Shanghai, Guangzhou, Chongqing, Chengdu, Shenyang, Zhengzhou, Changsha and Wuhan. From January to June 2022, CIRC actively overcame the impact of the epidemic and made every effort to promote the construction of its medical centres. The projects in Nanchang, Yichang and Taiyuan were officially completed and put into production. 23 medical centres are now available for single-photon drugs, 12 of which can supply positron drugs at the same time.

The diagnostic and therapeutic radiopharmaceuticals manufacturing bases were mainly located in four regions (i.e. Beijing, Shanghai, Ningbo and Leshan). The UBT kits and analyzers manufacturing bases were located in two regions (i.e. Shenzhen and Tongcheng). The radioactive source manufacturing bases were located in two regions (i.e. Beijing and Leshan). The in vitro immunoassay diagnostic reagents and kits manufacturing bases were located in Beijing. The construction of the bases in North and East China is also progressing steadily. Up to now, the Pengshan base successfully obtained the radiopharmaceuticals production license and officially has all the conditions for production, which will help optimize the industrial structure of CNGT and take a solid step towards the strategic goal of “Asia’s largest and world-class highland of radioactive source innovation and a leading national centre of nuclide radiopharmaceuticals”.

The annual designed capacity of major products as of 30 June 2022 is set out in the table below:

Imaging diagnostic and therapeutic radiopharmaceuticals:

	Annual designed capacity
Fluorine-18-FDG injections (Ci)	22,953
Molybdenum-99/technetium-99m generators (Ci)	32,445
Technetium-99m instantly labelled pharmaceutical series (vial)	1,678,950
Sodium iodine-131 oral solution (Ci)	22,036
Iodine-125 sealed sources (unit)	1,000,000
Strontium-89 chloride injections (vial)	67,400

UBT kits and analyzers:

	Annual designed capacity
Carbon – 13&14 UBT kits (unit)	100,000,000
Carbon – 13&14 UBT analyzers (unit)	8,500

In vitro immunoassay reagents and kits:

	Annual designed capacity
RIA kits(unit)	200,000
EIA reagents, CLIA reagents and TRFIA reagents (unit)	100,000

Radioactive source products:

	Annual designed capacity
Cobalt-60 source for gamma knife (Ci)	3,600,000
Iridium-192 brachytherapy sources (Ci)	10,000
Cobalt-60 radioactive source for irradiation service (Ci)	14,400,000
Iridium-192 non-destructive testing radioactive sources (Ci)	1,500,000
Caesium-137 radioactive sources (Ci)	59,000
Americium-241/Beryllium neutron sources (Ci)	1,000
Selenium-75 non-destructive testing radioactive source (Ci)	150,000

FUTURE DEVELOPMENT

In the first half of this year, the downward pressure on China's economy increased significantly due to the complicated evolution of the international environment, the impact of the domestic epidemic and other unexpected factors, but the long-term positive fundamentals of China's economy remain unchanged. With the domestic epidemic situation stabilizing and a series of growth stabilization policies and measures by the Chinese government gradually taking effect, the macroeconomic environment in China is bound to continue to improve in the future. As a leading company in the industry, we will continue to strengthen the research and judgment of the situation, grasp the changes in the internal and external environment comprehensively, accurately and dialectically, make efforts to prevent various risks, actively deal with external challenges, firmly grasp the development opportunities, focus on promoting market development, industrial layout, technological innovation, deepening reform, management improvement and other key tasks in an orderly manner, and strive to complete the annual key objectives and tasks.

In terms of market development, the “Medium and Long-term Development Plan for Medical Isotopes (2021-2035)” (《醫用同位素中長期發展規劃(2021-2035年)》) jointly issued by eight ministries and commissions including the China Atomic Energy Authority in 2021 proposes to promote the establishment of a nuclear medicine department, with the aim of achieving the full coverage of nuclear medicine in tertiary general hospitals by 2025 and implementing “One County, One Department” nationwide by 2035. In order to seize this policy opportunity and help to speed up the implementation of the “One County, One Department” plan, CIRC has actively integrated its internal resources to establish the Nuclear Medicine Development Centre. In the future, we will rely on the Nuclear Medicine Development Centre and make full use of the CNNC's unique industrial resources in the field of nuclear medicine and radiotherapy to accelerate the implementation of CNNC solution of the national plan for “One County, One Department”, striving to achieve nationwide promotion by the end of the “14th Five-Year Plan” period. At the same time, we are deeply aware of the importance of the international market and have taken an important step in developing the international market by setting up a Hong Kong subsidiary of CNNC Headway in a timely manner. In the future, we will further strengthen the development of the international market, make every effort to promote the export of nuclear technology application products and services, and continuously increase the international market share through independent establishment of overseas localized institutions, overseas mergers and acquisitions and other means.

In terms of industrial layout, we will unswervingly follow the development path of “controlling at source, strengthening the core, expanding the application” to improve the industrial layout of nuclear technology applications. In terms of controlling at source, we will accelerate the construction of the CNNC Qinshan isotope production base and the $^{177}\text{Lu}/^{68}\text{Ga}$ production line for the integrated diagnosis and treatment nuclides, and realize the localization of key nuclides such as ^{125}I , ^{131}I , ^{14}C and ^{177}Lu as soon as possible. In terms of strengthening the core, we will make every effort to quicken the construction of projects, such as the North China medical base, the East China medical base and the Sichuan radioactive source R&D and production base, to accelerate the improvement of the nationwide medical centre network layout, promoting larger industrial scale with an increase in production capacity and consolidating competitive advantages with economies of scale. In terms of expanding the application, we will further enrich our range of nuclear medical equipment products and develop emerging industries such as radiation curing in the field of irradiation applications.

In terms of scientific and technological innovation, we are deeply aware of the fact that scientific and technological innovation is the first driving force to lead the development of enterprises, and will unswervingly put the building of scientific and technological innovation capabilities and the transformation of scientific research achievements at the core position of the overall development of the “14th Five-Year Plan”. On the one hand, we will continue to increase investment in research and development and fully exploit CNNC’s collaborative innovation advantages of research and development, production and application to promote technological innovation in the fields of medical isotopes, radioactive source, radiopharmaceuticals, nuclear medical equipment and irradiation application. On the other hand, we will continue to increase our efforts in building research and development (R&D) platforms, and focus on the construction of a world-class project on securing R&D conditions for radiopharmaceuticals and radioactive sources, fully supporting the high-standard operation of IAEA Radiopharmaceuticals and Radioactive Source Production and Application Collaboration Centre (IAEA放射性藥物及放射源生產應用協作中心), the CIRC Branch Centre of the National Research Center of Isotope Engineering and Technology, National Atomic Energy Agency R&D Centre (國家原子能機構研發中心), the CNNC Radiopharmaceuticals Engineering and Technology Research Center and the Joint Laboratory of China Pharmaceutical University.

In terms of deepening reform, CIRC was successfully selected as a “Science and Technology Reform Demonstration Enterprise” by the State-owned Assets Supervision and Administration Commission of the State Council in the first half of 2022. We will take this opportunity to make good use of the policies on state-owned enterprise reform, continue to enrich our medium – and long-term incentive packages and toolboxes, further optimize our value distribution system, and accelerate the establishment of a mechanism to share the interests of enterprises and employees, so as to fully stimulate the innovation vitality and the endogenous power of CIRC. At the same time, we will vigorously cultivate a group of high-tech, specialized and new enterprises, and continue to enhance their value creation and industry competitiveness.

In terms of management improvement, we will take CNNC’s “Year of Lean Management” as an opportunity to deepen the lean management and further improve the lean management system based on the “decay” characteristics of products, thus building a lean benchmarking demonstration workshop for business modules such as radiopharmaceuticals, radioactive source and irradiation application. We will promote the improvement of various market competitiveness indicators such as quality, safety, and cost with lean management. At the same time, we will focus on compliance operation, quality control and safety production, and identify potential risks in a timely and accurate manner to ensure that major risk management and control are in place.

The “14th Five-Year Plan” is a period of strategic opportunity for the development of the nuclear technology application industry. For this reason, we have formulated the “17520” planning goals. “1” refers to the building of an internationally renowned supplier of isotopes and radiation technology application products and services in an all-round way. “7” refers to the leap of seven business units to a new level. “5” refers to the comprehensive improvement of the “Five Top” core capabilities. “20” refers to the accomplishment of twenty landmark achievements. In future development, we will unify our thinking and understanding, maintain strategic focus and practice the “CIRC speed” with focus on this goal, going all out to promote the implementation of the key tasks of the “14th Five-Year Plan”, fully promoting the accelerated development of the nuclear technology application industry, thus further consolidating the Group’s leading position in the industry.

IMPACT OF THE COVID-19

Currently, the global COVID-19 pandemic is still spreading. The epidemic in China is spreading and frequently occurring in many places, and the situation of prevention and control is serious and complicated. The Group coordinated the alignment of epidemic prevention and control with production and operation, with the business developments trending well in the first half of the year. In the second half of the year, in the face of the complicated domestic and international situation, we will maintain our confidence, stay determined and respond scientifically, insisting on both epidemic prevention and control and production and operation, and making full use of a series of growth stabilization policies issued by the Chinese government to ensure that our annual business targets are successfully achieved.

In the long run, the COVID-19 pandemic has also brought opportunities for the development of the nuclear technology application industry. Irradiation technology has played an irreplaceable role in fighting against the pandemic, shortening the sterilization time of disposable medical supplies from the original 14 days to less than one day, which has been fully affirmed by all sectors of society, and China has further increased its emphasis on the nuclear technology application industry. The outbreak of the COVID-19 pandemic has, at the same time, prompted the country to pay more attention to health issues, and people's demand for living in good health and preventing and treating disease has grown day by day, providing an important opportunity for the development of industries such as radiopharmaceuticals, medical diagnosis and high-end nuclear medical equipment. We will fully grasp the opportunities brought by the pandemic, and taking the planning initiative and following the trend, make every effort to promote the accelerated development of related industries.

FINANCIAL REVIEW

Revenue

We derived our revenue mainly from five major business segments: (1) pharmaceuticals; (2) radioactive source products; (3) irradiation; (4) radiation therapy equipment and related services; and (5) other businesses.

Our revenue increased by 27.3% from RMB2,057.9 million for the six months ended 30 June 2021 to RMB2,619.6 million during the Reporting Period, which was mainly due to the Company worked hard to develop the market, took effective measures to prevent and control the epidemic, and promoted the Company's business development in an orderly manner during the Reporting Period. The revenue of our pharmaceuticals segment, radiation therapy equipment and related services segment and other businesses all increased significantly.

Cost of Sales, Gross Profit and Gross Margin

Our cost of sales increased by 48.7% from RMB730.6 million for the six months ended 30 June 2021 to RMB1,086.8 million during the Reporting Period, which was mainly due to the increase in the business volume of each segment during the Reporting Period compared with the same period of the previous year, leading to a corresponding increase in the cost of sales.

Our gross profit increased by 15.5% from RMB1,327.3 million for the six months ended 30 June 2021 to RMB1,532.8 million during the Reporting Period and our gross margin decreased by 6.0% from 64.5% to 58.5%. The decrease in gross margin was primarily due to a change in the Company's sales structure as a result of an increase in the business volume and revenue share of the radiation therapy equipment and related services which, due to the nature of its business, had a lower gross margin than other business segments.

Other Income

Our other income increased by 65.7% from RMB22.0 million for the six months ended 30 June 2021 to RMB36.4 million during the Reporting Period, which was mainly due to increased government grants and interest income received during the Reporting Period.

Selling and Distribution Expenses

Our selling and distribution expenses increased by 11.9% from RMB780.4 million for the six months ended 30 June 2021 to RMB872.9 million during the Reporting Period, which was mainly due to our increased business volume during the Reporting Period, causing the increase of our sales service fees.

As a percentage of revenue, selling and distribution expenses decreased from 37.9% for the six months ended 30 June 2021 to 33.3% during the Reporting Period, which was mainly due to the income growth and the change in sales structure during the Reporting Period.

Administrative Expenses, Research and Development Costs and Credit Loss on Trade Receivables

Our administrative expenses, research and development costs and total credit loss on trade receivables increased by 25.6% from RMB296.6 million for the six months ended 30 June 2021 to RMB372.4 million during the Reporting Period. Our administrative expenses increased by 11.9% from RMB215.9 million for the six months ended 30 June 2021 to RMB241.6 million during the Reporting Period, which was mainly due to an increase in agency fees and labor costs as result of the development of the Company's business during the Reporting Period.

The research and development costs increased by 45.4% from RMB80.1 million for the six months ended 30 June 2021 to RMB116.6 million during the Reporting Period, which was mainly due the increase of research and development investment and technological innovation by the Company.

The total credit loss on trade receivables increased by 2,504.0% from RMB0.5 million for the six months ended 30 June 2021 to RMB14.2 million during the Reporting Period, which was mainly due to the increased bad debt losses accrued based on credit risk this year.

As a percentage of revenue, administrative expenses, research and development costs and total impairment loss on trade receivables decreased from 14.4% for the six months ended 30 June 2021 to 14.2% during the Reporting Period, which was mainly due to the controls over administrative expenses by the Company.

Finance costs

Our finance costs increased by 42.9% from RMB16.8 million for the six months ended 30 June 2021 to RMB23.9 million during the Reporting Period, which was mainly due to the increase in our interest exchange losses resulting from foreign exchange fluctuations during the year.

Share of Profits Less Losses of Associates and Share of Profits of Joint Ventures

Our share of profits less losses of associates increased by 67.6% from RMB2.7 million for the six months ended 30 June 2021 to RMB4.4 million during the Reporting Period, mainly due to the increase in profits and decrease in losses of associates. Our share of profits of joint ventures decreased by 62.3% from RMB20.2 million for the six months ended 30 June 2021 to RMB7.6 million during the Reporting Period, mainly due to a decrease in profits from our joint venture Shanghai GMS Pharmaceutical Co., Ltd.

Profit before Tax

As a result of the foregoing, our profit before tax increased by 12.1% from RMB278.3 million for the six months ended 30 June 2021 to RMB312.1 million during the Reporting Period.

Income Tax

Our income tax increased by 47.0% from RMB49.4 million for the six months ended 30 June 2021 to RMB72.6 million during the Reporting Period, mainly due to the increase in our taxable income.

For the six months ended 30 June 2021 and during our Reporting Period, our effective tax rate was 17.7% and 23.3% respectively.

Profit for the Period

As a result of the foregoing, our profit for the period increased by 4.6% from RMB228.9 million for the six months ended 30 June 2021 to RMB239.5 million during the Reporting Period.

FINANCIAL POSITION

Overview

For the six months ended 30 June 2022, the total assets, the total liabilities and the total equity of the Group were RMB10,878.0 million, RMB4,746.6 million and RMB6,131.4 million respectively.

Net Current Assets

The table below sets forth our current assets, current liabilities and net current assets as at the dates indicated:

	<i>RMB in million</i>	
	At 30 June 2022	At 31 December 2021
Inventories	844.4	691.9
Contract assets	25.5	29.4
Trade and bill receivables	3,207.8	2,821.2
Deposits and other receivables	139.2	153.7
Prepayments	249.9	212.4
Cash at bank and in hand	2,498.7	2,748.2
Total Current Assets	6,965.5	6,656.8
Bank loans	73.2	118.1
Corporate bond	510.1	500.0
Trade payables	487.9	337.9
Accruals and other payables	2,960.8	2,816.4
Lease liabilities	49.6	53.4
Provisions	81.9	76.5
Income tax payable	72.9	69.4
Total Current Liabilities	4,236.4	3,971.7
Net Current Assets	2,729.1	2,685.1

Our net current assets increased by 1.6% from RMB2,685.1 million as of 31 December 2021 to RMB2,729.1 million as of 30 June 2022, which was mainly due to the increase in inventories and trade and bill receivables, resulting in an increase in current assets.

Adjusted Net Gearing Ratio and Quick Ratio

As of 31 December 2021 and 30 June 2022, our adjusted net gearing ratio (adjusted net debt (interest-bearing debt plus unaccrued proposed dividends) divided by adjusted equity (all components of equity less unaccrued proposed dividends)) was 16.5% and 13.6% respectively.

As of 31 December 2021 and 30 June 2022, our quick ratio (total current assets excluding inventories divided by total current liabilities as of the same date) was 1.5 times and 1.4 times, respectively.

Analysis of Cash Flows

The following table sets forth the cash flows of the Group:

	<i>RMB in million</i>	
	Six months ended 30 June	
	2022	2021
Net cash generated from/(used in) operating activities	(87.1)	30.1
Net cash used in investing activities	(54.7)	(394.5)
Net cash generated from financing activities	(57.5)	11.8
Net decrease in cash and cash equivalents	(199.3)	(352.6)
Cash and cash equivalents at the beginning of the period	2,141.5	2,351.5
Effect of changes in foreign exchange rate	0.1	0.1
Cash and cash equivalents at the end of the period	1,942.3	1,999.0

Trade Receivables, Prepayments, Deposits and Other Receivables

Trade and other receivables are stated at amortised cost using the effective interest method less allowance for credit losses. As of 30 June 2022, our trade and other receivables (net of bad debt allowance of RMB179.4 million) were RMB3,596.8 million.

Trade and Other Payables

Our trade and other payables mainly consist of trade payables and accruals and other payables, which include receipts in advance, other taxes payables, deposits from distributors, payables to distributors, payables for staff-related costs, dividends payables and other accruals and payables. As of 30 June 2022, our trade and other payables were RMB3,448.7 million.

Bank Loans and Pledge of Assets

As of 30 June 2022, the Group's total bank loans were RMB228.9 million.

As of 30 June 2022, the unsecured long-term bank loans mainly included:

- (i) A loan of RMB1.2 million borrowed by a subsidiary of the Group in 2022 at an interest rate of 4.40%.
- (ii) A loan of RMB1.5 million borrowed by a subsidiary of the Group in 2022 at an interest rate of 4.40%, with a principal of RMB2.1 million remaining as at 30 June 2022.
- (iii) A loan of RMB1.6 million borrowed by a subsidiary of the Group in 2022 at an interest rate of 4.40%, with a principal of RMB9.0 million remaining as at 30 June 2022.

As of 30 June 2022, the secured long-term bank loans mainly include:

- (i) A loan of RMB4.9 million borrowed by a subsidiary of the Group in 2022 at an interest rate of 4.10%, with a principal of RMB128.5 million remaining as at 30 June 2022, for which was jointly guaranteed by the shareholders of the subsidiary.
- (ii) A loan principal of RMB2.5 million borrowed by a subsidiary of the Group at an interest rate of 4.00%, for which certain of the Group's properties with total carrying amount of RMB55.4 million and right of use assets with total carrying amount of RMB6.8 million were pledged.
- (iii) A loan principal of RMB6.7 million borrowed by a subsidiary of the Group at an interest rate of 5.44%, for which certain of the Group's properties with total carrying amount of RMB8.0 million and right of use assets with total carrying amount of RMB0.9 million were pledged.
- (iv) A loan principal of RMB5.3 million borrowed by a subsidiary of the Group at an interest rate of 4.90%, for which was guaranteed by the shareholders of the subsidiary.
- (v) A fixed asset loan of RMB6.2 million borrowed by a subsidiary of the Group in 2022 at an interest rate of 4.15%, for which plants under construction were pledged.
- (vi) A fixed asset loan of RMB0.5 million borrowed by a subsidiary of the Group in 2022 at an interest rate of 4.45%, for which plants under construction were pledged.

As of 30 June 2022, the Group's short-term bank loans mainly include:

- (i) A loan principal of RMB10.0 million borrowed by a subsidiary of the Group in 2022 at an interest rate of 3.85%, which was guaranteed by Beijing Capital Investment & Guarantee Co., Ltd. (北京首創融資擔保有限公司).
- (ii) A loan principal of RMB107.0 million borrowed by a subsidiary of the Group in 2021 at an interest rate of 3.40%, with a principal of RMB57.0 million remaining as at 30 June 2022.

Capital Expenditures

Our capital expenditures mainly comprise additions to ownership interests in leasehold land held for own use, investment properties, plant and equipment and intangible assets. During the Reporting Period, our capital expenditures were RMB189.6 million.

Contingent Liabilities

As of 30 June 2022, we did not have any material contingent liabilities.

Foreign Exchange and Foreign Exchange Risk

During the six months ended 30 June 2022, the Group was exposed to currency risks primarily through bank deposits denominated in foreign currency, which were primarily Hong Kong dollars. The Group monitors foreign exchange movements and determines exchange when necessary. The Group currently has no foreign exchange hedging policy.

Credit Risks

In order to minimise the credit risk, we have policies in place to monitor the exposures to these credit risks on an ongoing basis. Before accepting any new customer requiring credit over a certain credit amount, we carry out research into their credibility and assess their credit quality and define credit limits for that customer. Our individual credit evaluations focus on the customer's historical payment records, and take into account information specific to the customer as well as pertaining to the economic environment in which the customer operates.

We normally do not require collateral from customers. Therefore, our exposure to credit risk is influenced mainly by the individual characteristics of each customer rather than the industry in which the customer operates. The significant concentration of credit risk primarily arises when we rely heavily on individual customers. We will, however, perform periodic credit evaluation on our customers and monitor the compliance of credit terms by them. We believe we do not have any significant concentration of credit risk as the trade and bill receivables involve a large number of customers across diverse industries and geographical areas.

Liquidity Risks

Our policy is to regularly monitor current and expected liquidity requirements to ensure that we maintain sufficient reserves of cash and adequate commitment funds from major financial institutions to meet both short and long term liquidity requirements. Our Directors believe that there is no significant liquidity risk, as we have sufficient monetary capital to fund our operations.

Dividend Policy

When the Board recommends the declaration of cash dividends to shareholders at a general meeting, the decision to declare any dividends and the amount of dividends will depend on, among other things:

- our results of operations and cash flows;
- our financial position;
- overall performance;
- our future prospects;
- statutory, regulatory and contractual restrictions on the payment of dividends by us; and
- other factors that the Board deems relevant.

Our Board will propose declaration of dividend, if any, in Renminbi with respect to the shares on a per share basis for shareholders' approval. We will pay such dividend in Renminbi. According to the Articles of Association of the Company, all of our shareholders are equally entitled to dividend and distribution. Holders of the shares will be proportionally entitled to all dividends and other distributions declared on a per share basis.

Interim Dividend

The Board does not recommend the payment of any interim dividend for the six months ended 30 June 2022.

No Material Adverse Change

The Directors have confirmed that there was no material adverse change in our financial and trading position or prospects since 30 June 2022.

Use of Proceeds from the Initial Public Offering

On 6 July 2018, H shares of the Company became listed on the Main Board of The Stock Exchange of Hong Kong Limited (the “**Stock Exchange**”) (stock code: 1763). Based on the offer price of HKD21.60 per H share and upon the partial exercise of the over-allotment option (100 shares), the net proceeds that the Group received from the global offering were approximately HKD1,690.0 million after deduction of the underwriting commissions and other estimated expenses in relation to the global offering.

In accordance with the requirements of paragraph 11(8) of Appendix 16 of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the “**Listing Rules**”), the update of use of proceeds, and the use of proceeds from the initial public offering for the first half of 2022 (including the expected time of full utilisation of this balance) is set out below:

RMB in million

Use	Initial Allocation of the net proceeds	Revised Allocation of the net proceeds	Amount Utilised as of 31 December 2018	Amount Utilised as of 31 December 2019	Amount Utilised as of 31 December 2020	Amount Utilised as of 31 December 2021	Amount Utilised as of 30 June 2022	Balance as of 30 June 2022	Expected time of full utilisation of balance
Investment in imaging diagnostic and therapeutic radiopharmaceuticals manufacturing and research and development bases	597.3	460.0	0.0	29.5	200.0	251.5	306.2	153.8	2022
Establishment of production and distribution subsidiaries	67.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Establishment of new production facilities	84.5	50.0	0.0	50.0	50.0	50.0	50.0	0.0	
Investment in the research and development of various imaging diagnostic and therapeutic radiopharmaceuticals, raw materials of radioactive source products, medical radioisotopes, and UBT products and related raw materials	253.6	118.3	0.0	76.6	101.2	105.5	105.5	12.8	2022
Investments/selective (mergers) acquisitions	286.5	536.1	51.4	529.9	536.1	536.1	536.1	0.0	
Working capital and general corporate purposes	143.3	268.1	71.7	232.5	268.1	268.1	268.1	0.0	
Total	1,432.5	1,432.5	123.1	918.5	1,155.4	1,211.2	1,265.9	166.6	

Note: The investment in the research and development in the use of proceeds is under preparation due to certain research and development projects to be newly launched. There may be differences between the actual and expected timeline for utilizing the proceeds for investment in research and development. The specific timeline of utilization of the proceeds for the investment in the research and development is subject to the actual timeline of utilization of the projects. The Company will fulfill the disclosure obligations in accordance with the relevant requirements according to the progress of the projects.

Employees and Remuneration Policy

The Group had a total of 3,244 employees as of 30 June 2022. During the six months ended 30 June 2022, our staff costs were approximately RMB485.9 million. The remuneration policy of the Group is to motivate and retain excellent staff so as to realize the long-term enterprise goals and objectives of the Group. The employee remuneration policy of the Group is determined after taking into account the overall salary level in the industry, employees' performance and other factors. The management regularly reviews the employee remuneration policy and arrangement of the Group.

We provide our employees with salaries and bonuses, as well as employee benefits, including employee retirement benefit schemes, medical and vocational injury insurance schemes and housing provident fund schemes. Our employees located in China are covered by the mandatory social security schemes defined by PRC local practice and regulations, which are essentially defined contribution schemes.

We provide training to all of our employees to have them equipped with the necessary skills to perform their jobs competently and to give them the opportunities to realize their personal career goals and aspirations. We are also committed to providing individuals with management and leadership training that will improve our capability to achieve our vision, mission and growth objectives. We realize the importance of developing individual career paths that will help employees develop their full potential. Development opportunities are provided as a result of on-the-job training and formal training programs.

HEDGING ACTIVITIES

During the six months ended 30 June 2022, the Group had not entered into any hedging transaction in relation to foreign exchange risks or interest risks.

FUTURE PLANS FOR MATERIAL INVESTMENTS OR CAPITAL ASSETS

The Group will actively explore investment opportunities in and outside the PRC to diversify its source of income, which may or may not include any acquisition or disposal of assets and/or business by the Group. Any such plans will comply with the applicable requirements under the Listing Rules (where appropriate).

CORPORATE GOVERNANCE AND OTHER INFORMATION

Compliance with the Corporate Governance Code

The Company has adopted and applied the principles and code provisions of the Corporate Governance Code set out in Appendix 14 to the Listing Rules. During the Reporting Period, the Company has complied with the principles and code provisions set out in the Corporate Governance Code. The Group has always been committed to enhancing its corporate governance level and deems the corporate governance as an integral part of the value created for shareholders. The Group has, with reference to the code provisions of the Corporate Governance Code set out in Appendix 14 to the Listing Rules, established a modern corporate governance structure effectively balanced and independently operated by the general meetings, the Board, the Board of Supervisors and senior management of the Company. The Company has also adopted the Corporate Governance Code as the corporate governance practices of the Company.

Compliance with the Model Code for Securities Transactions

The Group has adopted a set of codes (“**Customized Code**”) whose standards are not lower than the Model Code for Securities Transactions by Directors of Listed Issuers (the “**Model Code**”) as set out in Appendix 10 of the Listing Rules as its own code of conduct regarding securities transaction by all Directors, Supervisors and the relevant employees of the Company.

Having made specific enquiries to the Directors and Supervisors, all Directors and Supervisors confirmed that they had complied with the required standards as set out in the Customized Code during the Reporting Period. The Company was also not aware of any incidents of non-compliance with the Customized Code by the relevant employees.

Audit and Risk Management Committee

As of 30 June 2022, the audit and risk management committee of the Company (the “**Audit and Risk Management Committee**”) consists of two independent non-executive Directors and one non-executive Director, namely Mr. Hui Wan Fai (chairman), Mr. Lu Chuang and Mr. Liu Zhonglin, and its terms of reference comply with the requirements of Listing Rules.

The Audit and Risk Management Committee has considered and reviewed the accounting principles and practices adopted by the Group and has discussed the relevant internal control and financial reporting matters with the management, including reviewing the unaudited condensed consolidated interim financial results of the Group for the six months ended 30 June 2022.

On 31 August 2022, the Audit and Risk Management Committee reviewed and confirmed the interim results announcement of the Group for the six months ended 30 June 2022, the 2022 interim report and the unaudited condensed consolidated interim financial information for the six months ended 30 June 2022 prepared in accordance with the IAS 34 Interim Financial Reporting.

Purchase, Sale or Redemption of the Company’s Listed Securities

During the six months ended 30 June 2022 and as of the date of this interim results announcement, neither the Company nor any of its subsidiaries purchased, sold or redeemed any listed securities of the Company.

SUBSEQUENT EVENTS

Save as disclosed above, no significant subsequent events to be disclosed take place after the Reporting Period to the date of this announcement.

Material Litigation

As of 30 June 2022, the Company was not involved in any material litigation or arbitration. Nor were the Directors of the Company aware of any material litigation or claims that were pending or threatened against the Company.

Publication of Results Announcement and Interim Report

This announcement has been published on the websites of the Stock Exchange (www.hkexnews.hk) and the Company (www.circ.com.cn). The interim report for the six months ended 30 June 2022 will be despatched to the shareholders of the Company and published on the above websites in due course.

By order of the Board
China Isotope & Radiation Corporation
Wang Suohui
Chairman

Beijing, the PRC, 31 August 2022

As at the date of this announcement, the Board comprises Mr. Wang Suohui and Mr. Du Jin as executive Directors; Mr. Chen Shoulei, Ms. Chang Jinyu and Ms. Liu Xiuhong as non-executive Directors; Mr. Hui Wan Fai, Mr. Tian Jiahe, Ms. Chen Jingshan and Mr. Lu Chuang as independent non-executive Directors.