

THE NEEDHAM RESEARCH INSTITUTE
FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30TH SEPTEMBER 2021

NEDHAM RESEARCH INSTITUTE

FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH SEPTEMBER 2021

CHARITY INFORMATION

Charity Registration Number 311459

Trustees:

Professor Martin Jones (Chairman)
Lord Broers ScD, FRS, FREng
Dr Christopher Hughes
Professor Liu Dun
Mr Stephen Perry
Professor Roel Sterckx
Mr Michael Womack
Ms Elizabeth Wright
Dr Mary Augusta Brazelton
Dr Imre Galambos
Dr Charles Harpum
Ms Katie Lee

Members of the Finance Committee:

Professor Martin Jones (Chairman)
Dr Christopher Hughes
Mr Michael Womack
Ms Elizabeth Wright
Professor Roel Sterckx
Director and Bursar in attendance

Members of the Management Committee:

Professor Jianjun Mei (Chairman)
Ms Susan Bennett
Mr John Moffett
Brigadier Tim Thompson (until 30 June 2021)
Dr Christopher Jagger (from 1 June 2021)

Members of the Publications Board:

Professor Jianjun Mei (Chairman)
Ms Susan Bennett
Mr John Moffett
Brigadier Tim Thompson (until 30 June 2021)
Dr Christopher Jagger (from 1 June 2021)

Principal Officers:

Director:

Bursar:

Librarian:

Administrative Manager:

Professor Jianjun Mei
Brigadier Tim Thompson (until 30 June 2021)
Dr Christopher Jagger (from 1 July 2021)
Mr John Moffett
Ms Susan Bennett

Principal Office Address:

8 Sylvester Road
Cambridge
CB3 9AF

Auditors:

Prentis & Co LLP
Chartered Accountants & Statutory Auditors
115C Milton Road
Cambridge
CB4 1XE

Bankers and Deposit Holders:

National Westminster Bank plc
23 Market Street
Cambridge
CB2 3PA

COIF (until August 2021)
Senator House
85 Queen Victoria Street
EC4V 4ET

Quilter Cheviot Limited
Senator House
85 Queen Victoria Street
London EC4V 4AB

Solicitors:

King & Co
St. Andrews House
St. Andrews Street
Cambridge
CB2 3DD

FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH SEPTEMBER 2021

TRUSTEES REPORT

The Trustees present their report and financial statements for the year ended 30th September 2021.

The financial statements comply with the Charities Act 2011 and Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) (effective 1st January 2019).

REFERENCE AND ADMINISTRATIVE DETAILS

The Needham Research Institute, formerly titled "The East Asian History of Science Trust" is situated at 8, Sylvester Road, Cambridge CB3 9AF. Charity Registration No. 311459.

The names of the Trustees serving during the financial year 1 October 2020 to 30 September 2021 and serving on the date which this report was approved are given on the contents page.

Professor Jianjun Mei is the Director of the Institute and responsible for its day-to-day management. The names of the Institute's staff are given on the contents page.

OBJECTIVES AND ACTIVITIES

PURPOSES OF THE TRUST AS SET OUT IN THE GOVERNING DOCUMENT

Building on the foundation laid by the work of the late Dr Joseph Needham, the Institute seeks to facilitate, promote and develop academic research, publication and teaching of the highest possible standard in the fields of the history of science, technology and medicine in East Asia.

Beyond the purely academic sphere, it also seeks to raise public awareness of those aspects of its work that are of wider significance for human progress. Through the pursuit of those goals it aims to exploit and further develop its role as the world's leading international centre for research in its field. It seeks closer and mutually beneficial cooperation with Cambridge University whilst maintaining its present autonomy as an independent charitable Foundation.

MAIN ACTIVITIES UNDERTAKEN IN RELATION TO THOSE PURPOSES

The restrictions imposed as a result of the Corona Virus Pandemic have continued to affect much of the Institute's activities since the start of the first "lockdown" in March 2020. The Institute aims to ensure the successful completion of the "Science and Civilisation in China" project. Twenty-five volumes have been published and work is proceeding on a further three volumes in the series; in addition, fifteen volumes have been published in the Monograph Series and work is continuing on a number of others. The Institute also publishes a less formal 'Working Papers' Series.

The Institute has an active programme of Research Fellowships and Studentships which is largely funded by grants from several outside Foundations and which enables scholars from East Asia and elsewhere to study at the Institute. It also organises workshops and conferences with major academic organisations in and outside the UK. It runs regular academic seminars during the University term.

The Institute also hosts scholars and academics during the year, allowing them access to its diverse library and catalogue of works and publications in the fields of the history of science, technology and medicine in East Asia.

TRUSTEES REGARD TO THE CHARITY COMMISSION'S GUIDANCE ON PUBLIC BENEFIT

The Institute and its Library offers scholars facilities for research and writing unrivalled by any other academic institution in its field. In addition to its collection of monographs, the Library subscribes to a wide selection of journals, many of which are Chinese publications rarely available elsewhere in Europe. The Library also houses the archives of the late Dr Needham relating to his research in the field he established. A 3-year project (2019 – 2022) funded by the Wellcome Trust is currently being carried out on these archives to make them more accessible to researchers. Digitised research materials are freely available on the Cambridge University Digital Library.

All this material is described and catalogued electronically, and may be searched online for no fee. Any person with a serious interest in the subjects covered by the Institute is welcome to use its facilities without charge. In cases where scholars are sufficiently well funded, the Institute will accept a contribution to its overheads, but this is not an absolute condition for use of its facilities.

In addition to maintaining the Institute's facilities and facilitating access to them, the Trustees encourage the Director to play an active role in making a wider public aware of the area with which it deals. The Director has delivered public lectures Overseas. The Director has been appointed 'Director of Research' by The McDonald Institute for Archaeological Research in University of Cambridge.

FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH SEPTEMBER 2021.

TRUSTEES REPORT

ACHIEVEMENTS AND PERFORMANCE

SUMMARY OF THE MAIN ACHIEVEMENTS OF THE TRUST

Due to the COVID-19 pandemic, several fellowship programmes (such as Xingzhi Discovering China, Jing Brand and Sino-British Fellowship Trust) were suspended during the period of October 2020-September 2021. For other programmes, such as Ho Peng Yoke (HPY) Fellowships, Lloyd-Dan David (LDD) Fellowship, Independent School Foundation (ISF) Fellowship and Soon-Young Kim (SYK), awards were still in operation.

The Independent Schools Foundation (ISF) Fellowship was established in October 2013, for an initial period of three years, which was renewed in 2016 for a period of three years and again in 2019 for a further period of five years. Dr Huiyi Wu, the ISF Fellow, formally resigned from her ISF fellowship position with the Institute at the end of January 2021, and took up her permanent position at the CNRS in Paris from the beginning of February 2021. A Joint Selection Committee consisting of members of the ISF, Clare Hall, and the NRI, completed their selection process (including online interviews) in December 2020 and decided to award the ISF fellowship to Dr Jenny Jingyi Zhao, who was our former Lloyd-Dan David fellow until the end of January. In accordance with the agreement with the ISF, Dr Zhao took up her fellowship position from the beginning of February 2021 and was offered a Joseph Needham Visiting Fellowship by Clare Hall too.

In March 2021, the Institute decided to award the LDD fellowship to Mr. Arthur Harris, a PhD student at the Department of History and Philosophy of Science (HPS), University of Cambridge.

In April 2021, Dr Hyungsub Choi of the School of Liberal Arts, Seoul National University of Science and Technology, and Mr Bernhard Leitner, PhD candidate at the University of Vienna, were each awarded a six month SYK fellowship.

Dr Avital Rom had her three-month Ho Peng Yoke fellowship from February-April 2021.

On 19th - 21st April, Dr Avital Rom ran an online international workshop under the title 'Other Bodies: Disability and Bodily Impairment in Early and Medieval China'. It included eight speakers and three moderators from ten academic institutions worldwide (including Cambridge, Harvard, McGill University and more). Over 200 people from over 100 academic institutions registered their interest in attending the workshop, and between 50-90 participants attended each of the five sessions.

Six virtual seminars were organised during the University Easter term March – June 2021. On 9th December 2020, the Director delivered an online lecture 'Needham's Intellectual Heritage and its Significance in Today's World' to a group of students and teachers of the University of Science and Technology Beijing to commemorate the 120th anniversary of the birth of Dr Joseph Needham.

On 9th May 2021, the Director delivered an online lecture 'Some Thoughts on Early Copper Objects and the Origins of Metallurgy in China' to a virtual audience of several hundred, which was organised by the Shandong University.

On 9th July 2021, the Director delivered an online lecture 'A Scientific Study of Bronze Bells of the Western Zhou Period Recovered in Yichang, Hubei' to a virtual audience, which was one of the 100 years of Chinese Archaeology Lecture Series 2021 organised by the University of Heidelberg.

REVIEW OF THE FINANCIAL POSITION AT THE END OF THE YEAR

Funds are invested to provide income to meet the day-to-day running of the Institute. They are split between the Endowment Funds, Restricted Funds (related to grants to expend for the purpose specified, these are shown in note 17 on page 19) and Unrestricted Funds. As at 30th September 2021 funds invested amounted to £16,158,541, (2020: £13,566,504).

The Principal funding sources of the Institute are its income from the investment portfolio, donations and grants from outside foundations, royalties, interest on deposit accounts and rent of No. 2 Sylvester Road. No. 2 Sylvester Road has been leased to Robinson College for fifteen years from 3rd May 2018.

A review of investment performance and the Institute's investment policy are detailed on page 3.

The Institute has a potential liability relating to the employees who are in the 'Universities Superannuation Scheme'. Note 16 and 22 to the accounts set out the basis of a provision that has been made of £38,442 (2020: £50,199).

FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH SEPTEMBER 2021

TRUSTEES REPORT

STRUCTURE, GOVERNANCE AND MANAGEMENT

RESERVES POLICY

The Trustees have considered that the most appropriate policy is to maintain all surplus funds split between investments held with Quilter Cheviot and also a level of balances held as cash at bank sufficient to maintain the day to day costs of running and servicing the Institute.

This policy is kept under review, having regard to the level of funds available.

The Trustees' investment powers are governed by the Trust Deed which permits The Needham Research Institute to invest the monies of the Institute not immediately required for its purposes in such ways as the Institute shall in its absolute discretion think fit.

NATURE OF THE GOVERNING DOCUMENT

The Institute is an educational charity registered in England and subject to the provisions of the 1968 Trust Deed, as amended by Schemes of the Charity Commissioners dated 29th March 1988, 17th March 1992 and 27th November 2000.

THE BOARD OF TRUSTEES

The Trustees provide an appropriate mix of skills, diversity and experience; each is appointed for a term of five years by a resolution of the Trustees passed at a meeting and may be re-appointed for further terms in the same way.

The Trustees meet three times a year to receive reports from the Director, the Bursar through the Finance Committee and the Librarian. The Chairman and the Director are in close touch. All major decisions are referred to the Trustees.

The Trustees have given consideration to the major risks to which the Charity is exposed and have satisfied themselves that systems or procedures have been established in order to manage those risks.

The Institute has been moving towards a turnover of Trustees more consistent with Charity Commission guidelines.

RECRUITMENT OF NEW TRUSTEES

Newly appointed Trustees are given a full briefing and tour of the Institute soon after their appointment. All Trustees have been provided with the Charity Commission Investment Guidelines. The Chair of Trustees is elected annually at a formal meeting of the Trustees.

MANAGEMENT PERSONNEL REMUNERATION

The ultimate responsibility for the management of the Institute rests with the Trustees of the Needham Research Institute, and the day-to-day running of the Institute is overseen by a full-time salaried Director. He is supported by a full-time Librarian, a full-time Administrative Manager and a part-time Bursar, who together with the Director comprise the Management Committee of the Institute.

All Trustees give their time freely and no Trustee received any remuneration in the year. Details of Trustees' expenses are disclosed in note 10 to the financial statements.

The key officers of the Institute detailed above receive remuneration in line with those in similar positions within the University of Cambridge, and are accordingly remunerated in line with the University of Cambridge's pay scale. Officers receive the small "cost of living" salary increases awarded by the University of Cambridge.

PRINCIPAL RISKS AND UNCERTAINTIES

Internal controls over all forms of income, assets, commitment and expenditure continue to be refined to improve efficiency and effectiveness. Performance is monitored and appropriate management information is prepared and reviewed regularly by the management team and Trustees.

The Institute currently produces an annual budget and reports at Trustees meetings against that budget. The Trustees have delegated authority from the Board to ensure that an active risk management process is in place and forms part of The Needham Research Institute's ongoing organisation activity.

INVESTMENT POLICY AND PERFORMANCE

The Investment Portfolio continues to be managed by Quilter Cheviot Limited (now part of Old Mutual).

In the year to 30 September 2021, a total return of 18.3% was achieved. [5.7% in 2020]

FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH SEPTEMBER 2021

TRUSTEES REPORT

PLANS FOR FUTURE PERIODS

The Institute will seek to maximise its contribution to research, teaching and international relations, in its field, focusing principally on China but in the broader context of East Asia, and will take every opportunity to develop fruitful cooperation with the University of Cambridge in those areas, as well as with other institutions of research and higher learning world-wide.

Work will continue on the *Science and Civilisation in China* series and other publications including a planned *Science and Civilisation in Korea* series. Fundraising efforts will continue to increase the Institute's endowment, and to support fellowship programmes.

The annual "Needham Memorial Lecture", in collaboration with other institutions in Cambridge, has been established and will continue, although it could not be held in 2021 due to the pandemic.

The NRI Friendship Association was established in Beijing on 9th June 2018. It has raised funds to be added to the Ho Peng Yoke Fellowship and will continue to do so.

TRUSTEES' RESPONSIBILITIES IN RELATION TO THE FINANCIAL STATEMENTS

The Trustees are responsible for preparing a Trustees' Report and financial statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice).

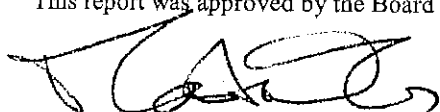
The law applicable to charities in England and Wales requires the Trustees to prepare financial statements for each year which give a true and fair view of the state of affairs of the charity and of the incoming resources and application of resources, of the charity for that period. In preparing the financial statements, the trustees are required to:

- select suitable accounting policies and then apply them consistently;
- observe the methods and principles in the applicable Charities SORP;
- make judgements and estimates that are reasonable and prudent;
- state whether applicable accounting standards have been followed, subject to any material departures that must be disclosed and explained in the financial statements;
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the charity will continue in business.

The Trustees are responsible for keeping proper accounting records that disclose with reasonable accuracy at any time the financial position of the charity and to enable them to ensure that the financial statements comply with the Charities Act 2011, the applicable Charities (Accounts and Reports) Regulations, and the provisions of the Trust deed. They are also responsible for safeguarding the assets of the charity and taking reasonable steps for the prevention and detection of fraud and other irregularities.

APPROVAL

This report was approved by the Board of Trustees and signed on its behalf, on 10 March 2021



PROFESSOR MARTIN JONES
CHAIRMAN OF TRUSTEES

FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH SEPTEMBER 2021

INDEPENDENT AUDITOR'S REPORT TO THE TRUSTEES OF THE NEEDHAM RESEARCH INSTITUTE

OPINION

We have audited the financial statements of The Needham Research Institute for the year ended 30th September 2021 which comprise the Statement of Financial Activities, the Balance Sheet, the Statement of Cash Flows and the related notes. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards, including Financial Reporting Standard 102 "The Financial Reporting Standard applicable in the UK and Republic of Ireland" (United Kingdom Generally Accepted Accounting Practice).

In our opinion the financial statements:

- give a true and fair view of the state of the charity's affairs as at 30th September 2021, and of its incoming resources and application of resources, for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Charities Act 2011.

BASIS OF OPINION

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the charity in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard, and the provisions available for small entities, in the circumstances set out in note 9 to the financial statements, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

CONCLUSIONS RELATING TO GOING CONCERN

In auditing the financial statements, we have concluded that the Trustees' use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the charity's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue.

Our responsibilities and the responsibilities of the Trustees with respect to going concern are described in the relevant sections of this report.

OTHER INFORMATION

The other information comprises the information included in the Trustees' Report, other than the financial statements and our auditor's report thereon. The Trustees are responsible for the Trustees' Report.

Our opinion on the 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 financial statements, our responsibility is to read the Trustees' Report and, in doing so, consider whether the Trustees' Report is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the financial statements or a material misstatement of the other information. 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.

FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH SEPTEMBER 2021

INDEPENDENT AUDITOR'S REPORT TO THE TRUSTEES OF THE NEEDHAM RESEARCH INSTITUTE

MATTERS ON WHICH WE ARE REQUIRED TO REPORT BY EXCEPTION

We have nothing to report in respect of the following matters in relation to which the Charities (Accounts and Reports) Regulations 2008 require us to report to you if, in our opinion:

- the information given in the financial statements is inconsistent in any material respect with the Trustees' Report; or
- sufficient accounting records have not been kept; or
- the financial statements are not in agreement with the accounting records and returns; or
- we have not received all the information and explanations we require for our audit.

RESPONSIBILITIES OF TRUSTEES

As explained more fully in the Trustees' responsibilities statement set out on page 4, the Trustees are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the Trustees determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Trustees are responsible for assessing the charity'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 Trustees either intend to liquidate the charity or to cease operations, or have no realistic alternative but to do so.

AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE FINANCIAL STATEMENTS

We have been appointed as auditor under section 144 of the Charities Act 2011 and report in accordance with the Act and relevant regulations made or having effect thereunder.

Our objectives are to obtain reasonable assurance about whether the 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. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) 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 financial statements.

Irregularities, including fraud, are instances of non-compliance with laws and regulations. We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. The extent to which our procedures are capable of detecting irregularities, including fraud, is detailed below:

- We have considered the nature of the industry and sector, control environment and business performance, including the design of the charity's remuneration policies.
- We have enquired with management in regards to their own assessment of the risks of irregularities, including fraud.
- We have obtained relevant documentation and representations in order to form an opinion on potential irregularities, including fraud.
- Our audit work is limited to samples inherently used under International Auditing Standards, therefore not all transactions are reviewed so the detection of irregularities, including fraud, is limited to this.
- Any matter we identified, we have obtained and reviewed the charity's documented policies and procedures relating to:
 - Identifying, evaluating and complying with laws and regulations and whether they are aware of any non-compliance.
 - Detecting and responding to the risks of fraud and whether they have knowledge of any actual, suspected or alleged fraud.
 - The internal controls established to mitigate risks of fraud or non-compliance with laws and regulations.

As a result of these procedures, we considered the opportunities and incentives that may exist within the organisation for fraud and identified the greatest potential for fraud is in relation to the overstatement of revenue. In common with all audits under ISA's (UK), we are also required to perform specific procedures to respond to the risk of management override.

We also obtained an understanding of the legal and regulatory environment and frameworks in which the charity operates, focusing on provisions of those laws and regulations that had a direct effect on the determination of material amounts and disclosures in the financial statements. The key laws and regulations we considered in this context included UK Companies Act and local tax legislation.

In addition, we have queried with management the need for any other provisions for other laws and regulations which do not have a direct effect on the financial statements, but compliance which may be fundamental for the charity to operate or to avoid a material penalty.

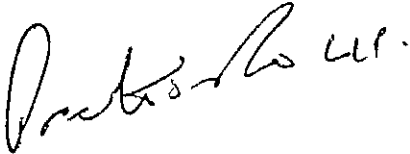
Relevant identified laws and regulations were communicated within the engagement team so they remained alert throughout the audit for indications of fraud or non-compliance.

A further description of our responsibilities for the audit of the financial statements is located on the Financial Reporting Council's website at www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditor's report.

FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH SEPTEMBER 2021

INDEPENDENT AUDITOR'S REPORT TO THE TRUSTEES OF THE NEEDHAM RESEARCH INSTITUTE

This report is made solely to the Trustees, as a body, in accordance with the Charities Act 2011. Our audit work has been undertaken so that we might state to the charity's Trustees those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the charity and the charity's Trustees as a body, for our audit work, for this report, or for the opinions we have formed.



PRENTIS & CO LLP
CHARTERED ACCOUNTANTS
& STATUTORY AUDITORS
115c Milton Road
Cambridge
CB4 1XE

22 March 2022

Prentis & Co LLP is eligible to act as an auditor in terms of section 1212 of the Companies Act 2006.

FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH SEPTEMBER 2021

STATEMENT OF FINANCIAL ACTIVITIES

	Notes	2021			2020				
		Unrestricted Funds	Restricted Funds	Endowment Funds	Total Funds	Unrestricted Funds	Restricted Funds	Endowment Funds	Total Funds
		£	£	£	£	£	£	£	£
INCOME FROM:									
Donations and legacies	2	229,893	7,953	-	237,846	6,453	15,350	-	21,803
Charitable activities	3	-	190,327	-	190,327	-	189,660	-	189,660
Investments	4	74,153	55,053	234,817	364,023	102,463	49,285	178,112	329,860
Other income	5	8,682	43	-	8,725	17,894	1,172	-	19,066
TOTAL INCOME		312,728	253,376	234,817	800,921	126,810	255,467	178,112	560,389
EXPENDITURE ON:									
Raising funds	6	-	-	-	-	-	691	-	691
Charitable activities	7 & 8	385,180	113,416	16,770	515,366	398,150	222,889	16,770	637,809
TOTAL EXPENDITURE		385,180	113,416	16,770	515,366	398,150	223,580	16,770	638,500
Net income/(expenditure) before gains on investments	9	(72,452)	139,960	218,047	285,555	(271,340)	31,887	161,342	(78,111)
Net gains on investments	13	436,553	306,649	1,382,437	2,125,639	119,416	44,011	290,538	453,965
NET INCOME/(EXPENDITURE)		364,101	446,609	1,600,484	2,411,194	(151,924)	75,898	451,880	375,854
Transfers between funds		290,964	(56,147)	(234,817)	-	197,902	(19,790)	(178,112)	-
NET MOVEMENT IN FUNDS		655,065	390,462	1,365,667	2,411,194	45,978	56,108	273,768	375,854
RECONCILIATION OF FUNDS									
Total funds brought forward		3,412,941	2,202,791	9,467,799	15,083,531	3,366,963	2,146,683	9,194,031	14,707,677
Total funds carried forward		4,068,006	2,593,253	10,833,466	17,494,725	3,412,941	2,202,791	9,467,799	15,083,531

The Statement of Financial Activities includes all gains and losses recognised in the year. All income and expenditure derive from continuing activities.

The notes on pages 1.1 to 2.4 form part of these financial statements.

FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH SEPTEMBER 2021

BALANCE SHEET

	Notes	2021		2020	
		£	£	£	£
FIXED ASSETS					
Tangible assets	12		1,126,161		1,149,640
Investments	13		16,158,541		13,566,504
TOTAL FIXED ASSETS			<u>17,284,702</u>		<u>14,716,144</u>
CURRENT ASSETS					
Debtors	14	67,013		7,567	
Short term deposits		-		291,468	
Cash at bank and in hand		213,517		191,973	
TOTAL CURRENT ASSETS		<u>280,530</u>		<u>491,008</u>	
LIABILITIES:					
Creditors: Amounts falling due within one year	15	(32,065)		(73,422)	
NET CURRENT ASSETS			<u>248,465</u>		<u>417,586</u>
TOTAL ASSETS LESS CURRENT LIABILITIES					
Provisions for liabilities and charges	16		17,533,167		15,133,730
TOTAL NET ASSETS			<u>17,494,725</u>		<u>15,083,531</u>
THE FUNDS OF THE CHARITY:					
Restricted funds	17		2,593,253		2,202,791
Endowment funds	18		10,833,466		9,467,799
Unrestricted funds:					
Designated funds	19	91,519		94,076	
Other charitable funds	19	3,976,487	4,068,006	3,318,865	3,412,941
TOTAL CHARITY FUNDS	20		<u>17,494,725</u>		<u>15,083,531</u>

The financial statements were approved by the Trustees at its meeting on 10 March 2022 and signed on its behalf by



PROFESSOR MARTIN JONES
CHAIRMAN OF TRUSTEES

The notes on pages 11 to 24 form part of these financial statements.

FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH SEPTEMBER 2021

STATEMENT OF CASH FLOWS

	Notes	2021 Total Funds £	2020 Total Funds £
Cash flows from operating activities:			
<i>Net cash provided by (used in) operating activities</i>	21	(164,551)	(277,055)
Cash flows from investing activities:			
Investment income		364,023	329,860
Purchase of tangible fixed assets		(2,998)	(9,952)
Purchase of investment fixed assets		(2,101,529)	(1,198,637)
Disposal of investment fixed assets		1,635,131	1,318,777
<i>Net cash provided by (used in) investing activities</i>		(105,373)	440,048
<i>Change in cash and cash equivalents in the year</i>		(269,924)	162,993
Cash and cash equivalents brought forward		483,441	320,448
Cash and cash equivalents carried forward		213,517	483,441

FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH SEPTEMBER 2021

NOTES TO THE FINANCIAL STATEMENTS

1. ACCOUNTING POLICIES

(a) BASIS OF PREPARATION

The financial statements have been prepared in accordance with the Statement of Recommended Practice: Accounting and Reporting by Charities preparing their financial statements in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) (effective 1 January 2019) - (Charities SORP (FRS 102)) and the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102).

The Needham Research Institute meets the definition of a public benefit entity under FRS 102.

Assets and liabilities are initially recognised at historical cost or transaction values unless otherwise stated in the relevant accounting policy notes.

(b) ASSESSMENT OF GOING CONCERN

The trustees consider that there are no material uncertainties about the Institute's ability to continue as a going concern.

(c) INCOME RECOGNITION

All incoming resources are included in the Statement of Financial Activities when the charity is legally entitled to the money and the amounts can be quantified with reasonable accuracy. The following specific policies are applied to particular categories of income:

Donations and legacies:

Donations are recognised when the Institute has been notified in writing of both the amount and settlement date. In the event that a donation is subject to conditions that require a level of performance before the charity is entitled to the funds, the income is deferred and not recognised until either those conditions are fully met, or the fulfilment of those conditions is wholly within the control of the charity and it is probable that those conditions will be fulfilled in the reporting period.

Grant income:

Income from grants, whether 'capital' grants or 'revenue' grants, is recognised when the trust has entitlement to the funds; any performance conditions attached to the grants have been met, it is probable that the income will be received and the amount can be measured reliably and is not deferred.

Investment income:

Interest on funds held on deposit is included when receivable and the amount can be measured reliably by the trust; this is normally upon notification of the interest paid or payable by the bank. Dividends are recognised once the dividend has been declared and notification has been received of the dividend due. This is normally upon notification by our investment advisor of the dividend yield of the investment portfolio.

(d) EXPENDITURE AND IRRECOVERABLE VAT

Expenditure is recognised once there is a legal or constructive obligation to make a payment to a third party, it is probable that settlement will be required and the amount of the obligation can be measured reliably. All expenditure is accounted for on an accruals basis. All expenses including support costs and governance costs are allocated or apportioned to the following expenditure headings as follows:

Raising funds:

Costs of raising funds comprise the costs of seeking and applying for grants and costs associated with the seeking and arranging of licence fee agreements.

Charitable activities:

Expenditure on charitable activities includes the costs of activities undertaken to further the purposes of the institute and their associated support costs. Costs relating to a particular activity are allocated directly, others are apportioned on an appropriate basis.

Governance costs include all expenditure not directly related to the charitable activity or fundraising ventures. This includes an appropriate proportion of costs of staff salaries for administration staff and audit fees.

Irrecoverable VAT is charged as a cost against the activity for which the expenditure was incurred.

FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH SEPTEMBER 2021

NOTES TO THE FINANCIAL STATEMENTS

(e) TANGIBLE FIXED ASSETS

The charity has a policy of capitalising fixed assets with a cost in excess of £100. Depreciation is provided on all tangible fixed assets at rates calculated to write-off the costs less estimated residual value of each asset over its expected useful life as follows:

8 Sylvester Road (Long leasehold)	- over the period of the lease (97 years)
Fixtures and fittings	- 10 years straight line
Equipment	- 4 years straight line

(f) INVESTMENTS FIXED ASSETS

Investments are a form of basic financial instrument and are initially recognised at their transaction value and subsequently measured at their fair value as at the balance sheet date using the closing quoted market price. The Statement of Financial Activities includes the net gains and losses arising on revaluation and disposals throughout the year.

The Institute does not acquire put options, derivatives or other complex financial instruments.

The main form of financial risk faced by the charity is that of volatility in equity markets and investment markets due to wider economic conditions, the attitude of investors to investment risk, and changes in sentiment concerning equities and within particular sectors or sub sectors.

(g) REALISED GAINS AND LOSSES

All gains and losses are taken to the Statement of Financial Activities as they arise. Realised gains and losses on investments are calculated as the difference between sales proceeds and their opening carrying value or their purchase value if acquired subsequent to the first day of the financial year.

Unrealised gains and losses are calculated as the difference between the fair value at the year end and their carrying value. Realised and unrealised investment gains and losses are combined in the Statement of Financial Activities.

(h) DEBTORS

Trade and other debtors are recognised at the settlement amount due after any trade discount offered. Prepayments are valued at the amount prepaid net of any trade discounts due.

(i) CREDITORS

Creditors and provisions are recognised where the charity has a present obligation resulting from a past event that will probably result in the transfer of funds to a third party and the amount due to settle the obligation can be measured or estimated reliably. Creditors and provisions are normally recognised at their settlement amount after allowing for any trade discounts due.

(j) PENSIONS

The Institute participates in the Universities Superannuation Scheme (the scheme). Throughout the current and preceding periods, the scheme was a defined benefit only pension scheme until 31 March 2016 which was contracted out of the Second State Pension (S2P). The assets of the scheme are held in a separate trustee-administered fund. Because of the mutual nature of the scheme, the scheme's assets are not hypothecated to individual institutions and a scheme-wide contribution rate is set.

The Institute is therefore exposed to actuarial risks associated with other institutions' employees and is unable to identify its share of the underlying assets and liabilities of the scheme on a consistent and reasonable basis and therefore, as required by Section 28 of FRS 102 "Employee benefits", accounts for the scheme as if it were a defined contribution scheme.

As a result, the amount charged to the Statement of Financial Activities represents the contributions payable to the scheme in respect of the accounting period. Since the institution has entered into an agreement (the Recovery Plan that determines how each employer within the scheme will fund the overall deficit), the institution recognises a liability for the contributions payable that arise from the agreement to the extent that they relate to the deficit and the resulting expense in the Statement of Financial Activities.

The Institute also participates in the Cambridge University Assistants' Contributory Pension Scheme (CPS). The scheme is a defined benefit scheme which is externally funded and is also contracted out of the State Second Pension (S2P). The fund is valued every three years by a professionally qualified independent actuary, with the actuary reviewing the progress of the scheme in the intervening years.

The Cambridge University Assistants' Contributory Pension Scheme, provides benefits based on final pensionable salary and contributions are made into a defined contribution scheme under the stakeholder rules. The Institute's contributions to this scheme are charged to the Statement of Financial Activities as they are incurred.

FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH SEPTEMBER 2021

NOTES TO THE FINANCIAL STATEMENTS

2.	INCOME FROM DONATIONS AND LEGACIES FOR THE YEAR ENDED 30TH SEPTEMBER 2021	Unrestricted Funds £	Restricted Funds £	Endowment Funds £	2021 Total £
	Donations	229,893	6,703	-	236,596
	Gift Aid	-	1,250	-	1,250
		<u>229,893</u>	<u>7,953</u>	<u>-</u>	<u>237,846</u>
	INCOME FROM DONATIONS AND LEGACIES FOR THE YEAR ENDED 30TH SEPTEMBER 2020	Unrestricted Funds £	Restricted Funds £	Endowment Funds £	2020 Total £
	Donations	6,453	14,100	-	20,553
	Gift Aid	-	1,250	-	1,250
		<u>6,453</u>	<u>15,350</u>	<u>-</u>	<u>21,803</u>
3.	INCOME FROM CHARITABLE ACTIVITIES YEAR ENDED 30TH SEPTEMBER 2021	Unrestricted Funds £	Restricted Funds £	Endowment Funds £	2021 Total £
	Grants	-	190,327	-	190,327
	INCOME FROM CHARITABLE ACTIVITIES YEAR ENDED 30TH SEPTEMBER 2020	Unrestricted Funds £	Restricted Funds £	Endowment Funds £	2020 Total £
	Grants	-	189,660	-	189,660
4.	INCOME FROM INVESTMENTS YEAR ENDED 30TH SEPTEMBER 2021	Unrestricted Funds £	Restricted Funds £	Endowment Funds £	2021 Total £
	Interest receivable	28	-	-	28
	Dividends receivable	41,931	55,053	234,817	331,801
	Rents receivable (No 2 Sylvester Road)	32,194	-	-	32,194
		<u>74,153</u>	<u>55,053</u>	<u>234,817</u>	<u>364,023</u>
	INCOME FROM INVESTMENTS YEAR ENDED 30TH SEPTEMBER 2020	Unrestricted Funds £	Restricted Funds £	Endowment Funds £	2020 Total £
	Interest receivable	3,169	-	-	3,169
	Dividends receivable	67,183	49,285	178,112	294,580
	Rents receivable (No 2 Sylvester Road)	32,111	-	-	32,111
		<u>102,463</u>	<u>49,285</u>	<u>178,112</u>	<u>329,860</u>
5	INCOME FROM OTHER YEAR ENDED 30TH SEPTEMBER 2021	Unrestricted Funds £	Restricted Funds £	Endowment Funds £	2021 Total £
	Royalties	7,820	-	-	7,820
	Sundry	862	43	-	905
		<u>8,682</u>	<u>43</u>	<u>-</u>	<u>8,725</u>
	INCOME FROM OTHER YEAR ENDED 30TH SEPTEMBER 2020	Unrestricted Funds £	Restricted Funds £	Endowment Funds £	2020 Total £
	Royalties	16,324	-	-	16,324
	Sundry	258	1,172	-	1,430
	Government Grants	1,312	-	-	1,312
		<u>17,894</u>	<u>1,172</u>	<u>-</u>	<u>19,066</u>

FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH SEPTEMBER 2021

NOTES TO THE FINANCIAL STATEMENTS

6.	EXPENDITURE ON: RAISING FUNDS YEAR ENDED 30TH SEPTEMBER 2021	Unrestricted Funds £	Restricted Funds £	Endowment Funds £	2021 Total £
	Fundraising costs	-	-	-	-
	EXPENDITURE ON: RAISING FUNDS YEAR ENDED 30TH SEPTEMBER 2020	Unrestricted Funds £	Restricted Funds £	Endowment Funds £	2020 Total £
	Fundraising costs	-	691	-	691
7.	CHARITABLE ACTIVITIES YEAR ENDED 30TH SEPTEMBER 2021	Unrestricted Funds £	Restricted Funds £	Endowment Funds £	2021 Total £
	Academic and related costs	169,610	101,874	-	271,484
	Establishment costs	61,254	-	16,770	78,024
	Office and support costs	146,926	11,387	-	158,313
	Governance costs	7,390	155	-	7,545
		<u>385,180</u>	<u>113,416</u>	<u>16,770</u>	<u>515,366</u>
	ANALYSIS OF EXPENDITURE ON CHARITABLE ACTIVITIES YEAR ENDED 30TH SEPTEMBER 2021	Unrestricted Funds £	Restricted Funds £	Endowment Funds £	2021 Total £
	Academic and related costs				
	Salaries (academic)	85,193	57,780	-	142,973
	Salaries (librarian)	63,732	26,691	-	90,423
	Research grants	-	14,500	-	14,500
	Books and publications	4,936	1,680	-	6,616
	Travel and accommodation	55	-	-	55
	Computer costs	9,327	-	-	9,327
	Telephone, postage and photocopying	3,373	-	-	3,373
	Other (incl. lecture and exhibition expenses)	2,994	1,223	-	4,217
		<u>169,610</u>	<u>101,874</u>	<u>-</u>	<u>271,484</u>
	Establishment costs				
	Rates	12,186	-	-	12,186
	Insurance	14,947	-	-	14,947
	Repairs and maintenance	9,658	-	-	9,658
	Water, light and heat	7,410	-	-	7,410
	Cleaning	8,348	-	-	8,348
	Gardening and grounds	8,670	-	-	8,670
	Ground rent	35	-	-	35
	Depreciation	-	-	16,770	16,770
		<u>61,254</u>	<u>-</u>	<u>16,770</u>	<u>78,024</u>
	Office and support costs				
	Other salaries	65,946	-	-	65,946
	Depreciation	8,483	1,224	-	9,707
	Printing and stationery	877	282	-	1,159
	Entertaining	199	-	-	199
	Investment broker charges	71,445	9,881	-	81,326
	Foreign exchange gain	(24)	-	-	(24)
		<u>146,926</u>	<u>11,387</u>	<u>-</u>	<u>158,313</u>
	Governance costs				
	Audit and accountancy	6,196	-	-	6,196
	Other legal and professional fees	1,194	155	-	1,349
		<u>7,390</u>	<u>155</u>	<u>-</u>	<u>7,545</u>
		<u>385,180</u>	<u>113,416</u>	<u>16,770</u>	<u>515,366</u>

FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH SEPTEMBER 2021

NOTES TO THE FINANCIAL STATEMENTS

8.	EXPENDITURE ON: CHARITABLE ACTIVITIES YEAR ENDED 30TH SEPTEMBER 2020	Unrestricted Funds £	Restricted Funds £	Endowment Funds £	2020 Total £
	Academic and related costs	182,062	202,120	-	384,182
	Establishment costs	59,544	1,288	16,770	77,602
	Office and support costs	150,482	19,181	-	169,663
	Governance costs	6,062	300	-	6,362
		<u>398,150</u>	<u>222,889</u>	<u>16,770</u>	<u>637,809</u>
	ANALYSIS OF EXPENDITURE ON CHARITABLE ACTIVITIES YEAR ENDED 30TH SEPTEMBER 2020	Unrestricted Funds £	Restricted Funds £	Endowment Funds £	2020 Total £
	Academic and related costs				
	Salaries (academic)	98,054	68,445	-	166,499
	Salaries (librarian)	64,335	26,676	-	91,011
	Research grants	-	84,220	-	84,220
	Books and publications	6,095	2,036	-	8,131
	Travel and accommodation	938	7,765	-	8,703
	Computer costs	6,832	-	-	6,832
	Telephone, postage and photocopying	3,774	66	-	3,840
	Other (incl. lecture and exhibition expenses)	2,034	12,912	-	14,946
		<u>182,062</u>	<u>202,120</u>	<u>-</u>	<u>384,182</u>
	Establishment costs				
	Rates	12,110	-	-	12,110
	Insurance	14,404	-	-	14,404
	Repairs and maintenance	10,978	1,288	-	12,266
	Water, light and heat	6,964	-	-	6,964
	Cleaning	7,000	-	-	7,000
	Gardening and grounds	8,053	-	-	8,053
	Ground rent	35	-	-	35
	Depreciation	-	-	16,770	16,770
		<u>59,544</u>	<u>1,288</u>	<u>16,770</u>	<u>77,602</u>
	Office and support costs				
	Other salaries	70,262	-	-	70,262
	Depreciation	8,528	1,224	-	9,752
	Printing and stationery	981	3,097	-	4,078
	Entertaining	446	1,403	-	1,849
	Investment broker charges	70,282	13,457	-	83,739
	Foreign exchange gains	(17)	-	-	(17)
		<u>150,482</u>	<u>19,181</u>	<u>-</u>	<u>169,663</u>
	Governance costs				
	Audit and accountancy	5,896	-	-	5,896
	Other legal and professional fees	166	300	-	466
		<u>6,062</u>	<u>300</u>	<u>-</u>	<u>6,362</u>
		<u>398,150</u>	<u>222,889</u>	<u>16,770</u>	<u>637,809</u>

FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH SEPTEMBER 2021

NOTES TO THE FINANCIAL STATEMENTS

9.	NET INCOME FOR THE YEAR	2021	2020
	This is stated after charging:	£	£
	Auditors remuneration	6,196	5,896
	- external audit		
	- non audit services	-	-
	Depreciation of tangible fixed assets	26,477	27,062

MANAGEMENT THREAT IN RELATION TO NON-AUDIT SERVICES

In common with many other businesses of our size and nature we use our auditors to assist with the preparation of the financial statements.

10.	ANALYSIS OF STAFF COSTS AND REMUNERATION OF KEY MANAGEMENT PERSONNEL	2021	2020
		£	£
	Salaries and wages	214,197	230,305
	Social security costs	23,382	24,021
	Pension contributions	69,118	68,136
		<u>306,697</u>	<u>322,462</u>

The pension contributions shown above include amounts relevant to the inclusion of the pension provision shown in note 16 to the financial statements as required following the introduction of FRS 102.

The number of employees whose emoluments (salaries and pension contributions) exceeded £60,000 was 2 (2020: 1).

The average number of staff employed, analysed by function, employed during the year were:

	2021	2020
	Number	Number
Academic	7	7
Administration	3	2
Establishment	1	1
	<u>11</u>	<u>10</u>

The above numbers do not include Trustees who are not permitted to receive remuneration for their duties.

The aggregate amount of expenses reimbursed to the Trustees was £0 (2020: £0).

The Institute considers its key management personnel comprise of the Trustees and the Institute's Director. The total employment benefits including employer pension contributions of the key management personnel were £99,132 (2020: £96,733).

11. TAXATION

As a charity, The Needham Research Institute is exempt from tax on income and gains falling within section 505 of the Taxes Act 1988 or section 252 of the Taxation of Chargeable Gains Act 1992 to the extent that these are applied to its charitable objects. No tax charges have arisen in the year.

12.	TANGIBLE FIXED ASSETS				
	YEAR ENDED 30TH SEPTEMBER 2021	Long Leasehold	Fixtures & Fittings	Equipment & Software	Total
		£	£	£	£
	COST				
	Balance at 1st October 2020	1,626,664	70,813	25,424	1,722,901
	Additions	-	-	2,998	2,998
	Balance at 30th September 2021	<u>1,626,664</u>	<u>70,813</u>	<u>28,422</u>	<u>1,725,899</u>
	DEPRECIATION				
	Balance at 1st October 2020	503,018	51,675	18,568	573,261
	Charge for the year	16,770	5,720	3,987	26,477
	Balance at 30th September 2021	<u>519,788</u>	<u>57,395</u>	<u>22,555</u>	<u>599,738</u>
	NET BOOK VALUE as at 30th September 2021	<u>1,106,876</u>	<u>13,418</u>	<u>5,867</u>	<u>1,126,161</u>

FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH SEPTEMBER 2021

NOTES TO THE FINANCIAL STATEMENTS

12.	TANGIBLE FIXED ASSETS YEAR ENDED 30TH SEPTEMBER 2020	Long Leasehold £	Fixtures & Fittings £	Equipment & Software £	Total £
	COST				
	Balance at 1st October 2019	1,626,664	62,383	23,902	1,712,949
	Additions	-	8,430	1,522	9,952
	Balance at 30th September 2020	<u>1,626,664</u>	<u>70,813</u>	<u>25,424</u>	<u>1,722,901</u>
	DEPRECIATION				
	Balance at 1st October 2019	486,248	45,731	14,220	546,199
	Charge for the year	16,770	5,944	4,348	27,062
	Balance at 30th September 2020	<u>503,018</u>	<u>51,675</u>	<u>18,568</u>	<u>573,261</u>
	NET BOOK VALUE as at 30th September 2020	<u>1,123,646</u>	<u>19,138</u>	<u>6,856</u>	<u>1,149,640</u>
13.	INVESTMENT FIXED ASSETS	2021		2020	
		Cost	Market Value	Cost	Market Value
		£	£	£	£
	Investment properties - long leasehold	111,548	1,200,000	111,548	1,200,000
	Listed investments	9,704,711	14,835,338	8,534,567	12,123,327
	Capital account	123,203	123,203	243,177	243,177
		<u>9,939,462</u>	<u>16,158,541</u>	<u>8,889,292</u>	<u>13,566,504</u>
	Market value at 1st October		13,323,327		13,187,275
	Listed investments acquired		2,101,529		1,198,637
	Listed investments disposed		(1,515,157)		(1,516,550)
	Realised (losses)/gains		(75,758)		(202,500)
	Gains/(losses) on revaluations at 30th September		2,201,397		656,465
	Market value at 30th September		<u>16,035,338</u>		<u>13,323,327</u>
	The long leasehold of 2 Sylvester Road was valued by the Westley & Huff on the basis of its market value being £1,200,000.				
	Listed investments have been valued at the prices as shown on recognised exchanges.				
	No listed investment, excluding cash balances, made up more than 5% of the portfolio.				
14.	DEBTORS			2021	2020
	Due within one year:			£	£
	Prepayments and accrued income			1,709	7,567
	Other debtors			65,304	-
				<u>67,013</u>	<u>7,567</u>
15.	CREDITORS			2021	2020
	Due within one year:			£	£
	Trade creditors			54	56
	Accruals and deferred income			29,986	71,341
	Deposit held			2,025	2,025
				<u>32,065</u>	<u>73,422</u>

FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH SEPTEMBER 2021

NOTES TO THE FINANCIAL STATEMENTS

16	PROVISIONS FOR LIABILITIES	2021
	Balance at 1st October 2020	£
	Provision identified in the year	50,199
	Movement in provision	-
	Balance at 30th September 2021	(11,757)
		<u>38,442</u>
	PROVISIONS FOR LIABILITIES	2020
	Balance at 1st October 2019	£
	Provision identified in the year	53,131
	Movement in provision	1,594
	Balance at 30th September 2020	(4,526)
		<u>50,199</u>

The introduction of FRS 102 necessitates the inclusion of a provision to account for the full liability of any pension deficit catch up plan. The liability is based on the additional expected payments required over the life of the catch up plan, allowing for discounting rates and changes in future contributions.

The provision relates to the USS pension deficit recovery plan as mentioned in note 1 (j) to the financial statements.

FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH SEPTEMBER 2021

NOTES TO THE FINANCIAL STATEMENTS

17. RESTRICTED FUNDS
YEAR ENDED 30TH SEPTEMBER 2021

	Balance B/Fwd £	Income £	Expenditure £	Revaluation Gains £	Transfers £	Balance C/Fwd £
a) SCC Fund (NSF)	14,037	-	-	-	-	14,037
b) Li Foundation Fund	14,570	22,159	-	-	-	36,729
c) Sino-British Fellowship Trust	24,788	-	-	-	-	24,788
d) PhD Studentship Fund	627,259	18,217	(12,878)	87,712	(16,181)	704,129
e) Kim Foundation	27,883	-	-	-	-	27,883
f) Fundraising and promotion	9,905	-	-	-	(9,905)	-
g) CNRS Sphere Project	9,929	-	(113)	-	(11)	9,805
h) Independent Schools Fund	-	53,074	(49,074)	-	(4,000)	-
i) Lloyd Dan David Fund	676,983	25,709	(13,952)	89,328	(4,638)	773,430
j) Jing Brand Fund (including Tianyoude grant)	148,868	2,983	(698)	26,083	(8,868)	168,368
k) Beijing Xingzhi	5,425	-	-	-	-	5,425
l) Conservation of Needham Archives	2,000	-	-	-	(2,000)	-
m) Kan Wan Ma Fund (in memory of Prof Ma)	7,407	-	-	-	-	7,407
n) Ho Peng Yoke Fellowship	604,359	16,097	(7,559)	103,526	(6,544)	709,879
o) Wellcome Grant	29,378	60,944	(29,142)	-	-	61,180
p) Suiyuan Grant	-	54,193	-	-	(4,000)	50,193
	<u>2,202,791</u>	<u>253,376</u>	<u>(113,416)</u>	<u>306,649</u>	<u>(56,147)</u>	<u>2,593,253</u>

Purpose of funds:

- a) Fund is for research resulting in publications, mainly in the Science and Civilisation in China projects.
- b) Fund is to support research fellows.
- c) Fund is to support research fellows.
- d) Fund is to fund PhD students.
- e) Fund is to support research in the history of science in modern East Asia.
- f) Fund is an amalgamation of the Chinese Academy and Joseph Needham Lecture and Conference Fund to be used towards the fundraising and promotion of The Needham Research Institute.
- g) Fund is to support the CNRS Sphere Project.
- h) Fund is to support Independent Schools in research.
- i) Fund is established under a grant given by Lloyd Dan David for support for future fellows research.
- j) Fund is established under a grant given by The Jing Brand for support for future fellowships.
- k) Fund is established under a grant given by the Beijing Xingzhi Exploring Culture Communication Company for support for future scholarships.
- l) Fund is for the conservation and preservation of the Joseph Needham archives.
- m) Fund is for the establishment of an annual lecture in memory of Prof K W Ma.
- n) Fund is for the establishment of a visiting Fellowship in memory of Professor Ho Peng Yoke.
- o) Fund to digitise and organise the extensive archives of Joseph and Dorothy Needham.
- p) Fund to support short term academic visits of Chinese scholars and small seminars related to research on the history of science and technology in China.

17. RESTRICTED FUNDS
YEAR ENDED 30TH SEPTEMBER 2020

	Balance B/Fwd £	Income £	Expenditure £	Revaluation Gains £	Transfers £	Balance C/Fwd £
a) SCC Fund (NSF)	14,467	-	(430)	-	-	14,037
b) Li Foundation Fund	14,570	-	-	-	-	14,570
c) Sino-British Fellowship Trust	21,610	14,000	(10,334)	-	(488)	24,788
d) PhD Studentship Fund	632,587	16,166	(24,108)	4,814	(2,200)	627,259
e) Kim Foundation	27,883	-	-	-	-	27,883
f) Fundraising and promotion	10,596	-	(691)	-	-	9,905
g) CNRS Sphere Project	9,929	-	-	-	-	9,929
h) Independent Schools Fund	-	-	-	-	-	-
i) Lloyd Dan David Fund	-	52,834	(52,069)	-	(765)	-
j) Jing Brand Fund (including Tianyoude grant)	663,945	24,567	(24,999)	15,512	(2,042)	676,983
k) Beijing Xingzhi	136,956	52,490	(39,070)	2,492	(4,000)	148,868
l) Conservation of Needham Archives	14,925	-	(6,320)	-	(3,180)	5,425
m) Kan Wen Ma Fund (in memory of Prof Ma)	-	7,000	-	-	(5,000)	2,000
n) HK Trust Grant - Conservation	7,407	-	-	-	-	7,407
o) Ho Peng Yoke Fellowship	-	(3,346)	-	-	3,346	-
p) Hooze Fellowship in the History of Chinese Science & Technology	591,493	15,576	(22,103)	21,193	(1,800)	604,359
q) Lloyds Workshop - Conference Science	(60)	-	-	-	60	-
r) Wellcome Grant	375	-	-	-	(375)	-
	<u>2,146,683</u>	<u>255,467</u>	<u>(223,580)</u>	<u>44,011</u>	<u>(19,790)</u>	<u>2,202,791</u>

Purpose of funds:

- a) Fund is for research resulting in publications, mainly in the Science and Civilisation in China projects.
b) Fund is to support research fellows.
c) Fund is to support research fellows.
d) Fund is to fund PhD students.
e) Fund is to support research in the history of science in modern East Asia.
f) Fund is an amalgamation of the Chinese Academy and Joseph Needham Lecture and Conference Fund to be used towards the fundraising and promotion of The Needham Research Institute.
g) Fund is to support the CNRS Sphere Project.
h) Fund is to support Independent Schools in research.
i) Fund is established under a grant given by Lloyd Dan David for support for future fellows research.
j) Fund is established under a grant given by The Jing Brand for support for future fellowships.
k) Fund is established under a grant given by the Beijing Xingzhi Exploring Culture Communication Company for support for future scholarships.
l) Fund is for the conservation and preservation of the Joseph Needham archives.
m) Fund is for the establishment of an annual lecture in memory of Prof K W Ma.
n) Fund is for the employment of a part time Archivist.
o) Fund is for the establishment of a visiting Fellowship in memory of Professor Ho Peng Yoke.
p) Funds to be established for a visiting Fellowship.
q) Fund to support a workshop held at the Institute.
r) Fund to digitise and organise the extensive archives of Joseph and Dorothy Needham.

FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH SEPTEMBER 2021

NOTES TO THE FINANCIAL STATEMENTS

18. ENDOWMENT FUNDS	Balance			Revaluation		Balance
YEAR ENDED 30TH	B/Fwd.	Income	Expenditure	Gains	Transfers	C/Fwd.
SEPTEMBER 2021	£	£	£	£	£	£
Building Fund	715,907	-	(10,650)	-	-	705,257
Building Fund (South Wing)	460,076	-	(6,120)	-	-	453,956
Endowment Fund	7,784,077	234,817	-	1,382,437	(234,817)	9,166,514
Endowment Fund Library	21,850	-	-	-	-	21,850
Joseph Needham Estate	485,889	-	-	-	-	485,889
	<u>9,467,799</u>	<u>234,817</u>	<u>(16,770)</u>	<u>1,382,437</u>	<u>(234,817)</u>	<u>10,833,466</u>

The building funds were provided for and expended on the erection of permanent premises for the Needham Research Institute and to house the East Asian History of Science Library.

The Endowment Fund exists to provide capital for investment which in turn will produce income sufficient in time to secure the continuing operation of the Institute.

ENDOWMENT FUNDS	Balance			Revaluation		Balance
YEAR ENDED 30TH	B/Fwd.	Income	Expenditure	Gains	Transfers	C/Fwd.
SEPTEMBER 2020	£	£	£	£	£	£
Building Fund	726,557	-	(10,650)	-	-	715,907
Building Fund (South Wing)	466,196	-	(6,120)	-	-	460,076
Endowment Fund	7,493,539	178,112	-	290,538	(178,112)	7,784,077
Endowment Fund Library	21,850	-	-	-	-	21,850
Joseph Needham Estate	485,889	-	-	-	-	485,889
	<u>9,194,031</u>	<u>178,112</u>	<u>(16,770)</u>	<u>290,538</u>	<u>(178,112)</u>	<u>9,467,799</u>

19. UNRESTRICTED FUNDS	Balance			Revaluation		Balance
YEAR ENDED 30TH	B/Fwd.	Income	Expenditure	Gains	Transfers	C/Fwd.
SEPTEMBER 2021	£	£	£	£	£	£
Designated funds:						
Building repairs fund	28,000	-	-	-	4,000	32,000
Computer and equipment fund	27,143	-	(2,857)	-	(2,857)	21,429
Library Special Fund	38,933	5	(2,848)	-	2,000	38,090
	<u>94,076</u>	<u>5</u>	<u>(5,705)</u>	<u>-</u>	<u>3,143</u>	<u>91,519</u>
Other charitable funds	3,318,865	312,723	(379,475)	436,553	287,821	3,976,487
	<u>3,412,941</u>	<u>312,728</u>	<u>(385,180)</u>	<u>436,553</u>	<u>290,964</u>	<u>4,068,006</u>

Purpose of designated funds:

The building repairs fund arises from amounts set aside towards major building maintenance.

The computer and equipment fund arises from amounts set aside towards the updating and replacement of computers and equipment.

The Library Special Fund arises from amounts set aside towards the purchase of books and publications for the Library.

UNRESTRICTED FUNDS	Balance			Revaluation		Balance
YEAR ENDED 30TH	B/Fwd.	Income	Expenditure	Gains	Transfers	C/Fwd.
SEPTEMBER 2020	£	£	£	£	£	£
Designated funds:						
Building repairs fund	24,000	-	-	-	4,000	28,000
Computer and equipment fund	27,143	-	-	-	-	27,143
Library Special Fund	35,199	191	(2,992)	1,535	5,000	38,933
	<u>86,342</u>	<u>191</u>	<u>(2,992)</u>	<u>1,535</u>	<u>9,000</u>	<u>94,076</u>
Other charitable funds	3,280,621	126,619	(395,158)	117,881	188,902	3,318,865
	<u>3,366,963</u>	<u>126,810</u>	<u>(398,150)</u>	<u>119,416</u>	<u>197,902</u>	<u>3,412,941</u>

FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH SEPTEMBER 2021

NOTES TO THE FINANCIAL STATEMENTS

20. ANALYSIS OF NET ASSETS BETWEEN FUNDS
YEAR ENDED 30TH SEPTEMBER 2021

	Unrestricted Funds £	Restricted Funds £	Endowment Funds £	2021 Total Funds £
Fund balances at 30th September are represented by:				
Tangible fixed assets	11,781	7,504	1,106,876	1,126,161
Investment fixed assets	4,107,610	2,355,806	9,695,125	16,158,541
Debtors	62,130	4,883	-	67,013
Cash at bank and in hand	(43,008)	225,060	31,465	213,517
Current liabilities	(32,065)	-	-	(32,065)
Provisions for liabilities	(38,442)	-	-	(38,442)
Net assets	<u>4,068,006</u>	<u>2,593,253</u>	<u>10,833,466</u>	<u>17,494,725</u>

ANALYSIS OF NET ASSETS BETWEEN FUNDS
YEAR ENDED 30TH SEPTEMBER 2020

	Unrestricted Funds £	Restricted Funds £	Endowment Funds £	2020 Total Funds £
Fund balances at 30th September are represented by:				
Tangible fixed assets	16,185	9,809	1,123,646	1,149,640
Investment fixed assets	3,558,565	1,868,037	8,139,902	13,566,504
Debtors	7,567	-	-	7,567
Cash at bank and in hand	(45,755)	324,945	204,251	483,441
Current liabilities	(73,422)	-	-	(73,422)
Provisions for liabilities	(50,199)	-	-	(50,199)
Net assets	<u>3,412,941</u>	<u>2,202,791</u>	<u>9,467,799</u>	<u>15,083,531</u>

21 RECONCILIATION OF NET MOVEMENT IN FUNDS TO NET CASH FLOW FROM OPERATING ACTIVITIES

	2021 £	2020 £
Net movement in funds		
Add: Depreciation	2,411,194	375,854
Less: Investment income	26,477	27,062
Less: Gains on investments	(364,023)	(329,860)
Decrease/(increase) in debtors	(2,125,639)	(453,965)
Increase/(decrease) in creditors	(59,446)	74,625
((Decrease)/increase in provisions	(41,357)	32,161
	(11,757)	(2,932)
Net cash provided by (used in) operating activities	<u>(164,551)</u>	<u>(277,055)</u>

FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH SEPTEMBER 2021

NOTES TO THE FINANCIAL STATEMENTS

22. PENSIONS

(a) Universities Superannuation Scheme

The Institute participates in the Universities Superannuation Scheme (the scheme) with three active members. Throughout the current and preceding periods, the scheme was a defined benefit only pension scheme until 31 March 2017 which was contracted out of the State Second Pension (S2P). The assets of the scheme are held in a separate trustee-administered fund. Because of the mutual nature of the scheme, the scheme's assets are not hypothecated to the individual institutions and a scheme-wide contribution rate is set. The Institute is therefore exposed to actuarial risks associated with other institutions' employees and is unable to identify its share of the underlying assets and liabilities of the scheme on a consistent and reasonable basis and therefore, as required by Section 28 of FRS 102 "Employee benefits", accounts for the scheme as if it were a defined contribution scheme.

As a result, the amount charged to the Statement of Financial Activities represents the contributions payable to the scheme. Since the Institute has entered into an agreement (the Recovery Plan) that determines how each employer within the scheme will fund the overall deficit, the Institute recognises a liability for the contributions payable that arise from the agreement to the extent that they relate to the deficit and the resulting expense in the Statement of Financial Activities.

The total cost charged to the Statement of Financial Activities for the Institute is £46,044 (2019/20: £40,616).

Since the Institute cannot identify its share of the scheme assets and liabilities, the following disclosures reflect those relevant for the scheme as a whole.

The latest available full actuarial valuation of the scheme was at 31 March 2019 ("the valuation date"), which was carried out using the projected unit method.

The 2019 valuation was the fifth valuation for USS under the scheme-specific funding regime introduced by the Pensions Act 2004, which requires schemes to adopt a statutory funding objective, which is to have sufficient and appropriate assets to cover their technical provisions. At the valuation date, the value of the assets of the scheme was £63.7 billion and the value of the scheme's technical provisions was £67.3 billion indicating a shortfall of £3.6 billion.

The assets therefore were sufficient to cover 89% of the benefits which has accrued to members after allowing for expected future increases in earnings.

Defined benefit liability numbers for the scheme have been produced using the following assumptions:

	2019	2018
Discount rate	2.44%	2.64%
Pensionable salary growth	N/A	N/A
Pension increase (CPI)	2.11%	2%

The main demographic assumption used relates to the mortality assumptions. Mortality in retirement is assumed to be in line with the Continuous Mortality Investigation's (CMI) SINA tables as follows:

Male members' mortality	91.5% of SINA ("light") YoB tables - No age rating
Female members' mortality	101.3% of SINA ("light") YoB tables - rated down 1 year

Use of these mortality tables reasonably reflects the actual USS experience. To allow for further improvements in mortality rates the CMI 2016 projections with a 1.8% pa long term rate were also adopted.

The current life expectancies on retirement at 65 are:

	2019	2018
Males currently aged 65 (years)	24.6	24.5
Females currently aged 65 (years)	26.1	26.0
Males currently aged 45 (years)	26.6	26.5
Females currently aged 45 (years)	27.9	27.8

FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH SEPTEMBER 2021

NOTES TO THE FINANCIAL STATEMENTS

PENSIONS(CONT.)

(b) Cambridge University Assistants' Contributory Pension Scheme

The Institute participates in the Cambridge University Assistants' Contributory Pension Scheme (CPS) which is a defined benefit scheme. The Institute's contributions are affected by a surplus or deficiency in the CPS but the Institute is unable to identify its share of the underlying assets and liabilities in the Scheme on a consistent and reasonable basis. The Institute therefore accounts for its contributions to the CPS as if it were a defined contribution scheme. It had six active members participating in the Scheme.

The CPS was established under the authority of the Universities of Oxford and Cambridge Act 1923. It is a registered pension scheme for the purposes of the Finance Act 2004. The active members of the scheme are employees of the University and its subsidiary undertakings. The scheme's benefit structure changed significantly from 1 January 2013, at which point employees covered by the schemes ceased to be contracted out of the State Second Pension.

Triennial valuation of the scheme

A full triennial valuation of the scheme was carried out by the actuary for the trustees of the scheme for funding purposes as at 31 July 2015. The results showed the actuarial value of the scheme's assets as £551m. These were insufficient to cover the scheme's past service liabilities of £612m; the scheme has a deficit of £61m and was 90% funded.

From 1 August 2013 employer contributions were set at 11.5% of pensionable pay for existing members at 31 December 2012 and 5.8% of pensionable pay (together with contributions at 3.0% to a separate defined contribution arrangement) for new entrants from 1 January 2013. In addition fixed employer contributions totalling £14.6m per annum are payable over the period from 1 August 2013 to 31 January 2019.