

SUSTAINABLE MOMENTUM

Annual Report 2022



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VISION & MISSION



A great global university
founded on science and
technology, nurturing leaders
and creating societal impact
through interdisciplinary
education and research



AT A GLANCE



GLOBAL

600

university partners
in academia and
research

39

corporate and
joint labs set
up with leading
multinationals on
campus

6,000

students benefitted
from overseas
immersion
programmes
across over
40 countries

6 in 10

undergraduates
have an overseas
opportunity during
their studies

20

joint/dual
PhD degree
programmes
with overseas
universities



HONOURS

19th

in QS World
University
Rankings 2022/23

1st

in QS ranking
of the world's
young universities
since 2014

2nd

in Times Higher
Education Young
University
Rankings 2022

3rd

in Nature Index
2021 Young
Universities
Ranking

1st

globally for
Materials Science,
Nanoscience &
Nanotechnology,
Condensed Matter
Physics and
Physical Chemistry



PEOPLE

24,900

undergraduates

9,500

graduate students

7,700

faculty,
researchers
and staff from
72 countries

275,600

university alumni
representing
159 nationalities

9 in 10

of the Class of
2021 received a
job offer within
four months of
graduation



RESEARCH & INNOVATION

S\$644m

in competitive
research grants
won in FY2021/22

117

patents granted
in FY2021/22

4,526

technology
disclosures
received since
FY2007/08

6

spin-off
companies in
FY2021/22

32

start-ups by staff
and students in
FY2021/22



CAMPUS

Top 10

most photogenic
university in the
world (QS)

3

Singapore
campuses

25

halls of residence
housing more than
14,000 students

758

units of faculty
housing

1

alumni house
(in one-north)

CHAIR'S MESSAGE



MOVING FORWARD AS ONENTU

NTU is an ongoing story of transformation. In just three decades, it has developed from a teaching-centred institution into a research-intensive university that is globally recognised.

Over the past academic year, NTU celebrated its 30th anniversary. The theme, 30 Years of Momentum, recognises that NTU's remarkable rise as a world-class institution is achieved through the dedication and commitment of its people, past and present.

This university continually rejuvenates itself. The NTU 2025 Strategic Plan,



NTU's sustainability efforts gained further traction with the launch last year of a 15-year sustainability manifesto and the issuance of a publicly-offered sustainability-linked bond under a S\$1 billion medium-term note programme. Leveraging the capital markets opens up exciting opportunities to fund NTU's wide-ranging sustainability and corporate initiatives.

unveiled in January 2021, guides NTU's education, research and innovation agendas to address humanity's grand challenges such as climate change, the impact of technology and ageing. These are ambitious goals, reachable as NTU rekindles its spirit as *Pioneers Always* – one that is tenacious in its pursuit of knowledge and emboldened in encouraging curiosity.

NTU's sustainability efforts gained further traction with the launch last year of a 15-year sustainability manifesto and the issuance of a publicly-offered sustainability-linked bond under a S\$1 billion medium-term note programme. Leveraging the capital markets opens up exciting opportunities to fund NTU's wide-ranging sustainability and corporate initiatives.

As a university, we want to make NTU the start of a great journey for all who join us. Already known as a beautiful and smart campus that embraces, develops and testbeds the latest advanced technologies, the NTU Board of Trustees' new campus vibrancy advisory committee is guiding the next phase of our master plan.

We have been inviting ideas that would achieve our vision of NTU as a stimulating community of learners, researchers and entrepreneurs. We aspire for NTU to be a magnet for multi-generational lifelong learning, where people with diverse life experiences and interests can each contribute and grow together as a thriving community.

Prof Subra Suresh will be returning to the United States at the end of this year. On behalf of the Board of Trustees, I want to thank Subra for his vision and contributions and wish him and Mary



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the best as they resettle back home. A global search for the next NTU President is ongoing. NTU's momentum built over the past three decades together with the dedication of its staff and faculty puts it on a strong footing as a top global university, and attractive to academic talents.

I thank the NTU Board of Trustees for their wisdom and counsel, and acknowledge retiring NTU Board members Mr Wong Yew Meng, Prof Gene Block and Ms Lai Wei Lin for their invaluable service. I also warmly welcome new members Mr Lai Chung Han and Mr Ching Wei Hong.

I express my gratitude to our students, faculty and staff. These past years have been unlike any others, with the global pandemic persistently testing your resolve at every turn. You adapted, stayed resilient and remained steadfast in your conviction to NTU. The University is also indebted to alumni, donors and partners who believe in us.

NTU is in a good place because of the hard work and indomitable spirit of the OneNTU community. I hope it will find the courage

and imagination it needs to achieve its ambitious goals. Together, I am confident we can maintain our momentum of excellence.

MS GOH SWEE CHEN
Chair, Board of Trustees

IN CONVERSATION WITH THE NTU PRESIDENT



PROF SUBRA SURESH
President and Distinguished University Professor

BUILDING ON NTU'S MOMENTUM

The past academic year was a momentous one, with the University celebrating its 30th anniversary. What were some of the key highlights?

Despite the continuing challenges posed by the COVID-19 pandemic, the last academic year was indeed a very memorable one, with many major accomplishments by the NTU community.

We celebrated NTU's 30th anniversary, acknowledging the University's continuing success and momentum as well as rich heritage, including its earlier contributions to Singapore through predecessor institutions, Nanyang University and Nanyang Technological Institute. We paid tribute to the individual power of one and collective power of all, past and present, in making a positive impact, as exemplified in the history and heritage of NTU.

NTU's anniversary theme, "30 years of Momentum. Pioneers Always", centred on the University's rapid growth in the brief span of

three decades and its vision for the future as it gathers pace to take on fresh challenges.

In just three decades, NTU has become a globally recognised research-intensive institution, striding confidently alongside international universities that are centuries old. The story of NTU speaks of humanity, philanthropy and community. These qualities were clearly demonstrated during the prolonged pandemic as we continued to build a robust, sustainable and secure future for NTU in spite of the challenges.

The year-long anniversary celebrations began at the NTU Convocation in September 2021. A few months later, we launched a digital time capsule that will be opened at NTU's Golden Jubilee, as well as a public exhibition and a limited-edition book titled *Thirty Years of Momentum, 30 Perspectives*.

Besides raising S\$1.1 million for both the OneNTU and wider community at large, the "We Belong" campaign paid it forward to

society through volunteerism and philanthropy, supporting bursaries, the NTU Priorities Fund, School Advancement Funds, and the NTU Sustainability Fund.

At the NTU Alumni Homecoming, the three past NTU Presidents – Profs Cham Tao Soon, Su Guanng and Bertil Andersson – joined me on stage to talk about our respective NTU journeys.



Minister for Education Mr Chan Chun Sing (left) and NTU President Prof Subra Suresh with a copy of the limited-edition 30th anniversary commemorative book that was launched at NTU's anniversary celebrations.

A major milestone last year was the launch of NTU's Sustainability Manifesto, a landmark for universities here. Tell us more about this.

NTU took a decisive step in its commitment to be a leader in environmental sustainability, and to demonstrate at scale how we build on our education and research activities to create lasting impact on our Smart Campus and for the planet.

In October 2021, we unveiled a 15-year sustainability manifesto with a pledge to achieve carbon neutrality by 2035, halve net energy utilisation and launch new sustainability courses, among other initiatives.

NTU also became the first university in the world to issue sustainability-linked public bonds. This will be used to support university-wide efforts aligned with the sustainability manifesto and other corporate initiatives. We established a Sustainability Office to coordinate our efforts and activities in a holistic and integrated way.

In our pursuit of a climate-positive future, we are embedding sustainability into the fabric of university operations and the on-campus experience. We will walk the walk on sustainability.

How has NTU grown from strength to strength as a top global university reputed for its thought leadership and impactful initiatives?

Over the past few years, several of NTU's academic and intellectual offerings have emerged as the best in the world, according to widely accepted independent international assessments. NTU is the only university under 50 years of age that is placed among the top 50 universities in the world by three major global metrics – US News & World Report, QS and Times Higher Education.

In the latest US News & World Report's global university rankings, NTU was ranked among the global top 10 for 11 subject areas, with four subjects placed first globally: Materials Science, Nanoscience & Nanotechnology, Condensed Matter Physics and Physical Chemistry.

NTU's Nanyang Business School has maintained its position as the top business school in Singapore for 15 consecutive years in the global ranking of full-time Master of Business Administration programmes published by The Economist. NTU is also ranked first in Asia and third globally for citations in artificial intelligence.

We now collaborate with about 650 academic institutions, government agencies and industry partners worldwide, including many industry leaders, to turn research into action, translate education and learning into societal impact, and bring ideas to reality at scale.

We drive discussions among thought leaders for collective impact, such as bringing together more than 90 university leaders at the annual presidents' meeting of the Association of Pacific Rim Universities in Singapore this past summer to discuss the critical issues of the century. We also held a very successful NTU Singapore-India Dialogue session in Bengaluru, India, where we engaged business and government leaders, academics and alumni to explore the critical themes of the transformation of education, research and innovation in a post-pandemic world.



Higher education leaders at the Annual Presidents' Meeting of the Association of Pacific Rim Universities, hosted by NTU.

Despite the pandemic, our fresh graduates continue to be in demand. The UK government announced that NTU graduates will be among select cohorts from top universities in the world to receive a special visa to seek employment in the UK.

Our improved standing in academia and global research impact have been underpinned by important governance and administrative successes, including measures introduced in 2018 to ensure the University's financial sustainability. In its first ever credit rating exercise last year, NTU received a credit rating of "Aaa", the highest available.

Our strategic investments in cloud-based digital technologies enabled us to accelerate our migration to online learning while nurturing new teaching and learning innovations during and beyond the pandemic. NTU was commended for

demonstrating resilience amidst the COVID-19 pandemic, receiving the Duty of Care Award for COVID-19 Agility and Response from the International SOS Foundation as the only tertiary institution winner in Singapore.

NTU was also named Leadership and Management Team of the Year at the 2022 Times Higher Education Awards Asia. This recognised our digital transformation and administrative reforms that aided the University's timely COVID-19 response, as well as our commitment to a sustainable future.

How has NTU's strategic plan, NTU 2025, been progressing?

The bold targets established in the NTU 2025 Strategic Plan are progressing on schedule. Our pioneering research and innovations in broad fields such as sustainability and learning have enabled us to define particularly ambitious goals in the NTU 2025 Strategic Plan.

Unveiled in January 2021, NTU 2025 articulates how we will address some of the toughest societal challenges. Its execution harnesses campus-wide efforts that synthesise varied ideas and approaches to build sustainable, liveable societies, advance learning, and support healthy living and ageing.

Addressing some of the most pressing and complex challenges facing humanity inevitably calls for strong interdisciplinary approaches in pedagogy and research. As part of NTU 2025, we introduced an interdisciplinary common core curriculum that develops real-world skills, including digital literacy, communication and inquiry, ethics, and service to humanity.

On the research front, we accelerated our efforts to foster campus-wide innovation and entrepreneurship, deepen ties with partners, and create new inter-school and inter-college opportunities to realise breakthrough innovations that have societal impact and economic value.

We are in a better position to nurture the next generation of entrepreneurs. Following the establishment of the Innovation & Entrepreneurship Office (I&E) Office to coordinate I&E activities, NTUitive, NTU's innovation and enterprise company, will focus on IP commercialisation and supporting NTU's startups and spinoffs, while the Nanyang Technopreneurship Centre will be the entrepreneurship education vehicle.

IN CONVERSATION WITH THE NTU PRESIDENT

At the same time, we prioritised the wellbeing of the entire university community, with stepped-up efforts to support physical and mental health and wellbeing. We also implemented a new policy on supporting students with special educational needs, as well as plans for psychological first aid to become an essential skill for all OneNTU community members. NTU received the Silver Ribbon Mental Health Award for Schools for the second time in December 2021.

Community building is the thread that ties the different parts of NTU 2025 together. We will continue to seek out ways to encourage the exchange of ideas that lead to multidisciplinary and multi-sector collaborations in education, research and translation of scientific discoveries into practice, especially in areas that are aligned with the NTU 2025 Strategic Plan.

What were some major educational initiatives in the past year?

As a cosmopolitan university, NTU offers intellectual diversity and rich socio-cultural exposure necessary for developing the three “Cs” of character, competence and cognitive agility in our students.

We have continued to transform education with new programmes and learning spaces and models that tap advances in the science, art and technology of learning, to equip our students for success in whatever fields they choose.

The new School of Chemistry, Chemical Engineering & Biotechnology, established in August 2021, is the University's first interdisciplinary school between two NTU colleges – the College of Engineering and the College of Science. Its establishment strengthens interdisciplinary education to help students cope better with the challenges of the workplace.

Apart from introducing the interdisciplinary common core curriculum, we established internship opportunities for all undergraduate students. Two large next-generation flipped classrooms now support the common core curriculum classes, where undergraduates from diverse disciplinary majors learn together in a unique technology-enabled setting. Multidisciplinary learning is also offered through existing interdisciplinary programmes at the undergraduate and graduate levels.

Residential education was enhanced with new spaces for hall residents to network, brainstorm ideas and hold workshops, and to foster entrepreneurial activities.

Launched in July 2021, the Institute for Pedagogical Innovation, Research & Excellence fuels cross-faculty collaborations to promote excellence in teaching and learning. It also works with industry to bring real-world issues and applications into the classroom and curriculum space.

NTU is piloting various digital innovations to enhance pedagogy, such as digital assessment with analytics, as well as a dashboard for student feedback on teaching that uses data aggregation and visualisation software.

What new pathways have been established to support lifelong learning?

Global developments have reinforced the need for new skill sets in many industries that are undergoing rapid changes. As a lifelong learning partner, NTU gives alumni and adult learners multiple pathways to improve their skills and knowledge.

The FlexiMasters programme for continuing education at the Master's degree level, launched

in 2020, has already grown to more than 35 curricular offerings from all parts of the University.

Our partnerships to help the workforce upskill and reskill include the provision of certification and new FlexiMasters courses for all segments of the workforce. These stem from tie-ups with companies such as Facebook, DBS, Global Compact Network Singapore, PwC Singapore, WTW, as well as course providers such as Marshall Cavendish Education. We also work with various professional associations such as the Institute of Valuers and Appraisers and Institute for Human Resource Professionals, and government bodies such as the Ministry of Defence.

Moving to research, how have the volume and quality of NTU's research advanced?

Global developments have reinforced the NTU's research volume has seen significant growth, setting a new annual record in each of the past several years. This reflects the very high quality of the scholarly work of our researchers.

In the past five years, the fraction of all publications by NTU faculty in the top research journals across fields has doubled. Our research is cited more often than the global average. In 2021, 36 of our scientists were recognised by US-based Clarivate Analytics for their significant and broad influence in their fields of research – the highest number among institutions in Singapore.

Despite the challenging global environment, NTU increased its research competitiveness, securing a record S\$644 million in competitive research funding. Significant funding received included S\$51 million to develop the Nanyang Environment & Water Research Institute as a centre of excellence, S\$50 million for the Singapore Centre for Environmental Life Sciences Engineering, and S\$23.4 million for remote sensing.

NTU's third Research Centre of Excellence, the Institute for Digital Molecular Analytics and Science, supported by the National Research Foundation with almost S\$94 million in funding from the Ministry of Education, began operations with a strong leadership team. Its founding paves the way for advancements in many areas of societal importance, including healthcare.



The newly launched School of Chemistry, Chemical Engineering & Biotechnology aims to become a pioneering model for excellence in interdisciplinary education and research.

Who are our new industry partners and what new challenges will be addressed through these collaborations?

The NTU Smart Campus offers a glimpse of how futuristic metropolises might look. Central to the success of NTU's positioning as a testbed for technologies addressing real-world problems has been its collaborative approach, and ability to attract strong industry and government partners.

Our industry research partnerships reflect shared priorities, such as harnessing the tools of the 4th industrial revolution to solve energy management, future mobility and security problems, including food security issues.

NTU was selected by Algorand Foundation to host a new research and education centre to advance blockchain technologies. We were the only lead organisation in Asia to be selected for this US\$50 million programme.

In the past year, we established new relationships with Campus for Research Excellence and Technological Enterprise entities such as the French National Centre for Scientific Research on hybrid artificial intelligence. Singapore's new S\$50 million national Digital Trust Centre will also be established by NTU.

With the pandemic accelerating the pace of automation, the S\$45 million Centre for Advanced Robotics Technology Innovation is developing affordable, safe and user-friendly robotics technologies that will reinvigorate and reimagine various sectors, including logistics, manufacturing and eldercare. The new NTU-AMD Data Science and Artificial Intelligence Lab on campus is also nurturing tomorrow's tech leaders and innovators.

The Separation Technologies Applied Research and Translation Centre, hosted by NTUitive, successfully completed its first phase and received S\$35 million from the National Research Foundation for its next chapter – to build and operate an integrated validation plant to reduce the cost of seawater desalination. With the Cyber Security Agency of Singapore, we launched the S\$19.5 million National Integrated Centre for Evaluation to advance the country's national hardware security evaluation and certification ecosystem.

A new S\$15 million biomedtech incubator, started with the Agency for Science, Technology & Research and National Healthcare Group, will help biomedical technology startups make the leap from R&D to commercialisation.

We also forged an agreement with Keppel Infrastructure Holdings, through its innovation and technology arm, to collaborate in the development of zero-emissions, decarbonisation and circular economy solutions.

How has NTU continued to attract and retain talent in the competitive higher education landscape?

The growing reputation of NTU is clearly reflected in our ability to attract talent from Singapore and leading universities around the world, with more than 350 faculty members recruited in just the past four years, including new Distinguished University Professors and senior leadership team members from prestigious universities.

Enhanced policies include a new Emeritus Professorial Scheme, launched to recognise outstanding faculty. NTU continues to provide joint, courtesy and concurrent faculty leadership appointments to foster high-impact interdisciplinary research and education, which also boosts our internal leadership capabilities.

A total of 191 academic and 96 administrative leaders have graduated from the Lead@NTU programmes, designed to prepare academic and administrative leaders for leadership roles. We will continue to provide meaningful developmental opportunities for professional and leadership growth.

The Presidential Postdoctoral Fellows Programme that I started has now become the most competitive young talent attraction scheme at NTU, with more than 1,050 applications for only 12 positions even during the height of the pandemic in 2020.

Part of the NTU 2025 Strategic Plan is to enhance excellence across the University by fostering an engaged and high performing workforce. We are proud to be the first university in Singapore to receive the SkillsFuture Employers Award, which recognises our strong

learning culture at the workplace through a robust learning and development system and other initiatives.

As you step down as President of NTU at the end of December 2022, can you share your thoughts with the community?

It has been an honour and privilege to serve as NTU's President alongside a remarkable leadership team and great colleagues, students, alumni and partners, and I thank the OneNTU community and all our internal, local and global stakeholders and partners for their friendship, support and trust in me during this memorable journey.

Time after time, I have been privileged to witness the OneNTU community's unity and strength in action. This was evident in the way our community came together during the pandemic when we established the NTU Priorities Fund to support students in urgent need of financial assistance. I'm also heartened by the growing impact of our efforts at fostering equity, diversity and inclusion across our campus.

With NTU's rapidly rising global stature, ambitious NTU 2025 Strategic Plan, dedicated community, and a growing portfolio of scholarly accomplishments and societal impact, I am proud of all that our OneNTU community has accomplished together over the past five years.

I will leave knowing that NTU is a world leader taking its rightful place among the top universities of the world, and that my successor will be able to build on this significant momentum.



The 30th anniversary festivities were capped off with a commemorative dinner that paid tribute to university leadership, faculty, staff, students, alumni and partners who have contributed to NTU over the past three decades.

BOARD OF TRUSTEES

AS AT 31 JULY 2022



Ms GOH Swee Chen
(Board Chair)

Board Chair
National Arts Council
Appointed as Board Chair
on 1 April 2021
Appointed as Board Member
on 1 August 2019



Prof Dewi Fortuna ANWAR
Research Professor
Research Centre for Politics,
National Research and
Innovation Agency, Indonesia
Chairman, Board of Directors,
The Habibie Centre
Appointed on 1 August 2021



Prof Sir Leszek BORYSIEWICZ
Chair
Cancer Research UK
Appointed on 1 February 2018



Mr CHING Wei Hong
Appointed on 1 April 2022



Mr GOH Sin Teck
Editor
Lianhe Zaobao
Appointed on 1 June 2012



Mr LAI Chung Han
Permanent Secretary
(Education)
Ministry of Education
Appointed on 4 October 2021



Mr LAM Chung Nian
Partner & Head
Intellectual Property,
Technology & Data Group,
Wong Partnership LLP
Appointed on 1 August 2021



Dr LEE Shiang Long
Group Chief Technology
and Digital Officer
ST Engineering
Appointed on 15 September 2017



Mr LIM Chow Kiat
Chief Executive Officer
GIC Pte Ltd
Appointed on 1 April 2015



Mr LIM Chuan Poh
Chairman
Singapore Food Agency
Appointed on 28 March 2006



Mr LO Kien Foh
President & CEO
Continental Automotive
Singapore Pte Ltd
Appointed on 1 April 2019



Mr LOW Check Kian
Director
Cluny Park Capital Pte Ltd
Appointed on 1 April 2014



Mr Anthony MALLEK
Appointed on 1 April 2019



Mr David SU Tuong Sing
Founding Managing Partner
Matrix Partners China
Appointed on 1 August 2021



Mr TAN Chin Hwee
Chief Executive Officer,
Asia Pacific
Trafigura Pte Ltd
Appointed on 1 April 2015



Mr ZAINUL ABIDIN Rasheed
Ambassador (Non-Resident)
to Kuwait
Ministry of Foreign Affairs
Appointed on 1 April 2017



Prof Alexander JB ZEHNDER
Chairman
Triple Z Ltd
Appointed on 25 August 2009



Prof Subra SURESH
President
Nanyang Technological
University, Singapore
Appointed on 1 January 2018

Retirements



Prof Gene D BLOCK
Chancellor
University of California,
Los Angeles
Appointed on 1 January 2018



Ms LAI Wei Lin
Permanent Secretary
(Transport Development) and
Second Permanent Secretary
(Finance)
Ministry of Transport
Ministry of Finance
Appointed on 1 April 2019



Mr WONG Yew Meng
Appointed on 1 August 2010

UNIVERSITY LEADERSHIP

AS AT 31 JULY 2022

PRESIDENT'S COUNCIL



Prof Subra SURESH

President and Distinguished University Professor

Appointed on 1 January 2018



Prof LING San

Deputy President and Provost, and President's Chair in Mathematical Sciences

Appointed on 1 January 2020 and 1 April 2019 respectively

- Provost and Vice President (Academic)
(1 January 2018 - 31 December 2019)
- Dean, College of Science
(1 August 2011 - 31 December 2017)
- Chair, School of Physical & Mathematical Sciences
(1 April 2008 - 31 December 2010)
- Head, Division of Mathematical Sciences, School of Physical & Mathematical Sciences
(1 July 2005 - 31 March 2008)



Prof LAM Khin Yong

Senior Vice President (Research) and President's Chair in Mechanical and Aerospace Engineering

Appointed on 1 January 2020 and 1 April 2019 respectively

- Vice President (Research)
(1 May 2014 - 31 December 2019)
- Acting Provost
(1 October - 31 December 2017 & 27 October - 5 December 2014)
- Chief of Staff
(1 July 2011 - 31 December 2017)
- Chief of Staff-Designate
(1 April - 30 June 2011)
- Associate Provost (Graduate Education & Special Projects)
(1 April 2008 - 30 June 2011)
- Chair, School of Mechanical & Aerospace Engineering
(1 August 2006 - 30 April 2008)



Prof Joseph SUNG

Senior Vice President (Health & Life Sciences), Dean, Lee Kong Chian School of Medicine, and Distinguished University Professor

Appointed on 1 April 2021 and 1 March 2021 respectively



Ms TAN Aik Na

Senior Vice President (Administration)

Appointed on 1 January 2020

- Vice President (Administration)
(1 January 2018 - 31 December 2019)
- Chief Administration Officer
(1 April - 31 December 2017)
- Chief Financial Officer
(1 January - 31 December 2017)
- Chief Financial Officer-Designate
(3 August - 31 December 2016)



Prof Christina SOH

Vice President (Strategy & Leadership Development), Dean, College of Business (Nanyang Business School), President's Chair in Information Systems and Goh Tjoei Kok Professor in Business

Appointed on 1 January 2022, 1 March 2020 and 1 April 2021 respectively

- Associate Provost (Faculty Affairs)
(1 January 2018 - 29 February 2020)
- Deputy Associate Provost (Faculty Affairs)
(1 November 2015 - 31 December 2017)
- Head, Division of Information Technology & Operations Management, Nanyang Business School
(1 July 2014 - 22 January 2017)
- Associate Dean, Nanyang Business School
(15 August 2009 - 30 June 2012)

ACADEMIC APPOINTMENTS

Prof Ralf EMMERS

Associate Vice President, International (Alliances & Partnerships), Dean, S Rajaratnam School of International Studies, and President's Chair in International Relations

Appointed on 1 May 2022, 1 January 2019 and 1 April 2019 respectively

- Associate Dean, S Rajaratnam School of International Studies (1 July 2014 - 31 December 2018)
- Head, Centre for Multilateralism Studies, S Rajaratnam School of International Studies (29 May 2015 - 31 December 2018)
- Acting Head, Centre for Non-Traditional Security Studies, S Rajaratnam School of International Studies (7 February 2011 - 6 February 2012)
- Head, Graduate Studies, S Rajaratnam School of International Studies (1 October 2006 - 5 May 2009)

Prof Christine GOH

Director, National Institute of Education, and President's Chair in Education (Linguistics & Language Education)

Appointed on 1 July 2018 and 1 April 2019 respectively

- Dean, Office of Graduate Studies & Professional Learning, National Institute of Education (1 July 2014 - 30 June 2018)
- Associate Dean, Office of Graduate Studies & Professional Learning, National Institute of Education (1 July 2010 - 30 June 2014)
- Associate Dean, Graduate Programmes & Research Office, National Institute of Education (1 January 2009 - 30 June 2010)
- Deputy Head, English Language & Literature Academic Group, National Institute of Education (1 January - 31 December 2008)

Prof LEE Pooi See

Associate Provost (Graduate Education), Associate Vice-President (Innovation & Entrepreneurship), Dean, Graduate College, and President's Chair in Materials Science and Engineering

Appointed on 1 March 2022, 1 May 2022, 1 January 2020 and 1 April 2021 respectively

- Associate Dean (Faculty Recruitment & Development), College of Engineering (1 July 2016 - 31 December 2019)

Prof Joseph LIOW

Dean, College of Humanities, Arts, & Social Sciences, and Tan Kah Kee Chair in Comparative and International Politics

Appointed on 1 July 2018 and 1 April 2019 respectively

- Dean, S Rajaratnam School of International Studies (3 November 2014 - 31 December 2018)
- Associate Dean, S Rajaratnam School of International Studies (1 July 2008 - 2 November 2014)

Prof Louis PHEE

Vice President (Innovation & Entrepreneurship), Dean, College of Engineering, and Tan Chin Tuan Centennial Professor in Mechanical Engineering

Appointed on 1 January 2022, 1 June 2018 and 1 January 2019 respectively

- Interim Dean, College of Engineering (16 September 2017 - 31 May 2018)
- Chair, School of Mechanical & Aerospace Engineering (1 July 2014 - 15 September 2017)
- Head, Division of Mechatronics & Design, School of Mechanical & Aerospace Engineering (1 July 2013 - 30 June 2014)
- Acting Head, Division of Mechatronics & Design, School of Mechanical & Aerospace Engineering (1 July 2011 - 30 June 2013)

Prof Simon REDFERN

Dean, College of Science, and President's Chair in Earth Sciences

Appointed on 1 August 2019

Prof Christina SOH

Vice President (Strategy & Leadership Development), Dean, College of Business (Nanyang Business School), President's Chair in Information Systems and Goh Tjoei Kok Professor in Business

Appointment details as above

Prof Joseph SUNG

Senior Vice President (Health & Life Sciences), Dean, Lee Kong Chian School of Medicine, and Distinguished University Professor

Appointment details as above

Prof Timothy John WHITE

Vice President (International Engagement) and President's Chair in Materials Science and Engineering

Appointed on 1 January 2022 and 1 April 2019 respectively

- Associate Vice President (Infrastructure & Programmes) (1 March 2018 - 31 March 2022)
- Research Director (Engineering & Physical Sciences) (1 December 2013 - 31 August 2019)
- Associate Chair (Research), School of Materials Science & Engineering (1 March 2014 - 28 February 2018)

ADMINISTRATIVE APPOINTMENTS

Mr Paul CHAIN

Chief Executive Officer, Office of Development & Facilities Management

Appointed on 1 December 2011

Mr CHAN Wei Chuen

Registrar

Appointed on 1 January 2020

- Chief Operating Officer, Lee Kong Chian School of Medicine (1 September 2018 - 31 December 2019)
- Senior Director of Corporate Services, Lee Kong Chian School of Medicine (1 February 2014 - 31 August 2018)
- Director of Infrastructure, Lee Kong Chian School of Medicine (1 July 2012 - 31 January 2014)

Mr Gregory CHEW

General Counsel & Chief Legal Officer, Legal & Secretarial Office

Appointed on 2 July 2018

Dr Vivien CHIONG

Chief Communication Officer

Appointed on 1 July 2014

- Director, Corporate Communications Office (4 May 2010 - 30 June 2014)

Ms LIEN Siaou-Sze

Vice President (University Advancement Office)

Appointed on 1 December 2020

- Vice President (Advancement) (2 January - 30 November 2020)

Mr Alvin ONG

Chief Information Officer

Appointed on 23 October 2017

Mr ONG Eng Hock

Chief Financial Officer

Appointed on 1 January 2018

- Head, NTU Shared Services (22 March - 31 December 2017)

Ms ONG Seok Bin

Chief Human Resource Officer

Appointed on 6 January 2022

Ms TAN Sin Mui

Chief Investment Officer

Appointed on 17 September 2018

Mr David TOH

Chief Executive Officer, NTUitive

Appointed on 15 October 2021

- Interim Chief Executive Officer, NTUitive (1 July - 14 October 2021)
- Chief Technology Officer, NTUitive (1 April 2014 - 30 June 2021)
- Director, Nanyang Innovation & Enterprise Office (1 March 2013 - 31 March 2014)

HEADS OF AUTONOMOUS INSTITUTES

Prof Christine GOH

Director, National Institute of Education, and President's Chair in Education (Linguistics & Language Education)

Appointment details as above

Prof Benjamin P HORTON

Director, Earth Observatory of Singapore, AXA-Nanyang Professor in Natural Hazards and President's Chair in Earth Sciences

Appointed on 1 July 2020 and 1 April 2019 respectively

- Acting Chair, Asian School of the Environment (1 July 2018 - 30 June 2020)
- Associate Chair (Faculty), Asian School of the Environment (1 January - 30 June 2018)

Prof Staffan KJELLEBERG

Director, Singapore Centre for Environmental Life Sciences Engineering, and Distinguished University Professor

Appointed on 1 January 2011 and 1 April 2019 respectively

Dr NEO Peng Fu

Director, Confucius Institute, Nanyang Technological University

Appointed on 1 January 2014

Ambassador ONG Keng Yong

Executive Deputy Chairman, S Rajaratnam School of International Studies, and Director, Institute of Defence & Strategic Studies

Appointed on 3 November 2014

- Head, International Centre for Political Violence and Terrorism Research (1 January 2019 - 31 March 2020)

Prof Joseph SUNG

Senior Vice President (Health & Life Sciences), Dean, Lee Kong Chian School of Medicine, and Distinguished University Professor

Appointment details as above

UNIVERSITY LEADERSHIP

AS AT 31 JULY 2022

Prof Paul TENG

Managing Director/Dean, NIE International Pte Ltd
Appointed on 1 January 2018

- Senior Advisor, National Institute of Education (1 July - 31 December 2017)
- Principal Officer, National Institute of Education (1 July 2014 - 30 June 2017)
- Dean, Graduate Studies & Professional Learning, National Institute of Education (1 November 2006 - 30 June 2014)
- Head, Natural Sciences & Science Education, National Institute of Education (1 November 2004 - 31 October 2006)

Assoc Prof YOW Cheun Hoe

Head of Chinese, School of Humanities, Director, Centre for Chinese Language & Culture, and Director, Chinese Heritage Centre
Appointed on 1 April 2017, 1 March 2017 and 1 November 2016 respectively

- Head, Division of Chinese, School of Humanities & Social Sciences (1 July 2016 - 31 March 2017)
- Deputy Director, Centre for Chinese Language & Culture (1 March 2013 - 28 February 2017)

OTHER SENIOR ACADEMIC APPOINTMENT HOLDERS

Prof TAN Ooi Kiang

Deputy Provost (Education)

Appointed on 1 August 2020

- Deputy Provost-Designate (Education) (1 - 31 July 2020)
- Associate Provost (Undergraduate Education) (3 August 2016 - 30 June 2020)
- Deputy Associate Provost (Undergraduate Education) (1 November 2015 - 2 August 2016)
- Director, Undergraduate Education (Projects), President's Office (1 October 2014 - 31 October 2015)
- Director, Admissions & Financial Aid, Office of Admissions & Financial Aid (1 July 2012 - 30 September 2014)

Prof GAN Chee Lip

Associate Provost (Undergraduate Education) and Executive Director, Office of Research & Technology in Defence & Security

Appointed on 1 August 2020 and 1 April 2018 respectively

- Associate Provost-Designate (Undergraduate Education) (1 - 31 July 2020)
- Deputy Associate Provost (Undergraduate Education) (1 September 2019 - 30 June 2020)
- Director, CSA-NTU Joint Centre (1 April 2020 - 31 March 2022)
- Director, Renaissance Engineering Programme (4 January 2016 - 31 March 2018)
- Deputy Director, Renaissance Engineering Programme (1 May 2015 - 3 January 2016)
- Director, Temasek Laboratories (2 February 2012 - 31 December 2019)

Prof LEE Pooi See

Associate Provost (Graduate Education), Associate Vice President (Innovation & Entrepreneurship), Dean, Graduate College, and President's Chair in Materials Science and Engineering

Appointment details as above

Prof THENG Yin Leng

Associate Provost (Faculty Affairs), Executive Director, Ageing Research Institute for Society and Education, and President's Chair in Information Studies

Appointed on 1 March 2020, 1 April 2020 and 1 April 2021 respectively

- Deputy Associate Provost (Faculty Affairs) (1 September 2019 - 29 February 2020)
- Acting Director, Ageing Research Institute for Society and Education (1 November 2015 - 31 March 2020)

Prof TJIN Swee Chuan

Associate Provost (Continuing Education) and Chief Executive of PaCE, Co-Director, The Photonics Institute, and President's Chair in Photonics

Appointed on 1 March 2022, 30 October 2014 and 1 April 2021 respectively

- Associate Provost (Graduate Education & Lifelong Learning) (1 January 2019 - 28 February 2022)
- Associate Provost (Graduate Education) (1 January - 31 December 2018)
- Executive Director, Office of Research & Technology in Defence & Security (1 April 2015 - 31 March 2018)
- Associate Chair (Research), School of Electrical & Electronic Engineering (1 June 2014 - 31 May 2017)

Assoc Prof Victor YEO

Associate Provost (Student Life)

Appointed on 1 January 2021

- Deputy Associate Provost (Student Life) (1 January 2018 - 31 December 2020)
- Associate Dean (Undergraduate Student Life), Nanyang Business School (1 October 2016 - 14 March 2018)
- Head, Division of Business Law, Nanyang Business School (1 July 2010 - 30 September 2016 & 1 January 2000 - 31 May 2005)

Prof Ralf EMMERS

Associate Vice President, International (Alliances & Partnerships), Dean, S Rajaratnam School of International Studies, and President's Chair in International Relations

Appointment details as above

Prof GUAN Yong Liang

Associate Vice President (Infrastructure & Programmes) and Co-Director, Continental-NTU Corporate Laboratory

Appointed on 1 April 2022 and 1 December 2019 respectively

Prof Shirley HO

Associate Vice President (Humanities, Social Sciences & Research Communications)

Appointed on 1 April 2022

- Research Director (Arts, Humanities, Education & Social Sciences) (1 January 2020 - 31 March 2022)
- Associate Chair (Faculty), Wee Kim Wee School of Communication & Information (17 December 2017 - 31 December 2019)

Prof KWOK Kian Woon

Associate Vice President (Wellbeing)

Appointed on 1 January 2021

- Associate Provost (Student Life) (1 July 2011 - 31 December 2020)
- Associate Provost-Designate (Student Life) (1 April - 30 June 2011)

- Associate Chair (Academic), School of Humanities & Social Sciences (1 August 2006 - 30 June 2011)
- Head, Division of Sociology, School of Humanities & Social Sciences (1 June 2004 - 30 June 2013)

Prof LAM Kwok Yan

Associate Vice President (Strategy & Partnerships) and Director, Strategic Centre for Research in Privacy-Preserving Technologies & Systems

Appointed on 1 April 2022 and 1 November 2018 respectively

- Director, Nanyang Technopreneurship Centre (1 June 2019 - 31 March 2022)

Prof LIU Hong

Associate Vice President, International (Liaison & Coordination)

Appointed on 1 May 2022

- Chair, School of Social Sciences (1 April 2017 - 31 March 2020)
- Director, Nanyang Centre for Public Administration (1 January 2014 - 31 December 2022)
- Chair, School of Humanities & Social Sciences (1 July 2011 - 31 March 2017)

Prof Peter PREISER

Associate Vice President (Biomedical & Life Sciences) and President's Chair in Biological Sciences

Appointed on 1 January 2019 and 1 April 2019 respectively

- Interim Dean, College of Science (11 March - 31 July 2019)
- Chair, School of Biological Sciences (1 November 2012 - 31 December 2018)
- Associate Provost (Graduate Education), President's Office (1 July 2011 - 30 June 2014)

Assoc Prof Valerie DU TOIT-LOW

Deputy Associate Provost (Residential Education)

Appointed on 1 October 2016

- Associate Dean (Undergraduate Student Life), Nanyang Business School (1 July 2014 - 30 September 2016)
- Associate Dean (Student Development & Outreach), Nanyang Business School (28 February 2011 - 30 June 2014)

Assoc Prof Vivien HUAN

Deputy Associate Provost (Student Wellbeing)

Appointed on 1 February 2020

- Associate Dean, Office of Teacher Education, National Institute of Education (1 July 2014 - 31 January 2020)
- Sub-Dean, Office of Teacher Education, National Institute of Education (1 July 2010 - 31 December 2013)
- Sub-Dean, Foundation Programmes Office, National Institute of Education (1 July 2009 - 30 June 2010)

Assoc Prof Andy KHONG Wai Hoong

Deputy Associate Provost (Student Life), Co-Director, Delta-NTU Corporate Laboratory, and Director of Students (Innovation & Entrepreneurship)

Appointed on 1 July 2022, 1 June 2022 and 1 May 2022 respectively

- Associate Dean (Students), College of Engineering (1 August 2019 - 30 June 2022)
- Associate Chair (Students), School of Electrical & Electronic Engineering (1 June 2017 - 31 July 2019)
- Deputy Director, Delta-NTU Corporate Laboratory (1 July 2016 - 30 June 2021)

DONORS



Boost to osteoarthritis research: (From left) StemiGen Therapeutics Chairman Mr Steven Lim; StemiGen Therapeutics CEO Dr James Hsieh; Prof Benjamin Seet, Deputy Group CEO (Education & Research), National Healthcare Group; NTU Vice President (University Advancement) Ms Lien Siaou-Sze; and Prof Joseph Sung, LKCMedicine Dean and NTU Senior Vice President (Health & Life Sciences).

GIFTS TO THE UNIVERSITY

Philanthropy continues to advance NTU's goals in education, research and innovation. The University is grateful to its donors for their unwavering belief in the institution and for supporting its priorities.

The gifts in FY2021 include:

\$S\$6 million from Aranda Investments Pte Ltd to establish the Temasek Chair Professorship in Clean Energy. The Professorship aims to attract eminent faculty who will strengthen NTU's leadership in research, education and innovation in clean energy. Aligned with NTU's Sustainability Manifesto, the gift will bolster the University's ambition to be a leader in sustainability and augment its wide-ranging efforts in this area.

\$S\$2 million from Mr Wu Hsioh Kwang for the advancement of education that supports the University's key priorities.

\$S\$1.2 million from StemiGen Therapeutics Pte Ltd in support of the StemiGen-Lee Kong Chian School of Medicine (LKCMedicine) Regenerative Medicine Research Fund. The gift will fund stem cell and regenerative medicine projects and translational research at LKCMedicine, such as practical therapeutic interventions for osteoarthritis of the knee.

\$S\$1.15 million from Hermes-Epitek Corporation Pte Ltd to fund the Hermes-Epitek Innovation Undergraduate and Graduate Scholarships, awarded to academically able students in the fields of electrical and electronic engineering, mechanical and aerospace engineering, materials science and engineering, and computer science and engineering.

\$S\$8.8 million for the Insurance Risk and Finance Research Centre to finance its

participation in the Global-Asia Insurance Partnership programme, which aims to address the future development and needs of the insurance sector, produce actionable research insights, develop policy recommendations, promote innovation and experimentation, and build a pipeline of highly trained professionals for the sector. Seven anchor partners donated \$S\$1 million each while six supporting partners donated \$S\$300,000 each.

\$S\$1 million from Dou Yee International Pte Ltd to boost the quantum of bursaries awarded to financially disadvantaged students under the Dou Yee Bursary, established by the company with a \$S\$1.2 million gift in 1998.

\$S\$1 million from Dr Tan See Leng to establish the Tan Seow Chiap POWERS Endowment, which will provide robust and steady support towards the Promotion of Women in Engineering, Research and Science (POWERS) programme that aims to empower women to pursue STEM education and careers.

\$S\$500,000 from Nippon Shokubai Co Ltd to establish the five-year term Nippon Shokubai Professorship in Chemistry. The Professorship provides recognition for existing faculty members from the Division of Chemistry and Biological Chemistry who have demonstrated excellence in research and teaching. It also aims to retain outstanding faculty members who can further contribute to the University.

\$S\$500,000 from Xu Family Charitable Foundation in support of the fundraising appeals to establish the Cham Tao Soon Career Development Professorship in Engineering, in honour of the founding President of NTU. The Professorship provides recognition for faculty members with distinguished achievements, and serves to strengthen the University's efforts to boost its appeal and reputation as an employer of choice for global talents.

INAUGURAL "WE BELONG" CAMPAIGN

We Belong 2022 raised about \$S\$1 million. Held to celebrate the University's 30th anniversary, it comprised the NTU Service Week, virtual Best Foot Forward fundraising run and NTU Giving Day.

NTU Service Week gathered volunteers for meaningful projects in partnership with alumni associations and non-profit groups. NTU Giving Day entailed a hybrid 12-hour fundraising drive and celebrated the growing culture of philanthropy within NTU.

These inclusive events from January to March 2022 encouraged the OneNTU community of students, employees and alumni, and supporters of NTU to volunteer their time and talents and raise funds for various causes, including bursaries to help needy students and School Advancement Funds.



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CORPORATE GOVERNANCE

INTRODUCTION

In April 2006 under the Nanyang Technological University (Corporatisation) Act (Cap. 192A) ("NTU Act"), NTU was corporatised from a statutory board to a not-for-profit company limited by guarantee (Reg. No. 200604393R) formed under the Companies Act (Cap. 50) of Singapore. The governance of the University takes place within the NTU Act and the University's Constitution.

NTU is committed to high standards of corporate governance, professionalism, integrity, transparency and commitment at all levels, underpinned by strong internal controls and risk management systems.

GOVERNANCE EVALUATION CHECKLIST

In addition to the application of good governance practices as a company and registered charity (Reg. No 01955), we have, as an institution of public character ("IPC"), adopted best practices in key areas of governance that are closely aligned to the principles and guidelines in the Code of Governance for Charities and Institutions of a Public Character (the "Code"). In line with the disclosure requirement by the Charity Council that all IPCs are required to disclose the extent of their compliance with the Code, NTU's Governance Evaluation Checklist can be found at the Charity Portal website (www.charities.gov.sg).

BOARD OF TRUSTEES

The NTU Board of Trustees is the highest governing organ within the University's governance framework. The Board comprises 18 members appointed by the Minister for Education, chaired by Ms Goh Swee Chen. Our Board of Trustees includes eminent business leaders, academics, alumni, entrepreneurs and professionals from the public service and private sector. Each member is appointed on the strength of his/her calibre, experience, stature and ability to contribute to NTU, and brings with him/her independent judgment on issues of strategy, performance, resource allocation, risk and compliance, as well as valuable relationships and networks that are essential for the growth of NTU.

The Board is responsible for ensuring that the University acts to further its objectives in education and research, and properly accounts for and safeguards the funds and assets of the University. The Board collaborates closely with Management and stakeholders of the University to shape the vision, chart the strategic direction, and develop programmes and initiatives to produce a strong and enduring impact for the University, Singapore and beyond. The Board also approves, amongst other responsibilities, the annual budget, the use of the University's operating reserves and NTU's audited annual financial statements.

The Board embraces an effective board framework with systems and processes based on the following governance principles and practices:

1. The responsibility for recommending suitable Board candidates is under the Nominating Committee's oversight. The Nominating Committee inducts new Board members through interactive briefing sessions with the Board Chair and Management. A Board Manual is made available to all Trustees supporting their induction and engagement as part of the Board induction programme.
2. Board Committees are structured to enable the Board to fulfil its governance role, relying on each Trustee's competency, skill and experience.
3. The Board partners closely with Management to set NTU's vision, mission and strategy.
4. The Board has executive succession plans tailored to reflect NTU's prevailing strategy and organisation.
5. The Board has an effective consultation and decision-making system with executive sessions and board meetings scheduled in advance, available professional expert advice, internal guidelines and procedures for the conduct of board meetings and board approvals obtained through the Board's secure cloud-based platform.
6. The Board evaluates and reviews its own performance and appoints an independent third party to collate and analyse the returns of the Trustees.
7. The Board delineates roles and responsibilities between the Board and Management. All members of the Board, including the Board Chair, are non-executive with the exception of the President of NTU. This ensures Board independence from Management.
8. The Board has a rotation plan for continuous self-renewal, with staggering of Trustees' terms to ensure continuity. There are policies and procedures for nomination and retirement of Trustees to enable formal board nomination and election.

CORPORATE GOVERNANCE

BOARD COMMITTEES

Seven Board Committees and two Advisory Committees have been established to support the Board. The roles of the Board Committees and Advisory Committees are briefly described below:

- The Academic Affairs Committee provides oversight and policy guidance for, and directly supports the academic concerns of, the University as well as the management of faculty and related matters.
- The Alumni and Development Committee provides oversight of the advancement of the University as a great university founded on science and technology and its relationship with its students, alumni and external communities.
- The Audit and Risk Committee oversees the University's internal controls, financial reporting and enterprise risk management.
- The Finance Committee provides oversight of the financial management of the University.
- The Investment Committee oversees the management and investment of the funds of the University.
- The Nominating Committee nominates suitable persons to serve on the Board and Committees, and other governance procedures that may apply to the Board.
- The Remuneration Committee provides oversight and policy guidance in employee compensation matters.
- The Campus Planning Advisory Committee provides oversight and advice on the implementation of the campus master plan.
- The Campus Vibrancy Advisory Committee provides oversight and guidance on the development and implementation of a new master plan to improve campus vibrancy conducive for NTU's community of staff, students, alumni and partners to live, learn, work and play.

The Committees operate based on the principle of delegated authority from the Board and observe their respective Terms of Reference as approved by the Board. The Terms of Reference of each of these Committees set out the role, powers and rules applying to these Committees. Non-Board members who have expertise in their respective fields may be co-opted to enhance the deliberation and decision-making process of these Committees.

BOARD MEMBERS

For the financial year ended 31 March 2022, the Board of Trustees comprises the following members.

No.	Member	Current Board Appointment(s)	Date of Appointment to the Board	Board Meetings	
				Held	Attended
1	Goh Swee Chen	Board Chair Chair, Nominating Committee Chair, Remuneration Committee Chair, Campus Vibrancy Advisory Committee	1 Aug 2019	5	5
2	Lim Chuan Poh	Member, Academic Affairs Committee Member, Investment Committee Member, Nominating Committee Member, Remuneration Committee	28 Mar 2006	5	5
3	Alexander JB Zehnder	Chair, Academic Affairs Committee Member, Audit and Risk Committee Member, Finance Committee Member, Campus Planning Advisory Committee	25 Aug 2009	5	5
4	Goh Sin Teck	Member, Alumni and Development Committee Member, Audit and Risk Committee Member, Campus Vibrancy Advisory Committee	1 Jun 2012	5	4
5	Low Check Kian	Chair, Investment Committee	1 Apr 2014	5	4
6	Lim Chow Kiat	Member, Investment Committee	1 Apr 2015	5	4
7	Tan Chin Hwee	Chair, Audit and Risk Committee Member, Investment Committee	1 Apr 2015	5	3
8	Zainul Abidin Rasheed	Member, Audit and Risk Committee	1 Apr 2017	5	5
9	Lee Shiang Long	Member, Finance Committee	15 Sep 2017	5	4
10	Subra Suresh	Member, Academic Affairs Committee Member, Finance Committee Member, Investment Committee	1 Jan 2018	5	5

CORPORATE GOVERNANCE

No.	Member	Current Board Appointment(s)	Date of Appointment to the Board	Board Meetings	
				Held	Attended
11	Leszek Borysiewicz	Member, Academic Affairs Committee	1 Feb 2018	5	5
12	Lo Kien Foh	Chair, Alumni and Development Committee	1 Apr 2019	5	5
13	Anthony Mallek	Member, Audit and Risk Committee Chair, Finance Committee	1 Apr 2019	5	5
14	David Su Tuong Sing	Member, Finance Committee	1 Aug 2021	3	3
15	Dewi Fortuna Anwar	Member, Alumni and Development Committee	1 Aug 2021	3	3
16	Lam Chung Nian	Member, Nominating Committee Member, Remuneration Committee	1 Aug 2021	3	3
17	Lai Chung Han	Member, Academic Affairs Committee Member, Nominating Committee Member, Remuneration Committee	4 Oct 2021	2	2
18	Lai Wei Lin (Retired 3 Oct 2021)	Member, Academic Affairs Committee Member, Nominating Committee Member, Remuneration Committee	1 Apr 2019	3	2
19	Gene Block (Retired 1 Nov 2021)	Member, Academic Affairs Committee	1 Jan 2018	4	2
20	Wong Yew Meng (Retired 31 Mar 2022)	Member, Alumni and Development Committee	1 Aug 2010	5	5

Remarks:

- Given the duration of the student journey into and beyond NTU, including undergraduate and postgraduate education, the Board may comprise long standing members beyond ten years, eminent leaders in their respective fields who continue to contribute significantly to NTU's strategic direction. The Ministry of Education continues to endorse the appointment and renewal of any Trustee. The NTU Constitution, adopting the principles set out in the Code, was revised to reflect that appointment of any Trustee should typically be on an initial three-year term, on a renewable basis. In alignment with the Code, the Nominating Committee will principally not recommend the re-appointment of a Trustee who has already served an aggregate term of ten years, except in circumstances where the Board recognises the contribution of Trustees who have, over time, developed deep insight into NTU's ambitions, and are willing and able to continue to contribute to NTU.
- The Board of Trustees had, during the year, an aggregate meeting attendance of 90%.
- The Board Committees had, during the year, an aggregate meeting attendance of 91%.

UNIVERSITY LEADERSHIP

The President is the University's Chief Executive Officer. He is accountable to the Board for NTU's strategic vision and mission. He has the authority to perform all acts that are necessary to give effect to the policies and statutes of the Board.

Forming NTU's core leadership team together with the President are the Provost and Deputy President, three Senior Vice Presidents and one Vice President, collectively the President's Council.

The Provost and Deputy President is the Chief Academic Officer and is responsible for the conduct, coordination and quality of all of NTU's academic programmes and for their future development. This includes graduate and undergraduate education, faculty development, student life and external academic liaison.

The Senior Vice President (Research) guides NTU's university-wide research agenda and its implementation. His responsibilities include research planning and policy development, research funding strategies and research infrastructure development.

The Senior Vice President (Administration) leads the administrative functions that enable the seamless delivery of NTU's academic and research priorities, including key initiatives around customer journeys that improve employee engagement, organisation capabilities and operational effectiveness.

CORPORATE GOVERNANCE

UNIVERSITY LEADERSHIP (CONT'D)

The Senior Vice President (Health and Life Sciences) seamlessly integrates university-wide activities in health, medicine and life sciences, spanning the full spectrum of education, research, innovation and clinical practice, to forge multidisciplinary interactions among the Colleges and Schools, as well as to foster close collaborations with the medical and healthcare enterprise across Singapore and around the globe.

The Vice President (Strategy & Leadership Development) leads the coordination of the NTU 2025 strategy across academic and administrative units and coordinates University-wide efforts in strengthening faculty and staff development, leadership cultivation and mentoring across faculty ranks in all Colleges and Schools.

POLICIES TO MANAGE CONFLICT OF INTEREST

Under the University Code of Conduct, members of the Board, faculty and staff are required in their respective capacities to act at all times in the best interest of the University. Clear policies and procedures are designed to prevent and address potential conflict-of-interest situations while promoting ethical business conduct of faculty and staff.

Trustees have a fiduciary duty to avoid a conflict between what they ought to do for NTU and what they might do for themselves. They are required to uphold a high standard of integrity and commitment in serving the University and if a conflict of interest arises, they shall recuse themselves from decisions where such conflict exists.

In addition, NTU's Constitution contains provisions for the management and avoidance of conflicts of interest by Trustees. Such provisions include (a) permitting a Trustee to be interested in any transaction with NTU provided that the member has declared the nature of the interest to the Board and abstains from participating in the Board's decision in respect of the transaction concerned, (b) permitting a Trustee, or a firm associated with the member, to act in any professional capacity for the University and to be remunerated for professional services as if the Board member was not a Trustee, and (c) permitting a Trustee to be reimbursed for out-of-pocket expenses, travelling and other expenses properly incurred by the Trustee in attending and returning from meetings of the Board, any of its Committees, any general meeting of the University or otherwise in connection with the affairs of the University. NTU's Constitution expressly stipulates that Trustees shall not receive any remuneration for services rendered by them as members of the Board. Except as otherwise disclosed in writing to the Board, the University has no paid staff who are close family members of the Trustee.

Faculty and staff must, as prescribed from time to time, also comply with policies on conflict of interest. The current policy requires faculty and staff to ensure that their private activities and interests do not conflict with their professional obligations to the University. They should take care to avoid conflict between their own personal interests and the interests of the University and should avoid or withdraw from situations where there may be a perception of such conflict. Where there is potential violation of the policy, the faculty or staff shall, as soon as possible, disclose the nature and extent of their interest to the University.

WHISTLEBLOWING POLICIES

The University maintains a Whistleblower Protection Policy, enabling whistleblowers accessible means of reporting legitimate incidents and concerns of unethical behaviour, breach of integrity or non-compliance, all whilst maintaining the confidentiality and integrity of such reports. Reporting can be done online, through a telephone hotline or by registered post. The Ethics and Compliance Committee, comprising a spectrum of the University's leadership, oversees, addresses, reports and manages ethical and legal compliance matters throughout the University.

TRUSTEES' STATEMENT

TRUSTEES' STATEMENT

The Board of Trustees present their statement to the members together with the audited consolidated financial statements of Nanyang Technological University (the "University Company") and its subsidiaries (collectively the "Group") and statement of financial position and statement of changes in funds and reserves of the University Company for the financial year ended 31 March 2022.

In the opinion of the Trustees:

- (a) the consolidated financial statements of the Group and the statement of financial position and statement of changes in funds and reserves of the University Company as set out on pages 27 to 85 are drawn up so as to give a true and fair view of the financial position of the Group and of the University Company as at 31 March 2022, and the financial performance, changes in funds and reserves and cash flows of the Group and the changes in funds and reserves of the University Company for the financial year then ended in accordance with the provisions of the Companies Act 1967 (the "Act"), the Singapore Charities Act 1994 and Singapore Financial Reporting Standards (International);
- (b) the University Company has complied with Regulation 15 of the Charities (Institutions of a Public Character) Regulations;
- (c) the use of donation monies are in accordance with the objectives of the University Company as required under Regulation 11 of the Charities (Institutions of a Public Character) Regulations; and
- (d) at the date of this statement, there are reasonable grounds to believe that the University Company will be able to pay its debts when they fall due.

TRUSTEES

The Trustees of the University Company in office at the date of this statement are:

Ms Goh Swee Chen	(Chair)
Prof Alexander Jakob Boris Zehnder	
Mr Anthony Mallek	
Mr Goh Sin Teck	
Dr Lee Shiang Long	
Prof Sir Leszek Borysiewicz	
Mr Lim Chow Kiat	
Mr Lim Chuan Poh	
Mr Lo Kien Foh	
Mr Low Check Kian	
Prof Subra Suresh	
Mr Tan Chin Hwee	
Mr Zainul Abidin Bin Mohamed Rasheed	
Mr David Su Tuong Sing	(Appointed on 1 August 2021)
Mr Lam Chung Nian	(Appointed on 1 August 2021)
Prof Dewi Fortuna Anwar	(Appointed on 1 August 2021)
Mr Lai Chung Han	(Appointed on 4 October 2021)
Mr Ching Wei Hong	(Appointed on 1 April 2022)

Ms Lai Wei Lin, Prof Gene David Block and Mr Wong Yew Meng retired as Trustees of the University Company on 3 October 2021, 1 November 2021 and 31 March 2022 respectively.

TRUSTEES' STATEMENT

ARRANGEMENTS TO ENABLE TRUSTEES TO ACQUIRE SHARES AND DEBENTURES

Neither at the end of the financial year nor at any time during the financial year did there subsist any arrangement whose object is to enable the Trustees of the University Company to acquire benefits by means of the acquisition of shares or debentures in the University Company or any other body corporate.

TRUSTEES' INTERESTS IN SHARES AND DEBENTURES

The University Company is limited by guarantee and does not have a share capital.

The Trustees of the University Company at the end of the financial year have no financial interest in the share capital (including any share options) and debentures of the University Company's related corporations as recorded in the register of the director's shareholdings kept by the University Company's related corporations under Section 164 of the Act.

AUDITORS

Pursuant to the Trustees' resolution dated 27 September 2021, KPMG LLP were appointed as the auditors of the University Company. The auditors, KPMG LLP, have indicated their willingness to accept re-appointment.

On behalf of the Board of Trustees



Ms Goh Swee Chen
Chair of the Board of Trustees

Trustee



Prof Subra Suresh
President of Nanyang Technological University

Trustee

18 August 2022

INDEPENDENT AUDITORS' REPORT

TO THE BOARD OF TRUSTEES OF NANYANG TECHNOLOGICAL UNIVERSITY

REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS

Opinion

We have audited the financial statements of Nanyang Technological University (the "University Company") and its subsidiaries ("the Group") which comprise the consolidated statement of financial position of the Group and the statement of financial position of the University Company as at 31 March 2022, and the consolidated statement of comprehensive income, consolidated statement of changes in funds and reserves and consolidated statement of cash flows of the Group and the statement of changes in funds and reserves of the University Company for the financial year then ended, and notes to the financial statements, including a summary of significant accounting policies and other explanatory information, as set out on pages 27 to 85.

In our opinion, the accompanying consolidated financial statements of the Group and the statement of financial position and statement of changes in funds and reserves of the University Company are properly drawn up in accordance with the provisions of the Companies Act 1967 (the "Act"), the Singapore Charities Act 1994 and other relevant regulations (the "Charities Act and Regulations") and Singapore Financial Reporting Standards (International) ("SFRS(I)s") so as to give a true and fair view of the consolidated financial position of the Group and the financial position of the University Company as at 31 March 2022 and of the consolidated financial performance, consolidated changes in funds and reserves and consolidated cash flows of the Group and of the changes in funds and reserves of the University Company for the year ended on that date.

Basis for opinion

We conducted our audit in accordance with Singapore Standards on Auditing ("SSAs"). Our responsibilities under those standards are further described in the 'Auditors' responsibilities for the audit of the financial statements' section of our report. We are independent of the Group in accordance with the Accounting and Corporate Regulatory Authority *Code of Professional Conduct and Ethics for Public Accountants and Accounting Entities* ("ACRA Code") together with the ethical requirements that are relevant to our audit of the financial statements in Singapore, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the ACRA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other matter

We draw attention to Note 2.1 to the financial statements which states that these are the Group's first financial statements prepared in accordance with SFRS(I)s and describe the changes to the comparative information.

The consolidated financial statements of the Group and the statement of financial position of the University Company as at and for the years ended 31 March 2021 and 31 March 2020 (from which the consolidated statement of financial position of the Group and the statement of financial position of the University Company as at 1 April 2020 have been derived) were audited by another auditor who expressed an unmodified opinion on those financial statements that were prepared in accordance with Financial Reporting Standards in Singapore on 19 August 2021.

As part of our audit of the consolidated financial statements of the Group and the statement of financial position and statement of changes in funds and reserves of the University Company as at and for the year ended 31 March 2022, we obtained sufficient appropriate audit evidence that the opening balances as at 1 April 2021 do not contain misstatements that materially affect the consolidated financial position of the Group and the financial position of the University Company as at 31 March 2022 and of the consolidated financial performance, consolidated changes in funds and reserves and consolidated cash flows of the Group and of the changes in funds and reserves of the University Company for the year ended on that date.

Key audit matters

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

INDEPENDENT AUDITORS' REPORT

TO THE BOARD OF TRUSTEES OF NANYANG TECHNOLOGICAL UNIVERSITY

VALUATION OF LEVEL 3 FINANCIAL ASSETS

(Refer to notes 11 and 34 to the financial statements)

The key audit matter

As at 31 March 2022, the Group's Level 3 financial assets amounted to \$1.5 billion which represents 19% of the Group's total assets and comprised mainly investments in limited partnerships. The fair values of the investments in limited partnerships were determined using the net asset value ("NAV") approach which considers the fair values of the underlying assets and liabilities of the limited partnerships. The fair values of the investments in limited partnerships are based on the NAV provided by fund managers and fund administrators.

Due to the significance of the Group's investments in limited partnerships, and the related estimation uncertainty, this is considered a key audit focus area.

How the matter was addressed in our audit

We discussed with management and assessed the appropriateness of management's approach in deriving fair values of the limited partnerships based on their NAV.

We independently obtained confirmations from the fund managers and fund administrators on the NAV as at 31 March 2022. In addition, we obtained the latest audited financial statements of the limited partnerships to assess the appropriateness of the valuation methodologies adopted to value the limited partnerships' underlying assets.

We also considered other factors that may impact the fair value of the NAV by performing independent adverse news check on the limited partnerships and reading the auditors' report on the latest audited financial statements of the limited partnerships to identify any modification to the audit opinion.

Our findings

We found management's approach to derive fair value using the NAV of the limited partnerships to be appropriate. We also did not identify any other factors that may impact the fair value of the NAV of the limited partnerships.

Other information

Management is responsible for the other information contained in the annual report. Other information is defined as all information in the annual report other than the financial statements and our auditors' report thereon. We have obtained the Trustee's Statement prior to the date of this auditors' 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 other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed on the other information obtained prior to the date of this auditors' report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of management and Trustees for the financial statements

Management is responsible for the preparation of financial statements that give a true and fair view in accordance with the provisions of the Act, the Charities Act and SFRS(I)s, and for devising and maintaining a system of internal accounting controls sufficient to provide a reasonable assurance that assets are safeguarded against loss from unauthorised use or disposition; and transactions are properly authorised and that they are recorded as necessary to permit the preparation of true and fair financial statements and to maintain accountability of assets.

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

The Trustees' responsibilities include overseeing the Group's financial reporting process.

INDEPENDENT AUDITORS' REPORT

TO THE BOARD OF TRUSTEES OF NANYANG TECHNOLOGICAL UNIVERSITY

Auditors' responsibilities for the audit of the financial statements

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 auditors' 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 SSAs 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.

As part of an audit in accordance with SSAs, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

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

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

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

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

INDEPENDENT AUDITORS' REPORT

TO THE BOARD OF TRUSTEES OF NANYANG TECHNOLOGICAL UNIVERSITY

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

In our opinion, the accounting and other records required by the Act and the Charities Act and Regulations to be kept by the University Company and by those subsidiary corporations incorporated in Singapore of which we are the auditors have been properly kept in accordance with the provisions of the Act and the Charities Act and Regulations.

During the course of our audit, nothing has come to our attention that causes us to believe that during the year:

- (a) the University Company has not used the donation moneys in accordance with its objectives as required under Regulation 11 of the Charities (Institutions of a Public Character) Regulations; and
- (b) The University Company has not complied with the requirements of Regulation 15 of the Charities (Institutions of a Public Character) Regulations.

The engagement partner on the audit resulting in this independent auditor's report is Jeya Poh Wan S/O K. Suppiah.



KPMG LLP
*Public Accountants and
Chartered Accountants*

Singapore

18 August 2022

STATEMENTS OF FINANCIAL POSITION

As at 31 March 2022

		Group			University Company		
	Note	2022	2021	1 April 2020	2022	2021	1 April 2020
		\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
ASSETS							
Non-current assets							
Property, plant and equipment	4	1,753,478	1,835,329	1,962,798	1,746,710	1,828,385	1,957,214
Intangible assets	5	2,762	4,107	5,584	1,787	2,931	4,520
Subsidiaries	6	–	–	–	500	500	500
Associates and joint ventures	7	17,748	15,022	14,671	17,594	14,846	14,407
Student loans	8	999	2,177	2,440	999	2,177	2,440
Total non-current assets		1,774,987	1,856,635	1,985,493	1,767,590	1,848,839	1,979,081
Current assets							
Student loans	8	911	1,784	1,669	911	1,784	1,669
Trade and other receivables	10	412,844	531,182	461,390	400,287	517,470	448,724
Financial assets at fair value through profit or loss	11	4,395,935	3,501,677	2,805,833	4,379,892	3,492,580	2,796,070
Cash and cash equivalents	12	1,300,547	1,107,883	997,719	1,258,639	1,069,629	952,610
Total current assets		6,110,237	5,142,526	4,266,611	6,039,729	5,081,463	4,199,073
Total assets		7,885,224	6,999,161	6,252,104	7,807,319	6,930,302	6,178,154
LIABILITIES							
Non-current liabilities							
Deferred capital grants	13	933,561	1,046,971	1,158,313	931,517	1,044,399	1,155,695
Long term borrowings	17	650,000	–	–	650,000	–	–
Other non-current liabilities		142	2,600	2,711	67	2,525	2,711
Sinking fund received in advance	14	299,798	307,687	313,442	299,798	307,687	313,442
Lease liabilities	19	2,692	2,794	2,091	1,006	1,148	1,337
Total non-current liabilities		1,886,193	1,360,052	1,476,557	1,882,388	1,355,759	1,473,185

The accompanying notes form an integral part of these financial statements.

STATEMENTS OF FINANCIAL POSITION

As at 31 March 2022

		Group			University Company		
	Note	2022	2021	1 April 2020	2022	2021	1 April 2020
		\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Current liabilities							
Derivative financial instruments	9	1,526	19,935	20,075	1,526	19,935	20,075
Other payables and accruals		252,983	243,689	210,134	241,220	229,194	193,588
Provisions	15	70,193	77,337	63,931	68,398	75,611	62,800
Grant received in advance							
- Operating grants	16	10,027	6,923	7,884	2,312	-	-
Grant received in advance							
- Development grants	14	42,374	42,967	41,472	42,374	42,967	41,472
Grant received in advance							
- Information technology and furniture and equipment ("IT and F&E")	14	56,309	49,094	43,559	55,495	48,632	42,997
Sinking fund received in advance	14	18,697	25,072	27,972	18,697	25,072	27,972
Short-term borrowings	17	-	120,800	126,500	-	120,800	126,500
Deferred tuition and other fees		127,461	117,211	96,830	126,271	115,934	95,383
Research grants received in advance	18	208,783	180,892	171,625	208,346	180,784	166,392
Lease liabilities	19	2,374	2,102	4,414	506	189	2,845
Deferred grant income	20	-	9,158	33,485	-	7,549	31,443
Income tax payable		1	1	256	-	-	-
Total current liabilities		790,728	895,181	848,137	765,145	866,667	811,467
Total liabilities		2,676,921	2,255,233	2,324,694	2,647,533	2,222,426	2,284,652
Net assets		5,208,303	4,743,928	3,927,410	5,159,786	4,707,876	3,893,502
FUNDS AND RESERVES							
Capital account	21	200,858	200,858	200,858	200,858	200,858	200,858
Endowment fund	22	2,751,681	2,573,707	2,113,128	2,752,184	2,574,210	2,113,631
Accumulated surplus – General fund							
- Designated	23	1,872,734	1,632,108	1,354,382	1,819,944	1,591,060	1,315,133
- Specific	23	383,030	337,255	259,042	386,800	341,748	263,880
Funds and reserves		5,208,303	4,743,928	3,927,410	5,159,786	4,707,876	3,893,502

See Note 24 for funds managed on behalf of the Government Ministry.

The accompanying notes form an integral part of these financial statements.

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

Year ended 31 March 2022

	Note	General fund						Endowment fund		Total	
		Designated		Specific		Total		2022	2021	2022	2021
		2022	2021	2022	2021	2022	2021				
		\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Group Income											
Tuition and other fees		469,308	419,570	–	–	469,308	419,570	–	–	469,308	419,570
Scholarship, bursary and sponsorship expenses		(86,328)	(95,103)	–	–	(86,328)	(95,103)	–	–	(86,328)	(95,103)
Net tuition and other fees		382,980	324,467	–	–	382,980	324,467	–	–	382,980	324,467
Rental income		63,909	60,311	–	7	63,909	60,318	–	–	63,909	60,318
Research grants (non-ministry)	18	–	–	135,368	133,402	135,368	133,402	–	–	135,368	133,402
Interest income	25	1,825	3,287	203	481	2,028	3,768	–	–	2,028	3,768
Donations and sponsorships		14,836	13,810	26,594	21,063	41,430	34,873	–	–	41,430	34,873
Other grants		1,958	3,411	3,016	2,457	4,974	5,868	–	–	4,974	5,868
Sundry income		104,539	82,407	2,434	88	106,973	82,495	–	–	106,973	82,495
Gain/(Loss) on disposal of property, plant and equipment		21,999	–	(1,990)	–	20,009	–	–	–	20,009	–
Deferred capital grants amortised (non-ministry)	13	10,745	12,566	21,837	18,968	32,582	31,534	–	–	32,582	31,534
Total income before profit on investments and share results of associates and joint ventures		602,791	500,259	187,462	176,466	790,253	676,725	–	–	790,253	676,725
Profit on investments	27	62,875	134,358	24,272	58,139	87,147	192,497	180,220	473,799	267,367	666,296
Share of results of associates and joint ventures		(22)	(88)	–	–	(22)	(88)	2,748	439	2,726	351
Total income after profit on investments and share of results of associates and joint ventures		665,644	634,529	211,734	234,605	877,378	869,134	182,968	474,238	1,060,346	1,343,372

The accompanying notes form an integral part of these financial statements.

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

Year ended 31 March 2022

	Note	General fund						Endowment fund		Total	
		Designated		Specific		Total		2022	2021	2022	2021
		2022	2021	2022	2021	2022	2021				
		\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Group (cont'd)											
Expenditure											
Expenditure on manpower		687,746	696,055	247,068	244,254	934,814	940,309	4,260	2,229	939,074	942,538
Teaching/research/ administration		189,770	188,841	105,115	93,729	294,885	282,570	(2,716)	–	292,169	282,570
Scholarship, bursary and sponsorship expenses		16,469	12,876	89,849	86,152	106,318	99,028	–	–	106,318	99,028
Maintenance		128,153	97,452	8,112	8,060	136,265	105,512	–	3	136,265	105,515
Depreciation of property, plant and equipment	4	65,057	69,832	184,642	194,188	249,699	264,020	–	–	249,699	264,020
Amortisation of intangible assets	5	1,710	2,437	293	11	2,003	2,448	–	–	2,003	2,448
Capital expenditure not capitalised		8,927	10,531	8,609	4,687	17,536	15,218	–	–	17,536	15,218
Loss on disposal of property, plant and equipment		–	333	–	264	–	597	–	–	–	597
Interest expense		6,712	1,952	57	67	6,769	2,019	–	–	6,769	2,019
Other expenses		1,214	1,004	31	14	1,245	1,018	2,298	1,447	3,543	2,465
Total expenses		1,105,758	1,081,313	643,776	631,426	1,749,534	1,712,739	3,842	3,679	1,753,376	1,716,418
(Deficit)/Surplus before grants from ministries											
	28	(440,114)	(446,784)	(432,042)	(396,821)	(872,156)	(843,605)	179,126	470,559	(693,030)	(373,046)
Grants from ministries											
Development grants	14	4,801	5,351	1,742	1,313	6,543	6,664	–	–	6,543	6,664
Operating grants	29	560,414	562,267	–	–	560,414	562,267	–	–	560,414	562,267
Research grants	18	–	–	258,311	220,782	258,311	220,782	–	–	258,311	220,782
Other grants		24,210	14,406	69,145	106,086	93,355	120,492	–	–	93,355	120,492
Government grant income	26	8,144	52,931	–	–	8,144	52,931	–	–	8,144	52,931
Deferred capital grants amortised	13	26,671	29,788	141,518	148,150	168,189	177,938	–	–	168,189	177,938
Total grants from ministries		624,240	664,743	470,716	476,331	1,094,956	1,141,074	–	–	1,094,956	1,141,074
Surplus after grants from ministries											
		184,126	217,959	38,674	79,510	222,800	297,469	179,126	470,559	401,926	768,028
Tax expense	30	(1)	(2)	–	–	(1)	(2)	–	–	(1)	(2)
Surplus for the year representing total comprehensive income for the year											
		184,125	217,957	38,674	79,510	222,799	297,467	179,126	470,559	401,925	768,026

The accompanying notes form an integral part of these financial statements.

STATEMENTS OF CHANGES IN FUNDS AND RESERVES

Year ended 31 March 2022

Group	Accumulated surplus				
	Capital account	Endowment fund	General Fund		Total
			Designated	Specific	
	\$'000	\$'000	\$'000	\$'000	\$'000
At 1 April 2020	200,858	2,113,128	1,354,382	259,042	3,927,410
Total comprehensive income for the year					
Surplus for the year	–	470,559	217,957	79,510	768,026
Total comprehensive income for the year	–	470,559	217,957	79,510	768,026
Transactions recognised directly in funds:					
Donations	–	9,825	–	–	9,825
Government matching grants	–	38,667	–	–	38,667
Fund transfers	–	(58,472)	59,769	(1,297)	–
Total transactions	–	(9,980)	59,769	(1,297)	48,492
At 31 March 2021	200,858	2,573,707	1,632,108	337,255	4,743,928
At 1 April 2021	200,858	2,573,707	1,632,108	337,255	4,743,928
Total comprehensive income for the year					
Surplus for the year	–	179,126	184,125	38,674	401,925
Total comprehensive income for the year	–	179,126	184,125	38,674	401,925
Transactions recognised directly in funds:					
Donations	–	21,069	–	–	21,069
Government matching grants	–	41,381	–	–	41,381
Fund transfers	–	(63,602)	56,501	7,101	–
Total transactions	–	(1,152)	56,501	7,101	62,450
At 31 March 2022	200,858	2,751,681	1,872,734	383,030	5,208,303

The accompanying notes form an integral part of these financial statements.

STATEMENTS OF CHANGES IN FUNDS AND RESERVES

Year ended 31 March 2022

	Capital account \$'000	Endowment fund \$'000	Accumulated surplus General Fund		Total \$'000
			Designated \$'000	Specific \$'000	
University Company					
At 1 April 2020	200,858	2,113,631	1,315,133	263,880	3,893,502
Total comprehensive income for the year					
Surplus for the year	–	470,559	216,158	79,165	765,882
Total comprehensive income for the year	–	470,559	216,158	79,165	765,882
<i>Transactions recognised directly in funds:</i>					
Donations	–	9,825	–	–	9,825
Government matching grants	–	38,667	–	–	38,667
Fund transfers	–	(58,472)	59,769	(1,297)	–
Total transactions	–	(9,980)	59,769	(1,297)	48,492
At 31 March 2021	200,858	2,574,210	1,591,060	341,748	4,707,876
At 1 April 2021	200,858	2,574,210	1,591,060	341,748	4,707,876
Total comprehensive income for the year					
Surplus for the year	–	179,126	172,249	38,085	389,460
Total comprehensive income for the year	–	179,126	172,249	38,085	389,460
<i>Transactions recognised directly in funds:</i>					
Donations	–	21,069	–	–	21,069
Government matching grants	–	41,381	–	–	41,381
Fund transfers	–	(63,602)	56,635	6,967	–
Total transactions	–	(1,152)	56,635	6,967	62,450
At 31 March 2022	200,858	2,752,184	1,819,944	386,800	5,159,786

The accompanying notes form an integral part of these financial statements.

CONSOLIDATED STATEMENT OF CASH FLOWS

Year ended 31 March 2022

	Note	2022 \$'000	2021 \$'000
Cash flows from operating activities			
Deficit before grants from ministries		(693,030)	(373,046)
Adjustments for:			
Amortisation of intangible assets	5	2,003	2,448
Deferred capital grants amortised (non-ministry)		(32,582)	(31,534)
Depreciation of property, plant and equipment	4	249,699	264,020
(Gain)/Loss on disposal of property, plant and equipment		(20,009)	597
Interest expense		6,769	2,019
Interest income		(2,028)	(3,768)
Profit on investments		(267,367)	(666,296)
Research grant income		(135,368)	(133,402)
(Reversal of loss allowance)/Loss allowance on trade and other receivables		(4,328)	2,018
Share of results of associates and joint ventures		(2,726)	(351)
		(898,967)	(937,295)
Changes in working capital:			
- Student loans		2,051	148
- Trade and other receivables		126,088	(8,531)
- Other payables and accruals		(30,642)	75,454
- Deferred tuition and other fees		10,250	20,381
Cash used in operations		(791,220)	(849,843)
Donations received for Endowment Fund		21,069	9,825
Tax paid		(1)	(257)
Net cash flows used in operating activities		(770,152)	(840,275)
Cash flows from investing activities			
Acquisition of property, plant and equipment		(170,294)	(134,081)
Acquisition of intangible assets		(658)	(971)
Interest received		1,804	5,697
Proceeds from disposal of property, plant and equipment		25,246	471
Proceeds from sale of financial assets		545,950	764,755
Purchase of financial assets		(1,161,930)	(794,443)
Net cash flows used in investing activities		(759,882)	(158,572)

The accompanying notes form an integral part of these financial statements.

CONSOLIDATED STATEMENT OF CASH FLOWS

Year ended 31 March 2022

	Note	2022 \$'000	2021 \$'000
Cash flows from financing activities			
Development grants and related income received		10,212	18,396
Government ministry grants received		134,736	159,159
Interest paid		(6,769)	(2,019)
IT and F&E grant received		23,309	22,600
Operating grants received, net of payment of goods and service tax expense on tuition fees and tuition grants		573,252	550,217
Proceeds from loans and borrowings		650,000	–
Repayment of loans and borrowings		(120,800)	(5,700)
Repayment of lease liabilities		(2,621)	(5,147)
Research grants received	18	461,379	371,505
Net cash flows from financing activities		1,722,698	1,109,011
Net increase in cash and cash equivalents		192,664	110,164
Cash and cash equivalents at beginning of the year		1,107,883	997,719
Cash and cash equivalents at end of the year	12	1,300,547	1,107,883

The accompanying notes form an integral part of these financial statements.

NOTES TO THE FINANCIAL STATEMENTS

The financial statements were authorised for issue by the Board of Trustees on 18 August 2022.

1 DOMICILE AND ACTIVITIES

Nanyang Technological University ("NTU" or the "University Company") is incorporated and domiciled in Singapore as a Company limited by guarantee under the Singapore Companies Act, Chapter 50. The University Company's registered office and place of business is located at 50 Nanyang Avenue Singapore 639798.

The University Company is principally engaged in the advancement and dissemination of knowledge, the promotion of research and scholarships and the conferring and awarding of degrees, diplomas and certificates.

The principal activities of the subsidiaries are set out in Note 6.

As the operations of the University Company is substantially funded by the Ministry of Education ("MOE" or the "Government Ministry") through government grants, with MOE having the power to appoint and remove members to the Board of Trustees of the University Company, MOE is regarded as the parent entity.

The consolidated financial statements as at and for the year ended 31 March 2022 comprise the University Company and its subsidiaries (together referred to as the "Group" and individually as "Group entities") and the Group's interest in equity-accounted investees.

2 BASIS OF PREPARATION

2.1 Statement of compliance

The financial statements have been prepared in accordance with the Singapore Financial Reporting Standards (International) ("SFRS(I)s"). SFRS(I)s are issued by the Accounting Standards Council, which comprise standards and interpretations that are equivalent to IFRSs issued by the International Accounting Standards Board.

Adoption of SFRS(I)s

These are the Group's first financial statements prepared in accordance with SFRS(I)s and SFRS(I) 1 *First-time Adoption of Singapore Financial Reporting Standards (International)* has been applied.

In the previous financial years, the financial statements were prepared in accordance with Financial Reporting Standards in Singapore ("FRSs").

The accounting policies set out in note 3 have been applied in preparing the financial statements for the year ended 31 March 2022, the comparative information presented in these financial statements for the year ended 31 March 2021 and in the preparation of the opening SFRS(I) statement of financial position at 1 April 2020 (the Group's date of transition), subject to the mandatory exceptions and optional exemptions under SFRS(I) 1.

In preparing the opening SFRS(I) statement of financial position, the Group has adjusted amounts reported previously in the financial statements prepared in accordance with previous FRSs.

The following summarises the impacts on initial application of SFRS(I) 1 on the Group's and the University Company's financial position as at 1 April 2020 and 31 March 2021. There were no material adjustments to the Group's statement of comprehensive income and statement of cash flows for the year ended 31 March 2021 arising on transition to SFRS(I).

SFRS(I) 1

In adopting SFRS(I), the Group has applied the transition requirements in SFRS(I) 1 with 1 April 2020 as the date of transition. SFRS(I) 1 generally requires the Group to apply SFRS(I) that are effective as at 31 March 2022 on a retrospective basis, as if such accounting policies had always been applied, subject to the mandatory exceptions and optional exemptions in SFRS(I) 1. Except as described below, the application of the mandatory exceptions and the optional exemptions in SFRS(I) 1 did not have any significant impact on the financial statements.

NOTES TO THE FINANCIAL STATEMENTS

2 BASIS OF PREPARATION (CONT'D)

2.1 Statement of compliance (cont'd)

Revaluation as deemed cost for freehold land classified as property, plant and equipment

The Group elected the optional exemption in SFRS(I) 1 to measure the freehold land held by the University Company at the date of transition to SFRS(I) by using its revalued amount determined under previous FRS as its deemed cost in its SFRS(I) financial statements. The said revalued amount was determined based on a valuation report issued by the commissioner of Lands in December 1987, which was a one-off revaluation in accordance with paragraph 81 of FRS 16 *Property, Plant and Equipment*, that provides an exemption to the Group for not revaluing its assets if the Group performed any one-off revaluation on its property, plant and equipment between 1 January 1984 and 31 December 1996.

At the date of the transition to SFRS(I), the correspondence revaluation surplus of \$200,858,000 was recorded under "Capital account" in accordance with the previous FRS represented freehold land contributed by an association in Singapore to the University Company.

2.2 Basis of measurement

The financial statements have been prepared on the historical cost basis except as otherwise described in the notes below.

2.3 Functional and presentation currency

These financial statements are presented in Singapore dollars, which is the University Company's functional currency. All financial information presented in Singapore dollars has been rounded to the nearest thousand, unless otherwise stated.

2.4 Use of estimates and judgments

The preparation of the financial statements in conformity with SFRS(I)s requires management to make judgements, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised prospectively.

Information about assumptions and estimation uncertainties that have a significant risk of resulting in a material adjustment to the carrying amounts of assets and liabilities within the next financial year are included in the following notes:

- Note 34 – valuation of derivative financial instruments.
- Note 34 – valuation of financial assets at fair value through profit or loss

NOTES TO THE FINANCIAL STATEMENTS

2 BASIS OF PREPARATION (CONT'D)

2.4 Use of estimates and judgments (cont'd)

Measurement of fair values

A number of the Group's accounting policies and disclosures require the measurement of fair values, for both financial and non-financial assets and liabilities.

The Group regularly reviews significant unobservable inputs and valuation adjustments. If third party information, such as broker quotes or pricing services, is used to measure fair values, then the Group assesses and documents the evidence obtained from the third parties to support the conclusion that these valuations meet the requirements of SFRS(I), including the level in the fair value hierarchy in the valuations should be classified. Significant valuation issues are reported to the Investment Committee, if any.

When measuring the fair value of an asset or a liability, the Group uses observable market data as far as possible. Fair values are categorised into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows:

Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2: inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices).

Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs).

If the inputs used to measure the fair value of an asset or a liability fall into different levels of the fair value hierarchy, then the fair value measurement is categorised in its entirety in the same level of the fair value hierarchy as the lowest level input that is significant to the entire measurement (with Level 3 being the lowest).

The Group recognises transfers between levels of the fair value hierarchy as of the end of the reporting period during which the change has occurred.

Further information about the assumptions made in measuring fair values is included in the following notes:

- Note 34 – valuation of derivative financial instruments.
- Note 34 – valuation of financial assets at fair value through profit or loss

3 SIGNIFICANT ACCOUNTING POLICIES

The accounting policies set out below have been applied consistently to all periods presented in these financial statements and in preparing the opening SFRS(I) statements of financial position at 1 April 2020 for the purposes of the transition to SFRS(I)s, unless otherwise indicated.

3.1 Consolidation

(i) Basis of consolidation

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

- (i) Has power over the investee;
- (ii) Is exposed, or has rights, to variable returns from its involvement with the investee; and
- (iii) Has the ability to use its power to affect its returns.

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

NOTES TO THE FINANCIAL STATEMENTS

3 SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

3.1 Consolidation (cont'd)

(i) Basis of consolidation (cont'd)

When the University Company has less than a majority of the voting rights of an investee, it has power over the investee when the voting rights are sufficient to give it the practical ability to direct the relevant activities of the investee unilaterally. The University Company considers all relevant facts and circumstances in assessing whether or not the University Company's voting rights in an investee are sufficient to give it power, including:

- (i) The size of the University Company's holding of voting rights relative to the size and dispersion of holdings of the other vote holders;
- (ii) Potential voting rights held by the University Company, other vote holders or other parties;
- (iii) Rights arising from other contractual arrangements; and
- (iv) Any additional facts and circumstances that indicate that the University Company has, or does not have, the current ability to direct the relevant activities at the time that decisions need to be made, including voting patterns at previous shareholders' meetings.

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

The accounting policies of subsidiaries have been changed where necessary to align them with the policies adopted by the Group.

Intra-group balances and transactions, and any unrealised income or expenses arising from intra-group transactions, are eliminated in preparing the consolidated financial statements.

Investments in subsidiaries are carried at cost less any impairment in net recoverable value that has been recognised in profit or loss, in the University Company's statement of financial position.

(ii) Business combinations

Business combinations are accounted for using the acquisition method when the acquired set of activities and assets meets the definition of a business as at the acquisition date, which is the date on which control is transferred to the Group. In determining whether a particular set of activities and assets is a business, the Group assesses whether the set of assets and activities acquired includes, at a minimum, an input and substantive process and whether the acquired set has the ability to produce outputs. The consideration for each acquisition is measured at the aggregate of the acquisition date fair values of assets given, liabilities incurred by the Group to the former owners of the acquiree, and equity interests issued by the Group in exchange for control of the acquiree.

The consideration transferred does not include amounts related to the settlement of pre-existing relationships. Such amounts are generally recognised in profit or loss.

The Group has an option to apply a 'concentration test' that permits a simplified assessment of whether an acquired set of activities and assets is not a business. The optional concentration test is met if substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or group of similar identifiable assets.

Costs related to the acquisition, other than those associated with the issue of debt or equity securities, that the Group incurs in connection with a business combination are expensed as incurred.

Any contingent consideration payable is recognised at fair value at the acquisition date. If the contingent consideration is classified as funds and reserves, it is not remeasured and settlement is accounted for within funds and reserves. Otherwise, subsequent changes to the fair value of the contingent consideration are recognised in the consolidated statement of comprehensive income.

NOTES TO THE FINANCIAL STATEMENTS

3 SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

3.1 Consolidation (cont'd)

(iii) Associate and joint venture

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

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

The results and assets and liabilities of joint ventures and associates are incorporated in these consolidated financial statements using the equity method of accounting. Under the equity method, an investment in joint venture or an associate is initially recognised in the consolidated statement of financial position at cost and adjusted thereafter to recognise the Group's share of the profit or loss and other comprehensive income of the joint venture or associate. When the Group's share of losses of a joint venture or associate exceeds the Group's interest in that joint venture or associate, the Group discontinues recognising its share of further losses. Additional losses are recognised only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the joint venture or associate.

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

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

3.2 Foreign currency

(i) Foreign currency transactions

Transactions in foreign currencies are translated to the respective functional currencies of Group entities at the exchange rate prevailing on the date of the transaction. At the end of each reporting period, monetary items denominated in foreign currencies are retranslated to the functional currency at the rates prevailing at the end of the reporting period. Non-monetary items carried at fair value that are denominated in foreign currencies are retranslated to the functional currency at the rates prevailing on the date that the fair value is determined. Non-monetary items that are measured in terms of historical cost in foreign currency are not retranslated.

Foreign currency differences arising on retranslation are recognised in profit or loss.

(ii) Foreign operations

The assets and liabilities of foreign operations are translated to the functional currency of the University Company and the presentation currency for the consolidated financial statements at exchange rates prevailing at the reporting date. The income and expenses of foreign operations are translated to Singapore dollars at exchange rates ruling at the dates of the transactions.

Foreign currency differences are recognised in other comprehensive income and accumulated in a separate component of equity under the header of foreign currency translation reserve. When a foreign operation is disposed of, in part or in full, the relevant amount in the foreign exchange translation reserves is transferred to profit or loss as part of the gain or loss on disposal.

When the settlement of a monetary item receivable from or payable to a foreign operation is neither planned nor likely to occur in the foreseeable future, foreign exchange gains and losses arising from such a monetary item that are considered to form part of a net investment in a foreign operation are recognised in other comprehensive income, and are presented in the translation reserve in equity.

NOTES TO THE FINANCIAL STATEMENTS

3 SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

3.3 Funds

Assets and liabilities of all funds are pooled in the statements of financial position.

(i) General Fund

Income and expenditure are generally accounted for under the "General Fund" in the consolidated statement of comprehensive income. General Fund comprise "Designated" and "Specific".

"Designated" includes funds set aside for the operational activities of the University.

"Specific" relates to funds that are subject to legal or grantor imposed conditions such as funds from externally funded research grants, development grants, sinking fund as well as externally funded scholarships, bursaries and sponsorships.

The use of these funds are governed by the terms and conditions set out by the respective funds.

(ii) Endowment fund

The Endowment Fund comprises donations, grants, gifts, testamentary disposition and proceeds from gifts of movable or immovable properties. The objectives of this fund comprise the provision of facilities for teaching, training and research, the advancement and dissemination of knowledge and the promotion of research.

Donations received and Government matching grants received/receivable during the year are taken directly to the statement of changes in funds and reserves. Income and expenditure arising from the management of the Endowment Fund are taken to the consolidated statement of comprehensive income of the Endowment Fund.

3.4 Grants and sinking fund

Grants and sinking fund from the Government Ministry, other ministries and statutory boards and contributions received/receivable from other organisations for the purchase of depreciable assets or to finance research or capital projects are taken to the grants received in advance account in the first instance. They are taken to the deferred capital grants account upon the utilisation of the grants for purchase of assets, which are capitalised, or to profit or loss for purchase of assets which are written off in the year of purchase.

Deferred capital grants are recognised in the profit or loss over the periods necessary to match the depreciation, write off and/or impairment loss of the assets purchased with the related grants. Upon the disposal of property, plant and equipment, the balance of the related deferred capital grants is recognised in profit or loss to match the net book value of the property, plant and equipment being disposed of.

Development grant is recognised when there is reasonable assurance that the University Company will comply with the conditions attach to them and that the grants will be received.

Information Technology and Furniture and Equipment ("IT and F&E") grants received from the Government Ministry are for the purchase of information technology appliances and furniture and equipment to support teaching and administrative function of the University Company. These grants are taken to the grants received in advance account in the first instance. They are taken to deferred capital grants account upon the utilisation of the grants for purchase of assets, which are capitalised, or to the profit or loss for purchase of assets which are written off in the year of purchase.

Grants from the Government Ministry and other ministries to meet the current year's operating expenses are recognised as income in the same year these operating expenses were incurred.

All grants and contributions are accounted for on the accrual basis.

Wage Credit scheme and Special Employment Credit scheme

Cash grants received from the government in relation to the Wage Credit scheme and Special Employment Credit scheme are recognised upon receipt. Such grants are provided to defray the wage costs incurred and are offset against manpower costs in the financial statements.

NOTES TO THE FINANCIAL STATEMENTS

3 SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

3.5 Property, plant and equipment

(i) Recognition and measurement

Property, plant and equipment are stated at cost less accumulated depreciation and impairment losses except for land alienated to the Group and University Company which are stated at values provided by the Government. Donated assets are stated at valuation at initial recognition.

Cost includes expenditures that are directly attributable to the acquisition of the asset. The cost of self-constructed assets includes the cost of materials and direct labour, any other costs directly attributable to bringing the asset to a working condition for its intended use, and the costs of dismantling and removing the items and restoring the site on which they are located. Purchased software that is integral to the functionality of the related equipment is capitalised as part of that equipment.

When parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items (major components) of property, plant and equipment.

Property, plant and equipment costing less than \$2,000 each, renovation costing \$100,000 and below and library books are generally charged to profit or loss in the year of purchase.

The gain or loss on disposal of an item of property, plant and equipment recognised in profit or loss is derived from the proceeds from disposal and the carrying amount of property, plant and equipment.

(ii) Subsequent costs

The cost of replacing part of an item of property, plant and equipment is recognised in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to the Group and its cost can be measured reliably. The carrying amount of the replaced part is derecognised. The costs of the day-to-day servicing of property, plant and equipment are recognised in the profit or loss as incurred.

(iii) Depreciation

Depreciation is based on the cost of an asset less its residual value. Significant components of individual assets are assessed and if a component has a useful life that is different from the remainder of that asset, that component is depreciated separately.

Depreciation is recognised as an expense in the profit or loss on a straight-line basis over the estimated useful lives of each component of an item of property, plant and equipment.

Depreciation is recognised from the date that the property, plant and equipment are installed and are ready for use, or in respect of internally constructed assets, from the date that the asset is completed and ready for use.

Except for freehold land and buildings under construction which are not depreciated, depreciation on other property, plant and equipment is recognised in the consolidated statement of comprehensive income on a straight-line basis over the estimated useful lives (or lease term, if shorter) of each part of an item of property, plant and equipment.

The estimated useful lives are as follows:

Leasehold land	10 to 30 years
Buildings and infrastructure	3 to 30 years
Improvement works	5 years
Machinery, laboratory and workshop equipment	6 years
Furniture and office equipment	3 to 5 years
Transportation equipment	8 years
Others	8 years

NOTES TO THE FINANCIAL STATEMENTS

3 SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

3.5 Property, plant and equipment (cont'd)

(iii) Depreciation (cont'd)

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

Buildings under construction are stated at cost, less any recognised impairment loss, if any. Expenditure relating to the construction of projects are capitalised when incurred. No depreciation is charged on building under construction until the building under construction is completed and the related property, plant and equipment are transferred to the respective property, plant and equipment categories and depreciated accordingly.

3.6 Intangible assets

Intangible assets acquired separately are reported at cost less accumulated amortisation (where they have finite useful lives) and accumulated impairment losses. Intangible assets with finite useful lives are amortised on a straight-line basis over their estimated useful lives, on the following basis:

Application software	3 years
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The estimated useful life and amortisation method are reviewed at the end of each annual reporting period, with the effect of any changes in estimate being accounted for on a prospective basis. Intangible assets with indefinite useful lives are not amortised. Each period, the useful lives of such assets are reviewed to determine whether events and circumstances continue to support an indefinite useful life assessment for the asset. Such assets are tested for impairment annually and whenever there is an indication that the asset may be impaired.

3.7 Financial instruments

(i) Recognition and initial measurement

Non-derivative financial assets and financial liabilities

Trade receivables and debt investments issued are initially recognised when they are originated. All other financial assets and financial liabilities are initially recognised when the Group becomes a party to the contractual provisions of the instrument.

A financial asset (unless it is a trade receivable without a significant financing component) or financial liability is initially measured at fair value plus, or minus, for an item not at fair value through profit or loss (FVTPL), transaction costs that are directly attributable to its acquisition or issue. A trade receivable without a significant financing component is initially measured at the transaction price.

Classification and subsequent measurement

Non-derivative financial assets

On initial recognition, a financial asset is classified as measured at amortised cost or FVTPL.

Financial assets are not reclassified subsequent to their initial recognition unless the Group changes its business model for managing financial assets, in which case all affected financial assets are reclassified on the first day of the first reporting period following the change in the business model.

Financial assets at amortised cost

A financial asset is measured at amortised cost if it meets both of the following conditions and is not designated as at FVTPL:

- it is held within a business model whose objective is to hold assets to collect contractual cash flows; and
- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

NOTES TO THE FINANCIAL STATEMENTS

3 SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

3.7 Financial instruments (cont'd)

(i) Recognition and initial measurement (cont'd)

Financial assets at FVTPL

All financial assets not classified as measured at amortised cost are measured at FVTPL. On initial recognition, the Group may irrevocably designate a financial asset that otherwise meets the requirements to be measured at amortised cost as at FVTPL if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise.

Financial assets: Business model assessment

The Group makes an assessment of the objective of the business model in which a financial asset is held at a portfolio level because this best reflects the way the business is managed and information is provided to management. The information considered includes:

- the stated policies and objectives for the portfolio and the operation of those policies in practice. These include whether management's strategy focuses on earning contractual interest income, maintaining a particular interest rate profile, matching the duration of the financial assets to the duration of any related liabilities or expected cash outflows or realising cash flows through the sale of the assets;
- how the performance of the portfolio is evaluated and reported to the Group's management;
- the risks that affect the performance of the business model (and the financial assets held within that business model) and how those risks are managed;
- how managers of the business are compensated – e.g. whether compensation is based on the fair value of the assets managed or the contractual cash flows collected; and
- the frequency, volume and timing of sales of financial assets in prior periods, the reasons for such sales and expectations about future sales activity.

Transfers of financial assets to third parties in transactions that do not qualify for derecognition are not considered sales for this purpose, consistent with the Group's continuing recognition of the assets.

Financial assets that are held-for-trading or are managed and whose performance is evaluated on a fair value basis are measured at FVTPL.

Non-derivative financial assets: Assessment whether contractual cash flows are solely payments of principal and interest

For the purposes of this assessment, 'principal' is defined as the fair value of the financial asset on initial recognition. 'Interest' is defined as consideration for the time value of money and for the credit risk associated with the principal amount outstanding during a particular period of time and for other basic lending risks and costs (e.g. liquidity risk and administrative costs), as well as a profit margin.

In assessing whether the contractual cash flows are solely payments of principal and interest, the Group considers the contractual terms of the instrument. This includes assessing whether the financial asset contains a contractual term that could change the timing or amount of contractual cash flows such that it would not meet this condition. In making this assessment, the Group considers:

- contingent events that would change the amount or timing of cash flows;
- terms that may adjust the contractual coupon rate, including variable rate features;
- prepayment and extension features; and
- terms that limit the Group's claim to cash flows from specified assets (e.g. non-recourse features).

A prepayment feature is consistent with the solely payments of principal and interest criterion if the prepayment amount substantially represents unpaid amounts of principal and interest on the principal amount outstanding, which may include reasonable additional compensation for early termination of the contract. Additionally, for a financial asset acquired at a significant discount or premium to its contractual par amount, a feature that permits or requires prepayment at an amount that substantially represents the contractual par amount plus accrued (but unpaid) contractual interest (which may also include reasonable additional compensation for early termination) is treated as consistent with this criterion if the fair value of the prepayment feature is insignificant at initial recognition.

NOTES TO THE FINANCIAL STATEMENTS

3 SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

3.7 Financial instruments (cont'd)

(i) Recognition and initial measurement (cont'd)

Non-derivative financial assets: Subsequent measurement and gains and losses

Financial assets at FVTPL

These assets are subsequently measured at fair value. Net gains and losses, including any interest or dividend income, are recognised in profit or loss.

Financial assets at amortised cost

These assets are subsequently measured at amortised cost using the effective interest method. The amortised cost is reduced by impairment losses. Interest income, foreign exchange gains and losses and impairment are recognised in profit or loss. Any gain or loss on derecognition is recognised in profit or loss.

Non-derivative financial liabilities: Classification, subsequent measurement and gains and losses

Non-derivative financial liabilities are initially measured at fair value less directly attributable transaction costs. They are subsequently measured at amortised cost using the effective interest method. Interest expense and foreign exchange gains and losses are recognised in profit or loss.

(ii) Derecognition

Financial assets

The Group derecognises a financial asset when:

- the contractual rights to the cash flows from the financial asset expire; or
- it transfers the rights to receive the contractual cash flows in a transaction in which either:
 - substantially all of the risks and rewards of ownership of the financial asset are transferred; or
 - the Group neither transfers nor retains substantially all of the risks and rewards of ownership and it does not retain control of the financial asset.

Transferred assets are not derecognised when the Group enters into transactions whereby it transfers assets recognised in its statements of financial position, but retains either all or substantially all of the risks and rewards of the transferred assets.

Financial liabilities

The Group derecognises a financial liability when its contractual obligations are discharged or cancelled, or expire. The Group also derecognises a financial liability when its terms are modified and the cash flows of the modified liability are substantially different, in which case a new financial liability based on the modified terms is recognised at fair value.

On derecognition of a financial liability, the difference between the carrying amount extinguished and the consideration paid (including any non-cash assets transferred or liabilities assumed) is recognised in profit or loss.

NOTES TO THE FINANCIAL STATEMENTS

3 SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

3.7 Financial instruments (cont'd)

(iii) Offsetting

Financial assets and financial liabilities are offset and the net amount presented in the statements of financial position when, and only when, the Group currently has a legally enforceable right to set off the amounts and it intends either to settle them on a net basis or to realise the asset and settle the liability simultaneously.

(iv) Cash and cash equivalents

Cash and cash equivalents comprise cash balances and short-term deposits that are subject to an insignificant risk of changes in their fair value, and are used by the Group in the management of its short-term commitments.

(v) Derivative financial instruments

The Group holds derivative financial instruments, through its external fund managers, to hedge its foreign currency exposure.

Embedded derivatives are separated from the host contract and accounted for separately if the economic characteristics and risks of the host contract and the embedded derivative are not closely related, a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative, and the combined instrument is not measured at fair value through profit or loss.

Derivatives are recognised initially at fair value; any attributable transaction costs are recognised in the profit or loss when incurred. Subsequent to initial recognition, derivatives are measured at fair value, and changes therein accounted for in the profit or loss.

3.8 Impairment

(i) Non-derivative financial assets and contract assets

The Group recognises loss allowances for expected credit losses ("ECLs") on financial assets measured at amortised cost.

Loss allowances of the Group are measured on either of the following bases:

- 12-month ECLs: these are ECLs that result from default events that are possible within the 12 months after the reporting date (or for a shorter period if the expected life of the instrument is less than 12 months); or
- Lifetime ECLs: these are ECLs that result from all possible default events over the expected life of a financial instrument or contract asset.

Simplified approach

The Group applies the simplified approach to provide for ECLs for all trade receivables. The simplified approach requires the loss allowance to be measured at an amount equal to lifetime ECLs.

NOTES TO THE FINANCIAL STATEMENTS

3 SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

3.8 Impairment (cont'd)

(i) Non-derivative financial assets and contract assets (cont'd)

General approach

The Group applies the general approach to provide for ECLs on all other financial instruments. Under the general approach, the loss allowance is measured at an amount equal to 12-month ECLs at initial recognition.

At each reporting date, the Group assesses whether the credit risk of a financial instrument has increased significantly since initial recognition. When credit risk has increased significantly since initial recognition, loss allowance is measured at an amount equal to lifetime ECLs.

When determining whether the credit risk of a financial asset has increased significantly since initial recognition and when estimating ECLs, the Group considers reasonable and supportable information that is relevant and available without undue cost or effort. This includes both quantitative and qualitative information and analysis, based on the Group's historical experience and informed credit assessment and includes forward-looking information.

If credit risk has not increased significantly since initial recognition or if the credit quality of the financial instruments improves such that there is no longer a significant increase in credit risk since initial recognition, loss allowance is measured at an amount equal to 12-month ECLs.

The Group considers a financial asset to be in default when the borrower is unlikely to pay its credit obligations to the Group in full, without recourse by the Group to actions such as realising security (if any is held).

The maximum period considered when estimating ECLs is the maximum contractual period over which the Group is exposed to credit risk.

Measurement of ECLs

ECLs are probability-weighted estimates of credit losses. Credit losses are measured at the present value of all cash shortfalls (i.e. the difference between the cash flows due to the entity in accordance with the contract and the cash flows that the Group expects to receive). ECLs are discounted at the effective interest rate of the financial asset.

Credit-impaired financial assets

At each reporting date, the Group assesses whether financial assets carried at amortised cost and debt investments at FVOCI are credit-impaired. A financial asset is 'credit-impaired' when one or more events that have a detrimental impact on the estimated future cash flows of the financial asset have occurred.

Evidence that a financial asset is credit-impaired includes the following observable data:

- significant financial difficulty of the debtor;
- a breach of contract such as a default;
- the restructuring of a loan or advance by the Group on terms that the Group would not consider otherwise;
- it is probable that the debtor will enter bankruptcy or other financial reorganisation; or
- the disappearance of an active market for a security because of financial difficulties.

NOTES TO THE FINANCIAL STATEMENTS

3 SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

3.8 Impairment (cont'd)

(i) Non-derivative financial assets and contract assets (cont'd)

Presentation of allowance for ECLs in the statements of financial position

Loss allowances for financial assets measured at amortised cost and contract assets are deducted from the gross carrying amount of these assets.

Write-off

The gross carrying amount of a financial asset is written off (either partially or in full) to the extent that there is no realistic prospect of recovery. This is generally the case when the Group determines that the debtor does not have assets or sources of income that could generate sufficient cash flows to repay the amounts subject to the write-off. However, financial assets that are written off could still be subject to enforcement activities in order to comply with the Group's procedures for recovery of amounts due.

(ii) Non-financial assets

The carrying amounts of the Group's non-financial assets are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the assets' recoverable amounts are estimated. An impairment loss is recognised if the carrying amount of an asset or its related cash-generating unit ("CGU") exceeds its estimated recoverable amount.

The recoverable amount of an asset or CGU is the greater of its value in use and its fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset or CGU. For the purpose of impairment testing, assets that cannot be tested individually are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or CGU.

Impairment losses are recognised in profit or loss. Impairment losses recognised in respect of CGUs are allocated first to reduce the carrying amount of any goodwill allocated to the CGU (group of CGUs), and then to reduce the carrying amounts of the other assets in the CGU (group of CGUs) on a *pro rata* basis.

Impairment losses recognised in prior periods are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised.

An impairment loss in respect of an associate or joint venture is measured by comparing the recoverable amount of the investment with its carrying amount in accordance with the requirements for non-financial assets. An impairment loss is recognised in profit or loss. An impairment loss is reversed if there has been a favourable change in the estimates used to determine the recoverable amount and only to the extent that the recoverable amount increases.

NOTES TO THE FINANCIAL STATEMENTS

3 SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

3.9 Employee benefits

(i) Defined contribution plans

A defined contribution plan is a post-employment benefit plan under which an entity pays fixed contributions to a separate entity and will have no legal or constructive obligation to pay further amounts. Obligations for contributions to defined contribution plans are recognised as an employee benefit expense in the profit or loss in the periods during which services are rendered by employees.

(ii) Short-term employee benefits

Short-term employee benefit obligations, including accumulated compensated absences, are measured on an undiscounted basis and are expensed as the related services are provided.

3.10 Provisions

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

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

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, the receivable is recognised as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably.

3.11 Leases

At inception of a contract, the Group assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

As a lessee

At commencement or on modification of a contract that contains a lease component, the Group allocates the consideration in the contract to each lease component on the basis of its relative stand-alone prices. However, for the leases of property, the Group has elected not to separate non-lease components and account for the lease and non-lease components as a single lease component.

The Group recognises a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received.

The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the end of the lease term, unless the lease transfers ownership of the underlying asset to the Group by the end of the lease term or the cost of the right-of-use asset reflects that the Group will exercise a purchase option. In that case the right-of-use asset will be depreciated over the useful life of the underlying asset, which is determined on the same basis as those of property and equipment. In addition, the right-of-use asset is periodically reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

The right-of-use asset is subsequently stated at cost less accumulated depreciation and impairment losses.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the lessee's incremental borrowing rate. Generally, the Group uses the lessee's incremental borrowing rate as the discount rate.

The Group determines the lessee's incremental borrowing rate by obtaining interest rates from various external financing sources and makes certain adjustments to reflect the terms of the lease and type of the asset leased.

NOTES TO THE FINANCIAL STATEMENTS

3 SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

3.11 Leases (cont'd)

As a lessee (cont'd)

Lease payments included in the measurement of the lease liability comprise the following:

- fixed payments, including in-substance fixed payments;
- variable lease payments that depend on an index or a rate, initially measured using the index or rate as at the commencement date;
- amounts expected to be payable under a residual value guarantee; and
- the exercise price under a purchase option that the Group is reasonably certain to exercise, lease payments in an optional renewal period if the Group is reasonably certain to exercise an extension option, and penalties for early termination of a lease unless the Group is reasonably certain not to terminate early.

The lease liability is measured at amortised cost using the effective interest method. It is remeasured when there is a change in future lease payments arising from a change in an index or rate, if there is a change in the Group's estimate of the amount expected to be payable under a residual value guarantee, if the Group changes its assessment of whether it will exercise a purchase, extension or termination option or if there is a revised in-substance fixed lease payment.

When the lease liability is remeasured in this way, a corresponding adjustment is made to the carrying amount of the right-of-use asset, or is recorded in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

The Group presents right-of-use assets within in 'property, plant and equipment' and lease liabilities as a separate line in the statements of financial position.

Short-term leases and leases of low-value assets

The Group has elected not to recognise right-of-use assets and lease liabilities for leases of low-value assets and short-term leases, including IT equipment. The Group recognises the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

As a lessor

At inception or on modification of a contract that contains a lease component, the Group allocates the consideration in the contract to each lease component on the basis of their relative stand-alone prices.

When the Group acts as a lessor, it determines at lease inception whether each lease is a finance lease or an operating lease.

To classify each lease, the Group makes an overall assessment of whether the lease transfers substantially all of the risks and rewards incidental to ownership of the underlying asset. If this is the case, then the lease is a finance lease; if not, then it is an operating lease. As part of this assessment, the Group considers certain indicators such as whether the lease is for the major part of the economic life of the asset.

If an arrangement contains lease and non-lease components, then the Group applies SFRS(I) 15 to allocate the consideration in the contract.

3.12 Income recognition

Student fees

Income from tuition and other fees are recognised over time in the period in which the services are rendered.

Tuition fees are deferred as the billing for tuition fees cover the academic year, which does not coincide with the financial year of the Group. The aggregate amount of the tuition fees allocated to performance obligations that have yet been satisfied for services as at the end of the reporting period is \$127,461,000 (2021: \$117,211,000). Management expects that full amount will be recognised as revenue during the next reporting period.

Donations and sponsorships

Unconditional donations and sponsorships are recognised at point in time upon receipt.

NOTES TO THE FINANCIAL STATEMENTS

3 SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

3.12 Income recognition (cont'd)

Dividends

Dividends are recognised in the financial year in which the right to receive payment is established.

Rental income

Rental income receivable under operating leases is recognised in the profit or loss on a straight-line basis over the term of the lease.

3.13 Finance income and finance costs

Finance income comprises interest income generated from fixed deposits and bank deposits. Interest income is recognised as it accrues in the profit or loss.

Finance costs comprise interest expense on borrowings and lease liabilities.

Interest income or expense is recognised using the effective interest method. The 'effective interest rate' is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument to:

- the gross carrying amount of the financial asset; or
- the amortised cost of the financial liability.

In calculating interest income and expense, the effective interest rate is applied to the gross carrying amount of the asset (when the asset is not credit-impaired) or to the amortised cost of the liability. However, for financial assets that have become credit-impaired subsequent to initial recognition, interest income is calculated by applying the effective interest rate to the amortised cost of the financial asset. If the asset is no longer credit-impaired, then the calculation of interest income reverts to the gross basis.

Borrowing costs that are not directly attributable to the acquisition, construction or production of a qualifying asset are recognised in profit or loss using the effective interest method.

3.14 Government grants

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

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

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

3.15 Tax

Tax expense comprises current and deferred tax. Current tax and deferred tax are recognised in profit or loss except to the extent that it relates to a business combination, or items recognised directly in equity or in other comprehensive income.

The Group has determined that interest and penalties related to income taxes, including uncertain tax treatments, do not meet the definition of income taxes, and therefore accounted for them under SFRS(I) 1-37 *Provisions, Contingent Liabilities and Contingent Assets*.

Current tax is the expected tax payable or receivable on the taxable income or loss for the year, using tax rates enacted or substantively enacted at the reporting date, and any adjustment to tax payable in respect of previous years. The amount of current tax payable or receivable is the best estimate of the tax amount expected to be paid or received that reflects uncertainty related to income taxes, if any.

Current tax assets and liabilities are offset only if certain criteria are met.

NOTES TO THE FINANCIAL STATEMENTS

3 SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

3.15 Tax (cont'd)

Deferred tax is recognised in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is not recognised for:

- temporary differences on the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable profit or loss;
- temporary differences related to investments in subsidiaries, associates and joint arrangements to the extent that the Group is able to control the timing of the reversal of the temporary difference and it is probable that they will not reverse in the foreseeable future; and
- taxable temporary differences arising on the initial recognition of goodwill.

The measurement of deferred taxes reflects the tax consequences that would follow the manner in which the Group expects, at the reporting date, to recover or settle the carrying amount of its assets and liabilities. Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they reverse, based on the laws that have been enacted or substantively enacted by the reporting date.

Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax liabilities and assets, and they relate to taxes levied by the same tax authority on the same taxable entity, or on different tax entities, but they intend to settle current tax liabilities and assets on a net basis or their tax assets and liabilities will be realised simultaneously.

Deferred tax assets are recognised for unused tax losses, unused tax credits and deductible temporary differences to the extent that it is probable that future taxable profits will be available against which they can be used. Future taxable profits are determined based on the reversal of relevant taxable temporary differences. If the amount of taxable temporary differences is insufficient to recognise a deferred tax asset in full, then future taxable profits, adjusted for reversals of existing temporary differences, are considered, based on the business plans for individual subsidiaries in the Group. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realised; such reductions are reversed when the probability of future taxable profits improves.

Unrecognised deferred tax assets are reassessed at each reporting date and recognised to the extent that it has become probable that future taxable profits will be available against which they can be used.

3.16 New standards and interpretations not adopted

A number of new standards, interpretations and amendments to standards are effective for annual periods beginning after 1 April 2021 and earlier application is permitted; however, the Group has not early adopted the new or amended standards and interpretations in preparing these financial statements.

The Group is in the process of assessing the impact of the following new SFRS(I)s, interpretations and amendments to SFRS(I)s on its financial statements.

- *Sale or Contribution of Assets between an Investor and its Associate or Joint Venture (Amendments to SFRS(I) 10 and SFRS(I) 1-28)*
- *SFRS(I) 17 Insurance Contracts and Amendments to SFRS(I) 17 Insurance Contracts*
- *Covid-19-Related Rent Concessions beyond 30 June 2021 (Amendment to SFRS(I) 16)*
- *Reference to the Conceptual Framework (Amendments to SFRS(I) 3)*
- *Property, Plant and Equipment – Proceeds before Intended Use (Amendments to SFRS(I) 1-16)*
- *Onerous Contracts – Costs of Fulfilling a Contract (Amendments to SFRS(I) 1-37)*
- *Classification of Liabilities as Current or Non-current (Amendments to SFRS(I) 1-1)*
- *Annual Improvements to SFRS(I)s 2018 – 2020*
- *Disclosure of Accounting Policies (Amendments to SFRS(I) 1-1 and SFRS(I) Practice Statement 2)*
- *Definition of Accounting Estimates (Amendments to SFRS(I) 1-8)*
- *Deferred Tax related to Assets and Liabilities arising from a Single Transaction (Amendments to SFRS(I) 1-12)*

NOTES TO THE FINANCIAL STATEMENTS

4. PROPERTY, PLANT AND EQUIPMENT

	Freehold land	Leasehold land [^]	Buildings and infrastructure	Buildings under construction	Improvement works	Machinery, laboratory and workshop equipment	Furniture and office equipment	Transportation equipment	Others [^]	Total
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Group										
Cost										
At 1 April 2020	200,858	38,639	2,647,869	59,968	297,721	1,549,030	313,798	14,732	17,373	5,139,988
Additions	–	–	1,212	51,281	1,694	66,615	12,885	223	3,709	137,619
Disposals/Write-offs	–	–	(365)	–	(184,123)	(36,473)	(17,617)	(560)	(88)	(239,226)
Reclassifications	–	–	(169,046)	(18,462)	168,642	41,542	(23,399)	(5)	728	–
At 31 March 2021	200,858	38,639	2,479,670	92,787	283,934	1,620,714	285,667	14,390	21,722	5,038,381
At 1 April 2021	200,858	38,639	2,479,670	92,787	283,934	1,620,714	285,667	14,390	21,722	5,038,381
Additions	–	–	543	94,751	1,238	59,684	13,866	1	3,002	173,085
Disposals/Write-offs	(1,558)	–	(9,518)	–	(4,033)	(38,648)	(15,549)	(1,262)	(7,043)	(77,611)
Reclassifications	–	–	4,531	(24,017)	8,473	10,076	937	–	–	–
At 31 March 2022	199,300	38,639	2,475,226	163,521	289,612	1,651,826	284,921	13,129	17,681	5,133,855
Accumulated depreciation										
At 1 April 2020	–	1,840	1,553,832	–	249,524	1,115,270	242,857	7,272	6,595	3,177,190
Depreciation for the year	–	1,840	58,561	–	22,015	150,411	24,441	1,322	5,430	264,020
Disposals/Write-offs	–	–	(365)	–	(183,958)	(35,823)	(17,471)	(498)	(43)	(238,158)
Reclassifications	–	–	(171,053)	–	166,566	20,806	(17,642)	–	1,323	–
At 31 March 2021	–	3,680	1,440,975	–	254,147	1,250,664	232,185	8,096	13,305	3,203,052
At 1 April 2021	–	3,680	1,440,975	–	254,147	1,250,664	232,185	8,096	13,305	3,203,052
Depreciation for the year	–	1,840	58,821	–	16,639	145,207	23,051	1,218	2,923	249,699
Disposals/Write-offs	–	–	(8,575)	–	(3,944)	(36,757)	(15,451)	(604)	(7,043)	(72,374)
At 31 March 2022	–	5,520	1,491,221	–	266,842	1,359,114	239,785	8,710	9,185	3,380,377
Carrying amounts										
At 1 April 2020	200,858	36,799	1,094,037	59,968	48,197	433,760	70,941	7,460	10,778	1,962,798
At 31 March 2021	200,858	34,959	1,038,695	92,787	29,787	370,050	53,482	6,294	8,417	1,835,329
At 31 March 2022	199,300	33,119	984,005	163,521	22,770	292,712	45,136	4,419	8,496	1,753,478

[^] 'Others' include right-of use assets relating to leasehold land and office premises.

NOTES TO THE FINANCIAL STATEMENTS

4. PROPERTY, PLANT AND EQUIPMENT (CONT'D)

	Freehold land	Leasehold land^	Buildings and infrastructure	Buildings under construction	Improvement works	Machinery, laboratory and workshop equipment	Furniture and office equipment	Transportation equipment	Others^	Total
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
University Company										
Cost										
At 1 April 2020	200,858	38,639	2,647,869	59,968	294,417	1,546,872	311,556	14,732	12,906	5,127,817
Additions	–	–	1,212	51,281	1,235	65,727	12,738	223	171	132,587
Disposals/Write-offs	–	–	(365)	–	(184,031)	(36,473)	(17,448)	(560)	(38)	(238,915)
Reclassifications	–	–	(169,046)	(18,462)	168,642	41,537	(23,394)	(5)	728	–
At 31 March 2021	200,858	38,639	2,479,670	92,787	280,263	1,617,663	283,452	14,390	13,767	5,021,489
At 1 April 2021	200,858	38,639	2,479,670	92,787	280,263	1,617,663	283,452	14,390	13,767	5,021,489
Additions	–	–	543	94,746	1,192	58,549	13,660	1	876	169,567
Disposals/Write-offs	(1,558)	–	(9,518)	–	(4,021)	(38,475)	(15,475)	(1,262)	(3,383)	(73,692)
Reclassifications	–	–	4,531	(24,088)	8,676	9,797	1,084	–	–	–
At 31 March 2022	199,300	38,639	2,475,226	163,445	286,110	1,647,534	282,721	13,129	11,260	5,117,364
Accumulated depreciation										
At 1 April 2020	–	1,840	1,553,832	–	247,364	1,114,204	241,647	7,272	4,444	3,170,603
Depreciation for the year	–	1,840	58,561	–	21,602	149,925	24,020	1,322	3,173	260,443
Disposals/Write-offs	–	–	(365)	–	(183,865)	(35,808)	(17,368)	(498)	(38)	(237,942)
Reclassifications	–	–	(171,053)	–	166,566	20,806	(17,642)	–	1,323	–
At 31 March 2021	–	3,680	1,440,975	–	251,667	1,249,127	230,657	8,096	8,902	3,193,104
At 1 April 2021	–	3,680	1,440,975	–	251,667	1,249,127	230,657	8,096	8,902	3,193,104
Depreciation for the year	–	1,840	58,821	–	16,334	144,262	22,774	1,218	777	246,026
Disposals/Write-offs	–	–	(8,575)	–	(3,946)	(36,591)	(15,377)	(604)	(3,383)	(68,476)
At 31 March 2022	–	5,520	1,491,221	–	264,055	1,356,798	238,054	8,710	6,296	3,370,654
Carrying amounts										
At 1 April 2020	200,858	36,799	1,094,037	59,968	47,053	432,668	69,909	7,460	8,462	1,957,214
At 31 March 2021	200,858	34,959	1,038,695	92,787	28,596	368,536	52,795	6,294	4,865	1,828,385
At 31 March 2022	199,300	33,119	984,005	163,445	22,055	290,736	44,667	4,419	4,964	1,746,710

^ 'Others' include right-of use assets relating to leasehold land and office premises.

NOTES TO THE FINANCIAL STATEMENTS

4. PROPERTY, PLANT AND EQUIPMENT (CONT'D)

Leases as lessee

The Group and University Company lease land and office premises for the Group's and University's operations. The leases typically run for a period from 1 to 10 years. Lease payments are renegotiated upon renewal to reflect market rentals.

The Group and University Company lease certain equipment with contract terms of less than a year. These leases are short-term and/or leases of low-value items. The Group and University Company have elected not to recognise right-of-use assets and lease liabilities for these leases.

Amounts recognised in consolidated statement of comprehensive income

	Group	
	2022	2021
	\$'000	\$'000
Depreciation expense on right-of-use assets	4,337	6,808
Interest expense on lease liabilities	118	138
Expenses relating to short-term and low value leases	1,160	553

Amounts recognised in consolidated statement of cash flows

	Group	
	2022	2021
	\$'000	\$'000
Total cash outflow for leases	(2,739)	(5,285)

As at 31 March 2022, the Group and University Company are committed to \$247,000 (2021: \$1,631,000) and \$247,000 (2021: \$1,516,000) for short-term leases respectively.

5. INTANGIBLE ASSETS

	Group		University Company	
	2022	2021	2022	2021
	\$'000	\$'000	\$'000	\$'000
Cost				
At 1 April	14,131	13,841	12,452	12,579
Additions	658	971	516	554
Disposals	–	(681)	–	(681)
At 31 March	14,789	14,131	12,968	12,452
Accumulated amortisation				
At 1 April	10,024	8,257	9,521	8,059
Amortisation charge for the year	2,003	2,448	1,660	2,143
Disposals	–	(681)	–	(681)
At 31 March	12,027	10,024	11,181	9,521

NOTES TO THE FINANCIAL STATEMENTS

5. INTANGIBLE ASSETS (CONT'D)

	Group		University Company	
	2022	2021	2022	2021
	\$'000	\$'000	\$'000	\$'000
Carrying amount				
At 1 April	4,107	5,584	2,931	4,520
At 31 March	2,762	4,107	1,787	2,931

6. SUBSIDIARIES

	University Company		
	2022	2021	1 April 2020
	\$'000	\$'000	\$'000
Equity investments at cost	500	500	500

Details of subsidiaries are as follows:

Name of subsidiary		Country of incorporation	Ownership interest		Principal activities	
			2022	2021	1 April 2020	
			%	%	%	
Held by the University Company						
^	Nanyang Technological University - NTUitive Pte Ltd	Singapore	100	100	100	Innovation and enterprise company of NTU.
^	NTU Holdings Pte Ltd	Singapore	100	100	100	Investment holding.
^	Singapore Centre for Chinese Language Limited	Singapore	100	100	100	Provision of training/ professional development courses for Chinese language teachers and conduct of educational research and activities.
^	NIE International Private Limited	Singapore	100	100	100	Provision of training programs in teacher education and school leadership.
#	Interim Services Pte Ltd	Singapore	–	100	100	Provision of education and training services for professional and management development.
^	National Institute of Early Childhood Development	Singapore	100	100	100	Provision of pre-service and continuing education and training for professionals in early childhood development.
Held by Nanyang Technological University - NTUitive Pte Ltd						
#	Code Farm Pte Ltd	Singapore	–	100	100	Research and development of other software and programming activities.
#	Systemed Pte Ltd	Singapore	–	100	100	Development and commercialisation in medical technology.

NOTES TO THE FINANCIAL STATEMENTS

6. SUBSIDIARIES (CONT'D)

Name of subsidiary	Country of incorporation	Ownership interest			Principal activities
		2022	2021	1 April 2020	
		%	%	%	
Held by NTU Holdings Pte Ltd					
* Nanyang Venture Consulting (Shanghai) Co., Ltd	China	100	100	100	Consultant for enterprise management, technology and education.
^ Confucius Institute, NTU Pte Ltd	Singapore	100	100	100	Promotion of Chinese language, culture and support of local Chinese teaching.
Held by Nanyang Venture Consulting (Shanghai) Co., Ltd					
* Nanyang Venture Consulting (Beijing) Co., Ltd	China	100	100	100	Consultant for enterprise management, technology and education.

^ Audited by KPMG LLP, Singapore.

* Audited by a member of KPMG International.

These companies were liquidated during the financial year.

7. ASSOCIATES AND JOINT VENTURES

	Group			University Company		
	2022	2021	1 April 2020	2022	2021	1 April 2020
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Cost of investments	13,458	13,458	13,458	13,063	13,063	13,063
Share of post-acquisition profits	4,290	1,564	1,213	4,531	1,783	1,344
	17,748	15,022	14,671	17,594	14,846	14,407

Details of the associates are as follows:

Name of associate	Country of incorporation	Group's proportion of ownership interest/voting power held			Principal activities
		2022	2021	1 April 2020	
		%	%	%	
Friends of NTU ⁽ⁱ⁾	United States	–	–	40	Promote the advancement of NTU in United States.
GenomeAsia 100k Ltd ⁽ⁱⁱ⁾	Singapore	33.3	33.3	33.3	Data Processing and related activities.

NOTES TO THE FINANCIAL STATEMENTS

7. ASSOCIATES AND JOINT VENTURES (CONT'D)

Details of the joint ventures are as follows:

Name of joint venture	Country of incorporation	Group's proportion of ownership interest/voting power held			Principal activities
		2022	2021	1 April 2020	
		%	%	%	
Lushang (Nanyang) Pte Ltd ⁽ⁱⁱⁱ⁾	Singapore	30	30	30	Other information technology and computer service activities.
Secur3DP+ Pte Ltd ^(iv)	Singapore	47.5	47.5	47.5	To develop and monetise certain intellectual property assets relating to 3D printing in Singapore.
SRIF Amcorp Pte. Ltd. ^(v)	Singapore	25	25	25	Investment holding.

- (i) In 2021, the representatives from the Group stepped down as Board members of the associate, leading to a loss of significant influence of the associate.
- (ii) Upon dissolution of the associate and settlement of all debts and liabilities, the remaining residual investment will be transferred to NTU as the preferred charitable organisation.
- (iii) The Group determined that it has joint control over Lushang (Nanyang) Pte Ltd by virtue that all significant matters requiring unanimous approval by all the directors and shareholders.
- (iv) The Group determined that it has joint control over Secur3DP+ Pte Ltd based on the joint venture agreement.
- (v) The Group determined that it has joint control over SRIF Amcorp Pte Ltd based on the joint venture agreement.

8. STUDENT LOANS

	Group and University Company		
	2022	2021	1 April 2020
	\$'000	\$'000	\$'000
Student loans	1,910	3,961	4,109
Represented by:			
- Amount repayable within 12 months	911	1,784	1,669
- Amount repayable after 12 months	999	2,177	2,440
	1,910	3,961	4,109

The student loans are unsecured, interest-free and repayable over a period of 2 to 5 years.

NOTES TO THE FINANCIAL STATEMENTS

9. DERIVATIVE FINANCIAL INSTRUMENTS

	Group and University Company		
	2022	2021	1 April 2020
	\$'000	\$'000	\$'000
Derivative liabilities			
Foreign currency forward contracts	1,526	19,935	20,075

Foreign currency forward contracts

The Group manages its exposure to foreign currency movements on its net income denominated in United States dollar by using forward currency forward contracts.

Forward exchange contracts with aggregate notional amounts of \$945 million (2021: \$713 million; 1 April 2020: \$589 million), have been entered into to hedge the currency risk of United States dollar.

10. TRADE AND OTHER RECEIVABLES

	Note	2022 \$'000	Group 2021 \$'000	1 April 2020 \$'000	2022 \$'000	University Company 2021 \$'000	1 April 2020 \$'000
Trade receivables		28,431	47,332	39,775	26,550	45,498	36,571
Loss allowance for doubtful receivables		(2,449)	(8,005)	(1,897)	(1,630)	(7,294)	(1,261)
		25,982	39,327	37,878	24,920	38,204	35,310
Interest receivables		544	320	2,249	535	312	2,198
Operating grant receivables		16,195	21,202	4,825	14,820	19,000	3,492
Research grant receivables		248,520	245,962	206,514	246,442	241,585	206,514
Job Support Scheme (JSS) grant receivables		–	6,151	33,485	–	6,033	31,443
Grants receivables	20	35,100	138	172	35,100	138	172
		326,341	313,100	285,123	321,817	305,272	279,129
Other receivables		75,566	205,320	160,226	68,112	199,806	153,745
Loss allowance for doubtful receivables		(6,311)	(5,083)	(9,173)	(6,255)	(5,083)	(9,173)
		69,255	200,237	151,053	61,857	194,723	144,572
Amounts due from subsidiaries (trade)		–	–	–	282	573	488
Loss allowance for doubtful receivables		–	–	–	(159)	(159)	(168)
		–	–	–	123	414	320
Amounts due from subsidiaries (non-trade)		–	–	–	1,015	1,015	1,015
Loss allowance for doubtful receivables		–	–	–	(1,015)	(1,015)	(1,015)
		–	–	–	–	–	–
Amounts due from joint venture and associates		26	29	–	26	29	–
Financial assets at amortised cost		395,622	513,366	436,176	383,823	500,438	424,021
Prepayments		17,222	17,816	25,214	16,464	17,032	24,703
		412,844	531,182	461,390	400,287	517,470	448,724

NOTES TO THE FINANCIAL STATEMENTS

10. TRADE AND OTHER RECEIVABLES (CONT'D)

The non-trade amounts due from subsidiaries are unsecured, interest-free and repayable on demand.

Credit risk relating to trade receivables is minimal as these receivables are from statutory boards, ministries and companies who provided funding for research activities. The Group's and University Company's historical experience in the collection of accounts receivables falls within the recorded allowances.

Credit risk for other grant receivables is limited as these relate mainly to receivables from the Government Ministry.

11. FINANCIAL ASSETS AT FAIR VALUE THROUGH PROFIT OR LOSS

	Group			University Company		
	2022	2021	1 April 2020	2022	2021	1 April 2020
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Quoted fixed income investments	200,793	237,205	427,014	200,541	236,951	426,757
Quoted equity investments	1,292,287	1,293,546 [^]	927,504 [^]	1,291,964	1,293,436 [^]	927,422 [^]
Unquoted investments	2,894,853	1,963,642 [^]	1,444,715 [^]	2,885,728	1,960,534 [^]	1,440,232 [^]
Other investments	8,002	7,284	6,600	1,659	1,659	1,659
	4,395,935	3,501,677	2,805,833	4,379,892	3,492,580	2,796,070

[^] Certain comparative figures have been reclassified in order to conform with current year's presentation

The Group's and University Company's investments comprise financial instruments (quoted fixed income, quoted equity, unquoted investments and other investments) managed by external fund managers and cash balances and bank deposits as follows:

		Group			University Company		
	Note	2022	2021	1 April 2020	2022	2021	1 April 2020
		\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Financial assets at fair value through profit or loss		4,395,935	3,501,677	2,805,833	4,379,892	3,492,580	2,796,070
Cash balances and bank deposits	12	201,293	120,797	127,831	201,293	120,797	127,831
		4,597,228	3,622,474	2,933,664	4,581,185	3,613,377	2,923,901

Quoted fixed income investments include investments in fixed income instruments via segregated accounts and pooled vehicles. Quoted equity investments represent investments in quoted equities via segregated accounts and pooled vehicles. The fair values of the financial instruments traded in active markets are based on quoted market prices at the end of the reporting period.

The unquoted investments represent investments in private equity funds, hedge funds and limited partnerships. The fair values of these unquoted investments are based on net asset values provided by fund managers and fund administrators.

NOTES TO THE FINANCIAL STATEMENTS

11. FINANCIAL ASSETS AT FAIR VALUE THROUGH PROFIT OR LOSS (CONT'D)

The cash balances and bank deposits are included as a component in the cash and cash equivalents in Note 12 for the purpose of disclosure.

The weighted average interest rates of quoted fixed income securities at the end of the reporting period and the periods in which they mature are as follows:

	Effective interest rate per annum %	Fixed interest rate securities maturing			Total \$'000
		Less than 1 year \$'000	In 1 to 5 years \$'000	After 5 years \$'000	
Group					
2022	1.6 to 3.5	–	175,004	25,789	200,793
2021	0.4 to 3.3	–	94,928	142,277	237,205
1 April 2020	0.6 to 3.3	–	182,409	244,605	427,014
University Company					
2022	1.6 to 3.5	–	174,752	25,789	200,541
2021	0.4 to 2.8	–	94,674	142,277	236,951
1 April 2020	0.6 to 2.9	–	182,152	244,605	426,757

12. CASH AND CASH EQUIVALENTS

	Note	Group		1 April 2020 \$'000	University Company		
		2022 \$'000	2021 \$'000		2022 \$'000	2021 \$'000	1 April 2020 \$'000
Operating							
Cash at bank and in hand		389,845	416,673	457,449	361,307	386,288	419,499
Deposits with financial institutions		709,409	570,413	412,439	696,039	562,544	405,280
		1,099,254	987,086	869,888	1,057,346	948,832	824,779
Investments							
Cash at bank and in hand		116,259	40,348	77,254	116,259	40,348	77,254
Money market funds and cash held by custodian banks		85,034	80,449	50,577	85,034	80,449	50,577
	11	201,293	120,797	127,831	201,293	120,797	127,831
Cash and cash equivalents		1,300,547	1,107,883	997,719	1,258,639	1,069,629	952,610

NOTES TO THE FINANCIAL STATEMENTS

13. DEFERRED CAPITAL GRANTS

	Government ministries		Statutory boards		Others		Total	
	2022	2021	2022	2021	2022	2021	2022	2021
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Group								
At 1 April	941,074	1,055,304	80,414	74,866	25,483	28,143	1,046,971	1,158,313
Add:								
Grants received/(refunded) for capital expenditure and development project transferred from								
- Operating grants (Note 29)	4,727	5,288	–	–	–	–	4,727	5,288
- Research grants (Note 18)	15,821	22,294	19,674	22,179	6,872	3,029	42,367	47,502
- Development grants (Note 14)	34,844	35,923	–	–	–	–	34,844	35,923
- Other grants	(691)	203	2,675	5,248	2,945	2,289	4,929	7,740
Assets donated by various organisations	31	–	–	–	463	1,677	494	1,677
	54,732	63,708	22,349	27,427	10,280	6,995	87,361	98,130
Less:								
Grants taken to profit or loss								
- Amortisation charge for the year	166,914	177,763	22,767	21,705	8,750	9,646	198,431	209,114
- On disposal of property, plant and equipment	1,275	175	361	174	704	9	2,340	358
	168,189	177,938	23,128	21,879	9,454	9,655	200,771	209,472
At 31 March	827,617	941,074	79,635	80,414	26,309	25,483	933,561	1,046,971
University Company								
At 1 April	938,502	1,052,686	80,414	74,866	25,483	28,143	1,044,399	1,155,695
Add:								
Grants received/(refunded) for capital expenditure and development project transferred from								
- Operating grants	4,681	4,654	–	–	–	–	4,681	4,654
- Research grants (Note 18)	15,821	22,294	19,674	22,179	6,872	3,029	42,367	47,502
- Development grants (Note 14)	34,532	35,737	–	–	–	–	34,532	35,737
- Other grants	(691)	203	2,675	5,248	2,945	2,289	4,929	7,740
Assets donated by various organisations	31	–	–	–	463	1,677	494	1,677
	54,374	62,888	22,349	27,427	10,280	6,995	87,003	97,310
Less:								
Grants taken to profit or loss								
- Amortisation charge for the year	166,028	176,897	22,767	21,705	8,750	9,646	197,545	208,248
- On disposal of property, plant and equipment	1,275	175	361	174	704	9	2,340	358
	167,303	177,072	23,128	21,879	9,454	9,655	199,885	208,606
At 31 March	825,573	938,502	79,635	80,414	26,309	25,483	931,517	1,044,399

NOTES TO THE FINANCIAL STATEMENTS

14. GRANTS RECEIVABLE/IT AND F&E GRANTS/SINKING FUND RECEIVED IN ADVANCE

Note	Group			University Company		
	2022 \$'000	2021 \$'000	1 April 2020 \$'000	2022 \$'000	2021 \$'000	1 April 2020 \$'000
Grants receivable within 12 months:						
- Development grant	362	138	172	362	138	172
Grants received in advance:						
- Development grant	(42,374)	(42,967)	(41,472)	(42,374)	(42,967)	(41,472)
- IT and F&E (a)	(56,309)	(49,094)	(43,559)	(55,495)	(48,632)	(42,997)
- Sinking fund (b)	(318,495)	(332,759)	(341,414)	(318,495)	(332,759)	(341,414)
Subtotal	(417,178)	(424,820)	(426,445)	(416,364)	(424,358)	(425,883)
Total	(416,816)	(424,682)	(426,273)	(416,002)	(424,220)	(425,711)
Grants received in advance represented as:						
Current portion						
- Development grant	(42,374)	(42,967)	(41,472)	(42,374)	(42,967)	(41,472)
- IT and F&E	(56,309)	(49,094)	(43,559)	(55,495)	(48,632)	(42,997)
- Sinking fund	(18,697)	(25,072)	(27,972)	(18,697)	(25,072)	(27,972)
	(117,380)	(117,133)	(113,003)	(116,566)	(116,671)	(112,441)
Non-current portion						
- Sinking fund	(299,798)	(307,687)	(313,442)	(299,798)	(307,687)	(313,442)
	(417,178)	(424,820)	(426,445)	(416,364)	(424,358)	(425,883)

Movements in grants (received in advance)/receivable:

Note	Group		University Company	
	2022 \$'000	2021 \$'000	2022 \$'000	2021 \$'000
At 1 April	(424,682)	(426,273)	(424,220)	(425,711)
Grants received during the year	(33,521)	(40,996)	(32,795)	(40,823)
	(458,203)	(467,269)	(457,015)	(466,534)
Less:				
Amounts transferred to deferred capital grants	13	34,844	34,532	35,737
Amounts taken to profit or loss		6,543	6,481	6,577
At 31 March		(416,816)	(416,002)	(424,220)

These are grants from the Government Ministry and statutory boards for financing development projects.

- (a) This amount relates to grants received in advance for the purchase of IT and F&E items to support teaching and administrative functions.
- (b) This amount relates to sinking fund received in advance from the Government Ministry for the purpose of maintenance and replacement of property, plant and equipment.

NOTES TO THE FINANCIAL STATEMENTS

15. PROVISIONS

The movement in the provision for unutilised compensated leave is as follows:

	Group		University Company	
	2022	2021	2022	2021
	\$'000	\$'000	\$'000	\$'000
Provision for unutilised compensated leave				
At 1 April	77,337	63,931	75,611	62,800
Provision (reversed)/made during the year	(7,144)	13,406	(7,213)	12,811
At 31 March	70,193	77,337	68,398	75,611

16. GRANTS RECEIVED IN ADVANCE – OPERATING GRANTS

	Group		University Company	
	2022	2021	2022	2021
	\$'000	\$'000	\$'000	\$'000
At 1 April	6,923	7,884	–	–
Grants received during the year	11,308	3,976	6,081	–
	18,231	11,860	6,081	–
Less:				
Amounts taken to profit or loss	(8,158)	(4,303)	(3,769)	–
Amounts transferred to deferred capital grants	(46)	(634)	–	–
At 31 March	10,027	6,923	2,312	–

This relates to grants received from the Government Ministry to finance the operations of subsidiaries. The balance in this account represents grant received but not utilised at the end of the financial year.

17. LOANS AND BORROWINGS

	Group and University Company		
	2022	2021	1 April 2020
	\$'000	\$'000	\$'000
Fixed rate term note	650,000	–	–
Unsecured bank loans	–	120,800	126,500
	650,000	120,800	126,500
Represented by:			
- Current	–	120,800	126,500
- Non-current	650,000	–	–
	650,000	120,800	126,500

NOTES TO THE FINANCIAL STATEMENTS

17. LOANS AND BORROWINGS (CONT'D)

Terms and debt repayment schedule

Terms and conditions of outstanding interest-bearing borrowings are as follows:

	Currency	Weighted average nominal interest rate %	Year of maturity	2022		2021		1 April 2020	
				Face value \$'000	Carrying amount \$'000	Face value \$'000	Carrying amount \$'000	Face value \$'000	Carrying amount \$'000
Group and University Company									
Fixed rate term note	SGD	2.185%	2036	650,000	650,000	–	–	–	–
		2021: 0.58% (1 April 2020: 1.51%)	2021: 2022 (1 April 2020: 2021)						
Unsecured bank loans	SGD			–	–	120,800	120,800	126,500	126,500
				650,000	650,000	120,800	120,800	126,500	126,500

The fixed rate term note relates to a \$650 million sustainability-linked bond under the \$1 billion medium term note ("MTN") programme. The sustainability-linked bond is to propel the University's wide-ranging sustainability efforts over the next 15 years towards a climate-aligned future. The net proceeds from the issuance will be applied in conjunction with the university's wide-ranging corporate and sustainability goals and activities aligned with the Sustainability Manifesto.

Reconciliation of movements of liabilities to cash flows arising from financing activities

	Liabilities		
	Loans and borrowings (Note 17) \$'000	Lease liabilities (Note 19) \$'000	Total \$'000
Balance at 1 April 2020	126,500	6,505	133,005
Changes from financing cash flows			
Interest paid	(1,881)	(138)	(2,019)
Repayment of lease liabilities	–	(5,147)	(5,147)
Repayment of loans and borrowings	(5,700)	–	(5,700)
Total changes from financing cash flows	(7,581)	(5,285)	(12,866)
Other changes			
Liability-related			
New leases	–	3,538	3,538
Finance costs	1,881	138	2,019
Total liability-related other changes	1,881	3,676	5,557
Balance at 31 March 2021	120,800	4,896	125,696
Balance at 1 April 2021	120,800	4,896	125,696
Changes from financing cash flows			
Interest paid	(6,651)	(118)	(6,769)
Repayment of lease liabilities	–	(2,621)	(2,621)
Proceeds from loans and borrowings	650,000	–	650,000
Repayment of loans and borrowings	(120,800)	–	(120,800)
Total changes from financing cash flows	522,549	(2,739)	519,810
Other changes			
Liability-related			
New leases	–	2,791	2,791
Finance costs	6,651	118	6,769
Total liability-related other changes	6,651	2,909	9,560
Balance at 31 March 2022	650,000	5,066	655,066

NOTES TO THE FINANCIAL STATEMENTS

18. RESEARCH GRANTS RECEIVED IN ADVANCE

		Group		University Company	
	Note	2022 \$'000	2021 \$'000	2022 \$'000	2021 \$'000
At 1 April		180,892	171,625	180,784	166,392
Grants received during the year		461,379	371,505	448,971	369,183
		642,271	543,130	629,755	535,575
Less:					
Amounts transferred to deferred capital grants	13	(42,367)	(47,502)	(42,367)	(47,502)
Amounts taken to profit or loss		(393,679)	(354,184)	(383,899)	(342,360)
Amounts transferred to grant receivables		2,558	39,448	4,857	35,071
At 31 March		208,783	180,892	208,346	180,784

These are grants received from the Government Ministry, other ministries, statutory boards and other sources for research activities. The balance in this account represents grants received but not utilised at the end of the financial year.

Research grants awarded to the Group from the Government Ministry, other ministries, statutory boards and other sources in 2022 amounted to \$644,494,000 (2021: \$610,982,000).

Research grants awarded to the Group from the Government Ministry, other ministries, statutory boards and other sources but not yet disbursed as at end of the financial year amounted to \$1,477,670,000 (2021: \$1,375,854,000).

19. LEASE LIABILITIES

	2022 \$'000	Group 2021 \$'000	1 April 2020 \$'000	2022 \$'000	University Company	
					2021 \$'000	1 April 2020 \$'000
Current	2,374	2,102	4,414	506	189	2,845
Non-current	2,692	2,794	2,091	1,006	1,148	1,337
	5,066	4,896	6,505	1,512	1,337	4,182

20. DEFERRED GRANT INCOME

This relates to the deferred grant income under the Job Support Scheme ("JSS") from the Government to support wages during the COVID-19 pandemic.

NOTES TO THE FINANCIAL STATEMENTS

21. CAPITAL ACCOUNT

The capital account represents the freehold land contributed by an association in Singapore to the University Company.

22. ENDOWMENT FUND

The Endowment Fund comprises donations, grants, gifts, testamentary disposition and proceeds from gifts of movable or immovable properties. The objectives of this fund comprise the provision of facilities for teaching, training and research, the advancement and dissemination of knowledge and the promotion of research.

23. GENERAL FUND

Income and expenditure are generally accounted for under the "General Fund" in the consolidated statement of comprehensive income. General Fund is further presented as "Designated" and "Specific".

"Designated" includes funds set aside for the operational activities of the University.

"Specific" relates to funds that are subject to legal or grantor imposed conditions such as funds from externally funded research grants, development grants, sinking fund as well as externally funded scholarships, bursaries and sponsorships.

24. FUNDS MANAGED ON BEHALF OF THE GOVERNMENT MINISTRY

Pursuant to the Tuition Fee Loan (TFL), Study Loan (SL) and Overseas Student Program Loan - 50% funded by MOE (OSP) schemes, the University Company acts as agent for these loans schemes and the Government Ministry as the financier providing the funds.

	Group and University Company	
	2022	2021
	\$'000	\$'000
Cash from the Government Ministry:		
At 1 April	240,213	203,690
Cash received	55,374	56,390
Interest income received on behalf of Government Ministry	1,451	814
Repayments	(90,498)	(19,579)
Bad debts incurred	(81)	(288)
Interest income transferred to Government Ministry	(1,451)	(814)
At 31 March	<u>205,008</u>	<u>240,213</u>
Represented by:		
Cash and bank balances held on behalf	854	946
TFL, SL and OSP	204,154	239,267
Net assets	<u>205,008</u>	<u>240,213</u>

NOTES TO THE FINANCIAL STATEMENTS

24. FUNDS MANAGED ON BEHALF OF THE GOVERNMENT MINISTRY (CONT'D)

Cash and bank balances of \$854,000 (2021: \$946,000) are held on behalf of Government Ministry for the purpose of extending study loans to students.

Students on TFL, SL and OSP are to commence repayment upon graduation. Students are given an option to repay by monthly instalments of minimum amount of \$100 over a period of up to 20 years (for TFL and SL) and 5 years (for OSP) after the borrowers' graduation. Interest is charged at the average prime rates of three local banks prevailing on the first day of each quarter, or such other rates as may be determined from time to time. Interest charged in 2022 is 4.75% (2021: 4.75%) per annum.

The interest on the TFL, SL and OSP is remitted in full to the Government Ministry on a monthly basis.

25. INTEREST INCOME

	Group	
	2022	2021
	\$'000	\$'000
Interest received/receivable:		
- fixed deposits placed with financial institutions	1,257	3,237
- bank balances	771	531
	<u>2,028</u>	<u>3,768</u>

26. GOVERNMENT GRANT INCOME

	Group	
	2022	2021
	\$'000	\$'000
Jobs Support Scheme	8,144	52,931

In 2020, the Group received wage support for local employees under the JSS from the Singapore Government as part of the Government's measures to support businesses during the period of economic uncertainty impacted by COVID-19. The Group assessed that there is reasonable assurance that it will comply with the conditions attached to the grants and the grants will be received. Grant income is recognised in profit or loss on a systematic basis over the period of uncertainty in which the related salary costs for which the grant is intended to compensate is recognised as expenses. Management has determined the period of uncertainty to be 17 months commencing from April 2020. Government grant income of \$8,144,000 (2021: \$52,931,000) in relation to JSS was recognised during the year.

27. PROFIT ON INVESTMENTS

	Group	
	2022	2021
	\$'000	\$'000
Interest income	3,942	7,602
Dividend income	3,276	2,134
Fair value gain on financial assets at fair value through profit or loss	255,052	634,276
Fair value gain on derivative financial instruments	5,097	22,284
	<u>267,367</u>	<u>666,296</u>

The fair value gains on financial assets at fair value through profit or loss and on derivative financial instruments comprise net realised and unrealised gains.

NOTES TO THE FINANCIAL STATEMENTS

28. (DEFICIT)/SURPLUS BEFORE GRANTS FROM MINISTRIES

The following items have been included in arriving at (deficit)/surplus before grants from ministries:

	Group	
	2022	2021
	\$'000	\$'000
(Reversal of loss allowance)/Loss allowance on trade and other receivables	(4,328)	2,018
Exchange (gain)/loss	(430)	185
Contribution to defined contribution plans included in expenditure on manpower	76,590	75,436
Government grants - Special Employment Credit and Wage Credit in expenditure on manpower	(2,453)	(6,283)

29. OPERATING GRANTS FROM GOVERNMENT MINISTRY

		Group	
	Note	2022	2021
		\$'000	\$'000
Operating grants received and receivable during the year		619,540	617,539
Payment for goods and services tax on tuition fees and tuition grants		(51,295)	(50,945)
Amounts transferred to:			
- deferred capital grants	13	(4,727)	(5,288)
- grant received in advance	16	(3,104)	961
Operating grants taken to profit or loss		560,414	562,267

30. TAX EXPENSE

The University Company is registered as a charitable institution by virtue of Section 13 of the Income Tax Act, Chapter 134.

The subsidiaries of the Group have unutilised tax losses of approximately \$11,043,000 (2021: \$10,893,000) which are available for offset against future taxable income. Deferred tax assets have not been recognised in respect of these items because it is not probable that future taxable profit will be available against which the subsidiaries can utilise the benefit.

The unabsorbed tax losses of the subsidiaries are subject to agreement by the tax authorities and compliance with the tax regulations in the respective countries in which certain subsidiaries operate. These temporary differences do not expire under current tax legislation.

	Group	
	2022	2021
	\$'000	\$'000
Current tax expense		
Current year	1	2
Reconciliation of effective tax		
Surplus after grants from ministries	401,926	768,028
Tax calculated using Singapore tax rate of 17% (2021: 17%)	68,327	130,565
Income and expenses not subject to tax	(68,326)	(130,563)
	1	2

NOTES TO THE FINANCIAL STATEMENTS

31. COMMITMENTS

Capital commitments

	Group	
	2022	2021
	\$'000	\$'000
Contracted but not provided for	103,112	172,257
Authorised but not contracted for	278,302	294,618

The capital commitments are mainly funded from grants from Government Ministries, subject to satisfying certain terms and conditions.

	Group	
	2022	2021
	\$'000	\$'000
Uncalled capital commitments for unquoted investments		
- contracted but not provided for	849,131	503,052

Collaboration with Imperial College of Science, Technology and Medicine

On 27 August 2010, NTU and Imperial College of Science, Technology and Medicine entered into an agreement in relation to a collaboration for the establishment and operation of a medical school in Singapore. As at 31 March 2022, NTU's outstanding commitment under the collaboration is estimated at £5.5 million (\$9.7 million) (2021 : £6.8 million (\$12.5 million)) till the expiry of the agreement on 31 July 2028.

32. OPERATING SEGMENTS

For the purpose of making resource allocation decisions and assessing segment performance, the President's Council (the chief operating decision maker) reviews internal/management reports of the Group's fund types: General Fund – Designated, General Fund – Specific, and Endowment Fund. The nature of the fund types is the factor used to determine the reportable segments. This forms the basis of identifying the operating segments of the Group under SFRS(I) 8 *Operating Segments*.

Information regarding the results of each reportable segment is included in the consolidated statement of comprehensive income. Performance is measured based on surplus after grants from ministries, as included in the internal management reports that are reviewed by the President's Council. Surplus after grants from ministries is used to measure performance as management believes that such information is the most relevant in evaluating the results of certain segments relative to other entities that operate within these industries.

33. RELATED PARTIES

Related party transactions

The Government of Singapore has control over the Group as the operations of the University Company is substantially funded through Government grants, with MOE having the power to appoint and remove members to the Board of Trustees of the University Company. Consequently, the Group has invoked the exemption from disclosure requirements of SFRS(I)1-24 in relation to related party transactions and outstanding balances (including commitments) with the Government of Singapore.

The Group has significant transactions with the Government of Singapore in the form of purchase of goods and services and rendering of services. Such purchases and sales are made to various Government agencies in Singapore and collectively approximate \$11.4 million (2021: \$15.4 million) and \$19.6 million (2021: \$20.4 million).

NOTES TO THE FINANCIAL STATEMENTS

33. RELATED PARTIES (CONT'D)

Other than disclosed elsewhere in the financial statements, the Group had the following significant transactions with related parties during the year on terms agreed between the parties as follows:

	Group	
	2022	2021
	\$'000	\$'000
Services rendered		
Consultancy fees paid to Trustees	65	76

Key management personnel

Key management personnel of the Group are those persons having the authority and responsibility for planning, directing and controlling the activities of the entity. The Board of Trustees and senior management team are considered as key management personnel of the Group.

Key management personnel remuneration is as follows:

	Group	
	2022	2021
	\$'000	\$'000
Key management personnel compensation		
Short-term employee benefits (includes the remuneration of an Executive Trustee)	7,956	6,518

34. FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT

Overview

The Group has exposure to the following risks from its use of financial instruments:

- credit risk
- liquidity risk
- interest risk
- price risk
- foreign currency risk
- capital risk

This note presents information about the Group's exposure to each of the above risks, the Group's objectives, policies and processes for measuring and managing risk, and the Group's management of capital. Further quantitative disclosures are included throughout these financial statements.

Credit risk management

Cash and investments in financial assets

Cash and deposits are placed with reputable financial institutions. Investment portfolios are managed by external fund managers.

NOTES TO THE FINANCIAL STATEMENTS

34. FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT (CONT'D)

Credit risk management (cont'd)

Cash and investments in financial assets (cont'd)

The maximum exposure to credit risk in the event that the counterparties fail to perform their obligations in relation to each class of recognised financial asset is the carrying amount of those assets as stated in the statements of financial position.

The credit risk is diversified over a range of institutions.

Student loans

The Group and University Company held student loans amounting to \$1,910,000 (2021: \$3,961,000; 1 April 2020: \$4,109,000). Impairment on these amounts has been measured on the 12-month expected loss basis, which reflects the low credit risk of the exposures. The amount of the allowance on student loans receivables was negligible.

Trade receivables

Credit risk is the potential loss resulting from the failure of a customer or a counterparty to settle its financial and contractual obligations to the Group, as and when they fall due.

The carrying amount of financial assets, grossed up for any allowance for doubtful receivables, represents the maximum credit exposure. At the reporting date, the credit risk is mainly due from customers in Singapore. There is no significant concentration of credit risk on trade receivables.

The Group manages its credit risk with regular monitoring and following up actions for the debts outstanding from debtors.

The Group uses an allowance matrix to measure the ECLs of trade receivables.

The following table provides information about the exposure to credit risk and ECLs for trade receivables:

	Gross carrying amount \$'000	Group Impairment loss allowance \$'000	Credit impaired	Gross carrying amount \$'000	University Company Impairment loss allowance \$'000	Credit impaired
2022						
Current (not past due)	18,080	(446)	No	17,887	(414)	No
1-30 days past due	3,989	(90)	No	3,632	(55)	No
31-150 days past due	4,261	(531)	Yes	3,720	(373)	Yes
More than 150 days past due	2,101	(1,382)	Yes	1,311	(788)	Yes
	<u>28,431</u>	<u>(2,449)</u>		<u>26,550</u>	<u>(1,630)</u>	
2021						
Current (not past due)	26,483	(894)	No	25,742	(888)	No
1-30 days past due	5,229	(119)	No	5,048	(113)	No
31-150 days past due	9,242	(1,393)	Yes	8,947	(1,250)	Yes
More than 150 days past due	6,378	(5,599)	Yes	5,761	(5,043)	Yes
	<u>47,332</u>	<u>(8,005)</u>		<u>45,498</u>	<u>(7,294)</u>	

NOTES TO THE FINANCIAL STATEMENTS

34. FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT (CONT'D)

Credit risk management (cont'd)

	Gross carrying amount \$'000	Group Impairment loss allowance \$'000	Credit impaired	Gross carrying amount \$'000	University Company Impairment loss allowance \$'000	Credit impaired
1 April 2020						
Current (not past due)	17,896	(89)	No	16,144	(83)	No
1-30 days past due	9,528	(78)	No	8,987	(61)	No
31-150 days past due	7,151	(177)	Yes	6,945	(140)	Yes
More than 150 days past due	5,200	(1,553)	Yes	4,495	(977)	Yes
	<u>39,775</u>	<u>(1,897)</u>		<u>36,571</u>	<u>(1,261)</u>	

Loss rates are estimated based on actual credit loss experience over the past three years. These rates are adjusted to reflect differences between economic conditions during the year over which the historic data has been collected, current conditions and the Group's and the University Company's view of economic conditions over the expected lives of the receivables. The amount of ECLs on non-credit impaired trade receivables was negligible.

Other receivables

The Group and University Company held other receivables. Except for other receivables of the Group and of University Company of \$6,311,000 (2021: \$5,083,000; 1 April 2020: \$9,173,000) and \$6,255,000 (2021: \$5,083,000; 1 April 2020: \$9,173,000) where impairment has been measured at an amount equal to lifetime ECLs, impairment on remaining balances of other receivables has been measured on the 12-month expected loss basis, which was negligible.

Amount due from subsidiaries

University Company held trade and non-trade receivables due from subsidiaries. Except for amounts due from subsidiaries of \$1,174,000 (2021: \$1,174,000; 1 April 2020: \$1,183,000) where impairment has been measured at an amount equal to lifetime ECLs, impairment on these amounts has been measured on the 12-month expected loss basis.

The movement in the loss allowance on trade and other receivables during the year is as follows:

	Group		University Company	
	2022 \$'000	2021 \$'000	2022 \$'000	2021 \$'000
At 1 April	13,088	11,070	13,551	11,617
Loss allowance (reversed)/charged	(4,328)	2,018	(4,492)	1,934
At 31 March	<u>8,760</u>	<u>13,088</u>	<u>9,059</u>	<u>13,551</u>

NOTES TO THE FINANCIAL STATEMENTS

34. FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT (CONT'D)

Liquidity risk management

Liquidity risk is the risk that the Group will encounter difficulty in meeting the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The contracted undiscounted cash outflows on financial liabilities approximate their carrying amounts and are generally settled within one year. The Group's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Group's reputation.

The Group monitors its liquidity risk and maintains a level of cash and cash equivalents deemed adequate to finance the Group's operations and to mitigate the effects of fluctuations in cash flow. Typically, the Group ensures that it has sufficient cash on demand to meet expected operational expenses including the servicing of financial obligations; this excludes the potential impact of extreme circumstances that cannot be reasonably predicted.

In addition, the Group maintains the following lines of credit:

- \$11 million bankers' guarantee facility that is unsecured.
- \$540 million that can be drawn down to meet short-term financing needs.

The Group has a \$1 billion Medium Term Note Programme, of which \$350 million is unutilised as at 31 March 2022.

The following are the remaining contractual maturities of financial liabilities, including estimated interest payments and excluding the impact of netting agreements:

	Cash flows				
	Carrying amount \$'000	Contractual cash flows \$'000	Within 1 year \$'000	1 to 5 years \$'000	More than 5 years \$'000
Group					
2022					
Non-derivative financial liabilities					
Other non-current liabilities	142	(142)	—	(142)	—
Other payables and accruals	252,983	(252,983)	(252,983)	—	—
Loans and borrowings	650,000	(842,570)	(14,203)	(56,810)	(771,557)
Lease liabilities	5,066	(5,313)	(2,477)	(2,466)	(370)
	908,191	(1,101,008)	(269,663)	(59,418)	(771,927)
Derivative financial instruments					
Forward exchange contracts	1,526				
- Outflow		(1,049,202)	(1,049,202)	—	—
- Inflow		1,047,676	1,047,676	—	—
	1,526	(1,526)	(1,526)	—	—
	909,717	(1,102,534)	(271,189)	(59,418)	(771,927)

NOTES TO THE FINANCIAL STATEMENTS

34. FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT (CONT'D)

Liquidity risk management (cont'd)

Group	Carrying amount \$'000	Cash flows			
		Contractual cash flows \$'000	Within 1 year \$'000	1 to 5 years \$'000	More than 5 years \$'000
2021					
Non-derivative financial liabilities					
Other non-current liabilities	2,600	(2,600)	–	(2,600)	–
Other payables and accruals	243,689	(243,689)	(243,689)	–	–
Loans and borrowings	120,800	(121,153)	(121,153)	–	–
Lease liabilities	4,896	(5,144)	(2,188)	(2,403)	(553)
	371,985	(372,586)	(367,030)	(5,003)	(553)
Derivative financial instruments					
Forward exchange contracts	19,935				
- Outflow		(2,453,143)	(2,453,143)	–	–
- Inflow		2,433,208	2,433,208	–	–
	19,935	(19,935)	(19,935)	–	–
	391,920	(392,521)	(386,965)	(5,003)	(553)
1 April 2020					
Non-derivative financial liabilities					
Other non-current liabilities	2,711	(2,711)	–	(2,711)	–
Other payables and accruals	210,134	(210,134)	(210,134)	–	–
Loans and borrowings	126,500	(128,380)	(128,380)	–	–
Lease liabilities	6,505	(6,824)	(4,530)	(1,555)	(739)
	345,850	(348,049)	(343,044)	(4,266)	(739)
Derivative financial instruments					
Forward exchange contracts	20,075				
- Outflow		(615,238)	(615,238)	–	–
- Inflow		595,163	595,163	–	–
	20,075	(20,075)	(20,075)	–	–
	365,925	(368,124)	(363,119)	(4,266)	(739)

NOTES TO THE FINANCIAL STATEMENTS

34. FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT (CONT'D)

Liquidity risk management (cont'd)

		←----- Cash flows -----→			
	Carrying amount \$'000	Contractual cash flows \$'000	Within 1 year \$'000	1 to 5 years \$'000	More than 5 years \$'000
University Company					
2022					
Non-derivative financial liabilities					
Other non-current liabilities	67	(67)	–	(67)	–
Other payables and accruals	241,220	(241,220)	(241,220)	–	–
Loans and borrowings	650,000	(842,570)	(14,203)	(56,810)	(771,557)
Lease liabilities	1,512	(1,658)	(546)	(742)	(370)
	892,799	(1,085,515)	(255,969)	(57,619)	(771,927)
Derivative financial instruments					
Forward exchange contracts	1,526				
- Outflow		(1,049,202)	(1,049,202)	–	–
- Inflow		1,047,676	1,047,676	–	–
	1,526	(1,526)	(1,526)	–	–
	894,325	(1,087,041)	(257,495)	(57,619)	(771,927)
2021					
Non-derivative financial liabilities					
Other non-current liabilities	2,525	(2,525)	–	(2,525)	–
Other payables and accruals	229,194	(229,194)	(229,194)	–	–
Loans and borrowings	120,800	(121,153)	(121,153)	–	–
Lease liabilities	1,337	(1,525)	(231)	(740)	(554)
	353,856	(354,397)	(350,578)	(3,265)	(554)
Derivative financial instruments					
Forward exchange contracts	19,935				
- Outflow		(2,453,143)	(2,453,143)	–	–
- Inflow		2,433,208	2,433,208	–	–
	19,935	(19,935)	(19,935)	–	–
	373,791	(374,332)	(370,513)	(3,265)	(554)

NOTES TO THE FINANCIAL STATEMENTS

34. FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT (CONT'D)

Liquidity risk management (cont'd)

		Cash flows			
	Carrying amount \$'000	Contractual cash flows \$'000	Within 1 year \$'000	1 to 5 years \$'000	More than 5 years \$'000
University Company					
1 April 2020					
Non-derivative financial liabilities					
Other non-current liabilities	2,711	(2,711)	–	(2,711)	–
Other payables and accruals	193,588	(193,588)	(193,588)	–	–
Loans and borrowings	126,500	(128,380)	(128,380)	–	–
Lease liabilities	4,182	(4,442)	(2,917)	(786)	(739)
	326,981	(329,121)	(324,885)	(3,497)	(739)
Derivative financial instruments					
Forward exchange contracts	20,075				
- Outflow		(615,238)	(615,238)	–	–
- Inflow		595,163	595,163	–	–
	20,075	(20,075)	(20,075)	–	–
	347,056	(349,196)	(344,960)	(3,497)	(739)

Interest risk management

Surplus funds from the Group's operations are invested in bank deposits and with fund managers. The Group has no material exposure to interest rate risk from fixed deposits and borrowings as the interest rates are on fixed rate basis.

The Group's investments in fixed income securities that are managed by fund managers (classified as financial assets at fair value through profit or loss) are exposed to interest rate risk.

At the reporting date, the interest rate profile of interest-bearing financial instruments was as follows:

	Group			University Company		
	2022 \$'000	2021 \$'000	1 April 2020 \$'000	2022 \$'000	2021 \$'000	1 April 2020 \$'000
Fixed rate instruments						
Deposits with financial institutions	709,409	570,413	412,439	696,039	562,544	405,280
Fixed rate term note	(650,000)	–	–	(650,000)	–	–
Unsecured bank loans	–	(120,800)	(126,500)	–	(120,800)	(126,500)
Lease liabilities	(5,066)	(4,896)	(6,505)	(1,512)	(1,337)	(4,182)
	54,343	444,717	279,434	44,527	440,407	274,598
Variable rate instruments						
Quoted fixed income investments	200,793	237,205	427,014	200,541	236,951	426,757

NOTES TO THE FINANCIAL STATEMENTS

34. FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT (CONT'D)

Interest risk management (cont'd)

Sensitivity analysis for interest risk

If movements in interest rates result in a 3% (2021: 3%) appreciation/depreciation in the value of the fixed income investments, all other variables being held constant, the Group's and University Company's surplus would have been higher/lower by \$6,024,000 (2021: \$7,116,000) and \$6,016,000 (2021: \$7,109,000) respectively.

Market risk - Price risk management

The Group is exposed to equity securities price risk from investments classified as financial assets at fair value through profit or loss. The market values of these investments are affected by, amongst others, changes in market prices as a result of changes in the global economic conditions, macro and micro economic factors affecting the country where the investments are quoted, and factors specific to the investee corporations.

To manage the price risk arising from investment in equity securities, the Group diversifies its portfolio across different markets and industries as appropriate.

At the reporting date, the price risk profile of investments classified as financial assets at fair value through profit or loss was as follows:

	2022 \$'000	Group 2021 \$'000	1 April 2020 \$'000	2022 \$'000	University Company 2021 \$'000	1 April 2020 \$'000
Quoted securities						
Quoted equity investments	1,292,287	1,293,546	927,504	1,291,964	1,293,436	927,422
Unquoted securities						
Unquoted investments	2,894,853	1,963,642	1,444,715	2,885,728	1,960,534	1,440,232
Other investments	8,002	7,284	6,600	1,659	1,659	1,659
	2,902,855	1,970,926	1,451,315	2,887,387	1,962,193	1,441,891

Sensitivity analysis for price risk

If movements in financial markets result in a 5% (2021: 5%) appreciation/depreciation in the value of the quoted equity and other investments, all other variables being held constant, the Group's and University Company's surplus would have been higher/lower by \$64,614,000 (2021: \$64,677,000) and \$64,598,000 (2021: \$64,672,000) respectively.

If movements in financial markets result in a 5% (2021: 5%) appreciation/depreciation in the value of the unquoted investments and other investments, all other variables being held constant, the Group's surplus and University Company's would have been higher/lower by \$145,143,000 (2021: \$98,546,000) and \$144,369,000 (2021: \$98,110,000) respectively.

NOTES TO THE FINANCIAL STATEMENTS

34. FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT (CONT'D)

Foreign currency risk management

The Group's investments which are managed by fund managers may be in instruments denominated in foreign currencies. Currency exposure arising from such investments is managed by fund managers. Additional information is set out in Note 9.

The main foreign currency exposure of investments (net of foreign currency forwards) based on information provided to management is as follows:

	US dollar \$'000	Euro \$'000	Japanese Yen \$'000	Pound Sterling \$'000	Others \$'000
Group and University Company					
2022	2,807,041	209,869	48,114	96,366	929,014
2021	1,896,129	241,501	51,786	77,097	912,538
1 April 2020	1,536,983	206,321	39,513	50,918	499,205

Sensitivity analysis for currency risk

If the relevant foreign currency changes against the Singapore dollar by 5% (2021: 5%), all other variables being held constant, the effects will be as follows:

	Profit or loss	
	2022 \$'000	2021 \$'000
Increase/(Decrease)		
<i>US dollar against Singapore dollar</i>		
Strengthened	140,352	94,806
Weakened	(140,352)	(94,806)
<i>Euro against Singapore dollar</i>		
Strengthened	10,493	12,075
Weakened	(10,493)	(12,075)
<i>Japanese Yen against Singapore dollar</i>		
Strengthened	2,406	2,589
Weakened	(2,406)	(2,589)
<i>Pound Sterling against Singapore dollar</i>		
Strengthened	4,818	3,855
Weakened	(4,818)	(3,855)

NOTES TO THE FINANCIAL STATEMENTS

34. FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT (CONT'D)

Capital risk management policies and objectives

The capital structure of the Group consists of funds and accumulated surplus. Risk management is integral to the activities of the Group. The Group has controls in place to create an acceptable balance between the cost of risks occurring and the cost of managing the risks. Management continually monitors its risk management processes to ensure that an appropriate balance between risk and control is achieved. Risk management processes are reviewed regularly to reflect changes in the Group's activities. The Group's overall strategy remains unchanged from 2021.

Accounting classifications and fair values

The carrying amounts and fair values of financial assets and financial liabilities, including their level in fair value hierarchy, are as follows. It does not include fair value information of financial assets and liabilities not measured at fair value if the carrying amount is a reasonable approximation of fair value.

	Note	Fair value through profit or loss \$'000	Amortised cost \$'000	Other financial liabilities \$'000	Total carrying amount \$'000	----- Fair value -----		
						Level 1 \$'000	Level 2 \$'000	Level 3 \$'000
Group								
2022								
Financial assets measured at fair value								
Financial assets at fair value through profit or loss	11	4,395,935	—	—	4,395,935	1,493,080	1,390,680	1,512,175
Financial assets not measured at fair value								
Student loans	8	—	1,910	—	1,910			
Trade and other receivables*	10	—	395,622	—	395,622			
Cash and cash equivalents	12	—	1,300,547	—	1,300,547			
		—	1,698,079	—	1,698,079			
Financial liabilities measured at fair value								
Forward exchange contracts	9	(1,526)	—	—	(1,526)	—	(1,526)	—
Financial liabilities not measured at fair value								
Other non-current liabilities		—	—	(142)	(142)			
Other payables and accruals		—	—	(252,983)	(252,983)			
Loans and borrowings	17	—	—	(650,000)	(650,000)			
Lease liabilities	19	—	—	(5,066)	(5,066)			
		—	—	(908,191)	(908,191)			

NOTES TO THE FINANCIAL STATEMENTS

34. FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT (CONT'D)

Accounting classifications and fair values (cont'd)

Group	Note	Fair value through profit or loss	Amortised cost	Other financial liabilities	Total carrying amount	----- Fair value -----		
		\$'000	\$'000	\$'000	\$'000	Level 1 \$'000	Level 2 \$'000	Level 3 \$'000
2021								
Financial assets measured at fair value								
Financial assets at fair value through profit or loss	11	3,501,677	–	–	3,501,677	1,530,751^	1,031,172^	939,754
Financial assets not measured at fair value								
Student loans	8	–	3,961	–	3,961			
Trade and other receivables*	10	–	513,366	–	513,366			
Cash and cash equivalents	12	–	1,107,883	–	1,107,883			
		–	1,625,210	–	1,625,210			
Financial liabilities measured at fair value								
Forward exchange contracts	9	(19,935)	–	–	(19,935)	–	(19,935)	–
Financial liabilities not measured at fair value								
Other non-current liabilities		–	–	(2,600)	(2,600)			
Other payables and accruals		–	–	(243,689)	(243,689)			
Loans and borrowings	17	–	–	(120,800)	(120,800)			
Lease liabilities	19	–	–	(4,896)	(4,896)			
		–	–	(371,985)	(371,985)			

NOTES TO THE FINANCIAL STATEMENTS

34. FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT (CONT'D)

Accounting classifications and fair values (cont'd)

Group	Note	Fair value through profit or loss	Amortised cost	Other financial liabilities	Total carrying amount	----- Fair value -----		
		\$'000	\$'000	\$'000	\$'000	Level 1 \$'000	Level 2 \$'000	Level 3 \$'000
1 April 2020								
Financial assets measured at fair value								
Financial assets at fair value through profit or loss	11	2,805,833	—	—	2,805,833	1,354,518^	770,154^	681,161
Financial assets not measured at fair value								
Student loans	8	—	4,109	—	4,109			
Trade and other receivables*	10	—	436,176	—	436,176			
Cash and cash equivalents	12	—	997,719	—	997,719			
		—	1,438,004	—	1,438,004			
Financial liabilities measured at fair value								
Forward exchange contracts	9	(20,075)	—	—	(20,075)	—	(20,075)	—
Financial liabilities not measured at fair value								
Other non-current liabilities		—	—	(2,711)	(2,711)			
Other payables and accruals		—	—	(210,134)	(210,134)			
Loans and borrowings	17	—	—	(126,500)	(126,500)			
Lease liabilities	19	—	—	(6,505)	(6,505)			
		—	—	(345,850)	(345,850)			

NOTES TO THE FINANCIAL STATEMENTS

34. FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT (CONT'D)

Accounting classifications and fair values (cont'd)

						----- Fair value -----		
	Note	Fair value through profit or loss \$'000	Amortised cost \$'000	Other financial liabilities \$'000	Total carrying amount \$'000	Level 1 \$'000	Level 2 \$'000	Level 3 \$'000
University Company								
2022								
Financial assets measured at fair value								
Financial assets at fair value through profit or loss	11	4,379,892	–	–	4,379,892	1,492,505	1,390,680	1,496,707
Financial assets not measured at fair value								
Student loans	8	–	1,910	–	1,910			
Trade and other receivables*	10	–	383,823	–	383,823			
Cash and cash equivalents	12	–	1,258,639	–	1,258,639			
		–	1,644,372	–	1,644,372			
Financial liabilities measured at fair value								
Forward exchange contracts	9	(1,526)	–	–	(1,526)	–	(1,526)	–
Financial liabilities not measured at fair value								
Other non-current liabilities		–	–	(67)	(67)			
Other payables and accruals		–	–	(241,220)	(241,220)			
Loans and borrowings	17	–	–	(650,000)	(650,000)			
Lease liabilities	19	–	–	(1,512)	(1,512)			
		–	–	(892,799)	(892,799)			

NOTES TO THE FINANCIAL STATEMENTS

34. FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT (CONT'D)

Accounting classifications and fair values (cont'd)

						----- Fair value -----		
	Note	Fair value through profit or loss \$'000	Amortised cost \$'000	Other financial liabilities \$'000	Total carrying amount \$'000	Level 1 \$'000	Level 2 \$'000	Level 3 \$'000
University Company								
2021								
Financial assets measured at fair value								
Financial assets at fair value through profit or loss	11	3,492,580	—	—	3,492,580	1,530,387^	1,031,172^	931,021
Financial assets not measured at fair value								
Student loans	8	—	3,961	—	3,961			
Trade and other receivables*	10	—	500,438	—	500,438			
Cash and cash equivalents	12	—	1,069,629	—	1,069,629			
		—	1,574,028	—	1,574,028			
Financial liabilities measured at fair value								
Forward exchange contracts	9	(19,935)	—	—	(19,935)	—	(19,935)	—
Financial liabilities not measured at fair value								
Other non-current liabilities		—	—	(2,525)	(2,525)			
Other payables and accruals		—	—	(229,194)	(229,194)			
Loans and borrowings	17	—	—	(120,800)	(120,800)			
Lease liabilities	19	—	—	(1,337)	(1,337)			
		—	—	(353,856)	(353,856)			

NOTES TO THE FINANCIAL STATEMENTS

34. FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT (CONT'D)

Accounting classifications and fair values (cont'd)

						----- Fair value -----		
	Note	Fair value through profit or loss \$'000	Amortised cost \$'000	Other financial liabilities \$'000	Total carrying amount \$'000	Level 1 \$'000	Level 2 \$'000	Level 3 \$'000
University Company								
1 April 2020								
Financial assets measured at fair value								
Financial assets at fair value through profit or loss	11	2,796,070	–	–	2,796,070	1,354,179^	770,154^	671,737
Financial assets not measured at fair value								
Student loans	8	–	4,109	–	4,109			
Trade and other receivables*	10	–	424,021	–	424,021			
Cash and cash equivalents	12	–	952,610	–	952,610			
		–	1,380,740	–	1,380,740			
Financial liabilities measured at fair value								
Forward exchange contracts	9	(20,075)	–	–	(20,075)	–	(20,075)	–
Financial liabilities not measured at fair value								
Other non-current liabilities		–	–	(2,711)	(2,711)			
Other payables and accruals		–	–	(193,588)	(193,588)			
Loans and borrowings	17	–	–	(126,500)	(126,500)			
Lease liabilities	19	–	–	(4,182)	(4,182)			
		–	–	(326,981)	(326,981)			

* Exclude prepayments

^ Certain comparative figures have been reclassified in order to conform with current year's presentation

NOTES TO THE FINANCIAL STATEMENTS

34. FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT (CONT'D)

Measurement of fair values

(i) Valuation techniques and significant unobservable inputs

The following tables show the valuation techniques used in measuring Level 2 and Level 3 fair values, as well as the significant unobservable inputs used.

Financial instruments measured at fair value

Type	Valuation technique	Key unobservable inputs	Inter-relationship between key unobservable inputs and fair value measurement
Foreign currency forward contracts	The fair values are based on broker quotes. Similar contracts are traded in an active market and the quotes reflect the actual transactions in similar instruments.	Not applicable	Not applicable
Financial assets at fair value through profit or loss	The fair values of the investments were determined using the net asset value approach which considers the fair values of the underlying assets and liabilities of the investees.	Net asset value	The estimated fair value would increase/decrease if net asset value is higher/lower

(ii) Transfer between Level 1 and 2

During the financial year ended 31 March 2022 and 31 March 2021, there were no transfers between Level 1 and Level 2.

(iii) Level 3 fair values

The following table shows a reconciliation from the beginning balances to the ending balances for fair value measurement in Level 3 of the fair value hierarchy:

	Financial assets designated at fair value through profit or loss			
	Group		University Company	
	2022	2021	2022	2021
	\$'000	\$'000	\$'000	\$'000
Unquoted investments				
At 1 April	939,754	681,161	931,021	671,737
Gains in profit or loss	222,672	188,516	217,298	191,028
Subscriptions/Contributions	524,938	205,859	523,477	203,634
Redemptions/Distributions	(175,189)	(135,782)	(175,089)	(135,378)
At 31 March	1,512,175	939,754	1,496,707	931,021

35. CHARITY ACT AND REGULATIONS

As required to be disclosed under Section 17(1) of the Charities (Institutions of a Public Character) Regulations, the University Company has received total tax deductible donations of \$35,256,000 (2021: \$21,079,000) in the current financial year.

36. COMPARATIVE INFORMATION

The consolidated financial statements of the Group and the statement of financial position and statement of changes in funds and reserves of the University Company as at and for the year ended 31 March 2021 were audited by another auditor who expressed an unmodified opinion on those financial statements on 19 August 2021.

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