

Sustainable Impact

Annual Report 2023



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A beacon of sustainability, Gaia is made almost entirely of timber harvested from renewable forests. It houses NTU's business school and has shared facilities that can be used by other university departments.

The image shows a vast, multi-level atrium with a prominent wooden structural frame. The ceiling is composed of large glass panels supported by a metal grid, allowing natural light to fill the space. Multiple levels are visible, each with white metal railings. The ground floor features a large, open area with a wooden lattice partition in the background. The overall atmosphere is modern and airy, with a strong emphasis on natural materials and light.

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

46

corporate and
joint labs set
up with leading
multinationals on
campus

3,700

students had
overseas
immersion in 49
countries

18

joint/dual PhD
degree
programmes
with overseas
universities



HONOURS

26th

in QS World
University
Rankings 2023/24

1st

in Times Higher
Education Young
University Rankings
2023

7th

In World's
Top 50 Most
Cited Research
Organisations by
Top 100 Global
Innovators 2023
(Clarivate)

1st

globally for
Condensed
Matter Physics,
Energy and Fuels,
Materials Science,
Nanoscience &
Nanotechnology
and Physical
Chemistry
(2022-2023 Best
Global Universities,
US News & World
Report)



PEOPLE

24,700

undergraduates

9,800

graduate students

7,900

faculty, researchers
and staff from
75 countries

286,200

university alumni
representing
160 nationalities

9 in 10

of the Class of 2022
received a job offer
within four months
of graduation



RESEARCH & INNOVATION

S\$846m

in competitive
research grants
won in FY2022

93

patents granted
in FY2022

5,044

technology
disclosures
received since
FY2007

11

spin-off
companies in
FY2022

9

start-ups by staff
and students in
FY2022



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)

Board Chair's Message



“

NTU has improved across many yardsticks of progress as it competes to attract top-tier talent globally. NTU faculty, staff and students, with alumni and partners across the globe, continue to present ingenious solutions to challenging global problems.

ACCELERATING A SUSTAINABLE FUTURE

In the past year, NTU Singapore has continued to accumulate evidence that it is world-leading in the quality of its academic activities and world-changing in the impact of its endeavours.

Already recognised among the world's best universities, NTU has improved across many yardsticks of progress as it competes to attract top-tier talent globally. NTU faculty, staff and students, with alumni and partners across the globe, continue to present ingenious solutions to challenging global problems.

This is most apparent in our contributions to climate resilience and liveability, which we make with ever-increasing urgency.

Our newest academic complex, Gaia, recently unveiled as the largest wooden building in Asia and NTU's eighth “zero energy” building, clearly demonstrates this commitment. Not just a beautiful building, it embodies NTU's sustainability mindset and aspirations, which thread through all we do.



The incredible achievements of our community show how we educate people and generate ideas that lead to valuable outcomes for society. As we chart NTU's next lap with renewed energy and optimism, I look forward to seeing what we can all achieve together.

NTU's Sustainability Manifesto is now in its third year. It commits us to decarbonisation and sustainable development, reducing how much energy and waste we consume on campus and beyond. These efforts cement NTU's identity as an innovative, sustainable Smart Campus among the greenest in the world.

I am proud of our community for their support in delivering the Manifesto's promise, for without individual efforts, sustainability cannot take root.

Alongside this Manifesto is our new campus master plan, which is well underway. It supports a university campus in a garden like no other that will become a destination for more than our students, staff and faculty, with the arrival of three MRT stations on these grounds by the end of this decade.

During the last year, we bade farewell to Prof Subra Suresh, who returned to the United States. I thank Subra for his contributions as President during his five years at the helm. I also want to express my appreciation to Prof Ling San for taking on the additional responsibilities as Acting President on top of his duties as Deputy President and Provost during the interim.

We are pleased to appoint Prof Ho Teck Hua, an academic leader with outstanding credentials, as NTU's fifth President. Since joining the University on 24 April 2023, he has lost no time in meeting faculty, staff, students and alumni to understand the priorities and opportunities. Working with NTU's leadership and the Board to develop his plans, he will build on NTU's momentum and help to realise the ambitions and goals of NTU 2025 in education, research, innovation and service.

The accomplishments of the OneNTU community in this report attest to its inherent strength as "Pioneers Always". NTU is fortunate to build on the distinguished history of two parent institutions and its resulting DNA of resilience.

I thank, on behalf of NTU's Board of Trustees, all who have contributed to the University's advancement over the past year – our students, colleagues, alumni, benefactors, partners and supporters. I would also like to thank Prof Alexander Zehnder, Mr Goh Sin Teck and Mr Lim Chow Kiat, who retired from the NTU Board in March 2023 after each serving nearly a decade or more. The University appreciates their immense contributions.

I'm heartened to note how many are now enrolling in NTU's continuing education programmes to upgrade themselves. In this and so many other ways, NTU benefits from sound government policies, for which we are grateful.

NTU is a young university at just over 30 years old. The incredible achievements of our community show how we educate people and generate ideas that lead to valuable outcomes for society. As we chart NTU's next lap with renewed energy and optimism, I look forward to seeing what we can all achieve together.

Ms Goh Swee Chen

Chair, Board of Trustees

Nanyang Technological University, Singapore

In conversation with the NTU President



PROF HO TECK HUA

President and Distinguished University Professor

CONNECTING FOR FUTURE IMPACT

TELL US MORE ABOUT YOUR IMPRESSIONS OF NTU AND WHAT YOU SEE AS ITS STRENGTHS.

NTU is a young university. Yet, in global rankings, the University is consistently among the best in the world, notably in fundamental technological fields like materials science, nanoscience, energy and artificial intelligence (AI). NTU is ranked the world's top young university by Times Higher Education, and in Singapore, we have the biggest share of the world's most highly cited scientists. These accolades show that NTU is a standout despite its youth, and has global impact as well as the potential for greater success.

In fact, NTU can be a world-changing institution and a top technological university in Asia. NTU must commit to uniformity

in excellence to achieve this ambition. We will know we have arrived when we have many notable alumni across the globe and have a collaborative community that creates solutions to address global challenges.

HOW DO YOU PLAN TO ENLARGE NTU'S INFLUENCE IN THE WORLD?

Making and strengthening connections is essential. First, we connect talented people with opportunities within our ecosystem. We then hope that they will pay it forward by creating opportunities for others. We connect global challenges with impactful solutions – something in which we have already made good progress. Finally, we make NTU a key node in the global research and innovation ecosystem, a node that catalyses transformative change for the good of humankind.



First, we connect talented people with opportunities within our ecosystem. We then hope that they will pay it forward by creating opportunities for others. We connect global challenges with impactful solutions – something in which we have already made good progress. Finally, we make NTU a key node in the global research and innovation ecosystem, a node that catalyses transformative change for the good of humankind.

We will continue to be a leader in influencing research, innovation, and policy through thought leadership. Through education, we will disseminate ideas needed for today and the future.

As a university “with heart, minds and hands”, these efforts span diverse disciplines, from engineering and science to the humanities and social sciences, so that we provide holistic solutions driven by positive motivations in a time of increasing automation.

HOW IS NTU PREPARING ITS UNDERGRADUATES FOR THE FUTURE?

Being a technological university provides us a competitive advantage in an Industry 4.0 world. Our programmes nurture future-ready graduates who are resilient and adaptive, and are ready to pivot towards different careers when needed.

NTU now admits more than half of its students through aptitude-based admissions, recognising more forms of talent and success. We have also started a talent-based scholarship for undergraduates.

An NTU education on our Smart campus imparts the three “Cs”: character, competence, and cognitive agility. Learning outcomes and co-curricular activities are mapped to these three attributes to measure each student’s development. We also use data analytics to improve educational programmes and guide each student’s growth.

The Interdisciplinary Collaborative Core curriculum has been a powerful way to simulate real life scenarios and prepare students for the future of work. Students learn alongside peers from diverse disciplinary backgrounds in state-of-the-art mega learning studios. As they tackle contemporary issues in teams, they gain essential skills and experience in communications, digital problem solving, and entrepreneurship.

As Singapore transitions to a green economy, we have launched new interdisciplinary minors and second majors in sustainability. To cultivate talent who can meet emerging needs, we will be offering courses that will be useful in the next five to 10 years. All NTU students also take internships to enhance their employability and career readiness.

WHAT ARE YOUR PLANS FOR GRADUATE AND CONTINUING EDUCATION?

An NTU education should prepare students for a lifetime of inquiry. But the world is not static, and new learning needs arise. NTU wants to be a lifelong learning partner of choice. We offer our alumni subsidies in course credits and discounts in programme fees.

We have made professional upgrading more straightforward and seamless. Working adults have the flexibility to learn through modular, self-contained credit-bearing courses. Credits earned go towards professional certifications by choosing modules that align with their career interests and goals. There has been a 15-fold increase in demand for FlexiMasters (certificates that are stackable to a degree) courses since 2019. Learners can progress from graduate certificates to FlexiMasters, and eventually to full master’s degrees.

Graduate student intake for master’s degrees has increased. We will continue to grow this enrolment and support human capital development for career growth. Our master’s degree programmes are responsive to emerging market trends and now cover fields such as AI, cyber security, data science, fintech, sustainability, and healthy living.

WHY IS NTU SO FOCUSED ON SUSTAINABILITY, AND HOW IS THE UNIVERSITY PROGRESSING WITH ITS SUSTAINABILITY MANIFESTO?

Sustainability is a top global priority. Climate change and environmental degradation are endangering our lives and hurting our planet. Therefore, each of us must do our part.

In research, we are uniquely positioned to address long-term climate and societal resilience. As part of our NTU 2025 Strategic Plan, we are taking the ambitious steps needed to mitigate the consequences of climate change.

On campus, sustainability is integrated into our daily lives. Gaia is the largest wooden building in Asia and the latest example of a building designed with sustainability in mind. It is also NTU's eighth "zero energy" building, which means that it produces as much energy as it uses.

As of 2022, all of NTU's eligible buildings are Green Mark Platinum-certified, earning Singapore's highest award for sustainable building design. I am proud that NTU has the greenest campus in Singapore and regularly makes the list of the world's most beautiful campuses.

In 2021, we launched a Sustainability Manifesto to propel our wide-ranging efforts and solidify our position as a global leader in sustainability. NTU is committed to decarbonisation and sustainable development, with a goal of carbon neutrality by 2035. In 2022, we had reductions of 29% in energy, 18% in water and 31% in waste. Our goal is to have a 50% reduction in net energy and waste consumption by 2026.

NTU received the Whole Systems Approach to Sustainable Campus Award in May from the International Sustainable Campus Network. The award recognises our expansive campus-wide sustainability efforts, which were showcased in a three-part CNA documentary, *Our World to Change*.

WHAT ARE SOME HIGHLIGHTS FROM NTU'S R&D AND RESEARCH COLLABORATIONS?

NTU's faculty has successfully attracted the competitive grant funding needed for research that leads to innovative, world-changing solutions. In fact, we secured a record \$846.3 million in research funding in FY2022.

The number of labs we have with companies and public agencies has grown from 11 in 2018 to 20 in 2022. We have also increased



Launching Gaia, NTU's eighth "zero energy" building and the largest wooden building in Asia.

our share of papers published in top academic journals. We are ramping up hiring of the very best talent whose research “home runs” have the potential to disrupt industries.

To increase our chances of producing breakthroughs, we facilitate experimentation across the campus and continue to invest in our seven world-class, pan-university shared research facilities. We also have a specific programme that supports faculty working in unconventional cross-disciplinary research.

HOW HAVE INNOVATION AND ENTREPRENEURSHIP BEEN BOOSTED ON CAMPUS?

Our innovation and enterprise (I&E) ecosystem has been enhanced and now covers all aspects of founding and running a start-up. This will allow our entrepreneurial students to fulfil their big dreams.

We also unveiled plans for the NTU Innovation Port at our learning hub, called The Arc. The Innovation Port will be a focal point where students can discuss start-up ideas, receive advice, and meet industry partners.

In the last five years, more than 1,400 students took entrepreneurship modules and courses. More than 340 students travelled overseas to work with start-ups and accelerators. Of these, 45 have founded or joined a start-up after graduation.

NTU has incubated over 210 start-ups and spin-off companies in the past five years. We formed 11 faculty spin-offs in FY2022 compared to 6 in FY2021. Follow-on funding in FY2022 increased by 110% to a record high of \$46 million. The post-money valuation of investee companies has increased nine-fold from \$94 million in FY2018 to \$818 million in FY2022.

YOU RECENTLY TALKED ABOUT THE IMPORTANCE OF RESEARCH TRANSLATION TO NTU. CAN YOU TELL US MORE ABOUT YOUR PLANS IN THIS AREA?

NTU has done well in knowledge creation and dissemination, and is now aiming for greater success in value creation.

Working with established global and local partners, we will intensify our efforts to nurture promising “deep impact tech start-ups”. We have launched a new licensing and commercialisation platform to support experimentation and the creation of impactful solutions.

The interdisciplinary nature of today’s challenges spans domains ranging from engineering and science to the humanities. Meeting these challenges necessitates a whole-of-university effort in innovation. We will bring together professors, students, and industry partners to develop path-breaking innovations.

WHAT RELATIONSHIPS MUST BE BUILT ON THE INTERNATIONAL STAGE FOR A UNIVERSITY SEEKING TRUE GLOBAL IMPACT?

Today’s global challenges require solutions from diverse, international teams. NTU works with some of the best global partners. For instance, we launched a new hub with Imperial College London to jointly tackle global issues. We were also selected by the United Nations to set up a training centre for sustainability education in the region.

NTU is also a bridge between Singapore and countries in Asia. We are further strengthening our partnership with China and recently held a major alumni conference in Indonesia for the first time.

WHAT OTHER STEPS MUST NTU TAKE IN ITS PURSUIT OF CONTINUED SUCCESS?

NTU’s vision is to be a great global university founded on science and technology, nurturing leaders and creating societal impact through interdisciplinary education and research.

Therefore, we must continue to seek out and invest in the best talent. We are doubling our target of Nanyang Assistant Professors and Management Associates hired. Both of these recruitment programmes are critical to sustaining a pipeline of outstanding talent. We will attract the finest students to NTU by launching new flagship programmes. These programmes will provide these students with tremendous opportunities to excel in our digital future.

We are also increasing our revenue sources, including philanthropic support, to develop talent and invest in emerging research areas and infrastructure expansion.

Supported by a collaborative OneNTU culture, I am confident that we have what it takes to achieve sustained excellence and cement NTU’s position as one of the top technological universities in the world.

Milestones

- Launch of the S\$6 million RGE-NTU Sustainable Textile Research Centre, a partnership with Royal Golden Eagle (RGE) to develop eco-friendly and sustainable textiles
- The S\$45 million Centre for Advanced Robotics Technology Innovation, focused on user-friendly robotics technologies for logistics, manufacturing and eldercare, takes off



- NTU and the Agency for Science, Technology and Research (A*STAR) tie up to boost research in the science of learning and the use of new technologies in future classrooms
- The Rehabilitation Research Institute of Singapore at NTU and Tan Tock Seng Hospital unveil a wearable assistive robot that prevents falls and aids in physiotherapy



- Rwandan President His Excellency Paul Kagame delivers the Majulah Lecture; NTU and Rwanda strengthen ties with a new academic collaboration



August 2022

- A new centre for blockchain research and education, supported by Algorand Foundation's US\$50 million programme, is announced
- Led by Earthlink NTU, members of the NTU community plant 100 trees on campus in support of the National Parks Board's nation-wide initiative to plant a million more trees by 2030



September 2022

- The NTU Singapore-India Dialogue session held in Bengaluru draws more than 200 business and government leaders, academics and distinguished alumni
- Official launch of the School of Chemistry, Chemical Engineering & Biotechnology, an interdisciplinary school of the Colleges of Engineering and Science

- NTU, A*STAR and the National Healthcare Group formalise the establishment of co11ab Novena, a S\$15 million biomedtech incubator located at NTU's medical school
- New microbiome research centre started to tackle obesity and chronic diseases



- NTU partners local hospitals to set up a national registry to tackle severe asthma

- NTU receives S\$12 million from the Singapore Maritime Institute to further deepen Singapore's maritime R&D capabilities in energy and sustainable development
- NTU rises 10 places to rank 36th in the Times Higher Education World University Rankings, its highest position to date in the global rankings
- Collaboration with Global Green Connect to develop and deliver sustainable technology programmes to upskill professionals for careers in the emerging green economy



October 2022

- NTU rises three places to 30th place and ranks 1st in five subjects in US News & World Report's global university rankings; 12 subjects are in the world's top 10; NTU ranks 2nd in Artificial Intelligence, a new subject added to the rankings
- Schmidt Futures selects NTU to be part of a US\$148 million postdoctoral fellowship programme in AI research
- NTU scientists join a Singapore effort to study and develop a novel floating hybrid renewable energy system that uses solar, wind and tidal energy to generate electricity



- Plans announced for a S\$5.7 million investment to ramp up campus solar energy production by end-2023; more than 13,000 new solar photovoltaic panels will be installed on campus, adding to the existing 19,000 solar panels

- University alumni, faculty and partners raise S\$3 million for a new professorship named after NTU's founding president, Prof Cham Tao Soon, to recognise mid-career faculty with distinguished achievements
- A S\$5 million research collaboration with OCBC Bank to develop tech solutions in sustainability, data privacy and cybersecurity is set in motion
- 41 NTU scientists are in Clarivate Analytics' Highly Cited Researchers 2022 list, the most among Singapore institutions; globally, NTU is among the top 25 institutions with the most number of influential scientists



November 2022

- In partnership with ComfortDelGro Bus, NTU sets up Singapore's first interactive Smart Mobility Experience Centre on campus and unveils the NTU Omnibus app for commuters
- Imperial College London and NTU form a collaborative research hub to tackle pressing global challenges such as the use of AI and robotics in healthcare
- NTU's third Research Centre of Excellence – the S\$160 million Institute for Digital Molecular Analytics and Science – is launched to advance molecular analysis with digital tools for real-time analysis of health, disease and environmental information



- Livent and NTU tie up to accelerate innovation in sustainable lithium battery technologies
- New Biosafety Level 3 lab launched to support the nation's fight against COVID-19 and future pandemics



- Mastercard-NTU Joint Lab established to train and reskill cybersecurity talent in the region

December 2022

- NTU and Indonesia's Ministry of Education, Culture, Research and Technology establish a joint research institute – INSPIRASI – to solve sustainability challenges and groom talent



- In collaboration with healthcare institutions, a large-scale population study is started to track the health of 100,000 Singaporeans to identify new ways to prevent diseases

Milestones

- NTU and the European Union Delegation to Singapore launch an inaugural exhibition by emerging ASEAN artists as part of Singapore Art Week



- NTU unveils a Management Associate Programme for young talent to pursue a meaningful non-academic career in the higher education sector
- Prominent behavioural scientist and academic leader Prof Ho Teck Hua is announced as the fifth President of NTU from 24 April 2023



- Collaboration with Vietnam's National Innovation Centre to build research translation and innovation capacity for start-ups, research institutions and companies

- The third Singapore-India Hackathon fosters collaboration between students and start-ups from both countries in areas such as fintech and sustainability
- A pan-university initiative to boost innovation and entrepreneurship is launched; the NTU Innovation Port, a one-stop centre for innovation-related matters, is unveiled



- S\$1 million is raised to support students and university programmes through the We Belong campaign
- Partnership with Se-secure Waste Management on a pilot battery recycling plant to extract metals from battery waste using biomass waste

January 2023

- NTU scientists demonstrate the theoretical phenomenon of quantum recoil for the first time, paving the way for precise X-ray imaging
- Another NTU scientist showcases an ultra-thin material made from recycled fruit that can be used in equipment to purify dirty water



February 2023

- NTU is ranked 7th among research organisations most cited by the world's top innovators, underscoring its strengths in industry-relevant research; NTU is the only Singapore institution in the top 10 global ranking by Clarivate
- Satellite imagery-guided maps built by the Earth Observatory of Singapore facilitate Turkey-Syria earthquake rescue work
- Researchers embark on a 10-day scientific expedition to Antarctica for the first time to better understand the threat of the melting Antarctic ice sheet



March 2023

- During NTU Service Week, students, alumni, faculty and staff join forces with community partners to volunteer in social service initiatives, as well as plant trees on campus; NTU also takes the Green Nation Pledge as a green Champion

April 2023

- Researchers demonstrate a more sustainable way to cool servers in data centres
- NTU announces a new scholarship for undergraduates to nurture non-academic achievements and talents
- Partnering the United Nations' training arm, NTU hosts a training centre for sustainability education and knowledge-sharing between government officials and leaders of Asia-Pacific countries



- NTU's commitment to sustainability is recognised with the Whole Systems Approach Excellence Award from the International Sustainable Campus Network



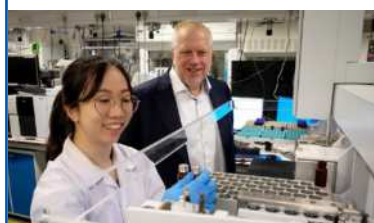
- Collaboration with National Arts Council to renew the Asia Creative Writing Programme for aspiring writers

May 2023

- The S\$24 million Delta-NTU Corporate Lab for Advanced Robotics is launched to develop collaborative robotic systems



- The Nanyang Environment & Water Research Institute receives S\$92 million from the National Research Foundation for research and innovation



June 2023

- NTU unveils Singapore's first integrated smart car park system that combines parking with electric vehicle charging via an integrated mobile app



- NTU's eighth "zero energy" building, Gaia, is showcased as the largest wooden building in Asia and the new home of the Nanyang Business School



- A partnership with the Singapore Land Authority to use satellite technology to measure changes to Singapore's land height and sea levels begins with the setting up of a reference station on Lazarus Island



- A study by NTU and TUMCREATE, in collaboration with Surbana Jurong, finds a significant geothermal resource in Singapore that could be a consistent source of clean energy

July 2023

- About 10,700 students graduate in 23 ceremonies at the NTU Convocation, where Prof Ho Teck Hua is inaugurated as the 5th President of NTU and conferred the title of Distinguished University Professor; honorary doctorates are conferred on Mr Philip Yeo, Ms Ho Peng and Prof Dame Lynn Gladden



- Our World to Change, a three-part documentary series on NTU's sustainability efforts in support of the Singapore Green Plan, premieres on CNA
- Three NTU-built satellites are launched to test 3D-printed parts and track atmospheric data, taking NTU's total satellite launch count to 13

Board of Trustees

AS AT 31 MARCH 2023



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
(Retired from NTU on 31 March 2023)



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 &
Digital Officer
Chief Technology Officer,
Defence & Public Security
ST Engineering
Appointed on 15 September 2017



Mr LIM Chow Kiat
Chief Executive Officer
GIC Pte Ltd
Appointed on 1 April 2015
(Retired from NTU on 31 March 2023)



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
(Retired from NTU on 31 March 2023)



Prof Subra SURESH
President
Nanyang Technological
University, Singapore
Appointed on 1 January 2018
(Retired from NTU on 31 December 2022)

University Leadership

AS AT 31 JULY 2023

PRESIDENT'S COUNCIL



Prof HO Teck Hua
President and Distinguished
University Professor
Appointed on 24 April 2023



Prof LING San
Deputy President and Provost,
and President's Chair in
Mathematical Sciences
*Appointed on 1 January 2020 and
1 April 2019 respectively*

- Acting President
(1 December 2022 - 23 April 2023)
- 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 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 LAM Khin Yong
Vice President (Industry) and
President's Chair in Mechanical
and Aerospace Engineering
*Appointed on 1 January 2023 and
1 April 2019 respectively*

- Senior Vice President (Research)
(1 January 2020 - 31 December 2022)
- 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 Luke ONG
Vice President (Research)
and Distinguished University
Professor
*Appointed on 1 January 2023 and
1 August 2022 respectively*

- Vice President (Research)-
Designate
(1 August - 31 December 2022)



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)

ACADEMIC APPOINTMENTS

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 LAM Khin Yong

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

Appointment details as above

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

Appointment details as above

Prof Kumar RAMAKRISHNA

Dean, S Rajaratnam School of International Studies, and Provost's Chair in National Security Studies

Appointed on 1 January 2023 and 1 April 2021 respectively

- Associate Dean, Policy Studies, S Rajaratnam School of International Studies (1 April 2020 - 31 December 2022)
- Head, International Centre for Political Violence & Terrorism Research, S Rajaratnam School of International Studies (1 April 2020 - 31 December 2022)
- Head, Policy Studies, S Rajaratnam School of International Studies (1 April 2015 - 31 March 2020)
- Head, Centre of Excellence for National Security, S Rajaratnam School of International Studies (1 April 2007 - 31 March 2015)
- Acting Head, Centre of Excellence for National Security, S Rajaratnam School of International Studies (1 April 2006 - 31 March 2007)
- Head, Graduate Studies, S Rajaratnam School of International Studies (1 July 2003 - 30 June 2006)

Prof Simon REDFERN

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

Appointed on 1 August 2019

Prof Christina SOH

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

Appointed on 1 March 2020 and 1 April 2021 respectively

- Vice President (Strategy & Leadership Development) (1 January 2022 - 30 June 2023)
- 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)

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 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

University Leadership

AS AT 31 JULY 2023

Mr SIEW Hoong Kit

Executive Director, Office of Development & Facilities Management

Appointed on 1 January 2023

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 & RESEARCH CENTRES OF EXCELLENCE

Prof Alain FILLoux

Director, Singapore Centre for Environmental Life Sciences Engineering

Appointed on 1 September 2022

Prof Christine GOH

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

Appointment details as above

Prof Jay T GROVES

Director, Institute for Digital Molecular Analytics and Science, and President's Chair in Bioanalytical Science

Appointed on 1 July 2021

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)

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 & 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

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

Director, Chinese Heritage Centre, Director, Centre for Chinese Language & Culture, and Head of Chinese, School of Humanities

Appointed on 1 November 2016, 1 March 2017 and 1 April 2017 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 OOI Kim Tiow

Associate Provost (Alumni)

Appointed on 1 April 2023

- Chair, School of Mechanical & Aerospace Engineering (1 October 2017 - 31 March 2023)
- Associate Chair (Academic), School of Mechanical & Aerospace Engineering (1 June 2011 - 31 May 2017)

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 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) and President's Chair in Communication Studies**

- Appointed on 1 April 2022 and 15 October 2022 respectively*
- 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)

Assoc Prof Vivien HUAN**Associate Vice President (Wellbeing)***Appointed on 1 January 2023*

- Deputy Associate Provost (Student Wellbeing) (1 February 2020 - 31 December 2022)
- 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)

Prof LAM Kwok Yan**Associate Vice President (Strategy & Partnerships), Director, Strategic Centre for Research in Privacy-Preserving Technologies & Systems, and Executive Director, The National Centre for Research in Digital Trust***Appointed on 1 April 2022, 1 November 2018 and 1 October 2022 respectively*

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

Prof LIU Hong**Associate Vice President, International (Liaison & Coordination), and Tan Lark Sye Chair Professor in Chinese Language and Culture***Appointed on 1 May 2022 and 1 April 2019 respectively*

- Director (Research & Executive Education), Nanyang Centre for Public Administration (1 January 2023 - 31 December 2023)
- 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 LIM Kah Leong**Associate Vice President (Biomedical & Life Sciences), Vice Dean (Research), Lee Kong Chian School of Medicine, and President's Chair in Translational Neuroscience***Appointed on 1 April 2023, 15 October 2019 and 1 April 2021 respectively*

- Research Director (Biomedical & Life Sciences) (1 July 2021 - 31 March 2023)

Prof WEN Yonggang**Associate Vice President (Capability Building) and Alibaba-NTU President's Chair in Computer Science and Engineering***Appointed on 1 April 2023 and 1 April 2021 respectively*

- Associate Dean (Research), College of Engineering (1 January 2018 - 31 March 2023)
- Acting Director, Nanyang Technopreneurship Centre (1 September 2017 - 30 April 2019)

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 Andy KHONG**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)

Assoc Prof LOW Kin Yew**Deputy Associate Provost (Programmes) and Co-Director, Interdisciplinary Collaborative Core Office, part of NTU's Institute for Pedagogical Innovation, Research & Excellence***Appointed on 1 October 2022 and 1 July 2021 respectively*

- Associate Dean (Undergraduate Academic), College of Business (Nanyang Business School) (1 August 2018 - 30 June 2021)

Prof May O LWIN**Deputy Associate Provost (Faculty Talent Development), President's Chair in Communication Studies and Chair, Wee Kim Wee School of Communication & Information***Appointed on 1 July 2023, 1 April 2021 and 1 July 2020 respectively*

- Associate Dean (Special Projects), College of Humanities, Arts, & Social Sciences (1 October 2015 - 30 June 2020)
- Director, University Scholars Programme (1 April 2015 - 30 June 2021)
- Associate Dean (Graduate Education), College of Humanities, Arts, & Social Sciences (1 October 2012 - 30 September 2015)
- Associate Chair (Undergraduate Studies), Wee Kim Wee School of Communication & Information (1 November 2010 - 31 December 2012)
- Head, Division of Public & Promotional Communication, Wee Kim Wee School of Communication & Information (1 July 2008 - 30 June 2011)
- Acting Head, Division of Public & Promotional Communication, Wee Kim Wee School of Communication & Information (1 January 2007 - 30 June 2008)

Assoc Prof Jesvin YEO**Deputy Associate Provost (Strategy) and Deputy Director, University Scholars Programme***Appointed on 1 October 2022 and 1 July 2020 respectively*

- Associate Dean (Students), College of Humanities, Arts, & Social Sciences (1 August 2020 - 16 October 2022)

Gifts to the University

Philanthropy continues to be a great source of strength for NTU, advancing its goals in education, research and innovation. The steadfast dedication of our donors plays a vital role in driving the University's mission forward.



A gift of support for deserving medical students: (From left) Mr Teo Ming Kian, Chairman of Vertex Holdings; Mr Joel Kellman, Co-Founder of GGV Capital; Mr Jixun Foo, Global Managing Partner at GGV Capital; Ms Lien Siaou-Sze, then NTU Vice President for University Advancement; Mr Lim Chuan Poh, Chairman, LKCMedicine Governing Board; and Prof Joseph Sung, LKCMedicine Dean.

FY2022 gifts include:

\$5 million from GGV Capital to establish the GGV Capital Award, which aims to support financially disadvantaged medical students at NTU. This generous contribution ensures that these students of the Lee Kong Chian School of Medicine (LKCMedicine) have equal access to a transformative education, empowering them to develop the knowledge, skills and values necessary to become ethical and compassionate medical professionals in the future.

\$2.5 million from Ms Petrina Leong, Ms Sandy Leong and Mr Jimmy Leong – the children of Madam Wang Lee Wah – to establish the Wang Lee Wah Memorial Fund in Microbiome Research. The Fund supports new research initiatives aimed at advancing knowledge of the intricate relationship between microbiome, disease and human health,

and translating discoveries into innovative solutions that address some of Asia's most critical health challenges.

Close to \$2 million from Temasek Foundation to support various programmes and initiatives in NTU, including the Temasek Foundation-NTU (CoHASS) Public Administration Leaders Programme in Thailand, and funding for the Temasek Foundation-NIE Integrated STEM Model in Gujarat, India, to foster the development of a sustainable and scalable integrated STEM programme to empower educators and school leaders to drive economic transformation.

\$1 million from NTU Board Chair Ms Goh Swee Chen to establish the Mr & Mrs Goh Chan Boo Scholarship. Named in honour of Ms Goh's parents, the Scholarship offers promising undergraduates who have a strong interest in the humanities and social sciences the chance to pursue their studies at NTU.

\$1 million from Mrs Margaret Lien to support the transformation of the Margaret Lien Centre for Professional Success into a physical space, in addition to its online platform. The funding further enhances NTU's commitment to fostering well-rounded students by instilling value-based ethics, a strong social conscience and compassion for those in need.

\$1 million (inclusive of another gift donated in 2010) from Hi-P Singapore Pte Ltd towards the Hi-P Scholarship, extending the impact of the scholarship programme in recognising and supporting academically outstanding students specialising in mechanical engineering.

A gift from Schmidt Futures for the Eric and Wendy Schmidt AI in Science Postdoctoral Fellowship Programme, where exceptional postdoctoral fellows get opportunities for mentorship, education and network development to enable them to pursue innovative research leveraging AI-related techniques.

Close to S\$750,000 from Aon

for the Insurance Risk and Finance Research Centre at NTU to finance its participation in the Global-Asia Insurance Partnership programme, which aims to address the future development and needs of the insurance sector, such as fostering actionable research, policy recommendations and innovation.

S\$500,000 from Singapore Maritime

Institute towards the MPA Chair Professorship in Maritime Management, which replaced the MPA Professorship in Shipping Management that was first established in 2003 with a gift from the Maritime and Port Authority of Singapore (MPA). The appointed MPA Endowed Chair Professor will teach courses, conduct research, organise events, provide guidance to government agencies and industry professionals, and represent Singapore as a thought leader in the maritime field.

S\$500,000 from Mr James Lim Jit

Teng to establish the You Jin Education Endowment Fund, which seeks to enrich students' learning and appreciation of Chinese language and heritage. The gift will help strengthen NTU's commitment to nurturing the next generation of leaders, writers and thinkers who will spur the appreciation and development of Chinese language, culture, and creativity towards new levels of mastery.

S\$400,000 from Sim Foundation

as continued support to increase the gift impact of the Sim Yung Chong Medical Scholarship that was established in 2018 for medical undergraduates at the Lee Kong Chian School of Medicine. The Scholarship not only eases the financial burden of aspiring medical students but also plays a vital role in growing the talent pool of future medical professionals who will help meet the increasing healthcare needs of our society.

"We Belong" Campaign 2023

GIVING DAY



More than
S\$1 million raised
for We Belong 2023

BEST FOOT FORWARD



1,043 participants
More than
S\$100,000 raised
Over
54,000km clocked

SERVICE WEEK



More than **6,000**
beneficiaries supported
More than **9,700**
volunteer hours contributed
Over **100** projects



NTU successfully concluded the second edition of the We Belong campaign, raising over S\$1 million from the OneNTU community and its supporters. Through its three signature initiatives – Service Week, Best Foot Forward and Giving Day – the campaign effectively fostered philanthropy and volunteerism, attracting new donors, with 45 per cent of these contributors making their first donation to NTU. The overall participation rate also increased. The Best Foot Forward fundraising run, which drew over 1,000 participants, featured a collaboration with the NTU Runners' Club, which helped to increase student engagement. To address new and relevant causes through Giving Day 2023, the NTU Wellbeing Fund was introduced as an additional area of support alongside the existing NTU Bursary Fund, School Advancement Funds, NTU Sustainability Fund, and NTU Priorities Fund.



A promising start to Giving Day.

FINANCIAL REVIEW

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

- The Board Executive Committee oversees the execution by Management of the overall strategy, financial objectives and directions set by the Board.*
- 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 issues relating to 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 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 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.

*The Finance Committee, which provides oversight of the financial management of the University, was retired on 17 January 2023. The Board Executive Committee, amongst other things, thereafter assumed the responsibilities of the Finance Committee.

BOARD MEMBERS

For the financial year ended 31 March 2023, 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 Chair, Board Executive Committee	1 Aug 2019	5	5
2	Lim Chuan Poh	Member, Academic Affairs Committee Member, Investment Committee Member, Nominating Committee Member, Remuneration Committee Member, Board Executive Committee	28 Mar 2006	5	4
3	Alexander JB Zehnder (Retired 31 March 2023)	Chair, Academic Affairs Committee Member, Audit and Risk Committee Member, Finance Committee	25 Aug 2009	5	5
4	Goh Sin Teck (Retired 31 March 2023)	Member, Alumni and Development Committee Member, Audit and Risk Committee Member, Campus Vibrancy Advisory Committee	1 Jun 2012	5	5
5	Low Check Kian	Chair, Investment Committee	1 Apr 2014	5	3
6	Lim Chow Kiat (Retired 31 March 2023)	Member, Investment Committee	1 Apr 2015	5	4
7	Tan Chin Hwee	Chair, Audit and Risk Committee Member, Investment Committee	1 Apr 2015	5	4
8	Zainul Abidin Rasheed	Member, Audit and Risk Committee Member, Board Executive Committee	1 Apr 2017	5	4
9	Lee Shiang Long	Member, Finance Committee	15 Sep 2017	5	5
10	Subra Suresh** (Retired 31 December 2022)	Member, Academic Affairs Committee Member, Finance Committee Member, Investment Committee	1 Jan 2018	4	4

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	4
13	Anthony Mallek	Member, Audit and Risk Committee Member, Board Executive Committee Member, Finance Committee	1 Apr 2019	5	5
14	David Su Tuong Sing	Member, Investment Committee	1 Aug 2021	5	5
15	Dewi Fortuna Anwar	Member, Alumni and Development Committee	1 Aug 2021	5	0
16	Lam Chung Nian	Member, Nominating Committee Member, Remuneration Committee	1 Aug 2021	5	5
17	Lai Chung Han	Member, Academic Affairs Committee Member, Nominating Committee Member, Remuneration Committee	4 Oct 2021	5	4
18	Ching Wei Hong	Member, Alumni and Development Committee Member, Board Executive Committee	1 Apr 2022	5	5

**Prof Ling San was appointed Acting President from 1 December 2022 to 23 April 2023.

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, reflects 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 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 84%.
- The Board Committees had, during the year, an aggregate meeting attendance of 87%.

UNIVERSITY LEADERSHIP

The President's Council is NTU's executive and policy-making body, chaired by the President, under the oversight of the Board of Trustees. The President's Council develops and enables NTU's strategic ambitions and direction.

The President's Council's broad executive authority encompasses the following:

- advocates and reports to the Board of Trustees on NTU's strategic direction and performance;
- builds and fosters a leadership team committed to fulfilling NTU's vision and mission;
- collaborates with leaders of various government agencies and private sector entities;
- champions NTU, its initiatives and campaigns with input from other councils or committees described in NTU's governance framework;
- drives and supports academic excellence and integrity;
- enables collegiality between NTU's Colleges, Schools, Centres and Departments;
- endorses academic, research, administrative, operational and financial policies;
- fosters a culture of knowledge and lifelong learning with NTU;
- oversees NTU's governance and compliance framework;
- maintains a strong and consultative relationship with the Board of Trustees;
- monitors NTU's key operations and fiscal health;
- represents the ideals and ambitions of NTU;
- supports excellence in teaching, research and administration across NTU; and
- upholds NTU's credibility and reputation.

Corporate Governance

UNIVERSITY LEADERSHIP (CONT'D)

The President's Council comprises:

- (a) President;
- (b) Deputy President and Provost;
- (c) Senior Vice President (Health & Life Sciences);
- (d) Senior Vice President (Administration);
- (e) Vice President (Research);
- (f) Vice President (Industry); and
- (g) Vice President (Innovation & Entrepreneurship).

The President's Council meets monthly and at other appropriate times. Deans, Chiefs, Centre Directors, Heads of Department or other faculty and staff may, from time to time, be invited to attend, present or update the President's Council on appropriate topics corresponding to their respective functions.

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

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 2023.

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 33 to 83 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 2023, 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)
Mr Anthony Mallek	
Dr Lee Shiang Long	
Prof Sir Leszek Borysiewicz	
Mr Lim Chuan Poh	
Mr Lo Kien Foh	
Mr Low Check Kian	
Mr Tan Chin Hwee	
Mr Zainul Abidin Bin Mohamed Rasheed	
Mr David Su Tuong Sing	
Mr Lam Chung Nian	
Prof Dewi Fortuna Anwar	
Mr Lai Chung Han	
Mr Ching Wei Hong	
Prof Wolfgang A. Herrmann	(Appointed on 1 April 2023)
Mr Jimmy Phoon Siew Heng	(Appointed on 1 April 2023)
Prof Ho Teck Hua	(Appointed on 24 April 2023)
Ms Alice Hung	(Appointed on 1 July 2023)
Mr Liew Nam Soon	(Appointed on 1 July 2023)
Mr Girish Ramachandran	(Appointed on 1 July 2023)

Prof Subra Suresh retired as Trustee of the University Company on 31 December 2022 whilst Prof Alexander Jakob Boris Zehnder, Mr Goh Sin Teck and Mr Lim Chow Kiat retired as Trustees of the University Company on 31 March 2023.

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 directors' shareholdings kept by the University Company's related corporations under Section 164 of the Act.

AUDITORS

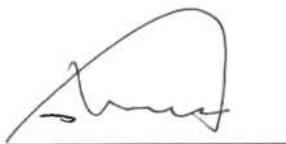
The auditors, KPMG LLP, have indicated their willingness to accept re-appointment.

On behalf of the Board of Trustees



Ms Goh Swee Chen
Chair of the Board of Trustees

Trustee



Prof Ho Teck Hua
President of Nanyang Technological University

Trustee

23 August 2023

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 2023, 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 33 to 83.

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 2023 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.

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.

VALUATION OF LEVEL 3 FINANCIAL ASSETS

(Refer to notes 11 and 33 to the financial statements)

The key audit matter

As at 31 March 2023, the Group's Level 3 financial assets amounted to \$1.6 billion which represents 21% of the Group's total assets and comprised mainly investments in limited partnerships and a real estate income trust. The fair values of the investments in limited partnerships and a real estate income trust were determined using the net asset value ("NAV") approach which considers the fair values of the underlying assets and liabilities of the limited partnerships and a real estate income trust. The fair values of the investments in limited partnerships and a real estate income trust 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 a real estate income trust, and the related estimation uncertainty, this is considered a key audit focus area.

Independent Auditors' Report

TO THE BOARD OF TRUSTEES OF NANYANG TECHNOLOGICAL UNIVERSITY

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 and a real estate income trust based on their NAV.

We independently obtained confirmations from the fund managers and fund administrators on the NAV as at 31 March 2023. In addition, we obtained the latest audited financial statements of the limited partnerships and a real estate income trust to assess the appropriateness of the valuation methodologies adopted to value the limited partnerships' and a real estate income trust's 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 a real estate income trust and reading the auditors' report on the latest audited financial statements of the limited partnerships and a real estate income trust 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 and a real estate income trust to be appropriate.

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

23 August 2023

Statements of Financial Position

AS AT 31 MARCH 2023

		Group		University Company	
	Note	2023	2022	2023	2022
		\$'000	\$'000	\$'000	\$'000
ASSETS					
Non-current assets					
Property, plant and equipment	4	1,655,424	1,753,478	1,650,522	1,746,710
Intangible assets	5	3,046	2,762	2,345	1,787
Subsidiaries	6	–	–	500	500
Associates and joint ventures	7	18,797	17,748	18,651	17,594
Student loans	8	1,054	999	1,054	999
Total non-current assets		1,678,321	1,774,987	1,673,072	1,767,590
Current assets					
Derivative financial instruments	9	7,456	–	7,456	–
Student loans	8	731	911	731	911
Trade and other receivables	10	382,495	412,844	373,716	400,287
Financial assets at fair value through profit or loss	11	4,332,152	4,395,935	4,314,964	4,379,892
Cash and cash equivalents	12	1,445,552	1,300,547	1,402,111	1,258,639
Total current assets		6,168,386	6,110,237	6,098,978	6,039,729
Total assets		7,846,707	7,885,224	7,772,050	7,807,319
LIABILITIES					
Non-current liabilities					
Deferred capital grants	13	862,893	933,561	861,285	931,517
Sinking fund received in advance	14	339,296	299,798	339,296	299,798
Loans and borrowings	17	650,000	650,000	650,000	650,000
Other non-current liabilities		134	142	59	67
Lease liabilities	19	4,088	2,692	3,161	1,006
Total non-current liabilities		1,856,411	1,886,193	1,853,801	1,882,388

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

Statements of Financial Position

AS AT 31 MARCH 2023

		Group		University Company	
	Note	2023	2022	2023	2022
		\$'000	\$'000	\$'000	\$'000
Current liabilities					
Derivative financial instruments	9	–	1,526	–	1,526
Other payables and accruals		264,003	252,983	246,365	241,220
Grants received in advance					
- Development grants	14	19,655	42,374	19,655	42,374
Grants received in advance					
- Information technology and furniture and equipment ("IT and F&E")	14	62,115	56,309	61,517	55,495
Sinking fund received in advance	14	8,952	18,697	8,952	18,697
Provisions	15	68,122	70,193	66,383	68,398
Grants received in advance					
- Operating grants	16	11,066	10,027	2,328	2,312
Grants received in advance					
- Research grants	18	180,851	208,783	180,806	208,346
Deferred tuition and other fees		127,887	127,461	125,396	126,271
Lease liabilities	19	3,547	2,374	2,327	506
Income tax payable		366	1	–	–
Total current liabilities		746,564	790,728	713,729	765,145
Total liabilities		2,602,975	2,676,921	2,567,530	2,647,533
Net assets		5,243,732	5,208,303	5,204,520	5,159,786
FUNDS AND RESERVES					
Capital account	20	200,858	200,858	200,858	200,858
Endowment fund	21	2,694,654	2,751,681	2,695,157	2,752,184
Accumulated surplus – General fund					
- Designated	22	1,940,257	1,872,734	1,896,971	1,819,944
- Specific	22	407,963	383,030	411,534	386,800
Funds and reserves		5,243,732	5,208,303	5,204,520	5,159,786

See Note 23 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 2023

		General fund									
		Designated		Specific		Total		Endowment fund		Total	
	Note	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022
		\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Group											
Income											
Tuition and other fees		494,672	469,308	–	–	494,672	469,308	–	–	494,672	469,308
Scholarship, bursary and sponsorship expenses		(86,952)	(86,328)	–	–	(86,952)	(86,328)	–	–	(86,952)	(86,328)
Net tuition and other fees		407,720	382,980	–	–	407,720	382,980	–	–	407,720	382,980
Rental income		71,849	63,909	–	–	71,849	63,909	–	–	71,849	63,909
Research grants (non-ministry)		18	–	–	176,832	135,368	176,832	135,368	–	–	176,832
Interest income		24	15,800	1,825	1,772	203	17,572	2,028	107	–	17,679
Donations and sponsorships			9,737	14,836	32,084	26,594	41,821	41,430	–	–	41,821
Other grants			1,205	1,958	11,768	3,016	12,973	4,974	–	–	12,973
Sundry income			115,134	104,539	1,811	2,434	116,945	106,973	508	–	117,453
Gain/(Loss) on disposal of property, plant and equipment			–	21,999	–	(1,990)	–	20,009	–	–	–
Deferred capital grants amortised (non-ministry)		13	9,240	10,745	21,655	21,837	30,895	32,582	–	–	30,895
Total income before (loss)/profit on investments and share of results of associates and joint ventures			630,685	602,791	245,922	187,462	876,607	790,253	615	–	877,222
(Loss)/Profit on investments		26	(23,419)	62,875	(5,927)	24,272	(29,346)	87,147	(39,675)	180,220	(69,021)
Share of results of associates and joint ventures			(8)	(22)	–	–	(8)	(22)	1,057	2,748	1,049
Total income/(loss) after (loss)/profit on investments and share of results of associates and joint ventures			607,258	665,644	239,995	211,734	847,253	877,378	(38,003)	182,968	809,250

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

Consolidated Statement of Comprehensive Income

YEAR ENDED 31 MARCH 2023

	Note	General fund						Endowment fund		Total	
		Designated		Specific		Total		2023	2022	2023	2022
		2023	2022	2023	2022	2023	2022				
		\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Group (cont'd)											
Expenditure											
Expenditure on manpower		719,573	687,746	271,325	247,068	990,898	934,814	4,504	4,260	995,402	939,074
Teaching/research/administration		219,677	189,770	120,005	105,115	339,682	294,885	1,009	(2,716)	340,691	292,169
Scholarship, bursary and sponsorship expenses		15,365	16,469	88,584	89,849	103,949	106,318	–	–	103,949	106,318
Maintenance		178,126	128,153	8,799	8,112	186,925	136,265	2	–	186,927	136,265
Depreciation of property, plant and equipment	4	57,702	65,057	172,830	184,642	230,532	249,699	–	–	230,532	249,699
Amortisation of intangible assets	5	1,213	1,710	300	293	1,513	2,003	–	–	1,513	2,003
Capital expenditure not capitalised		9,988	8,927	14,078	8,609	24,066	17,536	–	–	24,066	17,536
(Gain)/Loss on disposal of property, plant and equipment		(222)	–	1,900	–	1,678	–	–	–	1,678	–
Interest expense		14,305	6,712	154	57	14,459	6,769	–	–	14,459	6,769
Other expenses		33	1,214	11	31	44	1,245	2,111	2,298	2,155	3,543
Total expenses		1,215,760	1,105,758	677,986	643,776	1,893,746	1,749,534	7,626	3,842	1,901,372	1,753,376
(Deficit)/Surplus before grants from ministries	27	(608,502)	(440,114)	(437,991)	(432,042)	(1,046,493)	(872,156)	(45,629)	179,126	(1,092,122)	(693,030)
Grants from ministries											
Development grants	14	6,659	4,801	3,238	1,742	9,897	6,543	–	–	9,897	6,543
Operating grants	28	561,983	560,414	–	–	561,983	560,414	–	–	561,983	560,414
Research grants	18	–	–	255,541	258,311	255,541	258,311	–	–	255,541	258,311
Other grants		16,714	24,210	79,059	69,145	95,773	93,355	–	–	95,773	93,355
Government grant income	25	–	8,144	–	–	–	8,144	–	–	–	8,144
Deferred capital grants amortised	13	22,821	26,671	126,256	141,518	149,077	168,189	–	–	149,077	168,189
Total grants from ministries		608,177	624,240	464,094	470,716	1,072,271	1,094,956	–	–	1,072,271	1,094,956
(Deficit)/Surplus after grants from ministries		(325)	184,126	26,103	38,674	25,778	222,800	(45,629)	179,126	(19,851)	401,926
Tax expense	29	(367)	(1)	–	–	(367)	(1)	–	–	(367)	(1)
(Deficit)/Surplus for the year representing total comprehensive (loss)/income for the year		(692)	184,125	26,103	38,674	25,411	222,799	(45,629)	179,126	(20,218)	401,925

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

Statements of Changes in Funds and Reserves

YEAR ENDED 31 MARCH 2023

	Capital account \$'000	Endowment fund \$'000	Accumulated surplus General Fund		Total \$'000
			Designated \$'000	Specific \$'000	
Group					
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
<i>Transactions recognised directly in funds:</i>					
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
At 1 April 2022	200,858	2,751,681	1,872,734	383,030	5,208,303
Total comprehensive (loss)/income for the year					
(Deficit)/Surplus for the year	–	(45,629)	(692)	26,103	(20,218)
Total comprehensive (loss)/income for the year	–	(45,629)	(692)	26,103	(20,218)
<i>Transactions recognised directly in funds:</i>					
Donations	–	16,115	–	–	16,115
Government matching grants	–	39,532	–	–	39,532
Fund transfers	–	(67,045)	68,215	(1,170)	–
Total transactions	–	(11,398)	68,215	(1,170)	55,647
At 31 March 2023	200,858	2,694,654	1,940,257	407,963	5,243,732

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

Statements of Changes in Funds and Reserves

YEAR ENDED 31 MARCH 2023

	Capital account \$'000	Endowment fund \$'000	Accumulated surplus General Fund		Total \$'000
			Designated \$'000	Specific \$'000	
University Company					
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
At 1 April 2022	200,858	2,752,184	1,819,944	386,800	5,159,786
Total comprehensive (loss)/income for the year					
(Deficit)/Surplus for the year	–	(45,629)	8,812	25,904	(10,913)
Total comprehensive (loss)/income for the year	–	(45,629)	8,812	25,904	(10,913)
<i>Transactions recognised directly in funds:</i>					
Donations	–	16,115	–	–	16,115
Government matching grants	–	39,532	–	–	39,532
Fund transfers	–	(67,045)	68,215	(1,170)	–
Total transactions	–	(11,398)	68,215	(1,170)	55,647
At 31 March 2023	200,858	2,695,157	1,896,971	411,534	5,204,520

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

Consolidated Statement of Cash Flows

YEAR ENDED 31 MARCH 2023

	Note	2023 \$'000	2022 \$'000
Cash flows from operating activities			
Deficit before grants from ministries		(1,092,122)	(693,030)
Adjustments for:			
Amortisation of intangible assets	5	1,513	2,003
Deferred capital grants amortised (non-ministry)		(30,895)	(32,582)
Depreciation of property, plant and equipment	4	230,532	249,699
Interest expense		14,459	6,769
Interest income		(17,679)	(2,028)
Loss/(Gain) on disposal of property, plant and equipment		1,678	(20,009)
Loss/(Profit) on investments		69,021	(267,367)
Research grant income		(176,832)	(135,368)
Reversal of loss allowance on student loans, trade and other receivables		(4,198)	(4,328)
Share of results of associates and joint ventures		(1,049)	(2,726)
		(1,005,572)	(898,967)
Changes in working capital:			
- Student loans		120	2,051
- Trade and other receivables		36,759	126,088
- Other payables and accruals		38,199	(30,642)
- Deferred tuition and other fees		426	10,250
		(930,068)	(791,220)
Cash used in operations			
Donations received for Endowment Fund		16,115	21,069
Tax paid		(2)	(1)
Net cash flows used in operating activities		(913,955)	(770,152)
Cash flows from investing activities			
Acquisition of property, plant and equipment		(127,760)	(170,294)
Acquisition of intangible assets		(1,797)	(658)
Interest received		12,613	1,804
Proceeds from disposal of property, plant and equipment		823	25,246
Proceeds from sale of financial assets		702,922	545,950
Purchase of financial assets		(746,462)	(1,161,930)
Net cash flows used in investing activities		(159,661)	(759,882)

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

Consolidated Statement of Cash Flows

YEAR ENDED 31 MARCH 2023

	Note	2023 \$'000	2022 \$'000
Cash flows from financing activities			
Development grants and related income received		9,536	10,212
Government ministry grants received		135,305	134,736
Interest paid		(14,459)	(6,769)
IT and F&E grant received		22,273	23,309
Operating grants received, net of payment of goods and service tax expense on tuition fees and tuition grants		579,298	573,252
Proceeds from loans and borrowings		–	650,000
Repayment of loans and borrowings		–	(120,800)
Repayment of lease liabilities		(4,588)	(2,621)
Research grants received	18	488,422	461,379
Sinking fund received		2,834	–
Net cash flows from financing activities		1,218,621	1,722,698
Net increase in cash and cash equivalents			
		145,005	192,664
Cash and cash equivalents at beginning of the year		1,300,547	1,107,883
Cash and cash equivalents at end of the year	12	1,445,552	1,300,547

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 23 August 2023.

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 2023 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 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.

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 33 – valuation of derivative financial instruments
- Note 33 – 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 33 – valuation of derivative financial instruments
- Note 33 – valuation of financial assets at fair value through profit or loss

2.5 Changes in accounting policies

New standards and amendments

The Group has applied the following SFRS(I)s, amendments to and interpretations of SFRS(I) for the first time for the annual period beginning on 1 April 2022:

- Amendment to SFRS(I) 16: *COVID-19-Related Rent Concessions beyond 30 June 2021*
- Amendment to SFRS(I) 1-16: *Property, Plant and Equipment – Proceeds before Intended Use*
- Amendment to SFRS(I) 1-37: *Onerous Contracts – Cost of Fulfilling a Contract*
- Annual Improvements to SFRS(I)s 2018 - 2020

The application of these amendments to standards and interpretations does not have a material effect on the financial statements.

Notes to the Financial Statements

3 SIGNIFICANT ACCOUNTING POLICIES

The accounting policies set out below have been applied consistently to all periods presented in these financial statements, except as explained in note 2.5, which addresses changes in accounting policies.

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.

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.

Notes to the Financial Statements

3 SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

3.1 Consolidation (cont'd)

(ii) Business combinations (cont'd)

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.

(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	1 to 8 years

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.

Notes to the Financial Statements

3 SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

3.5 Property, plant and equipment (cont'd)

(iii) Depreciation (cont'd)

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.

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 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.

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.

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.

(iii) 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.

Notes to the Financial Statements

3 SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

3.7 Financial instruments (cont'd)

(iv) 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.

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.

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)

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.

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 of disposal. 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)

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 \$127,887,000 (2022: \$127,461,000). 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.

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.

Notes to the Financial Statements

3 SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

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 capital grants 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 2022 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.

- Amendments to SFRS(I) 1-1: *Classification of Liabilities as Current or Non-Current and Non-Current Liabilities with Covenants*
- Amendments to SFRS(I) 1-12: *Deferred Tax related to Assets and Liabilities arising from a Single Transaction*
- SFRS(I) 17 *Insurance Contracts* and Amendments to SFRS(I) 17 *Insurance Contracts*
- Amendments to SFRS(I) 1-1 and SFRS(I) Practice Statement 2: *Disclosure of Accounting Policies*
- Amendments to SFRS(I) 1-8: *Definition of Accounting Estimates*
- Amendments to SFRS(I) 16: *Lease liability in a sale and leaseback*
- Amendments to SFRS(I) 17: *Initial Application of SFRS(I) 17 and SFRS(I) 9 – Comparative Information*
- Amendments to SFRS(I) 1-12: *International Tax Reform – Pillar Two Model Rules*
- Amendments to SFRS(I) 1-7 and SFRS(I) 7: *Supplier Finance Arrangements*

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 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
At 1 April 2022	199,300	38,639	2,475,226	163,521	289,612	1,651,826	284,921	13,129	17,681	5,133,855
Additions	–	–	1,375	63,750	2,004	49,356	10,601	543	7,350	134,979
Disposals/Write-offs	–	–	(17,929)	–	(298)	(26,543)	(10,157)	(412)	(1,263)	(56,602)
Reclassifications	–	–	101,217	(192,474)	13,493	76,151	1,613	–	–	–
At 31 March 2023	199,300	38,639	2,559,889	34,797	304,811	1,750,790	286,978	13,260	23,768	5,212,232
Accumulated depreciation										
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
At 1 April 2022	–	5,520	1,491,221	–	266,842	1,359,114	239,785	8,710	9,185	3,380,377
Depreciation for the year	–	1,840	59,910	–	15,110	127,790	19,990	1,189	4,703	230,532
Disposals/Write-offs	–	–	(16,590)	–	(290)	(26,074)	(9,758)	(311)	(1,078)	(54,101)
At 31 March 2023	–	7,360	1,534,541	–	281,662	1,460,830	250,017	9,588	12,810	3,556,808
Carrying amounts										
At 1 April 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
At 31 March 2023	199,300	31,279	1,025,348	34,797	23,149	289,960	36,961	3,672	10,958	1,655,424

[^] 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 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
At 1 April 2022	199,300	38,639	2,475,226	163,445	286,110	1,647,534	282,721	13,129	11,260	5,117,364
Additions	–	–	1,375	63,750	1,849	48,990	10,253	543	6,657	133,417
Disposals/Write-offs	–	–	(17,929)	–	(298)	(26,532)	(10,014)	(412)	(158)	(55,343)
Reclassifications	–	–	101,217	(192,398)	13,417	76,151	1,613	–	–	–
At 31 March 2023	199,300	38,639	2,559,889	34,797	301,078	1,746,143	284,573	13,260	17,759	5,195,438
Accumulated depreciation										
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
At 1 April 2022	–	5,520	1,491,221	–	264,055	1,356,798	238,054	8,710	6,296	3,370,654
Depreciation for the year	–	1,840	59,910	–	14,707	127,117	19,713	1,189	2,815	227,291
Disposals/Write-offs	–	–	(16,590)	–	(294)	(26,063)	(9,616)	(311)	(155)	(53,029)
At 31 March 2023	–	7,360	1,534,541	–	278,468	1,457,852	248,151	9,588	8,956	3,544,916
Carrying amounts										
At 1 April 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
At 31 March 2023	199,300	31,279	1,025,348	34,797	22,610	288,291	36,422	3,672	8,803	1,650,522

[^] 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	
	2023	2022
	\$'000	\$'000
Depreciation expense on right-of-use assets	6,175	4,337
Interest expense on lease liabilities	218	118
Expenses relating to short-term and low value leases	296	1,160

Amounts recognised in consolidated statement of cash flows

	Group	
	2023	2022
	\$'000	\$'000
Total cash outflow for leases	(4,806)	(2,739)

As at 31 March 2023, the Group and University Company are committed to \$140,000 (2022: \$247,000) and \$140,000 (2022: \$247,000) for short-term leases respectively.

5. INTANGIBLE ASSETS

	Group		University Company	
	2023	2022	2023	2022
	\$'000	\$'000	\$'000	\$'000
Cost				
At 1 April	14,789	14,131	12,968	12,452
Additions	1,797	658	1,712	516
At 31 March	16,586	14,789	14,680	12,968
Accumulated amortisation				
At 1 April	12,027	10,024	11,181	9,521
Amortisation charge for the year	1,513	2,003	1,154	1,660
At 31 March	13,540	12,027	12,335	11,181
Carrying amount				
At 1 April	2,762	4,107	1,787	2,931
At 31 March	3,046	2,762	2,345	1,787

Notes to the Financial Statements

6. SUBSIDIARIES

	University Company	
	2023	2022
	\$'000	\$'000
Equity investments at cost	500	500

Details of subsidiaries are as follows:

Name of subsidiary	Country of incorporation	Ownership interest		Principal activities
		2023	2022	
		%	%	
Held by the University Company				
[^] Nanyang Technological University - NTUitive Pte Ltd	Singapore	100	100	Innovation and enterprise company of NTU.
[^] NTU Holdings Pte Ltd	Singapore	100	100	Investment holding.
[^] Singapore Centre for Chinese Language Limited	Singapore	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	Provision of training programs in teacher education and school leadership.
[^] National Institute of Early Childhood Development	Singapore	100	100	Provision of pre-service and continuing education and training for professionals in early childhood development.
Held by NTU Holdings Pte Ltd				
[*] Nanyang Venture Consulting (Shanghai) Co., Ltd	China	100	100	Consultant for enterprise management, technology and education.
[^] Confucius Institute, NTU Pte Ltd	Singapore	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	Consultant for enterprise management, technology and education.

[^] Audited by KPMG LLP, Singapore.

^{*} Audited by a member of KPMG International.

Notes to the Financial Statements

7. ASSOCIATES AND JOINT VENTURES

	Group		University Company	
	2023	2022	2023	2022
	\$'000	\$'000	\$'000	\$'000
Cost of investments	13,458	13,458	13,063	13,063
Share of post-acquisition profits	5,339	4,290	5,588	4,531
	18,797	17,748	18,651	17,594

Details of the associates are as follows:

Name of associate	Country of incorporation	Group's proportion of ownership interest/voting power held		Principal activities
		2023	2022	
		%	%	
GenomeAsia 100k Ltd ⁽ⁱ⁾	Singapore	33.3	33.3	Data Processing and related activities.

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
		2023	2022	
		%	%	
Lushang (Nanyang) Pte Ltd ⁽ⁱⁱ⁾	Singapore	30	30	Other information technology and computer service activities.
Secur3DP+ Pte Ltd ⁽ⁱⁱⁱ⁾	Singapore	47.5	47.5	To develop and monetise certain intellectual property assets relating to 3D printing in Singapore.
SRIF Amcorp Pte. Ltd. ^(iv)	Singapore	25	25	Investment holding.

- (i) 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.
- (ii) The Group determined that it has joint control over Lushang (Nanyang) Pte Ltd by virtue that all significant matters require unanimous approval by all the shareholders.
- (iii) The Group determined that it has joint control over Secur3DP+ Pte Ltd by virtue that all significant matters require unanimous approval by all the shareholders.
- (iv) The Group determined that it has joint control over SRIF Amcorp Pte Ltd by virtue that all significant matters require unanimous approval by all the shareholders.

Notes to the Financial Statements

8. STUDENT LOANS

	Group and University Company	
	2023	2022
	\$'000	\$'000
Student loans	1,785	1,910
Represented by:		
Amount repayable within 12 months	731	911
Amount repayable after 12 months		
- Student loans	1,059	999
- Loss allowance for doubtful receivables	(5)	—
	1,054	999
	1,785	1,910

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

9. DERIVATIVE FINANCIAL INSTRUMENTS

	Group and University Company	
	2023	2022
	\$'000	\$'000
Derivative assets/(liabilities)		
Foreign currency forward contracts	7,456	(1,526)

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 \$1,228 million (2022: \$945 million), have been entered into to hedge the currency risk of United States dollar.

Notes to the Financial Statements

10. TRADE AND OTHER RECEIVABLES

	Group		University Company	
	2023	2022	2023	2022
	\$'000	\$'000	\$'000	\$'000
Trade receivables	35,017	28,431	32,523	26,550
Loss allowance for doubtful receivables	(2,072)	(2,449)	(1,208)	(1,630)
	32,945	25,982	31,315	24,920
Interest receivables	5,610	544	5,560	535
Operating grant receivables	5,386	16,195	5,386	14,820
Research grant receivables	209,204	248,520	208,287	246,442
Grants receivables	66,067	35,100	65,637	35,100
	319,212	326,341	316,185	321,817
Other receivables	47,565	75,566	42,278	68,112
Loss allowance for doubtful receivables	(2,485)	(6,311)	(2,429)	(6,255)
	45,080	69,255	39,849	61,857
Amounts due from subsidiaries (trade)	–	–	440	282
Loss allowance for doubtful receivables	–	–	(159)	(159)
	–	–	281	123
Amounts due from subsidiaries (non-trade)	–	–	1,015	1,015
Loss allowance for doubtful receivables	–	–	(1,015)	(1,015)
	–	–	–	–
Amounts due from joint venture and associates	31	26	31	26
Financial assets at amortised cost	364,323	395,622	356,346	383,823
Prepayments	18,172	17,222	17,370	16,464
	382,495	412,844	373,716	400,287

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.

Notes to the Financial Statements

11. FINANCIAL ASSETS AT FAIR VALUE THROUGH PROFIT OR LOSS

	Group		University Company	
	2023 \$'000	2022 \$'000	2023 \$'000	2022 \$'000
Quoted fixed income investments	326,199	200,793	326,199	200,541
Quoted equity investments	1,019,064	1,292,287	1,018,836	1,291,964
Unquoted equity investments	2,981,038	2,894,853	2,969,929	2,885,728
Other unquoted investments	5,851	8,002	–	1,659
	<u>4,332,152</u>	<u>4,395,935</u>	<u>4,314,964</u>	<u>4,379,892</u>

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

Note	Group		University Company	
	2023 \$'000	2022 \$'000	2023 \$'000	2022 \$'000
Financial assets at fair value through profit or loss	4,332,152	4,395,935	4,314,964	4,379,892
Cash balances and bank deposits	12 137,908	201,293	137,908	201,293
	<u>4,470,060</u>	<u>4,597,228</u>	<u>4,452,872</u>	<u>4,581,185</u>

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

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:

		Fixed interest rate securities maturing			
	Effective interest rate per annum %	Less than 1 year \$'000	In 1 to 5 years \$'000	After 5 years \$'000	Total \$'000
Group					
2023	0.5 to 3.8	502	325,697	–	326,199
2022	1.6 to 3.5	–	175,004	25,789	200,793
University Company					
2023	0.5 to 3.8	502	325,697	–	326,199
2022	1.6 to 3.5	–	174,752	25,789	200,541

Notes to the Financial Statements

12. CASH AND CASH EQUIVALENTS

	Note	Group		University Company	
		2023 \$'000	2022 \$'000	2023 \$'000	2022 \$'000
Operating					
Cash at bank and in hand		344,736	389,845	314,118	361,307
Deposits with financial institutions		962,908	709,409	950,085	696,039
		1,307,644	1,099,254	1,264,203	1,057,346
Investments					
Cash at bank and in hand		74,082	116,259	74,082	116,259
Money market funds and cash held by custodian banks		63,826	85,034	63,826	85,034
	11	137,908	201,293	137,908	201,293
Cash and cash equivalents		1,445,552	1,300,547	1,402,111	1,258,639

13. DEFERRED CAPITAL GRANTS

	Government ministries		Statutory boards		Others		Total	
	2023 \$'000	2022 \$'000	2023 \$'000	2022 \$'000	2023 \$'000	2022 \$'000	2023 \$'000	2022 \$'000
Group								
At 1 April	827,617	941,074	79,635	80,414	26,309	25,483	933,561	1,046,971
Add:								
Grants received/(refunded) for capital expenditure and development project transferred from								
- Operating grants (Note 28)	5,467	4,727	–	–	–	–	5,467	4,727
- Research grants (Note 18)	27,921	15,821	8,811	19,674	7,933	6,872	44,665	42,367
- Development grants (Note 14)	24,498	34,844	23,280	–	–	–	47,778	34,844
- Other grants	5,931	(691)	3,682	2,675	1,654	2,945	11,267	4,929
Assets donated by various organisations	–	31	–	–	127	463	127	494
	63,817	54,732	35,773	22,349	9,714	10,280	109,304	87,361
Less:								
Grants taken to profit or loss								
- Amortisation charge for the year	147,277	166,914	21,997	22,767	8,638	8,750	177,912	198,431
- On disposal of property, plant and equipment	1,800	1,275	43	361	217	704	2,060	2,340
	149,077	168,189	22,040	23,128	8,855	9,454	179,972	200,771
At 31 March	742,357	827,617	93,368	79,635	27,168	26,309	862,893	933,561

Notes to the Financial Statements

13. DEFERRED CAPITAL GRANTS (CONT'D)

	Government ministries		Statutory boards		Others		Total	
	2023	2022	2023	2022	2023	2022	2023	2022
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
University Company								
At 1 April	825,573	938,502	79,635	80,414	26,309	25,483	931,517	1,044,399
Add:								
Grants received/(refunded) for capital expenditure and development project transferred from								
- Operating grants	5,191	4,681	–	–	–	–	5,191	4,681
- Research grants (Note 18)	27,921	15,821	8,811	19,674	7,933	6,872	44,665	42,367
- Development grants (Note 14)	24,306	34,532	23,280	–	–	–	47,586	34,532
- Other grants	5,931	(691)	3,682	2,675	1,654	2,945	11,267	4,929
Assets donated by various organisations	–	31	–	–	127	463	127	494
	63,349	54,374	35,773	22,349	9,714	10,280	108,836	87,003
Less:								
Grants taken to profit or loss								
- Amortisation charge for the year	146,373	166,028	21,997	22,767	8,638	8,750	177,008	197,545
- On disposal of property, plant and equipment	1,800	1,275	43	361	217	704	2,060	2,340
	148,173	167,303	22,040	23,128	8,855	9,454	179,068	199,885
At 31 March	740,749	825,573	93,368	79,635	27,168	26,309	861,285	931,517

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

	Note	Group		University Company	
		2023	2022	2023	2022
		\$'000	\$'000	\$'000	\$'000
Grants receivable within 12 months:					
- Development grant		1,078	362	1,078	362
- Sinking fund		35,156	–	35,156	–
Subtotal		36,234	362	36,234	362
Grants received in advance:					
- Development grant		(19,655)	(42,374)	(19,655)	(42,374)
- IT and F&E	(a)	(62,115)	(56,309)	(61,517)	(55,495)
- Sinking fund	(b)	(348,248)	(318,495)	(348,248)	(318,495)
Subtotal		(430,018)	(417,178)	(429,420)	(416,364)
Total		(393,784)	(416,816)	(393,186)	(416,002)
Grants received in advance represented as:					
Current portion					
- Development grant		(19,655)	(42,374)	(19,655)	(42,374)
- IT and F&E		(62,115)	(56,309)	(61,517)	(55,495)
- Sinking fund		(8,952)	(18,697)	(8,952)	(18,697)
		(90,722)	(117,380)	(90,124)	(116,566)
Non-current portion					
- Sinking fund		(339,296)	(299,798)	(339,296)	(299,798)
		(430,018)	(417,178)	(429,420)	(416,364)

Notes to the Financial Statements

14. GRANTS RECEIVABLE/IT AND F&E GRANTS/SINKING FUND RECEIVED IN ADVANCE (COND'T)

Movements in grants (received in advance)/receivable:

	Note	Group		University Company	
		2023 \$'000	2022 \$'000	2023 \$'000	2022 \$'000
At 1 April		(416,816)	(424,682)	(416,002)	(424,220)
Grants received during the year		(34,643)	(33,521)	(34,643)	(32,795)
		(451,459)	(458,203)	(450,645)	(457,015)
Less:					
Amounts transferred to deferred capital grants	13	47,778	34,844	47,586	34,532
Amounts taken to profit or loss		9,897	6,543	9,873	6,481
At 31 March		(393,784)	(416,816)	(393,186)	(416,002)

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.

15. PROVISIONS

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

	Group		University Company	
	2023 \$'000	2022 \$'000	2023 \$'000	2022 \$'000
Provision for unutilised compensated leave				
At 1 April	70,193	77,337	68,398	75,611
Provision reversed during the year	(2,071)	(7,144)	(2,015)	(7,213)
At 31 March	68,122	70,193	66,383	68,398

16. GRANTS RECEIVED IN ADVANCE – OPERATING GRANTS

	Group		University Company	
	2023 \$'000	2022 \$'000	2023 \$'000	2022 \$'000
At 1 April	10,027	6,923	2,312	–
Grants received during the year	5,626	11,308	16	6,081
	15,653	18,231	2,328	6,081
Less:				
Amounts taken to profit or loss	(4,311)	(8,158)	–	(3,769)
Amounts transferred to deferred capital grants	(276)	(46)	–	–
At 31 March	11,066	10,027	2,328	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.

Notes to the Financial Statements

17. LOANS AND BORROWINGS

	Group and University Company	
	2023	2022
	\$'000	\$'000
Non-current		
Fixed rate term note	650,000	650,000

Terms and debt repayment schedule

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

			2023		2022	
Currency	Weighted average nominal interest rate %	Year of maturity	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	650,000

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 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
Balance at 1 April 2022	650,000	5,066	655,066
Changes from financing cash flows			
Interest paid	(14,241)	(218)	(14,459)
Repayment of lease liabilities	–	(4,588)	(4,588)
Total changes from financing cash flows	(14,241)	(4,806)	(19,047)
Other changes			
Liability-related			
New leases	–	7,157	7,157
Finance costs	14,241	218	14,459
Total liability-related other changes	14,241	7,375	21,616
Balance at 31 March 2023	650,000	7,635	657,635

Notes to the Financial Statements

18. GRANTS RECEIVED IN ADVANCE – RESEARCH GRANTS

	Note	Group		University Company	
		2023 \$'000	2022 \$'000	2023 \$'000	2022 \$'000
At 1 April		208,783	180,892	208,346	180,784
Grants received during the year		488,422	461,379	483,811	448,971
		697,205	642,271	692,157	629,755
Less:					
Amounts transferred to deferred capital grants	13	(44,665)	(42,367)	(44,665)	(42,367)
Amounts taken to profit or loss		(432,373)	(393,679)	(428,531)	(383,899)
Amounts transferred (from)/to grant receivables		(39,316)	2,558	(38,155)	4,857
At 31 March		180,851	208,783	180,806	208,346

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 2023 amounted to \$847,457,000 (2022: \$644,494,000).

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 \$1,512,089,000 (2022: \$1,477,670,000).

19. LEASE LIABILITIES

	Group		University Company	
	2023 \$'000	2022 \$'000	2023 \$'000	2022 \$'000
Current	3,547	2,374	2,327	506
Non-current	4,088	2,692	3,161	1,006
	7,635	5,066	5,488	1,512

20. CAPITAL ACCOUNT

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

21. 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.

22. 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.

Notes to the Financial Statements

23. 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	
	2023	2022
	\$'000	\$'000
Cash from the Government Ministry:		
At 1 April	205,008	240,213
Cash received	53,864	55,374
Interest income received on behalf of Government Ministry	2,872	1,451
Repayments	(59,061)	(90,498)
Bad debts incurred	(680)	(81)
Interest income transferred to Government Ministry	(2,872)	(1,451)
At 31 March	199,131	205,008
Represented by:		
Cash and bank balances held on behalf	794	854
TFL, SL and OSP	198,337	204,154
	199,131	205,008

Cash and bank balances of \$794,000 (2022: \$854,000) 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 2023 is 4.75% (2022: 4.75%) per annum.

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

24. INTEREST INCOME

	Group	
	2023	2022
	\$'000	\$'000
Interest received/receivable:		
- fixed deposits placed with financial institutions	16,684	1,257
- bank balances	995	771
	17,679	2,028

25. GOVERNMENT GRANT INCOME

	Group	
	2023	2022
	\$'000	\$'000
Jobs Support Scheme	—	8,144

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 was reasonable assurance that it would comply with the conditions attached to the grants and the grants would be received. Grant income was recognised in profit or loss on a systematic basis over the period of uncertainty in which the related salary costs for which the grant was intended to compensate was recognised as expenses. Management had determined the period of uncertainty to be 17 months commencing from April 2020. Government grant income of \$8,144,000 in relation to JSS was recognised during the financial year ended 31 March 2022.

Notes to the Financial Statements

26. (LOSS)/PROFIT ON INVESTMENTS

	Group	
	2023	2022
	\$'000	\$'000
Interest income	3,799	3,942
Dividend income	2,993	3,276
Fair value (loss)/gain on financial assets at fair value through profit or loss	(96,191)	255,052
Fair value gain on derivative financial instruments	20,378	5,097
	<u>(69,021)</u>	<u>267,367</u>

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

27. (DEFICIT)/SURPLUS BEFORE GRANTS FROM MINISTRIES

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

	Group	
	2023	2022
	\$'000	\$'000
Reversal of loss allowance on student loans, trade and other receivables	(4,198)	(4,328)
Exchange gain	(357)	(430)
Contribution to defined contribution plans included in expenditure on manpower	77,888	76,590
Government grants - Special Employment Credit and Wage Credit in expenditure on manpower	(323)	(2,453)

28. OPERATING GRANTS FROM GOVERNMENT MINISTRY

		Group	
	Note	2023	2022
		\$'000	\$'000
Operating grants received and receivable during the year		620,924	619,540
Payment for goods and services tax on tuition fees and tuition grants		(52,435)	(51,295)
Amounts transferred to:			
- deferred capital grants	13	(5,467)	(4,727)
- grant received in advance		(1,039)	(3,104)
Operating grants taken to profit or loss		<u>561,983</u>	<u>560,414</u>

Notes to the Financial Statements

29. 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 \$6,430,000 (2022: \$6,028,000) 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	
	2023	2022
	\$'000	\$'000
Current tax expense		
Current year	367	1
Reconciliation of effective tax		
(Deficit)/Surplus after grants from ministries	(19,851)	401,926
Tax calculated using Singapore tax rate of 17% (2022: 17%)	(3,375)	68,327
Income and expenses not subject to tax	3,742	(68,326)
	367	1

30. COMMITMENTS

Capital commitments

	Group	
	2023	2022
	\$'000	\$'000
Contracted but not provided for	65,441	103,112
Authorised but not contracted for	273,729	278,302

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

	Group	
	2023	2022
	\$'000	\$'000
Uncalled capital commitments for unquoted equity investments		
- contracted but not provided for	892,062	849,131

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 2023, NTU's outstanding commitment under the collaboration is estimated at £4.1 million (\$6.8 million) (2022: £5.5 million (\$9.7 million)) till the expiry of the agreement on 31 July 2028.

Notes to the Financial Statements

31. 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.

32. 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 \$19.5 million (2022: \$11.4 million) and \$20.8 million (2022: \$19.6 million).

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	
	2023	2022
	\$'000	\$'000
<i>Services rendered</i>		
Consultancy fees paid to Trustees	9	65

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	
	2023	2022
	\$'000	\$'000
<i>Key management personnel compensation</i>		
Short-term employee benefits (includes the remuneration of an Executive Trustee)	8,265	7,956

Notes to the Financial Statements

33. 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.

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 \$1,790,000 (2022: \$1,910,000). Except for student loans of the Group and University Company of \$5,000 (2022: \$Nil) where impairment has been measured at an amount equal to lifetime ECLs, impairment on remaining balances of student loans has been measured on the 12-month expected loss basis, which reflects the low credit risk of the exposures and it 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.

Notes to the Financial Statements

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

Credit risk management (cont'd)

Trade receivables (cont'd)

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
2023						
Current (not past due)	21,240	(207)	No	20,293	(131)	No
1-30 days past due	9,108	(19)	No	8,682	(6)	No
31-150 days past due	2,778	(453)	Yes	2,636	(432)	Yes
More than 150 days past due	1,891	(1,393)	Yes	912	(639)	Yes
	<u>35,017</u>	<u>(2,072)</u>		<u>32,523</u>	<u>(1,208)</u>	
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>	

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.

Other receivables

The Group and University Company held other receivables. Except for other receivables of the Group and of University Company of \$2,485,000 (2022: \$6,311,000) and \$2,429,000 (2022: \$6,255,000) 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 (2022: \$1,174,000) 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, which was negligible.

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

	Group		University Company	
	2023 \$'000	2022 \$'000	2023 \$'000	2022 \$'000
At 1 April	8,760	13,088	9,059	13,551
Loss allowance reversed	(4,198)	(4,328)	(4,243)	(4,492)
At 31 March	<u>4,562</u>	<u>8,760</u>	<u>4,816</u>	<u>9,059</u>

Notes to the Financial Statements

33. 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 (2022: \$11 million) bankers' guarantee facility that is unsecured.
- \$540 million (2022: \$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 2023.

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					
2023					
Non-derivative financial liabilities					
Other non-current liabilities	134	(134)	–	(134)	–
Other payables and accruals	264,003	(264,003)	(264,003)	–	–
Loans and borrowings	650,000	(828,367)	(14,202)	(56,810)	(757,355)
Lease liabilities	7,635	(7,896)	(3,829)	(3,882)	(185)
	921,772	(1,100,400)	(282,034)	(60,826)	(757,540)
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

33. 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					
2023					
Non-derivative financial liabilities					
Other non-current liabilities	59	(59)	—	(59)	—
Other payables and accruals	246,365	(246,365)	(246,365)	—	—
Loans and borrowings	650,000	(828,367)	(14,202)	(56,810)	(757,355)
Lease liabilities	5,488	(5,690)	(2,433)	(3,072)	(185)
	901,912	(1,080,481)	(263,000)	(59,941)	(757,540)
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)
University Company					
2022					
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)

Notes to the Financial Statements

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

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	
	2023	2022	2023	2022
	\$'000	\$'000	\$'000	\$'000
Fixed rate instruments				
Deposits with financial institutions	962,908	709,409	950,085	696,039
Fixed rate term note	(650,000)	(650,000)	(650,000)	(650,000)
Lease liabilities	(7,635)	(5,066)	(5,488)	(1,512)
	<u>305,273</u>	<u>54,343</u>	<u>294,597</u>	<u>44,527</u>
Variable rate instruments				
Quoted fixed income investments	<u>326,199</u>	<u>200,793</u>	<u>326,199</u>	<u>200,541</u>

Sensitivity analysis for interest risk

If movements in interest rates result in a 3% (2022: 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 \$9,786,000 (2022: \$6,024,000) and \$9,786,000 (2022: \$6,016,000) 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:

	Group		University Company	
	2023	2022	2023	2022
	\$'000	\$'000	\$'000	\$'000
Quoted securities				
Quoted equity investments	<u>1,019,064</u>	<u>1,292,287</u>	<u>1,018,836</u>	<u>1,291,964</u>
Unquoted securities				
Unquoted equity investments	2,981,038	2,894,853	2,969,929	2,885,728
Other unquoted investments	5,851	8,002	—	1,659
	<u>2,986,889</u>	<u>2,902,855</u>	<u>2,969,929</u>	<u>2,887,387</u>

Notes to the Financial Statements

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

Market risk - Price risk management (cont'd)

Sensitivity analysis for price risk

If movements in financial markets result in a 5% (2022: 5%) appreciation/depreciation in the value of the quoted equity investments, all other variables being held constant, the Group's and University Company's surplus would have been higher/lower by \$50,953,000 (2022: \$64,614,000) and \$50,942,000 (2022: \$64,598,000) respectively.

If movements in financial markets result in a 5% (2022: 5%) appreciation/depreciation in the value of the unquoted equity investments and other unquoted investments, all other variables being held constant, the Group's surplus and University Company's would have been higher/lower by \$149,344,000 (2022: \$145,143,000) and \$148,496,000 (2022: \$144,369,000) respectively.

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					
2023	2,706,908	234,797	47,331	106,364	1,018,009
2022	2,807,041	209,869	48,114	96,366	929,014

Sensitivity analysis for currency risk

If the relevant foreign currency changes against the Singapore dollar by 5% (2022: 5%), all other variables being held constant, the effects will be as follows:

	Profit or loss	
	2023 \$'000	2022 \$'000
Increase/(Decrease)		
<i>US dollar against Singapore dollar</i>		
Strengthened	135,345	140,352
Weakened	(135,345)	(140,352)
<i>Euro against Singapore dollar</i>		
Strengthened	11,740	10,493
Weakened	(11,740)	(10,493)
<i>Japanese Yen against Singapore dollar</i>		
Strengthened	2,367	2,406
Weakened	(2,367)	(2,406)
<i>Pound Sterling against Singapore dollar</i>		
Strengthened	5,318	4,818
Weakened	(5,318)	(4,818)

Notes to the Financial Statements

33. 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 2022.

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.

						----- 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
Group								
2023								
Financial assets measured at fair value								
Financial assets at fair value through profit or loss	11	4,332,152	–	–	4,332,152	1,345,263	1,365,617	1,621,272
Forward exchange contracts	9	7,456	–	–	7,456	–	7,456	–
		<u>4,339,608</u>	<u>–</u>	<u>–</u>	<u>4,339,608</u>			
Financial assets not measured at fair value								
Student loans	8	–	1,785	–	1,785			
Trade and other receivables*	10	–	364,323	–	364,323			
Cash and cash equivalents	12	–	1,445,552	–	1,445,552			
		<u>–</u>	<u>1,811,660</u>	<u>–</u>	<u>1,811,660</u>			
Financial liabilities not measured at fair value								
Other non-current liabilities		–	–	(134)	(134)			
Other payables and accruals		–	–	(264,003)	(264,003)			
Loans and borrowings	17	–	–	(650,000)	(650,000)	–	(645,270)	–
Lease liabilities	19	–	–	(7,635)	(7,635)			
		<u>–</u>	<u>–</u>	<u>(921,772)</u>	<u>(921,772)</u>			

Notes to the Financial Statements

33. 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 \$'000	Amortised cost \$'000	Other financial liabilities \$'000	Total carrying amount \$'000	----- Fair value -----		
						Level 1 \$'000	Level 2 \$'000	Level 3 \$'000
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)	–	(645,371)	–
Lease liabilities	19	–	–	(5,066)	(5,066)			
		–	–	(908,191)	(908,191)			

Notes to the Financial Statements

33. 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								
2023								
Financial assets measured at fair value								
Financial assets at fair value through profit or loss	11	4,314,964	–	–	4,314,964	1,345,035	1,365,617	1,604,312
Forward exchange contracts	9	7,456	–	–	7,456	–	7,456	–
		<u>4,322,420</u>	<u>–</u>	<u>–</u>	<u>4,322,420</u>			
Financial assets not measured at fair value								
Student loans	8	–	1,785	–	1,785			
Trade and other receivables*	10	–	356,346	–	356,346			
Cash and cash equivalents	12	–	1,402,111	–	1,402,111			
		<u>–</u>	<u>1,760,242</u>	<u>–</u>	<u>1,760,242</u>			
Financial liabilities not measured at fair value								
Other non-current liabilities		–	–	(59)	(59)			
Other payables and accruals		–	–	(246,365)	(246,365)			
Loans and borrowings	17	–	–	(650,000)	(650,000)	–	(645,270)	–
Lease liabilities	19	–	–	(5,488)	(5,488)			
		<u>–</u>	<u>–</u>	<u>(901,912)</u>	<u>(901,912)</u>			

Notes to the Financial Statements

33. 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)	–	(645,371)	–
Lease liabilities	19	–	–	(1,512)	(1,512)			
		–	–	(892,799)	(892,799)			

* Exclude prepayments

Notes to the Financial Statements

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

Measurement of fair values

(i) Valuation techniques and significant unobservable inputs

Financial instruments measured at fair value

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.

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 are based on net asset values provided by fund managers and fund administrators.	Net asset value	The estimated fair value would increase/decrease if net asset value is higher/lower

Financial instruments not measured at fair value

Loans and borrowings

The fair value of loans and borrowings which reprice at the intervals of six months or less determined for disclosure purposes are calculated based on the present value of future principal and interest cash flows, discounted at the market rate of interest at the reporting date.

(ii) Transfer between Level 1 and 2

During the financial year ended 31 March 2023 and 31 March 2022, 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	
	2023	2022	2023	2022
	\$'000	\$'000	\$'000	\$'000
Unquoted investments				
At 1 April	1,512,175	939,754	1,496,707	931,021
(Losses)/Gains in profit or loss	(22,848)	222,672	(24,426)	217,298
Subscriptions/Contributions	319,027	524,938	318,527	523,477
Redemptions/Distributions	(187,082)	(175,189)	(186,496)	(175,089)
At 31 March	1,621,272	1,512,175	1,604,312	1,496,707

34. 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 \$24,728,000 (2022: \$35,256,000) in the current financial year.

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