

# TEMASEK

# WITH TOMORROW IN MIND



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## From Our Chairman



*“We must continue to build and innovate as we tap into new and emerging opportunities while scaling new heights in a changing world. Only with courage and conviction, can we help to build a better, more inclusive, and sustainable world for this and future generations.”*

**LIM BOON HENG**

Chairman

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## Performance & Portfolio





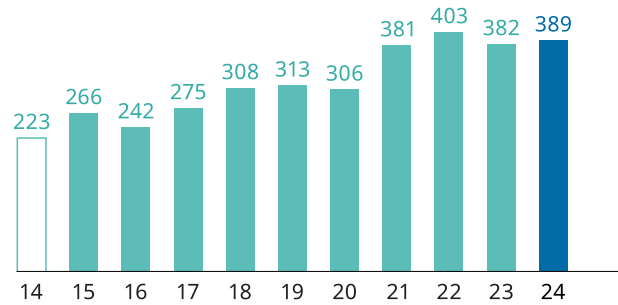
## Performance Overview

We ended the year with a net portfolio value of S\$389 billion. Marking our unlisted portfolio to market would provide S\$31 billion of value uplift and brings our net portfolio value to S\$420 billion.

### S\$389b

#### Net portfolio value

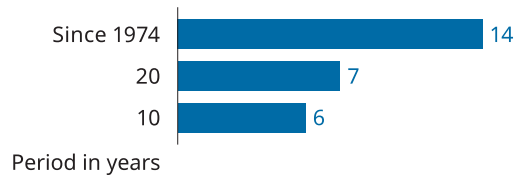
Up S\$166 billion over the last decade



### 6%

#### 10-year return to shareholder

Total shareholder return of 14% since inception

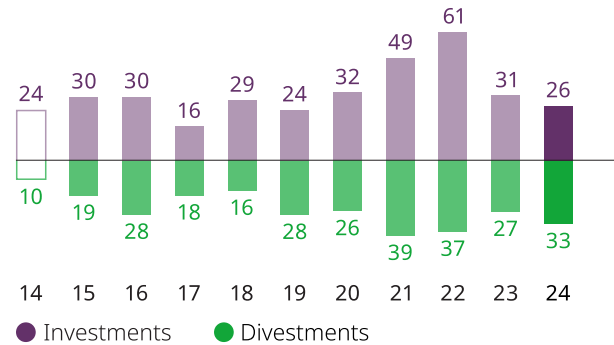


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### S\$328b

#### Invested during the decade

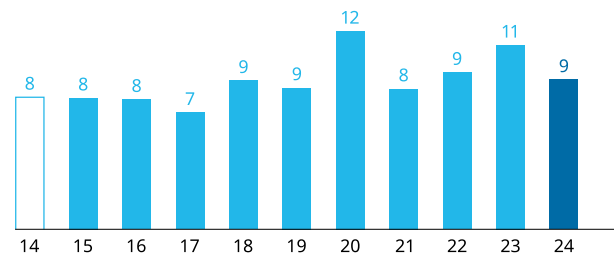
Invested S\$26b during the year



### S\$9b

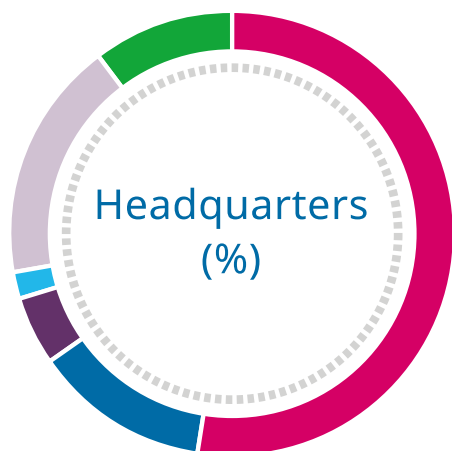
#### Dividend income

Average annual dividend income of S\$9 billion over the last decade

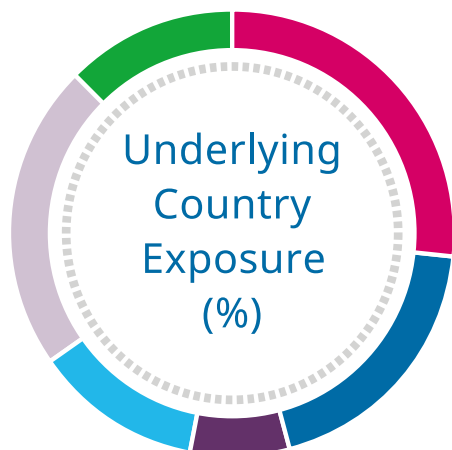


## Portfolio Highlights

Anchored in Asia, our portfolio has 64% underlying exposure to developed economies.



	2024	2023	2022
● Singapore	53	54	54
● China	13	15	15
● India	5	3	3
● Asia Pacific (ex Singapore, China & India)	2	2	2
● Americas	17	16	17
● Europe, Middle East & Africa	10	10	9



	2024	2023	2022
● Singapore	27	28	27
● China	19	22	22
● India	7	6	6
● Asia Pacific (ex Singapore, China & India)	12	11	12
● Americas	22	21	21
● Europe, Middle East & Africa	13	12	12

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## Investment Update

Consistent with past years, we continued to deploy capital into opportunities aligned with the four structural trends and our sustainability objectives. We de-risked certain positions and realised gains from earlier investments. This will allow us to recycle our capital, and to take advantage of market dislocations and unique investment opportunities, as and when they arise.



### Digitisation

Cross-sectoral digital technologies



### Sustainable Living

Products and services for sustainability



### Future of Consumption

New shifts in consumption types and patterns



### Longer Lifespans

Growing needs driven by longevity

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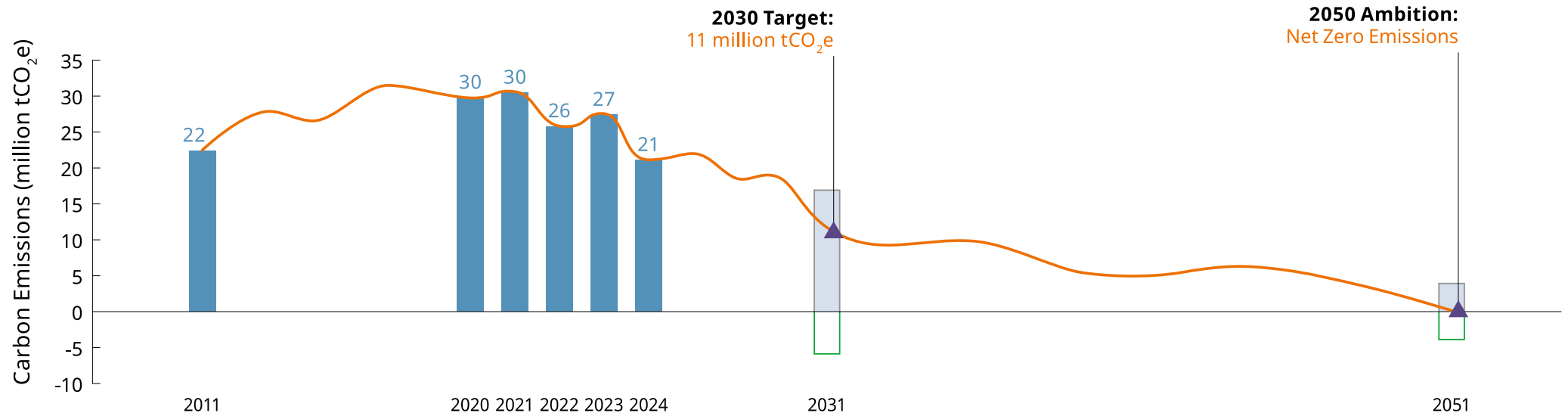
## Sustainability



Our commitment to sustainability is integral to building a thriving and resilient portfolio that enables us to deliver sustainable returns over the long term.

We have been advancing our net zero efforts through decarbonising our existing portfolio, making new investments, forging partnerships, and building platforms.

**Towards Net Zero**



- Historical Total Portfolio Emissions
- Total Portfolio Emissions (Illustrative)
- Negative Emissions (Illustrative)
- Pathway for Net Portfolio Emissions (Illustrative)
- ▲ Calendar year emissions data and targets are reported in the subsequent financial year

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## Institution



We strive to do well, do right, and do good, to build a brighter and more inclusive tomorrow for this and future generations. At the core of this ambition is our people — their values, passions, capabilities, and their willingness to learn, contribute, lead, and take on new ideas and responsibilities.

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## Making a Difference



Our journey in building social capital started over 20 years ago, when we adopted a deliberate and structured approach to give back to communities.

Learn how we support ground-up initiatives such as *Canine Partners* to foster meaningful connections with our community.

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# With Tomorrow in Mind

## 1.1 Preface



## WITH TOMORROW IN MIND

Our world has changed.  
We now live in an era of competition and conflict.  
Geopolitical tensions have intensified,  
amidst the possibility of persistent inflation and higher rates for longer,  
growing nationalism, populism, and protectionism.  
At the same time, the climate crisis looms.

To advance forward,  
we have developed our T2030 strategy  
to build a resilient and forward-looking portfolio,  
with sustainability at our core.

Our journey is driven by a sense of purpose  
to do well, do right, and do good.

At 50, we draw on lessons from our past  
and look ahead to the future with courage and conviction.

We remain resolute in our commitment  
to always do things today with tomorrow in mind,  
*So Every Generation Prospers.*



## 1.2 The Temasek Charter

Temasek is a global investment company rooted in Singapore.

Operating on commercial principles,  
we deliver sustainable returns over the long term.

As stewards of our assets,  
we engage our portfolio companies  
to enhance shareholder value and advocate good governance practices.  
Together, we contribute to the uplifting of the communities  
in which we operate.

We invest in human potential,  
build with courage, and catalyse solutions,  
with sustainability at the core of what we do.

In all these, we seek to Do Well, Do Right, and Do Good.  
Doing things today with tomorrow in mind,  
So Every Generation Prospers.

So every *Generation* prospers





“

We must continue to build and innovate as we tap into new and emerging opportunities while scaling new heights in a changing world. Only with courage and conviction, can we help to build a better, more inclusive, and sustainable world for this and future generations.

LIM BOON HENG  
Chairman

”



## From Our Chairman

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To adapt to a changing world, we draw on lessons from our past and look ahead to the future with courage and conviction.

2024 is a special year for Temasek as we [commemorate 50 years](#) since our inception in 1974. We are marking this significant milestone at a time when the world is deeply divided.

Over the past three decades, we had enjoyed global peace and stability with free trade and global collaboration, albeit interspersed with events that included the SARS epidemic and COVID-19 pandemic. Unfortunately, we have now entered a new era of conflict and competition with ongoing wars in Ukraine and Gaza, and intensifying US-China tensions against the backdrop of a rise in polarisation, populism, nationalism, and protectionism in a number of countries.

We have seen the emergence of muscular industrial policies which nations have introduced to enhance domestic competitiveness, create jobs, and protect the livelihoods of their citizens. At the same time, the climate crisis continues to loom large, with the window for action rapidly narrowing each year. These have wide-ranging implications on companies around the world and exacerbate the uncertainty of the macro environment.

Interestingly, this harks back to the era in which we were founded, back in 1974 — when the world was divided similarly by geopolitical differences and faced similar challenges to those we are witnessing today. Understanding the journey that led us to where we are

today is important to help prepare us for the future. It also gives renewed meaning to Temasek's ethos of doing things today with tomorrow in mind, so every generation prospers.

Temasek is a much bigger entity than it was in 1974. However, one thing remains constant, we must continue to build and innovate as we tap into new and emerging opportunities while scaling new heights in a changing world. Only with courage and conviction, can we help to build a better, more inclusive, and sustainable world for this and future generations.

## Portfolio Performance

As at 31 March 2024, our net portfolio value was S\$389 billion<sup>1</sup>, up S\$7 billion from the previous year, largely due to our returns in the US and India, offset by the underperformance of China's capital markets.

Amidst the global economic uncertainties, we maintained a cautious investment stance, and invested S\$26 billion and divested S\$33 billion in the financial year ended 31 March 2024 with a net divestment of S\$7 billion. This is compared to our net investment of S\$4 billion in the last financial year.

Our 10-year and 20-year Total Shareholder Return (TSR) were 6% and 7% respectively. One-year TSR was 1.60%. TSR since inception in 1974 was 14%. On a mark to market basis, our net portfolio value as at 31 March 2024 would have been S\$420 billion, including a value uplift of S\$31 billion from our unlisted portfolio.

The resilience of our portfolio remains our core strength. We will continue to shape our portfolio in line with [long-term structural trends](#), with the aim of achieving sustainable returns over the long term.

## Navigating a Complex World

The global economy has been more robust than expected. Recession risks in key developed markets have largely subsided, as policymakers navigated an eventful 2023. While monetary policy remains tight globally, we are seeing inflation coming down from elevated levels. This has given central banks more confidence to potentially ease monetary policy, with some already beginning the process. Despite the better growth outlook, there are risks on the horizon. Geopolitical tensions are a key concern primarily centred on tense US-China relations, and the wars in Ukraine and Gaza. The elections in the US and other countries this year could add an additional layer of complexity to the risk-reward spectrum.

In the US, inflationary pressures have broadly eased, even as growth has remained firm. Expansionary supply factors, especially higher immigration flows, have made this possible by adding to the labour force and the economy's overall growth capacity. However, the trajectory towards the Federal Reserve's inflation target of 2% remains uncertain. An unclear inflation path, a resilient labour market, and continued growth suggest less need for the Federal Reserve to pre-emptively ease its restrictive monetary policy, potentially leaving policy rates higher for longer. If inflation turns out to be more persistent than expected, the odds of further hikes may increase which may result in headwinds to financial markets.

The Eurozone economy is recovering. Domestic consumption is supported by credit growth and a pickup in real wages as inflation slows. This has allowed the European Central Bank to normalise policy. In addition, the global manufacturing cycle has troughed, forming another growth tailwind. However, we are watchful for downside risks in the form of a less supportive fiscal impulse. In the long term, there remains scope for significant infrastructure build out across Europe because of the energy transition. This creates opportunities to invest in quality businesses that benefit from increased capital expenditure in green technologies.

<sup>1</sup> Equivalent to US\$288 billion, €267 billion, £228 billion, and RMB2.08 trillion as at 31 March 2024.

China's government has set a target of around 5% economic growth for 2024, which is the same as last year. The government maintains a pro-growth policy stance. This has aided China in recovering from a cyclical bottom in growth but structural challenges remain. Diversification plans by global multinational corporations and reduced foreign direct investment could lower the potential for productivity gains. China's supply capacity remains highly competitive and efficient, but without a commensurate pickup in domestic demand, growth and inflation will continue to face downward pressure. At the same time, geopolitical tensions and threats of additional tariffs could weigh on export demand for Chinese goods.

Singapore's open economy is expected to be supported by a healthy external growth backdrop and continued recovery in the global goods cycle. However, geopolitical events and conflicts pose risks. We remain watchful over any potential disruption to global trade and supply chains which could disproportionately impact Singapore.

## Commemorating Our 50<sup>th</sup> Anniversary

Turning 50 is an opportunity to reflect on our journey and prepare for the road ahead. To guide us to realise our [Purpose](#) — *So Every Generation Prospers*, we have refreshed the [Temasek Charter](#), which is a living document that we review and update at different phases of Temasek's journey. The refreshed Charter sets out our role as a global investor rooted in Singapore, to deliver sustainable returns over the long term. To move forward, we have developed [our T2030 strategy](#) to build a resilient and forward-looking portfolio, with sustainability at our core.

In June 2024, we announced T-Spring, a S\$150 million gift to the community to advance capabilities and contribute to preparing Singapore's workforce and organisations to embrace a different world. The gift — which supports skills development, scholarships, and fellowships — is Temasek's tribute to Singapore's past, present, and future generations on our 50<sup>th</sup> anniversary. It reflects our intergenerational focus, underscores our roots, and acknowledges human capital as the driver of our journey and its role in Singapore's success.

## Extending Our Global Footprint

Temasek's growth is a story of globalisation. In 1974, we had a portfolio of 35 Singapore companies and since then we have grown into a global investment house with [13 offices in 9 countries](#) around the world.

In April this year, we held the [official opening of our Paris office](#), reaffirming our commitment across the broader Europe, Middle East, and Africa (EMEA) region. Our exposure to the EMEA region has grown almost five times since 2011, reflecting the opportunities and innovation we see there. Our Paris office will complement our London and Brussels offices to strengthen Temasek's global network.

## Inaugural Sustainability Report

As we continue to adapt to a changing world, our commitment to placing sustainability at our core remains. This year, we launched our inaugural [Sustainability Report](#). It brings together our disclosures and tracks our progress, by taking into consideration the disclosure requirements issued by the International Sustainability Standards Board. As a company, we uphold our commitment to carbon neutrality in our operations. We also remain committed to our strategy for [net zero](#), nature positive, and inclusive growth.

## In Appreciation

I am grateful to our international and regional advisors, who have always been generous with their insights and advice. Last year, we launched the [Temasek Southeast Asia Advisory Panel \(TSEAP\)](#), which comprises eminent business leaders with deep experience, insights, and perspectives on significant industry, economic, social, and political trends in the region. Together with the [Temasek Americas Advisory Panel](#) and the [Temasek European Advisory Panel](#), TSEAP will complement the Temasek International Panel in providing Temasek with regular access to and engagement with prominent business leaders on issues relevant to our activities across key markets.

I am also deeply appreciative to my colleagues on the Board for their tireless and generous contributions that enable us to navigate the challenges ahead. I wish to take this opportunity to welcome [Tan Chong Meng and Geoffrey Wong](#), who joined our Board on 1 April 2024 and 10 May 2024 respectively. Both are senior business leaders with extensive global experience in their respective fields. Chong Meng's 40-year executive career has spanned both private and public service. His track record of driving commercial growth in diverse global markets will be invaluable in guiding the Temasek team to navigate the complex operating environment. Geoffrey has a long career in investment management, especially in the Asia Pacific and emerging markets. His deep investment experience in equities and other asset classes, as well as in the areas of investment management and governance, will help to strengthen our board and investment deliberations. We look forward to tapping on their guidance and counsel.

My message started with a sombre picture of our world. However, I am optimistic that we will weather the storm and emerge stronger. I say this with conviction as our history is proof that we have what it takes to overcome a challenging environment. Many of the issues that we are dealing with today were present in 1974, such as high inflation and interest rates, the global oil crisis, the Cold War, and a fragmented global economy. We surmounted those headwinds 50 years ago and thrived. We will rise above the challenges that have come back to revisit us and may stay with us well past the end of the decade.

Finally, I would like to thank our people who have been instrumental to Temasek's journey. I am grateful to the boards, management, and staff of Temasek and our portfolio companies — past and present — for their contributions over the past 50 years. They have put us in good stead by always doing things [with tomorrow in mind](#). We will strive to continue their good work and stay committed to doing well, doing right, and doing good, so that every generation prospers.



**LIM BOON HENG**

Chairman  
July 2024





## Performance & Portfolio

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## 3.1 Performance Overview

We ended the year with a net portfolio value of S\$389 billion<sup>2</sup>. Marking our unlisted portfolio to market would provide S\$31 billion of value uplift and brings our net portfolio value to S\$420 billion<sup>3</sup>.

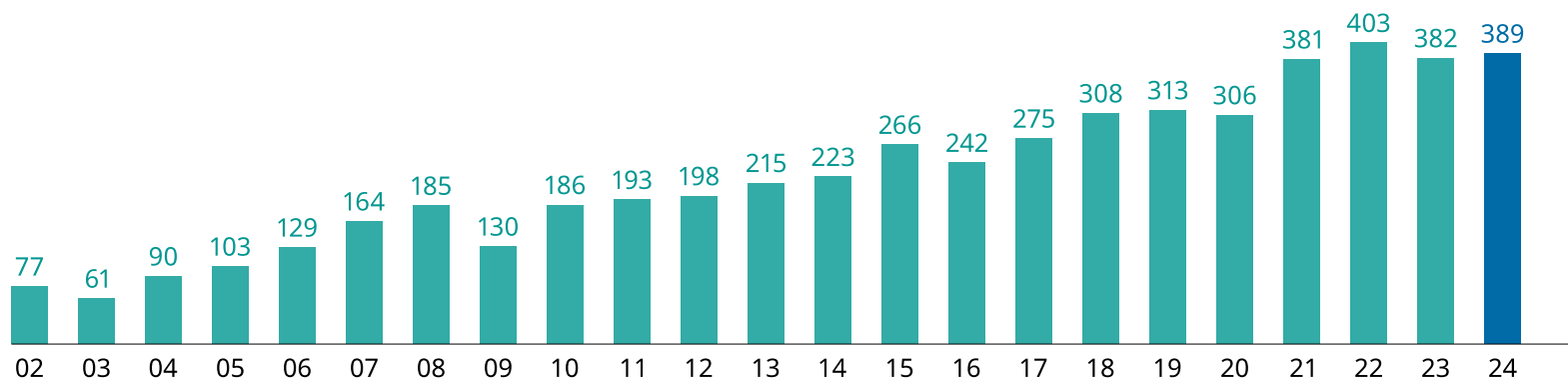
# S\$389b

**Net portfolio value**

Up S\$166 billion over the last decade

(as at 31 March)

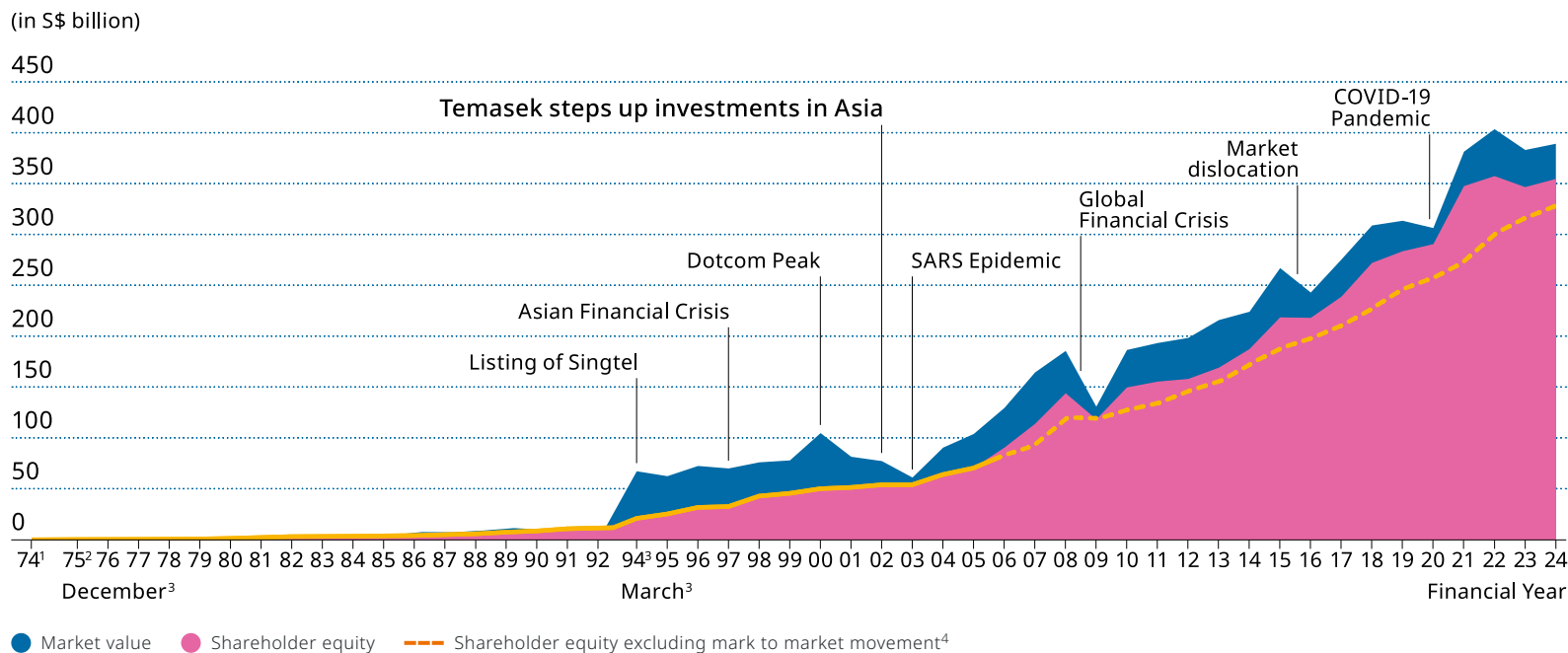
**Net Portfolio Value (S\$b)**



<sup>2</sup> Equivalent to US\$288 billion, €267 billion, £228 billion, and RMB2.08 trillion as at 31 March 2024.

<sup>3</sup> Applying a similar methodology, marking our unlisted portfolio to market would bring our net portfolio value to S\$411 billion and S\$438 billion for the financial years ended 31 March 2023 and 2022 respectively.

## Temasek Net Portfolio Value since Inception



<sup>1</sup> Incorporation of Temasek on 25 June 1974.

<sup>2</sup> Financial year 75 began on 25 June 1974 and ended 31 December 1975.

<sup>3</sup> Financial year-end was changed from 31 December before 1993 to 31 March from 1994 onwards.

<sup>4</sup> From the financial year ended 31 March 2006, the accounting standards require sub-20% investments to be marked to market.

Our portfolio comprises both listed and unlisted investments.

Our net portfolio value of S\$389 billion is based on valuing our listed investments at share prices as of the last trading day of our financial year and our unlisted investments at book value less impairment. Book value refers to Temasek's cost of investment plus our share of the investee company's profits or losses, changes in other equity reserves, minus write down (if any).

Over the last decade, our unlisted portfolio generated returns of 9% per annum, delivering higher returns than our listed portfolio.

Marking our unlisted portfolio to market, based on market approaches such as investee company's recent funding round, market multiples of comparable public companies, and/or income approach such as the discounted cash flow model, would provide S\$31 billion of value uplift, which is approximately 15% of our unlisted portfolio as at 31 March 2024.

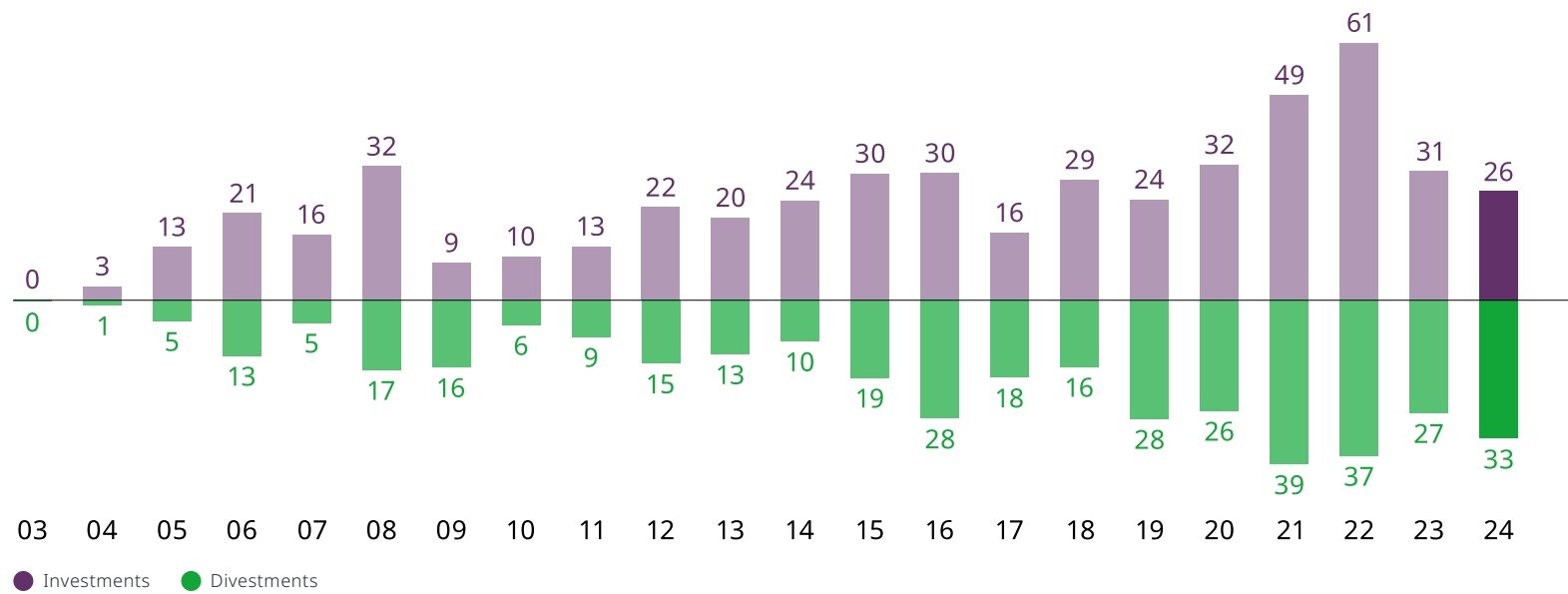
# S\$26b

## Invested during the year

Invested S\$328 billion over the last decade

(for year ended 31 March)

### Investments & Divestments (\$b)





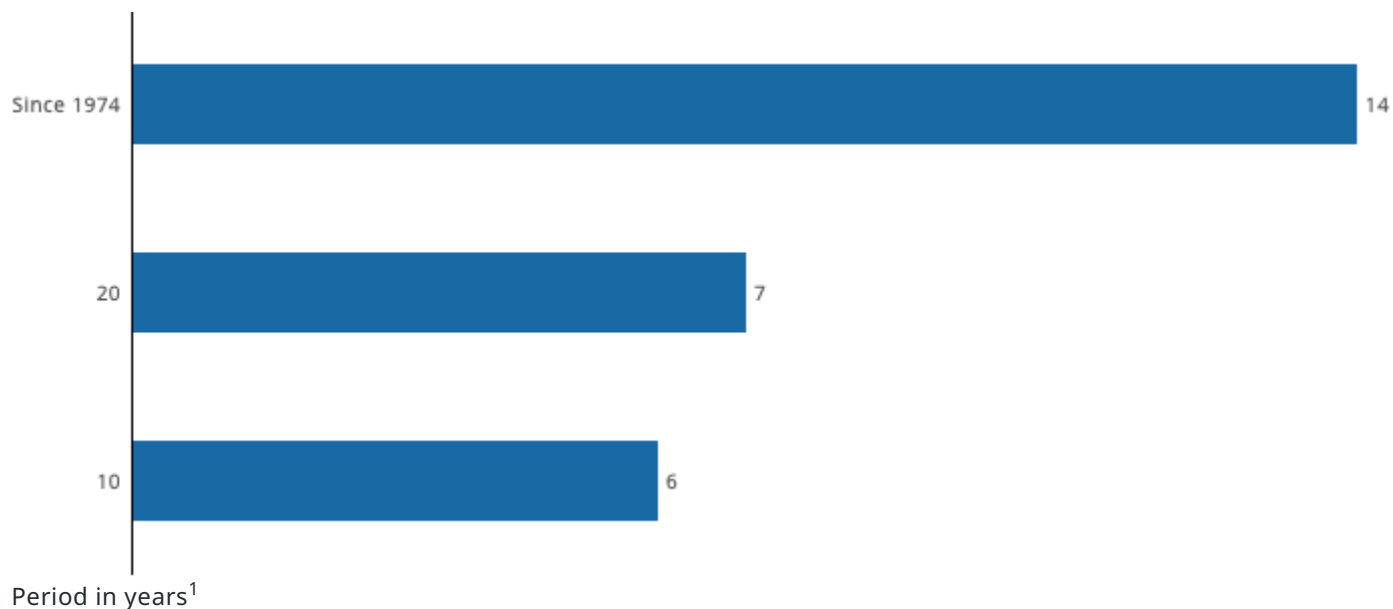
# 6%

## 10-year return to shareholder

Total shareholder return of 14% since inception

(as at 31 March 2024)

### S\$ Total Shareholder Return (%)



<sup>1</sup> Total Shareholder Return in US\$ terms was 5%, 8%, and 15% for 10, 20-year, and since inception periods respectively, based on historical foreign exchange rates.

Total Shareholder Return (TSR) is a compounded and annualised measure, which includes dividends paid to our shareholder and excludes investments made by our shareholder in Temasek's shares. Our TSR over different time periods is a snapshot of our performance, with the longer time periods being more representative of our performance as a long-term investor.

As at 31 March 2024, our Singapore dollar<sup>4</sup> 10-year TSR was 6% and three-year TSR was 0.68%.

Our 20-year TSR was 7%, versus the Singapore 20-year annualised core inflation<sup>5</sup> of 1.9%.

<sup>4</sup> Total Shareholder Return in US\$ terms was 1%, 5%, and 8% for 3, 10, and 20-year periods respectively, based on historical foreign exchange rates.

<sup>5</sup> As of the year ended March 2024, annualised core inflation in Singapore was 1.7% and 1.9% for 10 and 20-year periods respectively (Source: Monetary Authority of Singapore).

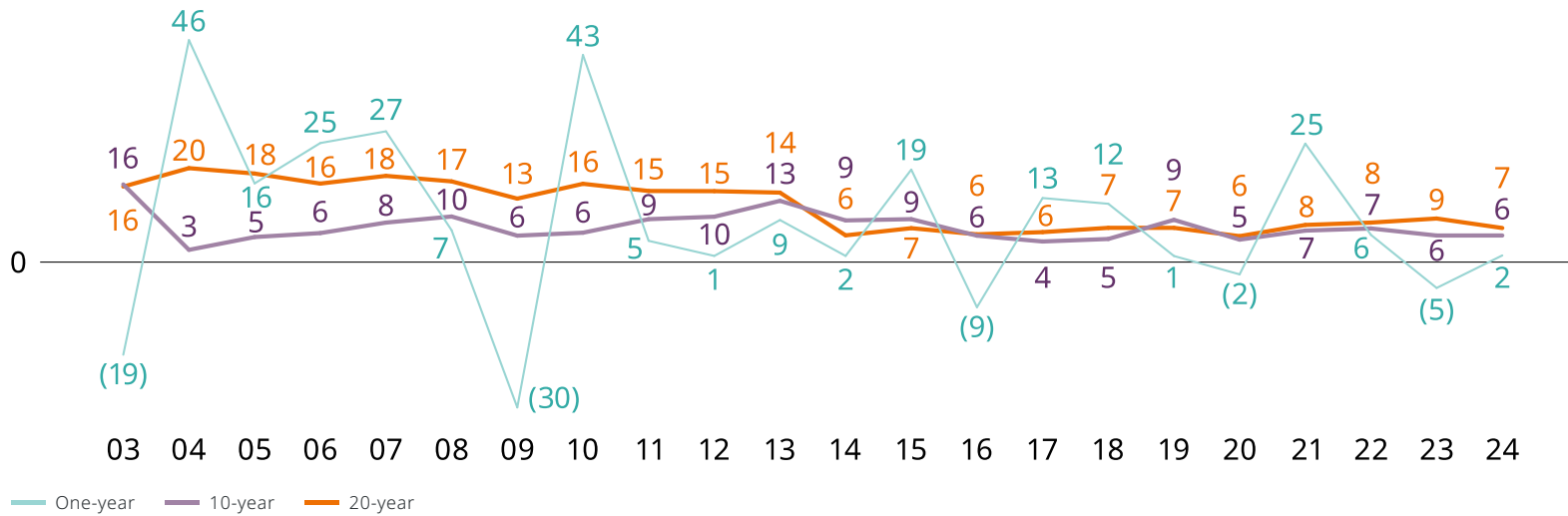
**7%**

**20-year return to shareholder**

One-year returns of -9% to 25% during the last decade

(as at 31 March)

**Rolling S\$ Total Shareholder Return (%)**



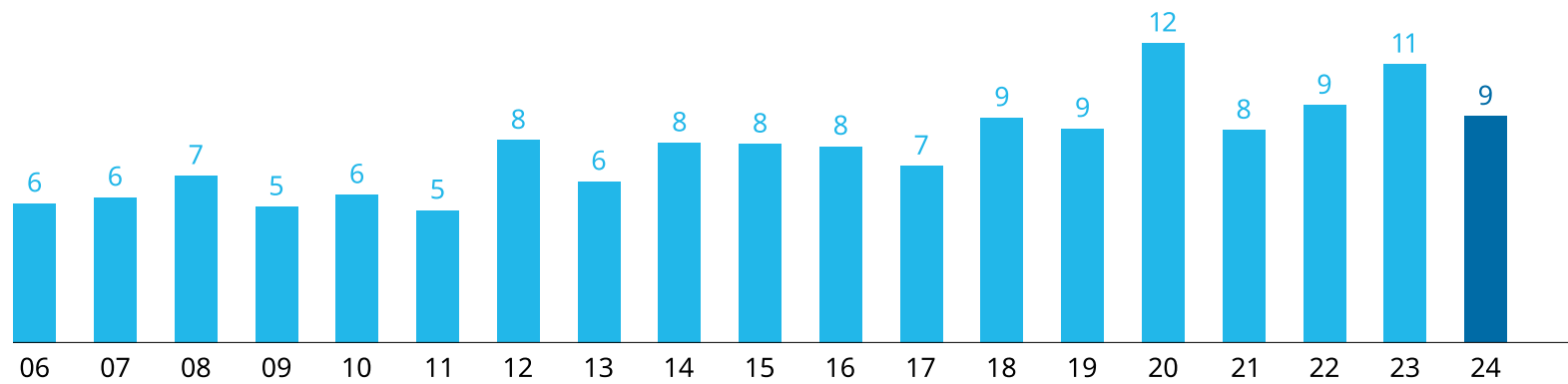
# S\$9b

## Dividend income

Average annual dividend income of S\$9 billion over the last decade

(for year ended 31 March)

### Dividend Income (S\$b)

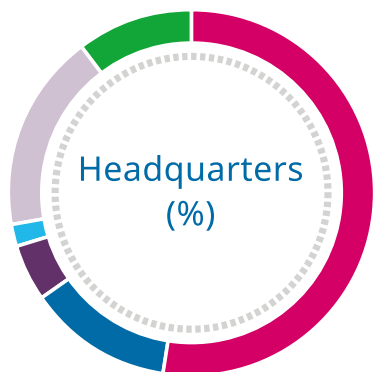




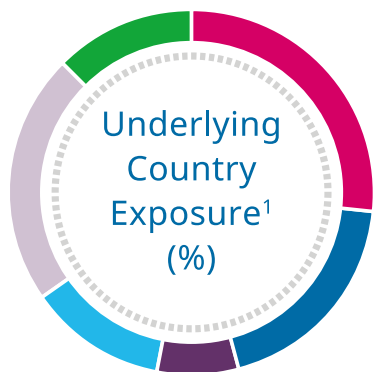
## 3.2 Portfolio Highlights

Anchored in Asia, our S\$389 billion<sup>6</sup> portfolio has 64% underlying exposure to developed economies.

(as at 31 March)



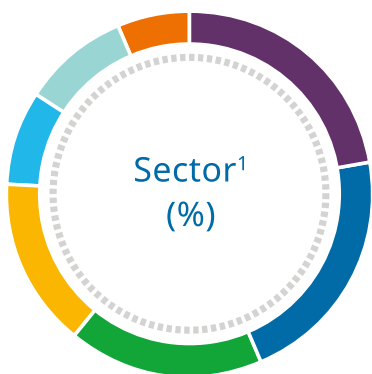
	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
● Singapore	<b>53</b>	54	54	49	52	55	54	60	60	57
● China	<b>13</b>	15	15	21	23	20	20	19	20	21
● India	<b>5</b>	3	3	3	2	2	2	3	2	2
● Asia Pacific (ex Singapore, China & India)	<b>2</b>	2	2	2	3	4	5	4	5	5
● Americas	<b>17</b>	16	17	15	12	11	12	8	7	7
● Europe, Middle East & Africa	<b>10</b>	10	9	10	8	8	7	6	6	8



	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
● Singapore	<b>27</b>	28	27	24	24	26	27	29	29	28
● China	<b>19</b>	22	22	27	29	26	26	25	25	27
● India	<b>7</b>	6	6	5	4	5	4	5	5	5
● Asia Pacific (ex Singapore, China & India)	<b>12</b>	11	12	12	14	15	18	17	19	19
● Americas	<b>22</b>	21	21	20	18	16	14	14	12	11
● Europe, Middle East & Africa	<b>13</b>	12	12	12	11	12	11	10	10	10

<sup>1</sup> Distribution based on underlying assets.

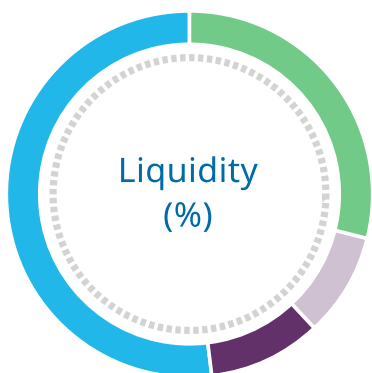
<sup>6</sup> Equivalent to US\$288 billion, €267 billion, £228 billion, and RMB2.08 trillion as at 31 March 2024.



	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
● Transportation & Industrials <sup>2</sup>	<b>22</b>	23	22	19	18	19	19	20	21	22
● Financial Services	<b>21</b>	21	23	24	23	25	26	25	23	28
● Telecommunications, Media & Technology	<b>18</b>	17	18	21	21	20	21	23	25	24
● Consumer & Real Estate	<b>15</b>	16	15	14	17	17	16	17	17	15
● Life Sciences & Agri-Food	<b>9</b>	9	9	10	8	7	6	4	4	3
● Multi-Sector Funds	<b>9</b>	8	8	8	8	8	8	8	7	5
● Others (including Credit)	<b>6</b>	6	5	4	5	4	4	3	3	3

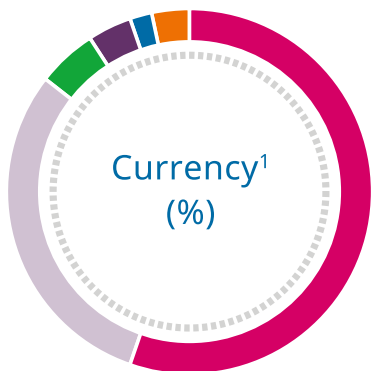
<sup>1</sup> Distribution based on underlying assets.

<sup>2</sup> The Transportation & Industrials sector includes investments in Energy & Resources.



	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
● Liquid & sub-20% listed assets <sup>1</sup>	<b>29</b>	27	28	38	37	36	36	33	31	34
● Listed large blocs (≥ 20% and < 50% share)	<b>9</b>	9	8	7	5	10	10	9	10	12
● Listed large blocs (≥ 50% share)	<b>10</b>	11	12	10	10	12	15	18	20	21
● Unlisted assets	<b>52</b>	53	52	45	48	42	39	40	39	33

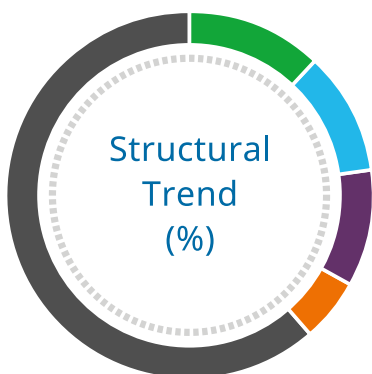
<sup>1</sup> Mainly cash and cash equivalents, and sub-20% listed assets.



	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
● Singapore dollars	<b>55</b>	54	49	50	57	63	53	60	58	58
● US dollars	<b>30</b>	30	34	31	26	21	24	19	19	14
● Hong Kong dollars	<b>5</b>	7	7	11	11	10	12	12	13	15
● Indian rupees	<b>4</b>	3	3	2	2	2	2	2	2	2
● Euros	<b>2</b>	0 <sup>2</sup>	1	1	0 <sup>2</sup>	0 <sup>2</sup>	1	0 <sup>2</sup>	0 <sup>2</sup>	1
● Others	<b>4</b>	6	6	5	4	4	8	7	8	10

<sup>1</sup> Distribution based on currency of denomination.

<sup>2</sup> Less than 1%.

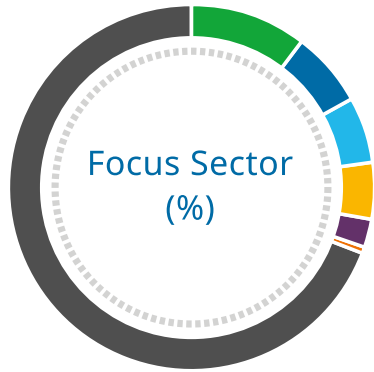


	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
● Sustainable Living	<b>12<sup>1</sup></b>	5	2	1	1	0 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	*
● Digitisation	<b>11</b>	10	11	9	7	6	3	3	2	*
● Future of Consumption	<b>10</b>	11	11	14	11	9	10	8	8	*
● Longer Lifespans	<b>6</b>	5	6	8	6	5	6	3	3	*
● Others	<b>61</b>	69	70	68	75	80	81	86	87	*

<sup>1</sup> The increase in our Sustainable Living exposure is mainly due to a reclassification of selected portfolio companies as at 31 March 2024, to better reflect their alignment with the trend.

<sup>2</sup> Less than 1%.

\* Information not measured in previous years. We have been aligning our portfolio to structural trends since 2016.



	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
● Technology	<b>10</b>	10	11	13	12	8	8	6	6	5
● Non-Bank Financial Services	<b>7</b>	7	8	9	7	6	5	4	3	4
● Life Sciences	<b>6</b>	6	6	8	6	5	5	4	4	3
● Consumer	<b>5</b>	5	5	5	7	7	7	7	7	6
● Agri-Food	<b>3</b>	3	3	2	2	2	1	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>
● Media	<b>1</b>	1	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>
● Others	<b>68</b>	68	67	63	66	72	74	79	80	82

<sup>1</sup> Less than 1%.



## 3.3 Investment Approach

Our investments are driven by our views of the trends shaping societies.

Since our incorporation in 1974, Temasek has transformed from a Singapore holding company into a global investment company. In the 2000s, we stepped out and grew with an emerging Asia. In 2010, we embarked on our strategy to be a global investor by the end of 2020, and expanded beyond investing in emerging markets and Asia, to developed markets in the US and Europe.

In 2019, Temasek developed our T2030 strategy — our 10-year roadmap to guide our strategic planning, capability building, and institutional development initiatives for this decade. As part of our T2030 strategy, we focus on constructing a resilient and forward-looking portfolio — one which is able to withstand exogenous shocks and perform through market cycles, while at the same time capitalising on growth opportunities with the potential for sustainable returns above our risk-adjusted cost of capital over the long term.

### Portfolio Composition

#### Structural Trends

To guide our construction of a portfolio that is resilient to shocks and relevant for the future, our investment activities are aligned to four structural trends.



#### Digitisation

Cross-sectoral digital technologies



#### Sustainable Living

Products and services for sustainability



#### Future of Consumption

New shifts in consumption types and patterns



#### Longer Lifespans

Growing needs driven by longevity

Digitisation and Sustainable Living are megatrends with a pervasive impact across all sectors and on the business models of incumbent and emerging businesses. Future of Consumption and Longer Lifespans reflect structural shifts in consumption patterns and growing needs arising from population growth and longer expected lifespans. These trends are interconnected, transcend sectors and countries, and persist through economic cycles.

We continue to [align our portfolio with such trends](#). We invest in companies that directly enable, drive, and benefit from these trends.

In addition, we deploy capital to catalyse solutions that can enable companies to transition to a more sustainable future, tap on opportunities to invest in future growth sectors and business models, and encourage enterprises to transform through efforts in innovation.

We set aside a portion of our investment capital to back innovations and disruptive technologies at pre-commercialisation stages. We are cognisant of the risks and challenges these early-stage companies face and accept the binary risks that come with investing in them.

### Listed and Unlisted

Our portfolio comprises both listed and unlisted assets, including our investments in funds. The unlisted portfolio has grown steadily over the years as we invested in attractive opportunities in the private markets and benefitted from the increase in the value of our unlisted assets.

As at 31 March 2024, 48% of our portfolio was in liquid<sup>7</sup> and listed assets, and 52% was in unlisted assets and funds.

We value our unlisted investments at book value less impairment<sup>8</sup>. Our unlisted portfolio, including our private equity co-investments and investments in private equity funds, generated returns of 9% per annum over the last decade and more than 10% per annum over the last two decades, delivering higher returns than our listed portfolio.

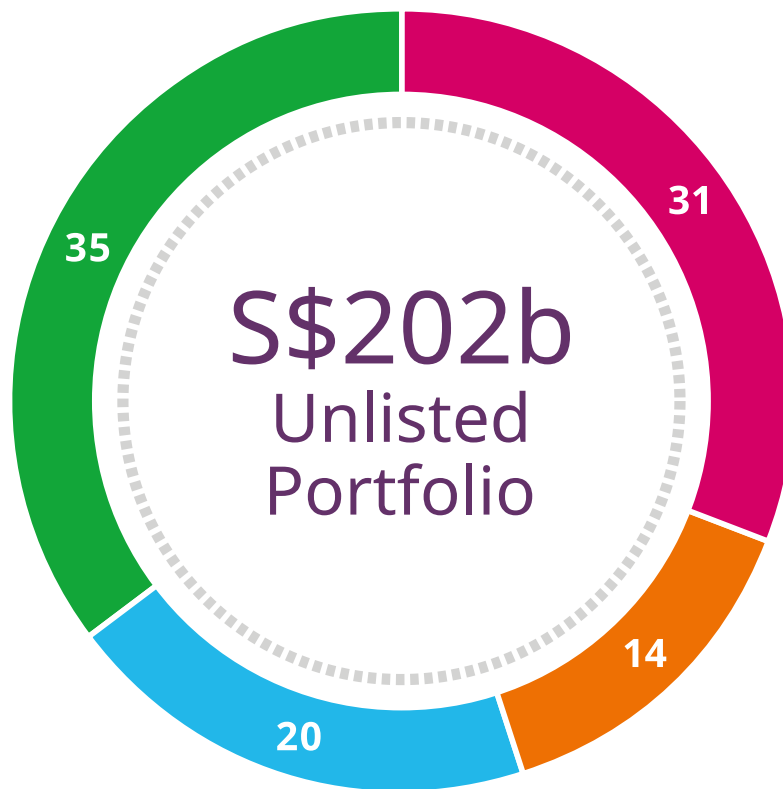
Marking our unlisted portfolio to market<sup>9</sup> would provide S\$31 billion of value uplift which is approximately 15% of our unlisted portfolio as at 31 March 2024.

<sup>7</sup> Mainly cash and cash equivalents.

<sup>8</sup> Book value refers to Temasek's cost of investment plus share of investee company's profits or losses, changes in other equity reserves, minus write down (if any).

<sup>9</sup> Based on market approaches such as investee company's recent funding round, market multiples of comparable public companies, and/or income approach such as the discounted cash flow model.

**Unlisted Portfolio (%)**



● Singapore Portfolio Companies<sup>1</sup>

● Private Equity and Credit Funds

● Asset Management Businesses

● Other Private Companies (Including Early Stage)

<sup>1</sup> Includes only key portfolio companies headquartered in Singapore.

Our unlisted portfolio is well diversified across geographies and sectors.

Unlisted Singapore companies include mature companies such as Mapletree, PSA, and SP Group.

Our asset management businesses include Sevia Holdings<sup>10</sup>, Pavilion Capital, and Vertex Holdings. Our asset management businesses manage around S\$83 billion in assets, which include third-party capital as well as our own capital.

Investments in private equity and credit funds have enabled us to gain deeper insights into new markets and sub-sectors of specialisation while providing co-investment opportunities.

The rest of our unlisted portfolio comprises direct investments in private companies. Our investments include Ant Group, AS Watson, Ceva Santé Animale, Element Materials Technology, Manipal Health Enterprises, Mastronardi, Schneider Electric India, and Topsoe.

Our unlisted portfolio offers us liquidity through divestments; steady dividends from mature companies; and distributions from the high-quality portfolio of funds we have built up over the years. The funds are well diversified across geographies, sectors, and vintages. We also achieve liquidity from our unlisted portfolio through public listings. For example, DoorDash, Gracell Biotechnologies, Intapp, Medanta, PB Fintech, and Zomato have listed in the past five years.

### Early-Stage Investments

Our focus as an investment company is to invest in innovation and growth. This includes investing in early-stage companies to identify potential winners early; to keep abreast of the latest technologies and innovations; and to drive portfolio development efforts. We also engage closely with portfolio companies on their efforts to assess potential disruption risks and to identify transformation opportunities arising from these new technologies.

We are cognisant of the risks and challenges these early-stage companies face and accept the binary risks that come with investing in them. However, some of these companies also have the potential to achieve significant growth over time and deliver outsized returns.

We manage our early-stage risk by appropriate sizing and diversification. We typically invest smaller amounts at the time of initial investment, with a view to increasing our stake if the company demonstrates successful de-risking. In addition, we cap our exposure to this segment to 6% of our overall portfolio as part of our risk management framework. Currently, our early-stage investments account for under 6% of our total portfolio, with about half through direct investments and the rest through venture capital funds.

## Integrating ESG Across Our Investments

We apply an [Environmental, Social, and Governance \(ESG\) framework](#) across our entire investment process. This includes investment due diligence to ensure that the opportunities we consider align with our objectives for sustainability and good governance. Post-investment, we engage investee companies to advance sustainability practices, including strengthening climate targets and transition plans, promoting inclusive workplaces as well as workplace health and safety, and fostering good governance.

## Investment Framework and Risk-Adjusted Cost of Capital

Our investment discipline is centred around intrinsic value and our risk-return framework. This framework forms the basis of our investment decisions, capital allocation, performance measurement, and [incentive system](#).

Our [risk-adjusted](#) cost of capital (RACOC) framework compares the relative attractiveness between investment opportunities. For each investment, we conduct a bottom-up intrinsic value analysis, with expected returns evaluated against a RACOC that we derive using the capital asset pricing model.

<sup>10</sup> Sevia Holdings comprises five companies — namely Azalea Investment Management, Fullerton Fund Management, InnoVen Capital, SeaTown Holdings International, and Sevia Capital.

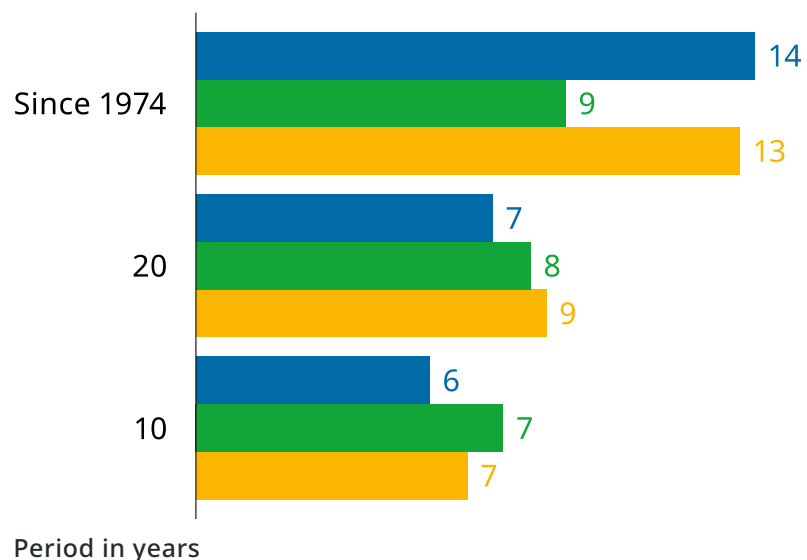


Each investment's RACOC takes into account country risk, industry risk, and capital structure. Investments in riskier sectors or markets will have higher costs of capital. We reflect additional risk by adding to the RACOC an illiquidity risk premium for unlisted investments and a venture risk premium for early-stage investments.

We assess our performance by measuring our TSR against our overall RACOC, which is the weighted average RACOC across all our individual investments.

(as at 31 March 2024)

### S\$ Total Shareholder Return Relative to Risk-Adjusted Cost of Capital (%)



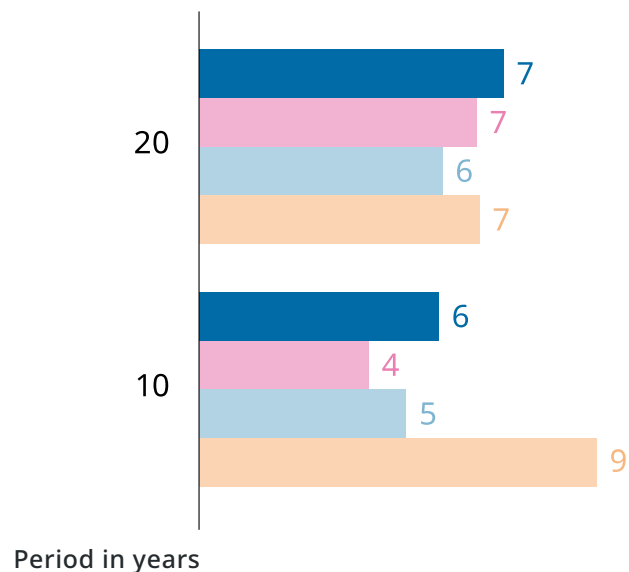
- S\$ Total Shareholder Return by Market Value<sup>1</sup>
- Risk-Adjusted Cost of Capital<sup>2</sup>
- S\$ Total Shareholder Return by Shareholder Equity<sup>3</sup>

<sup>1</sup> TSR by market value takes into account changes in the market value of our portfolio, dividends we paid, and nets off any new investments made by our shareholder in Temasek's shares.

<sup>2</sup> Our risk-adjusted cost of capital accounts for different risks faced by our investments, and is derived using a capital asset pricing model. The risk-adjusted cost of capital is built bottom-up, and aggregated across all our investments.

<sup>3</sup> TSR by shareholder equity takes into account the underlying profitability of our portfolio companies, realised returns from our investment activities, dividends we paid, and nets off any new investments made by our shareholder in Temasek's shares.

**S\$ Total Shareholder Return Relative to Market Indices<sup>1</sup> (%)**



- S\$ Total Shareholder Return by Market Value
- FTSE STI<sup>2</sup>
- MSCI AC Asia ex-Japan<sup>3</sup>
- MSCI ACWI<sup>4</sup>

<sup>1</sup> Temasek's mandate is to deliver sustainable returns over the long term. These market indices are broad indices, including a wide range of stocks across different countries and industry sectors. The allocations of the indices across sectors and countries are typically based on the market capitalisation of listed stocks, and it is more commonly used for passive investing through Exchange-Traded Funds (commonly known as ETFs). Temasek's portfolio composition is very different from these indices, especially as Temasek's portfolio includes a proportion of unlisted assets. However, market indices provide useful broad reference points as to how the overall market had moved over time. Temasek has set out our performance against various indices, where there is a complete dataset available, to assist those interested in such comparisons.

<sup>2</sup> The FTSE STI Index measures the performance of the top 30 companies listed on the Singapore Exchange.

<sup>3</sup> The MSCI AC Asia ex-Japan Index measures the performance of large to mid-sized companies in Asia, excluding Japan.

<sup>4</sup> The MSCI ACWI Index measures the performance of large to mid-sized companies in the developed and emerging markets.

We increased our internal carbon price from US\$50 per tonne of carbon dioxide equivalent (tCO<sub>2</sub>e)<sup>11</sup> in the financial year ended 31 March 2024 to US\$65 per tCO<sub>2</sub>e starting from 1 April 2024. Our internal carbon price is applied to each investment to better assess the potential climate impact, thereby enabling a greater focus on the long-term climate resilience of our portfolio. We expect to progressively increase this to US\$100 per tCO<sub>2</sub>e by 2030.

## Investment Engagement and Stewardship

Against the challenges and uncertainties in our macro environment, companies have to be ever more agile and laser-focused on the development and execution of their strategies, in order to meet the expectations of their shareholders and other stakeholders.

As an investor and owner seeking to achieve sustainable long-term returns from our portfolio, Temasek stays committed to working with our portfolio companies, their boards, and leadership, to ensure a close alignment between strategy and performance, and returns and rewards. We seek to add value to our investee companies — where appropriate, we work together with these companies to enhance value through partnerships, innovation, growth strategies, and transformational possibilities.

As an engaged shareholder, we proactively promote good governance, ethical business practices, and compliance with applicable laws. We set clear expectations and exercise our rights through voting at shareholder meetings. We view voting and engagement as key levers that are essential to long-term value creation and have formed a dedicated Investment Stewardship function to augment that effort.

<sup>11</sup> tCO<sub>2</sub>e refers to tonnes of carbon dioxide equivalent, a standard unit of measurement used in greenhouse gas emissions accounting and reporting.

## 3.4 Investment Update

Amidst a bifurcated global economy, we took a cautious investment stance while staying guided by long-term structural trends.

We invested S\$26 billion and divested S\$33 billion in the financial year ended 31 March 2024, with a net divestment of S\$7 billion. Our cautious investment stance was driven by expectations of a US recession until the Federal Reserve pivoted from its tight monetary policy in the last quarter of 2023, as well as the slower than expected pace of post-COVID recovery in China. Our divestments included the significant redemption of capital by Singapore Airlines and Pavilion Energy respectively.

Despite the market uncertainties, we believe that there are opportunities to be seized. The US remains the leading destination for our capital and we also stepped up our investment activities in Europe, India, and Japan.

Consistent with past years, we continued to deploy capital into opportunities aligned with the [four structural trends](#) and our sustainability objectives. We de-risked certain positions and realised gains from earlier investments. This will allow us to recycle our capital, and to take advantage of market dislocations and unique investment opportunities, as and when they arise.

### Investing Across Key Sectors and Geographies

We made significant investments in consumer, financial services, healthcare, and technology sectors.

In India, we strengthened our healthcare and financial services portfolio with investments in Manipal Health Enterprises, a hospital chain; Niva Bupa, a health insurance company; and follow-on investments in Axis Bank, HDFC Bank, and ICICI Bank. We continued our support for emerging champions by investing in Atomberg Technologies, a consumer electricals company, and Skyroot, a space tech company which specialises in space launches for small satellites.

In North America, we invested in Authentic Brands Group, a brand licensing and development company with a portfolio of over 50 global brands; Microsoft, a software and cloud infrastructure company; and Twin Health, a digital therapeutics company focused on reversing chronic metabolic diseases. We re-invested in entertainment, sports, and media agency Creative Artists Agency, as part of its acquisition by Artémis. The investment furthers our partnership with the company and its new owner in its next phase of growth. We also made follow-on investments in iCapital Network, a financial technology company that provides access to alternative investments, and MSCI, a provider of indexes and investment solutions.

In Europe, we invested in ASML, a Netherlands-based semiconductor capital equipment provider in the lithography sector, and H2 Green Steel, a Sweden-based company that aims to accelerate the decarbonisation of the steel industry using green hydrogen.

In China, we invested in companies underpinned by structural trends like Digitisation and Longer Lifespans. For example, we invested in Bambu Lab, a consumer tech company focused on 3D printers, and Viva Biotech, a one-stop drug research and development platform.

Southeast Asia continued to offer investment opportunities aligned with the structural trend of Future of Consumption. During the year, we increased our investment in Sea Limited, a global consumer Internet company based in Singapore.

In line with growing digitisation, the availability of Large Language Models has accelerated the experimentation and adoption of generative Artificial Intelligence (AI) across sectors and geographies. We are deepening our understanding of the enablers, adopters, and beneficiaries of generative AI. To this end, we have invested in companies that enable the effective implementation of AI on a large scale. These included companies involved in advanced semiconductor technologies and data centre infrastructure. In addition, several of our portfolio companies are actively expanding their data centre business, such as Keppel Data Centres, Mapletree, Singtel, and ST Telemedia. We have made investments in companies that specialise in the development of AI-enabled applications, which contribute to enhancing business productivity. Our subsidiary, Aicadium, has been working with selected portfolio companies on value-creation AI use cases to uplift returns. Amidst the momentum and optimism for generative AI, we maintain a disciplined and cautious approach to investing in AI-related businesses.

## Investing to Drive Sustainable and Inclusive Growth

We have been stepping up investments in companies that enable the transition towards a more sustainable future. Such efforts are aligned with the Sustainable Living trend, a megatrend that has pervasive impact across all sectors and on business models.

Over the year, we invested in companies developing innovative electrification solutions across the battery value chain. In the area of battery storage, we co-led with Decarbonization Partners a funding round for Ascend Elements, a US-based company that produces engineered battery materials from upcycled waste and scrap batteries. In the area of electric mobility, we invested in Electric Vehicle (EV) companies in India and China, with new investments in Mahindra Electric Automobile, an India-based company that manufactures four-wheeler passenger EVs, and BYD, a pioneer EV and battery manufacturer in China. We also made a follow-on investment in Ola Electric, an India-based electric two-wheeler manufacturer.

We invested in companies across the hydrogen value chain which are creating promising clean energy solutions. Over the year, we invested in US-based companies that manufacture, deliver, and commission electrolysers for critical industries to produce low-cost green hydrogen. For example, we made a new investment in Electric Hydrogen and a follow-on investment in Verdagy.

We continued to invest in funds and companies that aim to generate a positive impact for underserved communities while achieving sustainable returns over the long term. Over the year, we committed to funds that aim to enable climate mitigation in underserved communities. These included LeapFrog's Climate Fund, which addresses climate change in Africa and emerging markets in Asia, and ABC Impact's Fund II, which focuses on achieving positive social or environmental outcomes in Asia.



Find out more about how we embed sustainability in our investments



## 3.5 Major Investments










### Sources:




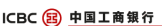






1. Financials for the companies are based on their respective annual filings.
2. Market relevant information is sourced from Bloomberg, Stock Exchanges, and public filings by companies.














### Glossary





Market Capitalisation = Market value as at 31 March 2024 and 31 March 2023

Shareholder Equity = Shareholder equity reported by the respective companies based on their annual filings

Logo	Name	Shareholding <sup>2</sup> (%) as at 31 March 2024	Currency	Market Capitalisation or Shareholder Equity <sup>1</sup>		Sector	Headquarters
				2024	2023		
	Adyen N.V.	6	EUR'm	48,681	45,237	Financial Services	Netherlands
	AIA Group Limited	3	HKD'm	593,481	964,512	Financial Services	Hong Kong SAR
	Alibaba Group Holding Limited	<1	USD'm	176,097	261,836	Telecommunications, Media & Technology	China
	AS Watson Holdings Limited <sup>3</sup>	25	HKD'm	37,176	33,555	Consumer & Real Estate	Hong Kong SAR
	Bayer Aktiengesellschaft	3	EUR'm	27,901	57,541*	Life Sciences & Agri-Food	Germany
	BlackRock, Inc.	3	USD'm	124,021	100,304	Financial Services	US
	CapitaLand Group Pte. Ltd.	100 <sup>#</sup>	SGD'm	13,404	14,444	Consumer & Real Estate	Singapore
	Celltrion, Inc.	3	KRW'b	39,550	21,348	Life Sciences & Agri-Food	South Korea
	DBS Group Holdings Ltd	29	SGD'm	93,152	85,102	Financial Services	Singapore

Logo	Name	Shareholding <sup>2</sup> (%) as at 31 March 2024	Currency	Market Capitalisation or Shareholder Equity <sup>1</sup>		Sector	Headquarters
				2024	2023		
 element	EM Topco Limited (Element Materials Technology) <sup>4</sup>	88	USD'm	2,543	3,195*	Transportation & Industrials <sup>5</sup>	UK
 GHX	Global Healthcare Exchange, LLC	71##	NA <sup>6</sup>	NA <sup>6</sup>	NA <sup>6</sup>	Telecommunications, Media & Technology	US
 HDFC BANK	HDFC Bank Limited	<1	INR'm	10,999,567	8,980,875	Financial Services	India
 ICICI Bank	ICICI Bank Limited	2	INR'm	7,677,520	6,125,675	Financial Services	India
 ICBC 中国工商银行	Industrial and Commercial Bank of China Limited	1	HKD'm	1,887,947	1,736,141	Financial Services	China
 Keppel	Keppel Ltd. <sup>7</sup>	21	SGD'm	13,026	9,900	Transportation & Industrials <sup>5</sup>	Singapore
 M+S	M+S Pte. Ltd.	40	NA <sup>8</sup>	NA <sup>8</sup>	NA <sup>8</sup>	Consumer & Real Estate	Singapore
 Mandai WILDLIFE GROUP	Mandai Park Holdings Pte. Ltd.	100	SGD'm	1,049	779	Consumer & Real Estate	Singapore
 manipalhospitals LIFE'S ON	Manipal Health Enterprises Private Limited	35	INR'm	40,286	32,421	Life Sciences & Agri- Food	India
 mapletree	Mapletree Investments Pte Ltd	100	SGD'm	18,979	19,908	Consumer & Real Estate	Singapore
 Mastercard	Mastercard Incorporated	<1	USD'm	445,067	342,114	Financial Services	US
 MONCLER GROUP	Moncler S.p.A.	4	EUR'm	18,721	17,162	Consumer & Real Estate	Italy
 NSE	NSE India Limited	5	INR'm	239,744	204,785	Financial Services	India

Logo	Name	Shareholding <sup>2</sup> (%) as at 31 March 2024	Currency	Market Capitalisation or Shareholder Equity <sup>1</sup>		Sector	Headquarters
				2024	2023		
	Olam Group Limited	52	SGD'm	4,268	6,033	Life Sciences & Agri-Food	Singapore
	Ping An Insurance (Group) Company of China, Ltd.	2	HKD'm	718,593	935,745	Financial Services	China
	PSA International Pte Ltd	100	SGD'm	15,050	14,317	Transportation & Industrials <sup>5</sup>	Singapore
	SATS Ltd.	40	SGD'm	3,876	4,150	Transportation & Industrials <sup>5</sup>	Singapore
	Schneider Electric India Pvt. Ltd.	35	INR'm	120,961	103,806	Transportation & Industrials <sup>5</sup>	India
	Seatrium Limited <sup>9</sup>	36	SGD'm	5,389	8,188	Transportation & Industrials <sup>5</sup>	Singapore
	Sembcorp Industries Ltd	49	SGD'm	9,612	7,792	Transportation & Industrials <sup>5</sup>	Singapore
	Singapore Airlines Limited	53	SGD'm	19,033	17,021	Transportation & Industrials <sup>5</sup>	Singapore
	Singapore Power Limited	100	SGD'm	12,874	12,317	Transportation & Industrials <sup>5</sup>	Singapore
	Singapore Technologies Engineering Ltd	51	SGD'm	12,542	11,413	Transportation & Industrials <sup>5</sup>	Singapore
	Singapore Technologies Telemedia Pte Ltd	100	SGD'm	4,682	5,035	Telecommunications, Media & Technology	Singapore
	Singapore Telecommunications Limited	51	SGD'm	41,753	40,600	Telecommunications, Media & Technology	Singapore
	SMRT Corporation Ltd	100	SGD'm	1,010	972	Transportation & Industrials <sup>5</sup>	Singapore

Logo	Name	Shareholding <sup>2</sup> (%) as at 31 March 2024	Currency	Market Capitalisation or Shareholder Equity <sup>1</sup>		Sector	Headquarters
				2024	2023		
	Standard Chartered PLC	17	GBP'm	17,547	17,422	Financial Services	UK
	Tencent Holdings Limited	<1	HKD'm	2,869,391	3,689,755	Telecommunications, Media & Technology	China
	Visa Inc.	<1	USD'm	565,137 <sup>10</sup>	468,280 <sup>10</sup>	Financial Services	US
	Zomato Limited	4	INR'm	1,580,674	426,563	Telecommunications, Media & Technology	India

● For year ended September 2023/2022.

● For year ended December 2023/2022.

● For year ended March 2024/2023.

<sup>1</sup> Market Capitalisation or Shareholder Equity: For listed companies, 2024 refers to market value as at 31 March 2024. For unlisted companies, 2024 refers to shareholder equity reported by respective companies based on their annual filings as at 31 March 2024 or 31 December 2023, in accordance with their respective financial year ends. Similarly for 2023.

<sup>2</sup> Percentages rounded to the nearest whole number.

<sup>3</sup> AS Watson Holdings Limited was formerly known as A.S. Watson Holdings Limited with name change effective from 22 January 2024.

<sup>4</sup> EM Topco Limited is the holding company for Element Materials Technology Group Limited.

<sup>5</sup> The Transportation & Industrials sector includes investments in Energy & Resources.

<sup>6</sup> Information not disclosed due to confidentiality obligations.

<sup>7</sup> Keppel Ltd. was formerly known as Keppel Corporation Limited with name change effective from 1 January 2024.

<sup>8</sup> Joint venture with Khazanah Nasional Berhad. Information not disclosed due to confidentiality obligations.

<sup>9</sup> Following the combination of Sembcorp Marine Ltd and Keppel Offshore & Marine Ltd on 28 February 2023, Sembcorp Marine Ltd was renamed as Seatrium Limited with effect from 26 April 2023.

<sup>10</sup> Based on number of shares of class A common stock on an as-converted basis.

\* Restated or reclassified, which includes effects of changes to accounting standards and/or adjustments due to change in basis.

# Held through CLA Real Estate Holdings Pte. Ltd. ("CLA"), a wholly-owned subsidiary of TJ Holdings (III) Pte. Ltd.

## Comprises a 71% stake held through various holding companies.

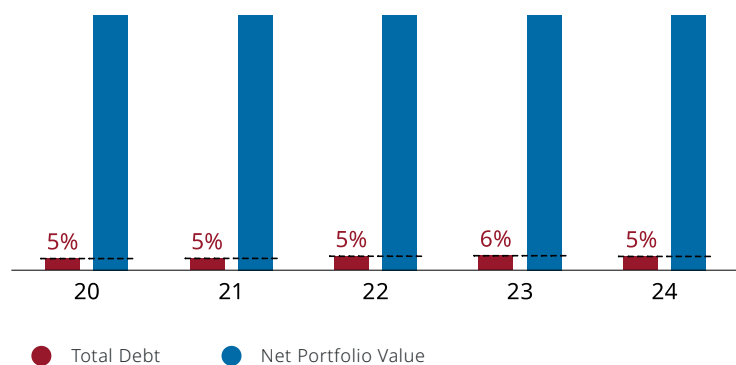
## 3.6 Credit Profile

Temasek's Credit Profile<sup>12</sup> is a snapshot of our credit quality and financial strength, serving as a public marker along with our credit ratings. For these ratios, the lower the percentage, the higher the credit quality.

(as at 31 March)

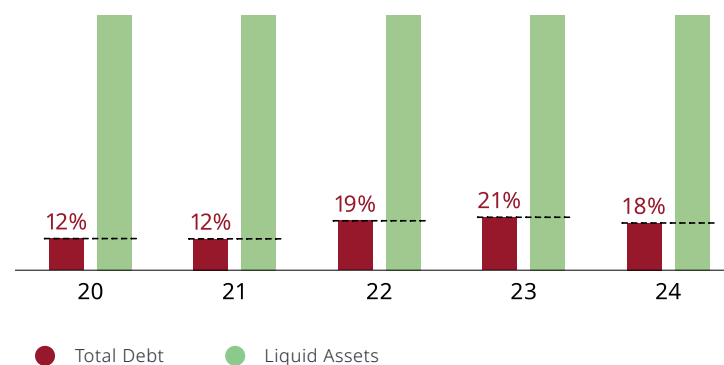
### Total Debt

**5%** of Net Portfolio Value



### Total Debt

**18%** of Liquid Assets<sup>1</sup>



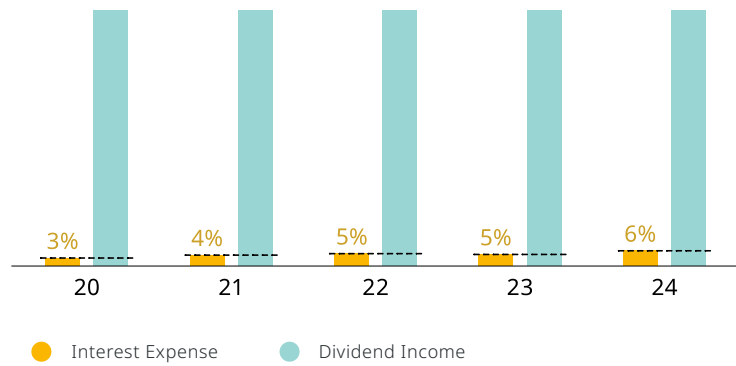
<sup>1</sup> Mainly cash and cash equivalents, and sub-20% listed assets.

<sup>12</sup> Based on the financial information of Temasek as an investment company, namely Temasek Holdings (Private) Limited (THPL) and its Investment Holding Companies (IHCs). IHCs are defined as THPL's direct and indirect wholly-owned subsidiaries, whose boards of directors or equivalent governing bodies comprise employees or nominees of THPL, wholly-owned Temasek Pte. Ltd. (TPL), and/or TPL's wholly-owned subsidiaries. The principal activities of THPL and its IHCs are that of investment holding, financing, and/or the provision of investment advisory and consultancy services.



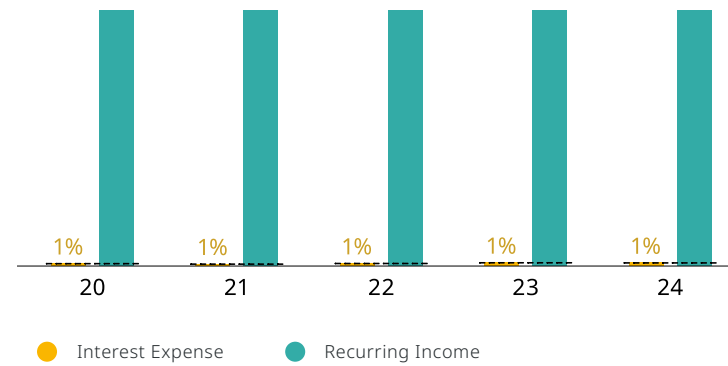
### Interest Expense

**6%** of Dividend Income



### Interest Expense

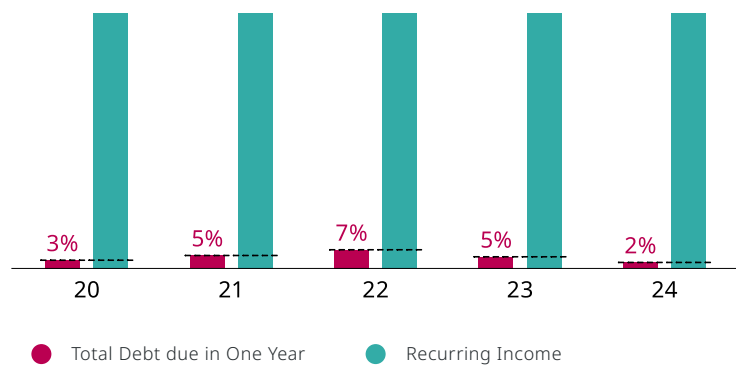
**1%** of Recurring Income<sup>1</sup>



<sup>1</sup> Divestments, dividend income, income from investments, and interest income.

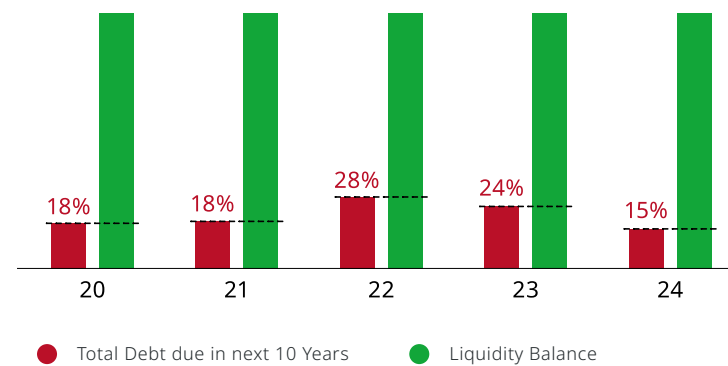
### Total Debt due in One Year

**2%** of Recurring Income<sup>1</sup>



### Total Debt due in next 10 Years

**15%** of Liquidity Balance<sup>1</sup>



<sup>1</sup> Cash and cash equivalents, and short-term investments.

<sup>1</sup> Divestments, dividend income, income from investments, and interest income.

As an investment company, our divestments, dividends from our portfolio and distributions from funds are used to make investments, fund business expenses, as well as pay interest and principal to bondholders and Euro-commercial Paper holders, taxes to tax authorities, and dividends to our shareholder.

For the year ended 31 March 2024, Temasek made S\$33 billion of divestments, which include fund distributions, and earned S\$9 billion in dividend income. These amounts formed the bulk of our recurring income.

We aim to build a resilient and forward-looking portfolio. We maintain sufficient access to liquidity to not only serve as a buffer against shocks in this uncertain environment, but also to allow us to take advantage of investment opportunities. Our portfolio includes high-quality assets that provide us with strong and stable liquidity. We also maintain the discipline of regular divestments to generate liquidity.

We are rated Aaa/AAA by Moody's Investors Service and S&P Global Ratings respectively<sup>13</sup>. Ratings are an outcome of credit rating agencies' independent assessment of Temasek's business and financial position in accordance with their respective methodologies.

### Key Credit Parameters (in S\$ billion)

For year ended 31 March	2020	2021	2022	2023	2024
Divestments	26	39	37	27	<b>33</b>
Dividend income	11.9	8.4	9.4	11.1	<b>9.0</b>
Income from investments	0.8	0.7	1.0	0.9	<b>0.9</b>
Interest income	0.7	0.1	0.1	0.6	<b>1.4</b>
Interest expense <sup>1</sup>	0.4	0.4	0.5	0.5	<b>0.5</b>
Net portfolio value	306	381	403	382	<b>389</b>
Liquid assets <sup>2</sup>	112.4	143.1	113.6	104.5	<b>113.0</b>
Liquidity balance <sup>3</sup>	47.1	50.8	38.4	43.7	<b>61.8</b>
Total debt <sup>1,4</sup>	13.9	17.6	22.0	21.7	<b>20.9</b>

<sup>1</sup> From the year ended 31 March 2020, the applicable accounting standard (IFRS 16: Leases) has required us to record our leases, comprising mainly office rental, on our balance sheet. This means that our lease liabilities and interest expense on lease liabilities are included as part of total debt and interest expense respectively. The credit ratios from the year ended 31 March 2020 reflect this change in accounting standards.

<sup>2</sup> Mainly cash and cash equivalents, and sub-20% listed assets.

<sup>3</sup> Cash and cash equivalents, and short-term investments.

<sup>4</sup> As at 31 March 2024, we had S\$20.2 billion of Temasek Bonds and S\$0.5 billion of Euro-commercial Paper (ECP) outstanding, in equivalent Singapore dollar value. The weighted average maturity for Temasek Bonds was over 18 years, and above four months for our ECP. All Temasek Bonds issued to date have been rated Aaa by Moody's Investors Service (Moody's) and/or AAA by S&P Global Ratings (S&P). Our ECP Programme has short-term ratings of P-1/A-1+ by Moody's and S&P respectively.

<sup>13</sup> From time to time, rating agencies may modify their rating criteria. Such criteria changes may lead to a revision in the rating assigned to an entity, sometimes even when the entity's financial position has not materially changed.

## 3.7 Managing Risks

There are inherent risks whenever we invest, divest, or hold our assets, and wherever we operate.

While we adopt a long-term view of our portfolio, we invest across different time horizons. We have the flexibility to take concentrated positions and invest across all stages of the business life cycle, from [early-stage](#) to mature, and unlisted to listed assets. We do not have specific targets for investing by asset class, country, sector, or single name.

Our long investment horizon means we have a portfolio of predominantly equities which is expected to deliver higher risk-adjusted returns over the long term. Our stable funding base allows us to invest and benefit from companies with high growth potential through listed and [unlisted assets](#) (including private equity funds).

Consequently, given the high equity exposure, our portfolio is expected to have higher volatility of returns, with a greater risk of negative returns in any one year.

Our investment approach is to ride out short-term market volatility and focus on generating sustainable returns over the long term.

Given the expected volatility, we manage our leverage and liquidity prudently for resilience and investment flexibility, even in times of extreme stress.

Our investment posture is coupled with a culture of risk ownership throughout the organisation. Our [risk-sharing compensation philosophy](#) puts the institution above the individual, emphasises the long term over the short term, and aligns the interests of our staff with those of our shareholder.

We have no tolerance for risks that could damage the reputation and credibility of Temasek.

Our Organisational Risk Management Framework includes Risk Return Appetite Statements which set out various levels of risks tolerance, from reputational risk to liquidity risk, and risk of sustained loss of overall portfolio value over prolonged periods.

## Organisational Risk Management Framework

### Risk Return Appetite Statements

**We have no tolerance for risks that could damage Temasek's reputation and credibility**

- Temasek rigorously identifies potential sources of reputational risk and how each type of reputation risk is to be managed

**We focus on performance over the long term**

- We target a long-term portfolio return that exceeds our risk-adjusted cost of capital
- We are prepared to accept fluctuations in annual reported results provided we are compensated by superior longer-term returns and it does not affect our ability to survive

**We have flexibility to take concentrated positions**

- Where good investment opportunities allow for superior long-term performance, Temasek has the flexibility to take portfolio concentrations in specific sectors, geographies, themes, or individual assets
- We adopt a disciplined approach to investing, with end-to-end assessment frameworks and processes for each asset class
- For direct equity investments this includes developing a deep understanding of each investment in order to determine the intrinsic value for investment, divestment, and hold decisions

**We maintain a resilient balance sheet**

- We manage leverage and liquidity to ensure resilience and flexibility even in times of extreme stress

**We evaluate the potential for sustained loss of overall portfolio value over prolonged periods, and use different scenarios to test our resilience**

### Risk Pillars

Investment Risk<sup>1</sup>

Liquidity &  
Leverage Risk

Portfolio Value  
Risk

Operational Risk

Cybersecurity  
Risk

Legal &  
Regulatory Risk

Macro and Geopolitical Risk

<sup>1</sup> Includes Foreign Exchange Risk and Environmental, Social, and Governance Risk.

## Risk Governance

There are various risk pillars by which we assess risks across a wide spectrum of domains. These risk pillars are supported by specialised teams, comprising members from different functions, which report to senior management for general oversight. We embed risk management in our systems and processes. These include our approval authority delegation, company policies, standard operating procedures, and risk reporting to our Board and [Board Risk & Sustainability Committee](#).

## Investment Risk

All new investment proposals are subject to a due diligence process commensurate with the nature of the investment to be made. This is intended to validate business theses and examine material risks. The exact scope of the required pre-investment analysis will be determined based on the specific risk profile being considered. Pre-investment analysis is done by our deal origination teams whose expertise is supplemented by internal experts or external professionals who perform additional due diligence in specialised areas such as legal, tax, and climate risks.

When we invest in companies, we conduct a bottom-up fundamental valuation analysis and due diligence. We also use an appropriate [risk-adjusted cost of capital](#) (RACOC) to determine a best estimate of company valuation. Our analysis enables us to estimate a fair value for the company. We also estimate stress case valuations to help us gauge the degree of variability in potential future returns under different assumptions.

We will compare our reasonable estimate of fair value with current market valuation to determine if an investment makes sense at the proposed price, and if it provides a margin of safety to our RACOC, including an estimated cost of carbon emissions.

The discount rate used in the valuation process will be a weighted average of the company's cost of debt and equity capital. We utilise the capital asset pricing model to derive an appropriate cost of equity. This takes into account leverage, the type of industry, and the countries of operation. Investments in riskier sectors or markets will have higher costs of capital. We also add an illiquidity risk premium for unlisted investments and a venture risk premium for [early-stage investments](#) to account for their respective risks.

We use individual companies' RACOC to compare the relative attractiveness between investment opportunities. We may dial up or down the required spread over RACOC as a tool to tighten or loosen our investment risk posture.

Depending on the external outlook and our [investment stance](#), we may choose to invest in opportunities with positive expected returns, which are below their respective individual RACOC. We also deploy excess liquidity in short-term liquid investments where the expected returns may be lower than our cost of capital.

All prospective investments must be reviewed and approved by our [investment committee](#).

Investment proposals made to the investment committee are typically submitted by both market and sector teams who provide geographic and industry expertise. Depending on the size or risk significance, these proposals may be escalated to our [Board Executive Committee or Board](#) for a final decision.

Post-investment monitoring is performed by the investment teams on a continuous basis, and formally by senior management at quarterly review meetings chaired by the Deputy CEO. They assess if the investment is performing to our expectations and whether any action should be taken.



## Foreign Exchange Risk

Our projected risk-adjusted return for each investment proposal takes into account any anticipated foreign exchange (FX) movements against the Singapore dollar.

We also selectively hedge FX exposures from confirmed nearer-term cash flow and expected divestments within our forecast period.

## Environmental, Social, and Governance Risk

Our investments are evaluated on the basis of our Environmental, Social, and Governance (ESG) framework, which is integrated within the investment process. This framework requires the analysis of material ESG considerations, with an emphasis on climate-related risks.

As part of our analysis, we apply an [internal carbon price](#) of US\$65<sup>14</sup> per tonne of carbon dioxide equivalent (tCO<sub>2</sub>e)<sup>15</sup>. This provides an additional consideration to our assessment of the long-term climate resiliency and our returns expectations for each investment.

We are also strengthening our analytic capabilities to enhance our pre-investment due diligence and post-investment engagements to address [material nature-related risks](#).

We piloted a set of baseline expectations in social areas such as human rights and labour practices; diversity, equity, and inclusion; talent management; product quality and safety; data privacy and security; and supply chain responsibility. To manage and mitigate such risks, we conduct deeper due diligence in cases where potential exposure to social risk is identified.

Our Board [Risk & Sustainability Committee \(RSC\)](#) was established in January 2022 to, amongst other things, enhance the focus on opportunities and risks arising from sustainability trends, including climate change, and other financial, reputational, operational, and cyber risks.

## Liquidity & Leverage Risk

We manage our [leverage, liquidity, and balance sheet](#) prudently for resilience and flexibility. We maintain a high level of liquidity in our portfolio and manage our liquidity risk by ensuring that our primary recurring sources of cash flows are able to cover our non-discretionary uses of cash, such as operating expenses, taxes, and interest to bondholders.

Our recurring income includes divestments, dividends from portfolio companies, and distributions from funds.

Our liquidity is supported primarily by our recurring income, supplemented by proceeds from any debt issuances via [Temasek Bonds](#) and [Euro-commercial Paper](#), as well as bank borrowings. Total leverage is restricted by an overall debt limit set by our Board. The debt limit takes into account our portfolio value, shareholder funds, forecast cash flow, and credit profile. We proactively plan for a well-distributed [debt maturity profile](#), avoiding large refinancing risk in any one year.

In addition to maintaining the discipline of regular divestments to generate liquidity, the construction of our portfolio enables us to access liquidity relatively quickly in times of stress. As at 31 March 2024, our liquid and sub-20% listed assets alone were about five times our debt outstanding. In the highly unlikely extreme scenario where we have no other cash inflows, aside from using our liquidity balance, divesting a small part of our liquid and sub-20% listed assets would be sufficient to cover the total debt outstanding in under two weeks<sup>16</sup>.

As a policy, Temasek does not provide any financial guarantees for the obligations of our portfolio companies.

<sup>14</sup> Increased from US\$50 since 1 April 2024.

<sup>15</sup> tCO<sub>2</sub>e refers to tonnes of carbon dioxide equivalent, a standard unit of measurement used in greenhouse gas emissions accounting and reporting.

<sup>16</sup> Based on the assumption that we will sell no more than 20% of the average daily trading volume over the financial year ended 31 March 2024. This is for each investment where our shareholding was below 20%, as at 31 March 2024.

## Portfolio Value Risk

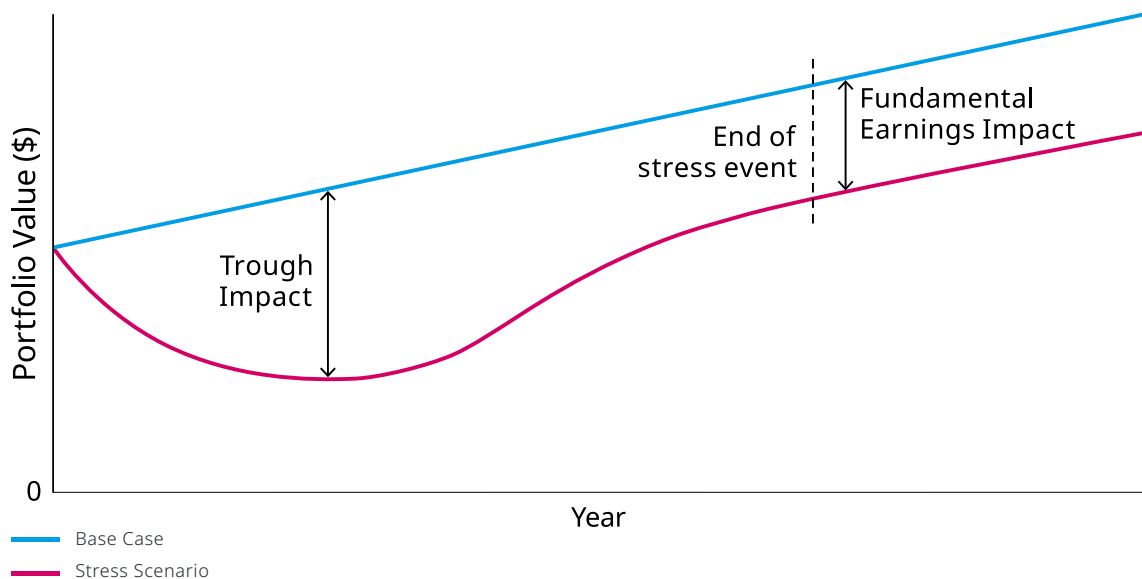
We track and manage risks proactively, through economic and market cycles, including specific risks at the asset level.

We assess the sustained impact of multiple risk scenarios on the intrinsic value of our investments. The aggregate of these changes provides an estimate of the portfolio level variation in present value, future cash flows, and income in each scenario.

As illustrated in the diagram below, Fundamental Earnings Impact is our estimate of sustained loss. This is different from Trough Impact, which includes mark to market effects due to short-term increases in risk aversion. In a stress event, our largely equity portfolio will likely be adversely affected by market volatility reflecting increased short-term risk aversion. However, markets typically recover from the trough and normalise after the stress event is over. Over time, we expect our portfolio value to recover towards the previous growth rate, but from a lower starting point.

We do not manage our portfolio to short-term mark to market changes.

### Illustration of Fundamental Earnings Impact



Based on our assessments of any likely sustained loss, consistent with our intrinsic value discipline, we may manage the risks as follows:

- Divest, hold, or protect the individual investment impacted;
- Change the portfolio composition for the long run;
- Take actions to protect the portfolio, for example, by entering into tactical single stock, index or rates hedges.

### 12-months Returns Simulation

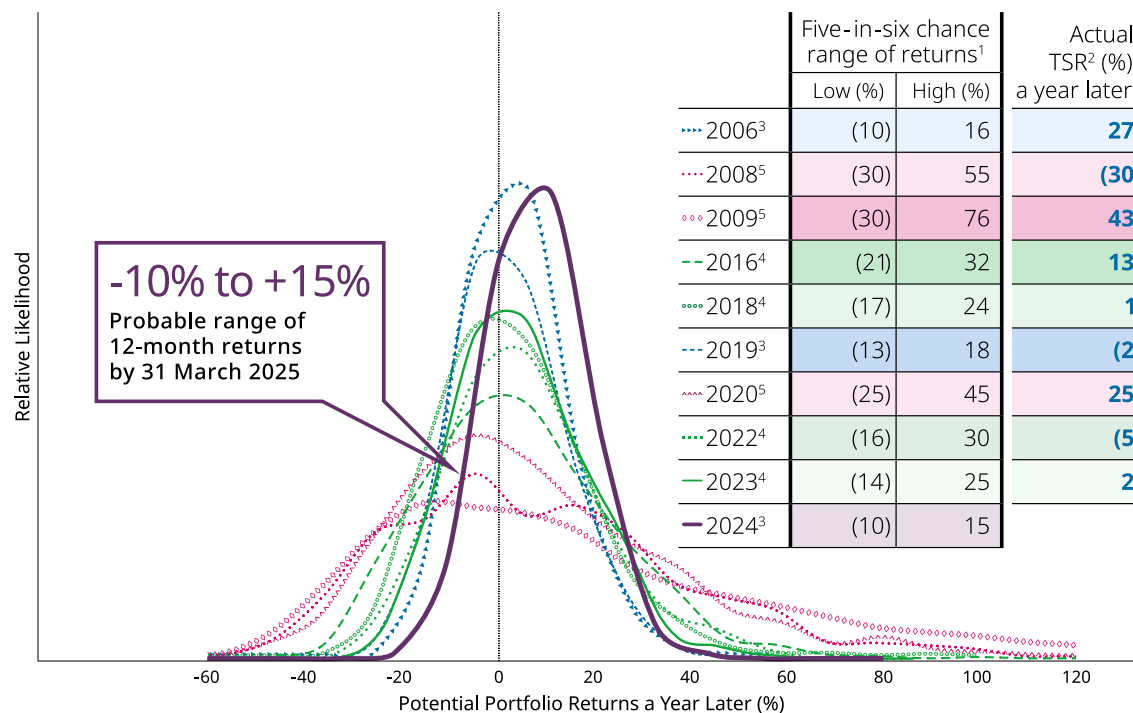
While we expect volatility consistent with a largely equities portfolio, we manage our portfolio to deliver sustainable returns over the long term.

For our current portfolio mix, our Monte Carlo simulations based on recent market conditions show a five-in-six chance that one-year forward portfolio returns may range from -10% to +15%. Our annual returns ranged from -30% to +43% over the past 20 years.

Narrower curves in the chart below mean less volatility compared, for instance, to the flatter curves of the 2008/09 Global Financial Crisis (GFC) years. A wider simulated range means a more volatile outlook.

(as at 31 March)

### Simulation of 12-month Forward Portfolio Returns



<sup>1</sup> Based on Monte Carlo simulation for 12-month forward portfolio returns distribution, assuming no change in market conditions or portfolio mix.

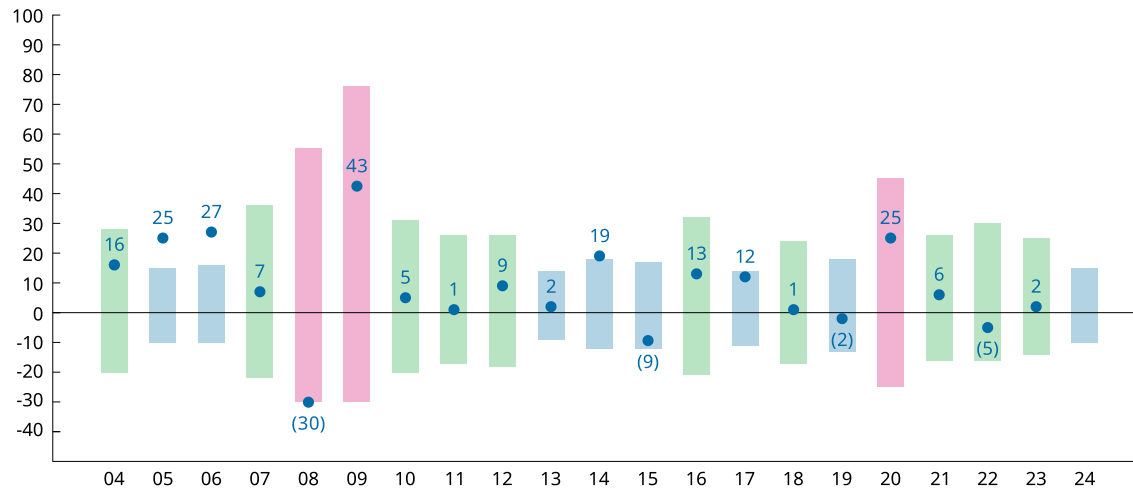
<sup>2</sup> Total Shareholder Return.

<sup>3</sup> Periods of low market volatility.

<sup>4</sup> Periods of medium market volatility.

<sup>5</sup> Periods of high market volatility.

### Volatility of Returns (%)



- Simulated returns<sup>1</sup> in a period of low market volatility
- Simulated returns<sup>1</sup> in a period of medium market volatility
- Simulated returns<sup>1</sup> in a period of high market volatility
- Actual Total Shareholder Return a year later

<sup>1</sup> Based on Monte Carlo simulation for 12-month forward portfolio returns distribution, assuming no change in market conditions or portfolio mix.

The range of possible returns from the simulation is dependent on the prevailing volatility and correlation conditions of asset markets. When prevailing volatility is high, such as at the onset of the COVID-19 pandemic or during the GFC years, the wider range of one-year simulated forward returns signals greater probability of larger gains and losses. When volatility is low, as at present, simulated forward returns fall within a narrower range. However, history shows that periods of lower volatility may be followed by sudden dislocations. We therefore complement these estimates based on current conditions with the scenario stress tests process described above.

## Operational Risk

We are committed to continuously improving the way we manage business continuity risks. Our contingency management framework ensures business continuity and covers incidents arising from safety, physical security, and other threats. The framework also takes into account the potential impact of emerging risks, such as physical threats and health situations around the world.

We have institutionalised a risk incident reporting process which encourages staff to proactively report gaps, perform root cause analysis, and adopt appropriate remediating measures for all reported risk incidents. This contributes to a work environment with a focus on excellence and helps build a healthy risk management culture in Temasek.

In response to growing physical security threats, we provide regular training to relevant stakeholders to adequately equip them with response techniques for emergency situations. For instance, Evacuation Wardens receive occupational first aid training, while our Business Continuity Planning Coordinators and front-line Emergency Response Team undergo emergency response training. Additionally, we have established multiple communication channels to ensure effective information dissemination. This proactive approach enables us to respond promptly and confidently in times of emergencies.

In addition to the training, we regularly conduct response exercises simulating critical infrastructure failures, and scenario-based tabletop exercises with key stakeholders to ensure that our contingency and disaster recovery plans remain effective, relevant, and adequate. We constantly work on improving our capabilities to ensure that our staff and visitors remain safe, and that critical business functions can resume in a timely manner.

For crisis management, the primary focus typically revolves around strategies and swift decision-making. While these elements are crucial, the mental well-being of our staff is equally paramount. As such, we have integrated our *Care Supporters* network into our crisis management processes. This significantly enhances our ability to manage crisis response and recovery efforts effectively. To strengthen psychological resilience amongst staff, more than 70% of our staff have been trained and equipped with basic psychological support skills.

## Cybersecurity Risk

Given the evolving cybersecurity landscape, we regularly monitor and track cyber risks and continuously enhance our cybersecurity defence and resilience. We continually assess and perform regular testing of our environment to ensure our cybersecurity controls are effective, and are committed to enabling secure deployments of applications and technologies that support business needs. Most recently, we established an Artificial Intelligence (AI) governance framework to enable secure AI deployment across the firm. In addition, we conduct simulation exercises and update our cyber response plans on a regular basis to ensure continued relevance, familiarity, and effectiveness.

We engage our portfolio companies, together with our [Temasek Operating System](#) partners, on an ongoing basis to champion cybersecurity best practices and to elevate our respective cyber defence and resilience capabilities. This year, we also introduced a Board-level Cyber Risk Governance Guideline to support board oversight of cyber governance and standards in our portfolio companies.

Our cybersecurity team, supported by expertise from our cybersecurity platform companies, assesses the cybersecurity health of potential investee companies as part of the investment due diligence process. Their assessment is based on four areas: key data assets; regulatory requirements and data privacy; cybersecurity policy and governance; and assessment and incidents. A comprehensive cybersecurity scan on potential investee companies may also be conducted.

## Legal & Regulatory Risk

We comply with all obligations under Singapore laws and regulations, including those arising from international treaties and UN sanctions, as well as the laws and regulations of jurisdictions where we have investments or operations.

Our global footprint, coupled with a fast and ever-evolving legal and regulatory environment and increasing enforcement and oversight by authorities, reinforces the importance of robust transactional processes and compliance programmes. We continue to build expertise across novel and developing areas that we are involved in to ensure that we are able to identify and manage legal, regulatory, and compliance risks appropriately.

Our Legal & Regulatory (L&R) department ensures that policies, processes, and systems are appropriately designed and implemented, consistent with applicable laws and aligned with Board directives to advance the firm's objectives while managing risks and safeguarding its interest. For example, we have implemented policies and control processes to address financial crime such as bribery and corruption, and sanctions violations; to ensure compliance with foreign direct investment, merger control, and export control regimes; and to manage legal and regulatory risks relating to the trading of derivatives. We continuously monitor regulatory developments to ensure that our policies, procedures, and monitoring systems reflect these changes.

We encourage and facilitate the development of a sound corporate culture that incentivises good staff behaviour. High ethical standards and compliance with applicable laws and regulations are expected in the pursuit of our business interests. Specific attention is directed at governance, incentive systems, and training.

At the core of this is our Temasek Code of Ethics and Conduct (T-Code) and its related policies that guide our Board directors and staff in their daily dealings and conduct. With integrity as the key overarching principle, T-Code policies cover areas such as anti-bribery, whistle-blowing, management of confidential information, and prohibition against insider trading. All staff also undergo mandatory training in anti-bribery and corruption, anti-harassment and discrimination, as well as the prevention of insider trading. Our annual staff bonus plans include T-Code compliance requirements.

## Macro and Geopolitical Risk

Over the last decade, besides the ever-changing macroeconomic landscape, we have seen heightened geopolitical tensions arising from events such as war and the pandemic, as well as great power rivalry.

Our views around the global economy help to guide Temasek's [investment stance](#) and our overall deployment pace. We also recognise that there has been a renewed and urgent focus on national security (encompassing economic security and competition), resiliency including energy and commodity sufficiency, data ownership, techno-nationalism in sectors such as biotechnology, and the use of subsidies, to name a few pressing issues. The presumptive gains from the globalisation of trade, investment, and technology are subject to ever-greater scrutiny.



To stay ahead of these developments, our International Policy and Governance teams — located in Beijing, Brussels, Singapore, and Washington, DC — actively monitor geopolitical risks and anticipate policy developments in our key markets that could impact our activities.

Through our engagement with thought leaders and authorities, we exchange views so as to promote better outcomes for all in the design and implementation of policy. In particular, we aim to promote a better understanding of how we operate based on commercial principles, and independent of government interference and support. For example, we had supported the International Monetary Fund initiative to frame the Santiago Principles for sovereign investments back in 2008. We advocate good governance and uphold these principles.



## Sustainability

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## 4.1 Sustainability Overview

Our commitment to sustainability is integral to building a thriving and resilient portfolio that enables us to deliver sustainable returns over the long term.

Sustainability is at the core of everything we do — from our mandate to deliver sustainable returns over the long term, to our strategy of how we operate as an institution, shape our portfolio, and engage our portfolio companies to build sustainable businesses.

Our long-term success is contingent on the presence of vibrant businesses and economies, cohesive societies and communities, and a resilient planet.

We have been advancing our net zero efforts through decarbonising our existing portfolio, making new investments, forging partnerships, and building platforms.

With an increasing recognition of the interconnectedness between climate change, the natural environment, and social impact, we have also started to take an integrated approach in how we systematically strengthen our contribution to nature positive and inclusive growth. We do so through our Nature and Social Roadmaps, which are multi-year initiatives to advance social and nature positive practices within our portfolio.



Find out more about our sustainability strategy



Find out more about our approach to sustainability governance

### Sustainability Milestones

In recent years, we achieved several milestones in our sustainability journey.

We took part in the [International Sustainability Standards Board's \(ISSB\)](#) COP28 Declaration of Support, joining close to 400 organisations across 64 jurisdictions in committing to advance the ISSB's global baseline for consistent and comparable climate-related disclosures.

We launched our inaugural [Sustainability Report](#), which brings together our disclosures and tracks our progress. Our report takes into consideration the disclosure requirements issued by the ISSB.

Our [internal carbon price](#) was raised from US\$50 per tCO<sub>2</sub>e<sup>17</sup> to US\$65 per tCO<sub>2</sub>e on 1 April 2024. We expect to progressively increase this to US\$100 per tCO<sub>2</sub>e by 2030.



Any initiative addressing the climate crisis cannot be undertaken without collaboration. We continue to forge partnerships and work with like-minded partners. In doing so, we harness the collective strengths of our networks to catalyse and scale positive impact.

Our efforts have included partnerships to scale climate tech innovations, such as the establishment of [Breakthrough Energy Fellows - Southeast Asia](#) with [Breakthrough Energy](#) and [Enterprise Singapore](#).

<sup>17</sup> tCO<sub>2</sub>e refers to tonnes of carbon dioxide equivalent, a standard unit of measurement used in greenhouse gas emissions accounting and reporting.

We also collaborate to deploy innovative financing solutions that enable a just and inclusive climate transition in emerging markets and developing economies. For example, we are partnering the [Monetary Authority of Singapore \(MAS\)](#) on several initiatives, such as the [Green Investments Partnership](#), which is part of MAS' [Financing Asia's Transition Partnership](#), a blended finance mechanism to accelerate a sustainable transition in the region.

This year, we convened [Ecosperity Week 2024](#), a milestone edition as we marked the platform's 10<sup>th</sup> anniversary. The need to protect and restore nature featured high on the agenda, alongside the role of philanthropic capital and blended finance in bridging the climate finance gap.

-  Find out more about our sustainability strategic partnerships and platforms
-  Find out more about our past sustainability milestones



## 4.2 Advancing Sustainability Through Our Portfolio

As an investor and owner, we strive to build a portfolio of companies that contribute to the resilience and progress of our environment and society.

Sustainable Living, one of the four structural trends that guides our portfolio construction, is a megatrend which has pervasive impact across all sectors and business models. We have stepped up the deployment of capital to enable the transition to a more sustainable future.

As at 31 March 2024, our investments that are aligned with the Sustainable Living trend represented 12% of net portfolio value. This comprises sustainability-focused investments and climate transition investments, which include established businesses as well as companies with disruptive ideas in key focus areas such as food, water, waste, energy, materials, clean transportation, and the built environment.

### Pathways Towards Our Climate Targets

Our target is to reduce the net carbon emissions attributable to our portfolio to half of its 2010 levels by 2030, with the ambition to achieve net zero by 2050. This requires determined and sustained action.

In recent years, we have accelerated efforts to achieve our climate targets through three pathways:



#### Investing for a Low-Carbon Economy

We continue to step up investments that support the transition towards a low-carbon economy. These include solutions that seek to accelerate energy transition and decarbonisation across key sectors, be it through the advancement of hydrogen technologies, energy-efficient solutions, or alternative production processes in hard-to-abate sectors.

→ Find out more about such investments



#### Encouraging Decarbonisation Efforts in Our Portfolio Companies

Our long-term investment horizon, which can span decades, puts us in a unique position to engage our portfolio companies on their business transformation and adoption of carbon mitigation actions.

→ Find out more about our efforts to engage portfolio companies



### Enabling Carbon Markets Solutions

We continue to explore approaches that support decarbonisation while conserving or restoring natural systems. We view voluntary carbon markets as an important lever in enabling nature-based and technology-based solutions. Through [GenZero](#), we continue to invest in strengthening the carbon markets infrastructure and ecosystem.

## Advancing Sustainability Through Strategic Partnerships and Platforms

We have stepped up efforts through our strategic partnerships and platforms to accelerate industry transitions, further diversify and augment the financing toolbox, and grow the green economy.

One such partnership is [Decarbonization Partners](#), our joint venture with BlackRock. It recently closed its inaugural late-stage venture and early-growth private equity investment fund, Decarbonization Partners Fund I, at US\$1.4 billion in committed capital. The Fund has invested in more than five companies covering areas such as carbon capture, utilisation, and storage; next-generation energy; and carbon management services.

GenZero has built up a diversified portfolio by actively deploying capital across nature-based solutions, technology-based solutions, and carbon ecosystem enablers. Examples of GenZero's investments include a land restoration project in Ghana; sustainable aviation fuel-related technology companies such as Velocys; and a carbon marketplace and exchange, [Climate Impact X \(CIX\)](#). GenZero has also seen further validation of its investment in CIX with Mizuho Financial Group coming on board as an additional lead investor to scale the voluntary carbon credits market in Asia.

Our ability to deploy capital flexibly has enabled us to look beyond traditional financing approaches. Alongside other partners, we strive to address climate financing gaps with varied and innovative solutions. These include blended and/or transition finance mechanisms that can better support the development and scaling of sustainable infrastructure.

[Clifford Capital Holdings](#) is one of our platform companies providing debt financing solutions for the infrastructure and maritime sectors. It has structured and issued three project and infrastructure debt securitisation transactions for eligible green and social loans since its first issuance in 2018, with its most recent issuance in September 2023.

[Pentagreen Capital](#), our joint venture with HSBC, has started to catalyse financing for sustainable infrastructure projects in Asia. It signed its first transaction with Philippines-based solar development company Citicore Solar Energy Corporation, structuring a US\$100 million mezzanine construction green loan with an initial tranche of US\$30 million. The initial tranche supports a portfolio of six solar projects in the Philippines and is expected to enable more than US\$300 million in total project capital value. The transaction reflects Pentagreen's potential as a specialised lender to remove barriers to bankability.



## Emissions Associated with Our Portfolio

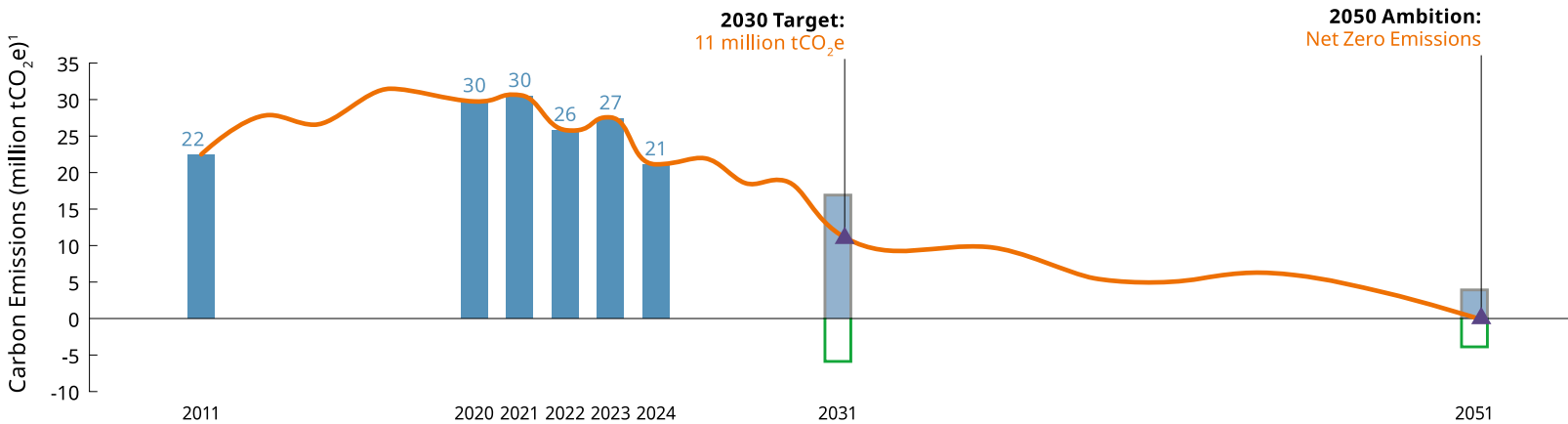
We have been disclosing the carbon emissions attributable to our investment portfolio as part of our annual reporting<sup>18</sup> and we are tracking the progress towards our climate targets.

Total Portfolio Emissions<sup>19</sup> have decreased from 27 million tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) for the financial year ended 31 March 2023 to 21 million tCO<sub>2</sub>e for the financial year ended 31 March 2024. The reported Total Portfolio Emissions encompass 77%<sup>20</sup> of the portfolio as at 31 March 2024.

Portfolio Weighted Average Carbon Intensity<sup>21</sup> has also decreased from 116 tCO<sub>2</sub>e/\$M revenue for the financial year ended 31 March 2023 to 92 tCO<sub>2</sub>e/\$M revenue for the financial year ended 31 March 2024.

(for year ending 31 March)

### Towards Net Zero



- Historical Total Portfolio Emissions<sup>2</sup>
- Total Portfolio Emissions<sup>2</sup> (Illustrative)
- Negative Emissions<sup>3</sup> (Illustrative)
- Pathway for Net Portfolio Emissions (Illustrative)
- ▲ Calendar year emissions data and targets are reported in the subsequent financial year

<sup>1</sup> tCO<sub>2</sub>e refers to tonnes of carbon dioxide equivalent, a standard unit of measurement used in greenhouse gas emissions accounting and reporting.

<sup>2</sup> Total Portfolio Emissions reflect the absolute emissions (Scope 1 and Scope 2) associated with our investment portfolio, expressed in tCO<sub>2</sub>e. Our investment positions in private equity funds, credit, and other assets are excluded.

<sup>3</sup> Negative emissions acquired through investments and high-quality carbon offsets.

<sup>18</sup> PricewaterhouseCoopers LLP, an independent third party, has undertaken a limited assurance engagement on the selected portfolio emission metrics for the financial year ended 31 March 2024. Their assurance report can be found [here](#).

<sup>19</sup> Total Portfolio Emissions reflect the absolute emissions (Scope 1 and Scope 2) associated with our investment portfolio, expressed in tCO<sub>2</sub>e. Our investment positions in private equity funds, credit, and other assets are excluded.

<sup>20</sup> Reflects percentage of total market value of our assets in-scope for Total Portfolio Emissions relative to the market value of the portfolio. Includes our direct investments in public and private equities, and excludes our investment positions in private equity funds, credit, and other assets.

<sup>21</sup> Portfolio Weighted Average Carbon Intensity reflects our portfolio's exposure to carbon-intensive companies by revenue, expressed in tCO<sub>2</sub>e/\$M revenue. Emissions are allocated based on portfolio weights (market value of the investment relative to the market value of the portfolio).

 Find a more detailed breakdown of our portfolio metrics and targets

## Broader Engagement with Portfolio Companies

Beyond [engaging with portfolio companies](#) on their decarbonisation journeys, we also work with them on opportunities to drive value creation by stepping up Environmental, Social, and Governance (ESG) practices. This includes engaging them through our ESG value creation playbook.

We proactively promote good governance, ethical business practices, and compliance with applicable laws. We also support our portfolio companies in building capacity for sustainability leadership and carbon emissions management.

 Find out more about how we engage our portfolio companies on sustainability

# Independent Practitioner's Report

Independent Practitioner's Limited Assurance Report on the Selected Portfolio Emissions Metrics of Temasek Holdings (Private) Limited ("Temasek") for the financial year ended 31 March 2024

We have undertaken a limited assurance engagement in respect of the Selected Portfolio Emissions Metrics, contained in the *Temasek Review 2024* (the "TR 2024"), for the financial year ended 31 March 2024.

## Selected Portfolio Emissions Metrics

Metric	For the financial year ended 31 March 2024
Total Portfolio Emissions <sup>1</sup> (in tCO <sub>2</sub> e)	21 million
Portfolio Carbon Intensity <sup>2</sup> (in tCO <sub>2</sub> e/\$M portfolio value)	73
Portfolio Weighted Average Carbon Intensity <sup>3</sup> (in tCO <sub>2</sub> e/\$M revenue)	92

<sup>1</sup> Rounded to nearest million tCO<sub>2</sub>e.

<sup>2</sup> Rounded to nearest tCO<sub>2</sub>e/\$M portfolio value.

<sup>3</sup> Rounded to nearest tCO<sub>2</sub>e/\$M revenue.

The basis of preparation for the above Selected Portfolio Emissions Metrics is set out in [Appendix I](#) (the "Reporting Criteria").

Our assurance engagement was with respect to the financial year ended 31 March 2024. We have not performed any procedures with respect to (i) earlier periods and (ii) any other elements included in the TR 2024, and therefore do not express any conclusion thereon.

## Management's Responsibility

Management is responsible for establishing suitable criteria for preparing the Selected Portfolio Emissions Metrics and for the preparation of the Selected Portfolio Emissions Metrics in accordance with the Reporting Criteria.

Management is also responsible for designing, implementing and maintaining internal control over information relevant to the preparation of the Selected Portfolio Emissions Metrics that is free from material misstatement, whether due to fraud or error.

The Selected Portfolio Emissions Metrics have been prepared to assist management to report the Selected Portfolio Emissions Metrics to Temasek's Board of Directors and for inclusion in the TR 2024 using the Reporting Criteria designed for this purpose. As a result, the Selected Portfolio Emissions Metrics may not be suitable for another purpose.

## Practitioner's Independence and Quality Management

We have complied with the independence and other ethical requirements of the Accounting and Corporate Regulatory Authority (ACRA) Code of Professional Conduct and Ethics for Public Accountants and Accounting Entities (ACRA Code), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

Our firm applies Singapore Standard on Quality Management 1 which requires the firm to design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical

requirements, professional standards and applicable legal and regulatory requirements.

## Practitioner's Responsibility

Our responsibility is to express a limited assurance conclusion on the Selected Portfolio Emissions Metrics based on the procedures we have performed and the evidence we have obtained. We performed our limited assurance engagement in accordance with Singapore Standard on Assurance Engagements 3000 (Revised) – *Assurance Engagements other than Audits or Reviews of Historical Financial Information* and, in respect of greenhouse gas emissions included in the Selected Portfolio Emissions Metrics, Singapore Standard on Assurance Engagements 3410 – *Assurance Engagements on Greenhouse Gas Statements* (collectively the "Standards"). These Standards require that we plan and perform our work to form the conclusion about whether the Selected Portfolio Emissions Metrics are free from material misstatement. The extent of our procedures depends on our professional judgement and our assessment of the engagement risk.

A limited assurance engagement involves assessing the suitability in the circumstances of Temasek's use of the Reporting Criteria as the basis for the preparation of the Selected Portfolio Emissions Metrics, assessing the risks of material misstatement of the Selected Portfolio Emissions Metrics whether due to fraud or error, responding to the assessed risks as necessary in the circumstances, and evaluating the overall presentation of the Selected Portfolio Emissions Metrics. A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks.

The procedures we performed included inquiries, inspection of documents, analytical procedures, evaluating the appropriateness of quantification methods and reporting policies, and agreeing or reconciling with underlying records. Given the circumstances of the engagement, in performing the procedures listed above we:

- Evaluated the suitability of the Reporting Criteria as a basis to prepare the Selected Portfolio Emissions Metrics;
- Through inquiries, obtained an understanding of Temasek's control environment and the information systems relevant to the preparation of the Selected Portfolio Emissions Metrics. However, we did not evaluate the design of control activities, obtain evidence about their implementation or test their operating effectiveness;
- Evaluated whether Temasek's methods for developing estimates are appropriate and had been consistently applied. However, our procedures did not include testing the data on which the estimates are based or separately developing our own estimates against which to evaluate Temasek's estimates;
- For a limited sample of assets, reconciled the emissions data back to the underlying records. However, our procedures did not include the corroboration of the underlying greenhouse gas emissions and financial data; and
- Considered the presentation and disclosure of the Selected Portfolio Emissions Metrics.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Accordingly, we do not express a reasonable assurance opinion about whether Temasek's Selected Portfolio Emissions Metrics have been prepared, in all material respects, in accordance with the Reporting Criteria.

## Inherent Limitations

In designing these procedures, we considered the system of internal controls in relation to the Selected Portfolio Emissions Metrics and reliance has been placed on internal controls where appropriate. Because of the inherent limitations in any accounting and internal control system, errors and irregularities may nevertheless occur and not be detected.

The absence of a commonly used generally accepted reporting framework or a significant body of established practice on which to draw to evaluate and measure subject matter allows for different, but acceptable, measurement techniques that can affect comparability between entities and over time. As there are currently no legislative requirements or regulation prescribing the preparation, disclosure and verification of Temasek's portfolio emissions, the Selected Portfolio Emissions Metrics need to be read and understood together with the Reporting Criteria.

The quantification of the greenhouse gas emissions data underlying the Selected Portfolio Emissions Metrics is subject to inherent uncertainty because of incomplete scientific knowledge used to determine emissions factors and the values needed to combine emissions of different gases, and the estimation uncertainty from the measurement and calculation processes used to quantify emissions within the bounds of existing scientific knowledge. This can affect the ability to draw meaningful comparison of Temasek's portfolio emissions over time.

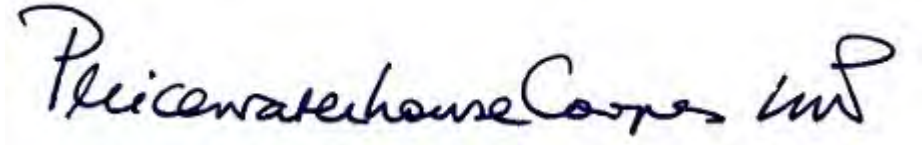
## Conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Selected Portfolio Emissions Metrics for the financial year ended 31 March 2024 are not prepared, in all material respects, in accordance with the Reporting Criteria.

## Purpose and Restriction on Distribution and Use

This report, including our conclusion, has been prepared solely for Temasek in accordance with the letter of engagement between us. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than Temasek for our work or this report.

Yours faithfully

A handwritten signature in black ink that reads "PricewaterhouseCoopers LLP". The signature is written in a cursive, flowing style.

### **PricewaterhouseCoopers LLP**

Public Accountants and Chartered Accountants  
Singapore

1 July 2024

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## 4.3 Building a Sustainable Organisation

Our focus on sustainability extends from portfolio to planet to people.

At Temasek, we strive to foster a company culture that embraces sustainability.

### Reducing Environmental Impact Arising from Our Operations

We continue to uphold our commitment to carbon neutrality in our operations by harnessing all levers to reduce emissions, and are making strides through various initiatives and programmes.

Over the year, we saw an [increase in our overall indirect emissions](#) from our operations, mainly due to the resumption of business travel post-pandemic.

However, we remain judicious on the need for business travel and have introduced several measures to promote sustainable and disciplined travel practices. These include the introduction of a carbon charge for business travel, pegged to our [internal carbon price](#).

Our efforts to procure electricity from renewable sources for our UK and India offices, as well as the Renewable Energy Certificates obtained for our Singapore office, have resulted in a decrease in emissions in relation to electricity consumption.

In 2023, our Singapore office received the [Green Mark Award \(Platinum\)](#) from the Singapore [Building and Construction Authority](#), recognising our efforts to create a more sustainable and resource-efficient office environment.

To compensate for residual emissions from our operations, we purchase [carbon credits](#) through [Climate Impact X](#). We prioritise carbon credits with higher ratings and more recent vintages for our purchases.

We remained carbon neutral in our operations for the fifth year running, as at 31 March 2024.



Read more about how we are reducing the overall environmental impact arising from our operations

### Developing a Diverse, Equitable, and Inclusive Institution

We value diversity, equity, and inclusion. We foster an inclusive environment for our employees, one that respects and embraces differences across a wide range of dimensions, regardless of gender, age, religion, sexual orientation, nationality, ethnicity, physical ability, or neurodiversity. Guided by our [MERITT](#) values, we forge a culture where everyone feels respected, empowered, and is treated fairly.

Our [Inclusivity@Temasek](#) initiatives continue to strengthen our diversity practices and reinforce our culture of belonging. One such initiative, Temasek Women's Network, supports and inspires our female staff in their career journeys.

Today, our staff encompass 34 nationalities with a [gender mix](#) of 54% male and 46% female. We continue to embrace and work towards diversity while ensuring a fair, meritocratic, and inclusive workplace.



## Capacity Building and Knowledge Sharing


Our employees are critical to advancing a more sustainable organisation. We continuously upskill and equip them with diverse skill sets and competencies to navigate an increasingly complex world, and to remain relevant for the future.

We have also expanded our mandatory learning programmes to include topics such as our approach to sustainability, as well as diversity and inclusivity.

For the year ended 31 March 2024, every staff underwent an average of 35 hours of training.

## Developing a Culture of Sustainability

More than 90% of our staff took part in sustainability-focused initiatives for the year ended 31 March 2024. These included a self-paced learning programme on our sustainability efforts, and activities such as a shoe recycling drive, upcycling workshops, as well as mangrove monitoring to assess the carbon abatement potential of urban mangrove habitats.

 Find out more about how we are fostering a company culture that embraces sustainability

## Appendix I — Reporting Criteria

### Portfolio Emissions Metrics: Explanatory Notes on Definitions and Methodology Used

We report the following portfolio emissions metrics with reference to the Greenhouse Gas (GHG) Protocol, as well as recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) for Asset Owners:

Metric	Description
Total Portfolio Emissions <sup>4</sup> (in tCO <sub>2</sub> e)	The absolute GHG emissions (Scope 1 and Scope 2) associated with our portfolio, expressed in tCO <sub>2</sub> e.
Portfolio Carbon Intensity <sup>5</sup> (in tCO <sub>2</sub> e/\$M portfolio value)	The GHG emissions associated with our portfolio normalised by the market value of the portfolio, expressed in tCO <sub>2</sub> e/\$M portfolio value.
Portfolio Weighted Average Carbon Intensity <sup>6</sup> (in tCO <sub>2</sub> e/\$M revenue)	The sum of each asset's carbon intensity (tCO <sub>2</sub> e/\$M revenue) multiplied by the weight of that asset in the portfolio (the market value of that asset relative to the market value of the portfolio), expressed in tCO <sub>2</sub> e/\$M revenue.

<sup>4</sup> This metric is also known as Total Carbon Emissions (tCO<sub>2</sub>e) within the TCFD Supplemental Guidance for the Financial Sector.

<sup>5</sup> This metric is also known as Carbon Footprint (tCO<sub>2</sub>e/\$M invested) within the TCFD Supplemental Guidance for the Financial Sector.

<sup>6</sup> This metric is also known as Weighted Average Carbon Intensity (tCO<sub>2</sub>e/\$M revenue) within the TCFD Supplemental Guidance for the Financial Sector.

Our portfolio emissions encompass Temasek's direct investments in public and private equities. Our investment positions in private equity funds, credit, and other assets are excluded.

The portfolio emissions reported include Scope 1 and Scope 2 emissions of the underlying companies based on the latest available data sets.

We use a combination of company-reported emissions data and modelling approaches to establish our portfolio emissions based on our proportionate shares (i.e., ownership interests) in the assets.

We adopt the following hierarchy in data sources as we establish our portfolio emissions, taking into account availability and timeliness of reported data:

- 1. Company-reported data:** GHG emissions data that is reported by the company, either directly to Temasek or made available through S&P Global Sustainable1.
- 2. Company-specific estimates:** GHG emissions for each company modelled or estimated by Temasek or S&P Global Sustainable1 using relevant industry level carbon intensity or carbon efficiency averages as proxies (GHG emissions normalised by revenue / market capitalisation / other relevant operational unit of measurement). In case industry averages do not provide a meaningful proxy for the company, carbon intensity or efficiency data of comparable peers may be used instead.



## Institution

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## 5.1 Governance & Leadership

We aspire to do well, do right, and do good, for today's and future generations.

Guided by our [Purpose](#), which defines why we do what we do, our [Charter](#) sets out who we are and what we do.

Incorporated as a company under the [Singapore Companies Act](#) on 25 June 1974, Temasek<sup>22</sup> is wholly owned by the Singapore Minister for Finance<sup>23</sup>.

Under the [Singapore Constitution](#), Temasek is a Fifth Schedule entity<sup>24</sup> with a constitutional responsibility to safeguard our Company's past reserves<sup>25</sup>. Temasek's reserves form part of the nation's reserves<sup>26</sup>.

Temasek owns its assets — we are not a fund manager. We do not manage Singapore's Central Provident Fund savings, or the Singapore Government's assets, or the foreign exchange reserves of Singapore. Neither does Temasek manage the assets of any other Fifth Schedule entity: these are independently managed by the respective Fifth Schedule entities themselves.

Temasek is not state-directed. Neither the President of Singapore<sup>27</sup> nor the Singapore Government is involved in or directs our investment strategies, investment decisions, or other business decisions, except in relation to the protection of our past reserves.

<sup>22</sup> Temasek Holdings (Private) Limited.

<sup>23</sup> Under the Singapore Minister for Finance (Incorporation) Act 1959, the Minister for Finance is a body corporate.

<sup>24</sup> Fifth Schedule entities under the Singapore Constitution include GIC Private Limited, which manages the reserves of the Singapore Government; the Central Provident Fund Board; the Monetary Authority of Singapore; Housing and Development Board; and Jurong Town Corporation.

<sup>25</sup> On the eve of the first day of each term of Government, Temasek's total reserves — comprising our past reserves and current reserves at the changeover — are locked up as past reserves. This cycle repeats every time there is the swearing in of a new Government after a General Election.

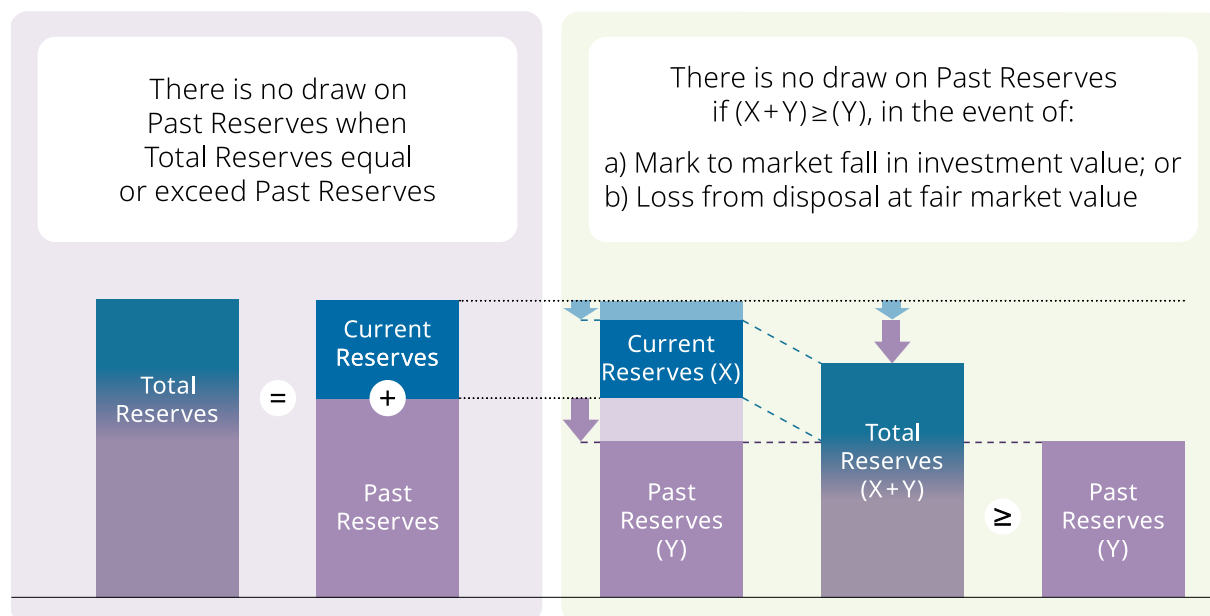
<sup>26</sup> The nation's reserves comprise  
1) the Singapore Government's reserves;  
2) Temasek's reserves; and  
3) the reserves of the other Fifth Schedule entities.

<sup>27</sup> The Singapore President has an independent custodial role under the Singapore Constitution to safeguard the respective past reserves of the Singapore Government and the Fifth Schedule entities, including those of Temasek.

## Relating to the President of Singapore

The Chairman, CEO, and each Board member have the responsibility under the Singapore Constitution to protect our Company's past reserves. Temasek's past reserves are those accumulated by the Company before the current term of Government. Temasek's current reserves are those Temasek accumulates during the current term of Government.

Our Board and the CEO have a duty to seek the President's approval before any draw occurs on our past reserves. There is no draw on our past reserves if our total reserves equal or exceed our past reserves. Mark to market declines on existing investments are not a draw on past reserves. We have a duty to ensure every disposal of investment is transacted at fair market value<sup>28</sup>. A realised loss arising from such disposals at fair market value is not a draw on past reserves.



Every year, the Temasek Board and senior management brief the President and the Council of Presidential Advisers on Temasek's performance and investment strategies.

## Relating to Our Shareholder

Our shareholder holds the [Board](#) accountable for our overall performance by assessing Temasek's long-term returns. In turn, the Board delegates the day-to-day management of Temasek to Temasek's [senior management](#).

<sup>28</sup> Fair market value is the price agreed between a willing buyer and a willing seller on an arm's length basis.

While the [Board Leadership Development & Compensation Committee](#) is responsible for recommending Board and management leadership plans, our shareholder has the right under the Singapore Companies Act to appoint, reappoint, or remove our Board members, subject to the President's concurrence<sup>29</sup>. The Board's appointment or removal of the CEO is also subject to the President's concurrence. These constraints are part of the "second key" concept, to safeguard the integrity of our Board and CEO in protecting Temasek's past reserves.

Temasek declares dividends annually in accordance with our dividend policy. Our Board sets our dividend policy, balancing the sustainable distribution of profits as dividends to our shareholder with the retention of profits for reinvestment to generate future returns. The policy also takes into account our constitutional responsibility to protect Temasek's past reserves. Our Board recommends the dividend payout for our shareholder's acceptance at the annual general meeting.

Under the [Net Investment Returns \(NIR\) Framework](#), the Government is permitted to spend up to 50% of the expected long-term real rates of return of GIC, the Monetary Authority of Singapore, and Temasek. The NIR framework does not affect, change, or impact Temasek's responsibility to protect our past reserves; our dividend policy; and strategies and operations as a long-term investor.

Every year, the Temasek Board and senior management meet with the Finance Minister and officials from the [Ministry of Finance](#) to review Temasek's performance and investment strategies.

## Our Internal Governance Approach

Temasek<sup>30</sup> is an exempt private company<sup>31</sup> under the Singapore Companies Act which is exempted from disclosing its financial information publicly. We have nonetheless published our portfolio performance in our annual *Temasek Review* since 2004, and our consolidated group financials in our bond offering circulars. As a commercial investment company, our annual statutory financial statements are audited by a major international audit firm.

We comply with our obligations under Singapore laws and regulations, as well as those of the jurisdictions where we have investments or operations.

Our Board has a fiduciary duty towards Temasek as a Company, with full discretion and flexibility to guide the management of our portfolio.

### Temasek Board

Our Board provides overall guidance and policy directions to management.

As at 31 March 2024, our Board comprised 11 members from across the world, each with diverse skills, experiences, and knowledge, and the majority of whom (82%) are non-executive independent private sector business leaders. Tan Chong Meng and Geoffrey Wong joined Temasek's Board on 1 April 2024 and 10 May 2024 respectively.

Both are senior business leaders with extensive global experience in their respective fields. Chong Meng recently retired as the Group CEO of PSA International and is the Chairman of JTC Corporation. He has over 40 years of global experience in a multinational business environment. Geoffrey, who recently retired as Head of Emerging Markets and Asia Pacific Equities at UBS Global Asset Management, brings over 40 years of investment experience in the Asia Pacific and emerging markets.

<sup>29</sup> The President of Singapore's concurrence is exercised independent of the Cabinet.

<sup>30</sup> Temasek Holdings (Private) Limited.

<sup>31</sup> Under the Singapore Companies Act 1967, one of the definitions of an exempt private company (EPC) is a private company with not more than 20 shareholders and no corporation as its shareholder. A solvent EPC is exempted from filing its financial statements with the Accounting and Corporate Regulatory Authority. Temasek is an EPC as the Minister for Finance does not fall within the definition of "corporation" under this Act.



Our Board operates on a commercial basis, with the added constitutional responsibility, together with our Chairman and CEO, of protecting the Company's past reserves, given Temasek's status as a Fifth Schedule entity<sup>32</sup> under the Singapore Constitution. There are no nominees of the Government on our Board.

The annual Board schedule includes quarterly two-day meetings, and additional meetings as needed, such as for significant large investments. Six Board meetings were held in the financial year ended 31 March 2024.

The Board has reserved the following matters for its decision:

- overall long-term strategic objectives
- annual budget
- annual audited statutory accounts
- major investment and divestment proposals
- major funding proposals
- CEO appointment and succession planning
- Board changes
- portfolio risk appetite and profile

The following Board committees, each chaired by a non-executive Director who is independent of management, have been set up with specific delegated authorities:

- Executive Committee
- Audit Committee
- Leadership Development & Compensation Committee
- Risk & Sustainability Committee

The Board has separate and independent access to information to assist it with its deliberations, including the opportunity to request supplementary or explanatory information from management. Management provides information to the Board on an ongoing basis, including minutes of key management committee meetings, to allow the Board to effectively discharge its responsibilities.

#### Executive Committee (ExCo)

The ExCo has been delegated the authority to approve new investment and divestment decisions up to a defined threshold, beyond which, transactions will be considered by the Board. The minutes of ExCo meetings are circulated to the Board. The ExCo met seven times during the year.

#### Audit Committee (AC)

Comprising only independent directors, the AC supports the Board in its oversight responsibilities by reviewing, among other things, our system of internal controls, and processes used for financial reporting, audit, and monitoring compliance with laws and regulations. The AC also reviews the scope and results of the external audit, and the independence of the external auditors.

The AC is supported by Internal Audit (IA). To ensure its independence, IA reports functionally to the AC and administratively to the office of the CEO of Temasek Holdings.

IA has full and unrestricted access to all records, properties, and personnel to effectively perform its functions. IA performs planned reviews of key control processes for all offices.

<sup>32</sup> Fifth Schedule entities under the Singapore Constitution include GIC Private Limited, which manages the reserves of the Singapore Government; the Central Provident Fund Board; the Monetary Authority of Singapore; Housing and Development Board; and Jurong Town Corporation.

To maintain confidentiality, the key controls over financial reporting relating to central payroll processes are reviewed by external auditors as part of the statutory audit of our group financial statements. IA may also undertake special reviews requested by our Board, AC, or senior management. The minutes of AC meetings are circulated to the Board.

The AC met four times during the year. The AC also has separate sessions, without management, with the external auditors and with IA.

#### [Leadership Development & Compensation Committee \(LDCC\)](#)

The LDCC is responsible for recommending Board and management leadership plans to the Temasek Board. These include Board and CEO succession, as well as guidelines and policies on performance measurement and compensation plans. The LDCC met three times during the year.

#### [Risk & Sustainability Committee \(RSC\)](#)

We operate in a complex global environment influenced by multiple geopolitical and socio-economic forces. The RSC was established to enhance focus on opportunities and risks arising from sustainability trends, including climate change, and other financial, reputational, operational, and cyber risks.

The RSC supports the Board in its oversight responsibilities by reviewing, among other things, our portfolio risk appetite and profile, material Environmental, Social, and Governance (ESG) matters, risk management and sustainability frameworks and policies, as well as key public statements relating to risk, sustainability, and ESG. The RSC coordinates with other standing Committees of the Board, such as the AC and the LDCC, in its oversight of risk and sustainability matters, where relevant. The RSC met three times during the year.

#### [Board Governance](#)

Decisions at Board and Committee meetings are based on a simple majority of the votes, including those made via telephone and/or video conference. Where a Board resolution is obtained via circulation, the resolution becomes effective upon approval by at least two thirds of the Board.

Board members with interests that may conflict with specific Temasek interests are recused from the relevant information flow, deliberations, and decisions on the matter on which they are conflicted.

Quarterly Board meetings include Executive Sessions for non-executive Directors to meet without management presence. The discipline of our annual CEO succession review is a part of these deliberations.

Board and Committee Memberships as at 31 March 2024

	Board	ExCo	AC	LDCC	RSC
Lim Boon Heng	Chairman	Chairman		Chairman	
Cheng Wai Keung	Deputy Chairman	Member		Member	
Bobby Chin YC	Member		Chairman		
Fu Chengyu	Member				
Jenny Lee	Member				Member
Stephen Lee CY	Member	Member	Member	Member	
Lee Theng Kiat	Member	Member		Member	Member
Tan Chee Meng	Member		Member		Member
Peter R Voser	Member			Member	Chairman
Jaime Augusto Zobel de Ayala	Member				Member
Dilhan Pillay Sandrasegara	ED & CEO	Member			

Full profiles of our Board members are available on [our corporate website](#).

### Temasek Senior Management

Senior management sets the tone and culture of our institution, leading the delivery of Temasek's vision and mission.

In line with global best practices of international investment companies, Temasek International (TI) was set up in 2011 as the management arm of Temasek. Today, TI houses all our management and staff, except the Temasek CEO who continues to be employed under Temasek Holdings.

Operating as *OneTemasek*, our management team implements the strategy and policy directions set by the Temasek Board to fulfil our mandate to deliver sustainable returns over the long term. Levels of authority for investment, divestment, and other operational matters are defined according to our Board's delegation.

Our senior management oversees Temasek's key business strategies and organisational initiatives with the support of the following committees, which are chaired by our CEO and comprising members of senior management:

- Strategy, Portfolio and Risk Committee (SPRC)
- Senior Divestment and Investment Committee (SDIC)
- Senior Management Committee (SMC)

The SPRC reviews macroeconomic, political, industry, technological, and social trends that provide the context in which new opportunities and risks may arise, in both existing and new markets. It also reviews our overall portfolio construction efforts and investment strategies.

The SDIC manages and shapes our portfolio on an ongoing basis and decides on investments and divestments up to the authority limits as delegated by our Board. Investment proposals beyond these authorisation limits are escalated to the ExCo and/or the Board as warranted. Meeting minutes are circulated to the Board.

The SMC reviews and sets overall management and organisational policies. These include internal controls, the implementation of our Derivatives Framework, and the Valuation Policy approved by the Board Audit Committee. The SMC has developed the Temasek Code of Ethics and Conduct (T-Code) and constituted the Ethics Committee to assist in its implementation. All employees are required to observe and comply with the T-Code.

Our list of senior management is available on our [corporate website](#).

## Relating to Our Portfolio Companies

As stewards of our assets, we engage our portfolio companies to enhance shareholder value and advocate good governance and sustainability practices.

### Governance

The day-to-day management and business decisions of companies in our portfolio are the responsibility of their respective boards and management. Temasek does not direct their business decisions or operations.

Effective board governance is fundamental to a company's success and long-term viability. Board directors have a fiduciary duty to safeguard the interests of their respective companies and those of shareholders as a whole. We rely on the boards of portfolio companies to set the company's strategy, supervise management's performance, exercise effective oversight, and be accountable to stakeholders for their decisions and outcomes of their actions.

We support the formation of high-calibre and effective boards. An effective board is one that displays independent judgement, a good mix of competencies and expertise, as well as diversity and accountability. We encourage our portfolio companies to conduct regular reviews of board succession plans, taking into consideration the changing needs of the company.

We support boards which are predominantly independent, comprising individuals with the requisite skills, experience, and attributes to significantly contribute to the success of the company. We advocate that the Chairman and CEO roles be held by separate persons, independent of each other, to ensure a healthy balance for independent decision-making, and a greater capacity for management supervision by the board.

As a shareholder, we vote to express our opinion on how a portfolio company should be governed and managed, and to hold its board and executives accountable for their actions, decisions, and performance. Voting also assists us to align our investments with our ethical and environmental values and promote sustainable and responsible business practices. When we exercise our vote, we seek to promote sound governance and long-term financial value creation, and to protect our interest as an investor.

We do not provide any financial guarantees for the obligations of our portfolio companies, just as the Singapore Government does not provide any financial guarantees for Temasek's obligations.

## Engagement

While we do not direct the business decisions and operations of our portfolio companies, we interact with them as an engaged shareholder to enhance shareholder value and advocate good governance, sustainability, and corporate practices. We believe in constructive engagement and are committed to working with our portfolio companies to promote a close alignment between strategy and performance, and returns and rewards.

We add value as a shareholder by exchanging ideas, sharing best practices, and organising roundtables and networking events in areas such as corporate governance, [cybersecurity](#), industry and technology trends, legal and regulatory, reputational risk management, and [sustainability](#). We also keep track of industry developments and trends that may impact our portfolio companies, and share our expertise and knowledge in these areas with them.

## Expectation

As part of our constructive engagement, we share our shareholder expectations with the boards of our portfolio companies. We encourage them to be agile and innovative, and to be prepared to face disruptions while tapping on new opportunities. They are key to helping us build a resilient and forward-looking portfolio as part of our [T2030 strategy](#), and ultimately, to deliver sustainable returns over the long term.

We expect companies to comply with applicable laws, and to abide by sound corporate governance and appropriate codes of conduct and ethics. We do not condone any form of misconduct and malfeasance and hold the boards accountable for the activities of their companies.

Boards should set the tone — in the pursuit of governance excellence — to effectively oversee management in the development and implementation of strategies and ensure robust governance, compliance systems, and processes are in place. These must be constantly reviewed and refreshed to ensure they are appropriate and relevant.

## 5.2 Compensation Philosophy

Our ownership ethos places the institution above the individual, emphasises long term over short term, and aligns employee and shareholder interests over economic cycles.

Our compensation framework aims to foster a high-performing and responsible culture, where our employees think and act as owners with a strong sense of intergenerational duty, sharing gains and pains alongside our shareholder. It balances rewards for short-term performance and long-term value creation. It also aligns our staff towards achieving both our financial performance and carbon emissions reduction targets.

Our base salaries are benchmarked globally. Short-term bonuses are driven by financial and non-financial targets. Medium and long-term incentives, which form a major proportion of our annual total compensation, are driven by our portfolio returns.

Returns above our overall [risk-adjusted cost of capital](#) determine our Wealth Added (WA) incentive pool, while negative portfolio returns determine our clawback pool.

Deferred incentives and clawbacks are integral to our remuneration. Longer-term incentives can be deferred for up to 12 years, and are subject to market risks and clawbacks, to ensure the sustainability of returns over market cycles.

For the year ended 31 March 2024, our one-year Total Shareholder Return (TSR) was 1.60% and three-year TSR was 0.68%. WA was S\$26.7 billion below our risk-adjusted cost of capital of 9% aggregated across our portfolio.

### Annual Cash Bonuses — Our Short-Term Incentives

Annual cash bonuses are driven by company-wide, team, and individual performances, and capped within budgeted limits. One of our annual performance targets requires our three-year average TSR to exceed our three-year average cost of debt.

Apart from financial targets, our [Make-A-Difference \(MAD\)](#) programme rewards employees for achieving non-financial goals targeted at strengthening the institution, contributing to the community, and taking care of their families and themselves.

### WA Bonus Bank — Our Medium-Term Incentives

A portion of our WA incentive pool, whether positive or negative, is distributed into each employee's notional WA bonus bank account, based on the individual's performance and contributions over four years.

When WA bonus bank balances are positive, a portion of the balance is paid out to staff. The remaining portion is deferred with the percentage deferral increasing with seniority.

Part of the retained balances are deferred as co-investment grants which vest over the following three years. The remaining WA bonus bank balances are subject to clawbacks in the future should portfolio returns be negative.

## Co-investment Grants — Our Long-Term Incentives

Our employees may be awarded co-investment grants with performance-based or time-based vesting conditions. These units grow or decline in value with our yearly TSR, reinforcing the ownership culture of our company. Co-investment units lapse after 12 years.

The performance-based co-investment grants are subject to stringent multi-year portfolio performance conditions to trigger a five-year vesting. Our time-based co-investment grants vest up to 12 years.

These co-investment grants reinforce our long-term alignment with shareholder interest and the sustainability of our business performance over different market cycles.

To reinforce the commitment to our carbon emission goals, we apply a carbon charge against our portfolio performance. This carbon charge is taken from our WA incentive pool to be awarded as another type of co-investment grants tied to our carbon emission reduction targets. This drives us to collectively work towards our institutional commitment to halve the net carbon emissions of our portfolio over 2010 levels by 2030, and to achieve net zero carbon emissions by 2050.

## Co-ownership in Practice

As part of co-ownership alignment, clawbacks are made to our employees' retained bonus banks when WA and portfolio returns are negative.

In the last decade, we had four clawback pools. Of these, two were clawback balances carried forward when the deferred WA incentives were not enough to clear the clawback pools from prior years. Clawback balances were then made good from future years' positive WA.

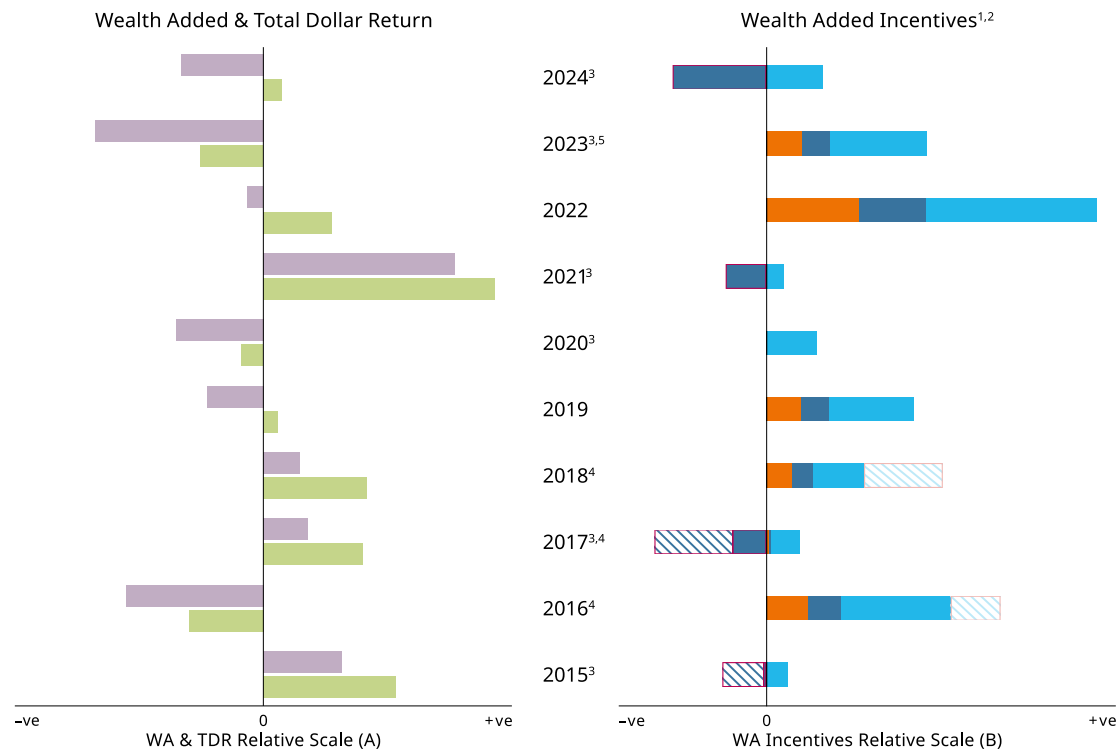
The negative WA for the year ended 31 March 2024 meant that we will not have new WA incentives to share. With a positive [Total Shareholder Return](#), there will be no clawback pool.

We also have a policy to recover paid-out incentives in the event of financial misstatements and/or misconduct by staff that have material impact on the performance or reputation of the firm.

This demanding framework for sharing gains and the associated risks and pains through market cycles has been tested and reaffirms our ownership ethos.



### WA Incentives of Key Team



- Wealth Added (WA) in dollars
- Total Shareholder Return in dollars (Total Dollar Return or TDR)
- Paid-out portion of WA Bonus earned for prior year's performance
- Deferred portion of WA Bonus earned for year's performance, with future clawback risks
- Co-investment units which grow or shrink with total returns to shareholder, and are subject to performance and time-based conditions
- Clawback of deferred WA Bonus from prior years
- Clawback balances carried forward for future bonus offset
- Part of earned WA Bonus used to offset the clawback balances brought forward from prior year

<sup>1</sup> WA incentives awarded in the year were for WA performance in the prior year.

<sup>2</sup> WA incentives of key management team which includes CEOs, Presidents, Senior Managing Directors, Managing Directors, as well as management Directors.

<sup>3</sup> No new T-Scope pool was generated due to negative WA in the prior year.

<sup>4</sup> WA Bonus attributable to the IPO of Alibaba was split into three tranches over 2016, 2017, and 2018, subject to sustained performance.

<sup>5</sup> WA Bonus attributable to the unallocated pool brought forward from the prior year.

## 5.3 Our People

We are guided by our [Purpose](#), [Temasek Charter](#), and [MERITT](#) values to work and grow together to build a better tomorrow.

We strive to do well, do right, and do good, to build a brighter and more inclusive tomorrow for this and future generations. At the core of this ambition is our people — their values, passions, capabilities, and their willingness to learn, contribute, lead, and take on new ideas and responsibilities.

### Supporting Our People

Our *Make-A-Difference* (MAD) programme has been an integral part of our life in Temasek since 2008. MAD promotes a culture of personal ownership and responsibility. Individual and company-wide MAD targets go beyond financial and performance targets to cover self-development, institution, community, and sustainability goals, and to foster lifelong skills and healthy habits.

We curated a learning module to deepen the understanding of Temasek's sustainability journey, how we have embedded sustainability through our various investments, as well as institutional and community initiatives.

To support the well-being of our employees, we have developed a suite of programmes that focuses on mindfulness, personal resilience, and crisis support. In addition to our *Employee Assistance Programme* that avails practical information and counselling to staff and their family members, our *Care Supporter Programme* equips staff to support each other's mental well-being. Our staff also have access to digital applications that offer classes on meditation, stress management, and fitness activities to support them in managing their well-being.

We offer a broad range of parental and family planning benefits. These include maternity leave of at least 26 weeks, paternity and adoption leave of at least 20 weeks, as well as fertility and family planning subsidies. Additionally, we increased our flexible leave provisions to allow staff to take time off for purposes meaningful to them, be it for childcare, eldercare, or for their own well-being. We also introduced rejuvenation leave for staff to take time off and recharge at specific career milestones.

Our hybrid and flexible work arrangements also help our staff manage their professional and personal obligations.

### Growing Our Talent

As part of our institutional focus to build a future-ready team, we anchor our talent development on the 4Es of Experience, Exposure, Education, and Enrichment.

Our annual CEO Challenge encourages staff to acquire new skills in areas such as Artificial Intelligence (AI), coding and data science, language, music, and dance. Our learning roadmaps help our employees scale their capabilities.

We continue to evolve our curriculum to build future-focused skill sets. For example, we have intensified our digital fluency efforts to encompass Analytics, Automation, and Generative AI. A growing number of our staff have been certified as "Citizen Developers",

enabling them to utilise digital resources to increase productivity. We have organised hackathons to engage our staff to develop AI-based solutions for varied work areas.

360° feedback is an integral part of our performance assessment and development process. We have implemented a real-time feedback mechanism and leveraged AI to synthesise feedback, enabling a culture of continuous improvement and ongoing learning. We also supplement 360° feedback with self-profiling tools to allow our teams to gain a better understanding of themselves and to foster collaboration.

## Our *OneTemasek* Team

We are committed to making Temasek a great place to work. By building an inclusive culture that celebrates diversity in perspectives, skill sets, and experiences, we create a conducive environment where everyone feels they belong and can bring their best self to work.

We have developed a set of Teaming principles and practices. Inspired by the Agile methodology, Teaming outlines a set of techniques, values, and principles designed to guide and improve how teams work in a continuous, collaborative, and iterative manner. This uniquely Temasek way of working together harnesses the collective experiences, thoughts, and perspectives within our teams, and drives better outcomes.

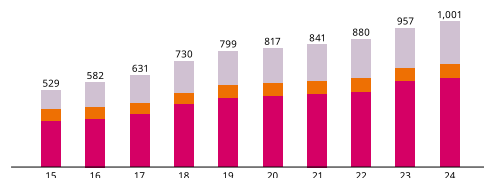
We continue to support [workforce diversity](#) through initiatives such as *Inclusivity@Temasek* and Temasek Women's Network.

(as at 31 March)

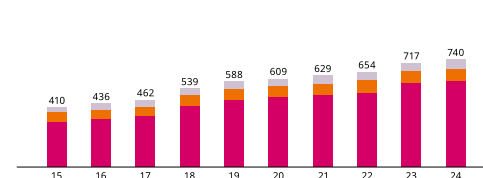
## Our Staff Composition

### By Nationality

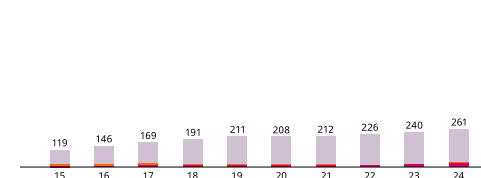
### Global



### Singapore



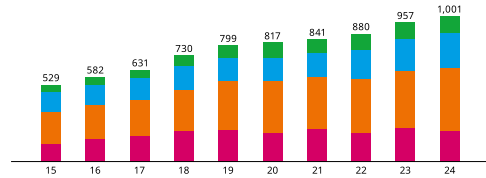
### Outside of Singapore



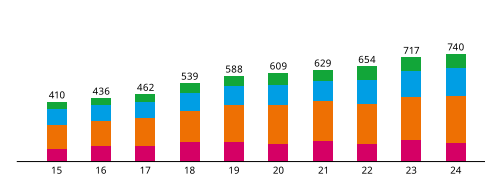
● Singaporeans ● Singapore PRs ● Other Nationalities

By Age

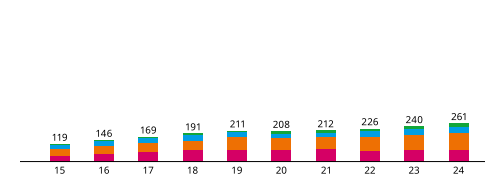
Global



Singapore



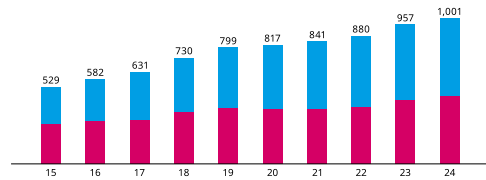
Outside of Singapore



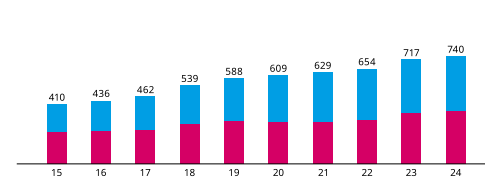
● Age range: ≤30 ● Age range: 31-40 ● Age range: 41-50 ● Age range: >50

By Gender

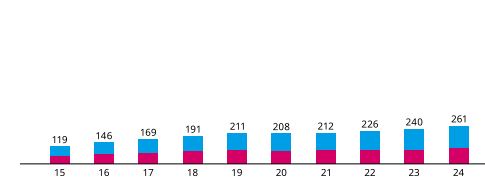
Global



Singapore



Outside of Singapore



● Female Staff ● Male Staff

We have about 1,000 people, encompassing 34 nationalities across 13 offices in 9 countries. About 60% of our staff are Singaporeans.

## Doing Good Together

Temasek's founding date, 25 June, is designated as our annual Community Day. Staff in our various offices work with beneficiaries on our anniversary, and throughout the year, and are given dedicated volunteer leave to participate in their personal or group volunteering activities.

Our offices also support local communities through donations and our staff actively participate in outreach programmes with non-profit groups and other organisations, as part of *T-Touch*, Temasek's staff volunteer initiative.

## Inspiring Generations



*Juliet Teo (second from left), Head, Portfolio Development Group and Head, Singapore Market, interacting with youths at a digital media appreciation activity during a company visit*

Last year, our Singapore office partnered the People's Association and the Community Development Council and invited about 160 youths from low-income families to experience and learn about jobs of the future. Our staff organised three career tracks spanning digital and social media, game development, and food sustainability, and the youths also tried out virtual reality headsets and played laser tag.

## Enhancing Living Environments



*Ben Gan, Director, Investment, London office, planting trees to improve surroundings at the hospice*

Our London colleagues volunteered at Haven House Children's Hospice, which provides specialist care to children who have life-limiting or life-threatening conditions, by improving the beneficiaries' facilities.

## Empowering Social Entrepreneurship



*Sherry Xia (second from left), Vice President, Investment, Beijing office, engaging beneficiaries on identifying issues and solutions to social challenges*

Our team in China partnered YouChange Foundation to empower social entrepreneurs through structured mentoring and resources to support projects that overcome challenges and achieve social goals.

## Reaching Out to the Needy



*Our colleagues from the New York office distributing food and connecting those in need with City Relief staff*

Our New York colleagues partnered Hope for New York and City Relief to distribute soup, bread, and beverages, as well as socks and hygiene kits to the homeless. Over 1,000 beneficiaries were assisted through the event.



## Supporting Well-being



*Our colleagues from our Mumbai office engaging beneficiaries through dance and artwork*

In Mumbai, our colleagues volunteered at St. Jude India ChildCare Centres where they participated in recreational activities to enhance the emotional and mental well-being of the beneficiaries.

## Uplifting Youth



*Bui Thu Nguyet (second from the right of the pillar), Office Manager, Vietnam office, facilitating discussions and helping to shortlist scholars for the academic year*

Our Vietnam office has sponsored 500 VietSeeds students from underprivileged backgrounds over the past nine years and supported their academic progress.



## 5.4 Community Stewardship

Our not-for-profit gifts aim to Connect People, Uplift Communities, Protect our Planet, and Advance Capabilities, in Singapore, Asia, and beyond.

As a global investor, our social licence to operate depends on our ability to create value for all stakeholders, including our communities. We believe in seeding social capital to foster a more inclusive and resilient world, so every generation prospers.

Our journey in building social capital started over 20 years ago, when we adopted a deliberate and structured approach, anchored on the twin pillars of governance and sustainability, to give back to communities.

Since 2003, we have been setting aside a portion of our net positive returns above our [risk-adjusted cost of capital](#) for community gifts. These are approved by the Temasek Board and then donated to partners to achieve our community objectives.

[Temasek Trust \(TT\)](#) has been the primary beneficiary of our gifts. TT disburses grants for programmes to be developed and delivered by our non-profit ecosystem, including Temasek Foundation (TF), Temasek Life Sciences Laboratory, Stewardship Asia Centre, and Mandai Nature. Our non-profit ecosystem has evolved over the years to better handle multi-faceted and complex social challenges.

To date, Temasek's gifts to TT have impacted about 3.7 million lives across Singapore and beyond.



Read more about how we support ground-up initiatives such as *Canine Partners*

TT has made good strides towards its vision to become a responsible steward of philanthropic assets, a trusted advocate of sustainability, and a proactive catalyst of positive impact.

Underscoring its catalytic role, the TT-backed Philanthropy Asia Alliance (PAA), with over 80 members and partners, crossed S\$1 billion of collective pledges last year. These pledges will help address key issues in the region surrounding climate and nature, holistic and inclusive education, and global and public health.

On the climate action front, TT became a Founding Partner of [The Earthshot Prize](#), which aims to showcase and scale innovative climate solutions for a more sustainable future. As a Founding Partner, TT hopes to spotlight Asia in the fight against climate change.

More cross-border collaborations will be forged through TT's [Asia Centre for Changemakers \(ACC\)](#). Hosted by the [Wealth Management Institute](#), the ACC aims to develop a regional community of active and informed changemakers ready to deploy their resources, skills, and passion for a better tomorrow.

Beyond our non-profit ecosystem, Temasek works with partners from the Public, Private, and People sectors to advance our community objectives, where our philanthropic capital, network, and industry insights can make the most impact.

## Advancing Capabilities

In June 2024, we announced [T-Spring](#), a S\$150 million gift to the community to advance capabilities and contribute to preparing Singapore's workforce and organisations to embrace a different world. The gift — which supports skills development, scholarships, and fellowships — is Temasek's tribute to Singapore's past, present, and future generations on our 50<sup>th</sup> anniversary. It reflects our intergenerational focus, underscores our roots, and acknowledges human capital as the driver of our journey and its role in Singapore's success.

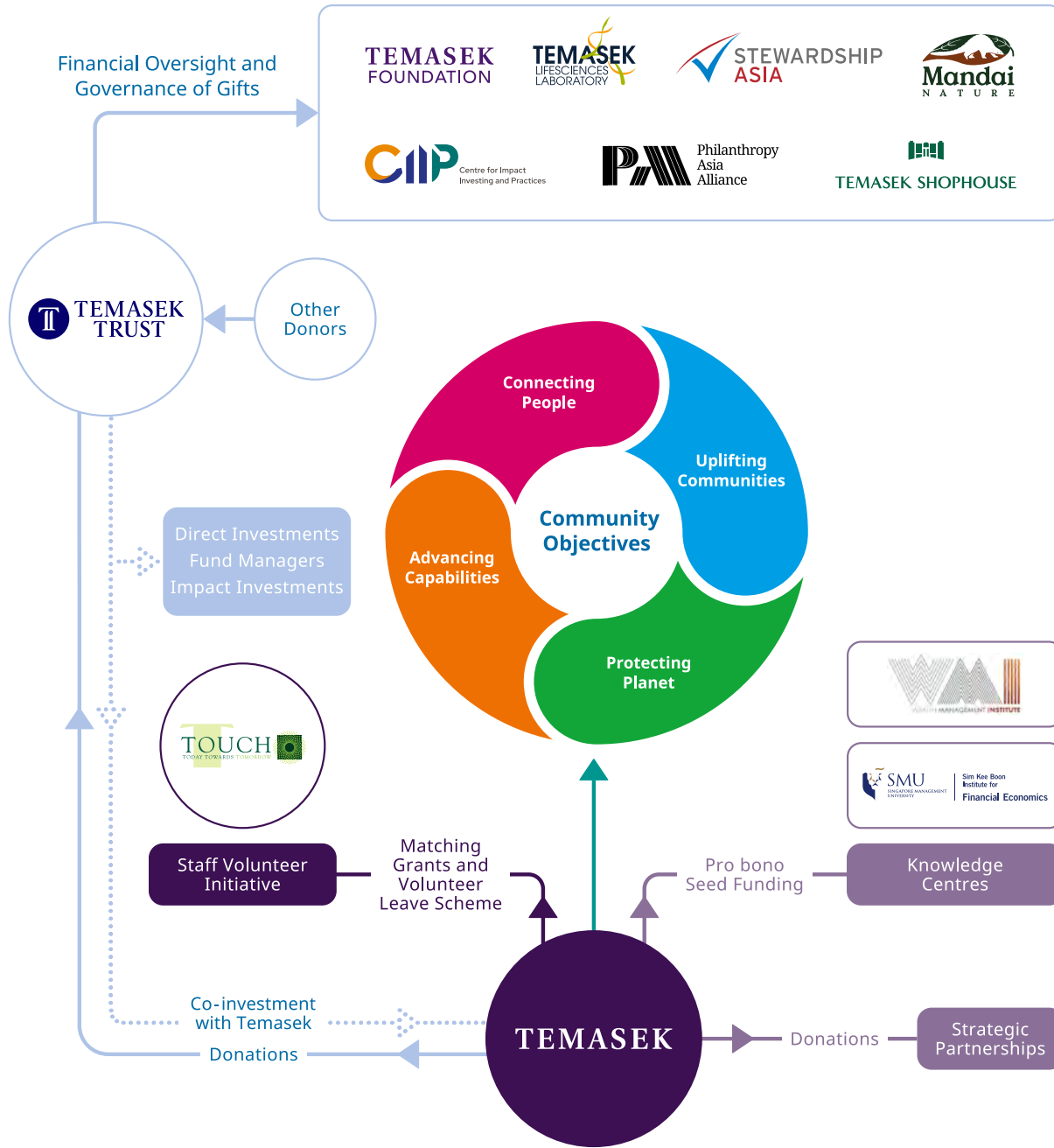
## Driving Impact

This year, we launched a pilot funding scheme to support impact enterprises that seek to achieve social objectives while operating in a financially sustainable manner. This highlights our belief that social and financial outcomes need not be mutually exclusive. Impact enterprises that aspire towards achieving a double bottom line represent a more sustainable way of delivering long-term impact. Under this scheme, we will provide recoverable grants to help impact enterprises scale their impact and operations. Our staff will also provide mentorship with the aim of empowering these impact enterprises to achieve self-sufficiency.

As our programme reach and partnerships widen, we must ensure that our gifts are truly making a difference to the communities. We have developed an Impact Measurement and Management framework that links the desired outcomes with programme activities across all our gifts. We see impact measurement as an essential part of good governance on our philanthropic journey and are working with our partners to co-create the measurement metrics. This will pave the way for more clarity and accountability, and ultimately, better outcomes for our communities.

## Doing Good in Our Communities

As a responsible corporate citizen, we support local charities with donations and staff volunteerism across all our [offices](#). When staff decide to launch a fundraising effort for a charity or cause, Temasek will provide matching grants.



## Financial Oversight and Governance

Established by Temasek Holdings in 2007, [Temasek Trust \(TT\)](#) is a steward of philanthropic assets, advocate of sustainability, and catalyst of positive impact. As a Company Limited by Guarantee, TT provides governance and financial oversight of non-profit endowments and gifts from Temasek and other donors. It provides steady and sustainable multi-year funding to support capacity building and capability development for an ecosystem of entities, with the shared purpose of building better for every generation — by connecting people, uplifting communities, protecting the planet, and advancing capabilities. TT aims to also forge new pathways for philanthropy and impact investing through collaborations with like-minded partners, as a force for good.

The skills required for the financial management of endowment funds are very different from those for developing and delivering community and social programmes. This governance model separates the financial management of philanthropic assets by TT, from the programme design and delivery by Temasek's non-profit ecosystem, and enables the respective entities to develop clear focus and capabilities. TT, TF, and other non-profit entities are separate, independent entities from Temasek, each with their respective boards and management teams. Temasek does not direct their day-to-day operations.

### TEMASEK FOUNDATION

#### Temasek Foundation (TF)

TF, a Company Limited by Guarantee, supports a diverse range of programmes that uplift lives and communities in Singapore and beyond. TF's programmes are made possible through philanthropic endowments gifted by Temasek, as well as gifts and other contributions from other donors. These programmes strive towards achieving positive outcomes for individuals and communities now, and for generations to come. Collectively, TF's programmes strengthen social resilience, foster international exchange and regional capabilities, advance science, and protect the planet.



#### Temasek Life Sciences Laboratory (TLL)

In 2002, TLL, an Institution of a Public Character, was established as a research institute to harness the power of life sciences to improve lives. With close to 200 researchers, TLL undertakes biomolecular science research and applications to benefit people in Asia and beyond.



#### Stewardship Asia Centre (SAC)

SAC is a non-profit organisation dedicated to helping business and government leaders, investors, and individuals accelerate leadership action on environmental and social challenges through catalytic knowledge and advisory. Through initiatives such as its annual Steward Leadership 25 listing, SAC showcases projects across Asia Pacific which create sustainable economic value by integrating the needs of stakeholders, society, future generations, and the environment.



### **Mandai Nature**

Mandai Nature was jointly established by Temasek and Mandai Wildlife Group. It is dedicated to advancing efforts on biodiversity conservation in Asia, with a focus on averting species extinction especially in Southeast Asia, by delivering conservation programmes at scale with partners, as well as convening partnerships and collaborative alliances to address critical conservation outcomes. As the conservation arm of Mandai Wildlife Group, it also works closely with the Group to apply holistic and integrated conservation action.



### **Centre for Impact Investing and Practices (CIIP)**

CIIP fosters the growth of impact investing and practices in Asia and beyond by building and sharing knowledge, bringing together stakeholders in the community, and bringing about positive action that accelerates the adoption of impact investing. Based in Singapore, CIIP was established by TT in 2022 as a non-profit centre, with Temasek and ABC Impact as strategic partners.



### **Philanthropy Asia Alliance (PAA)**

PAA is a TT initiative dedicated to catalysing collaborative philanthropy in Asia through dynamic multi-sector partnerships. By harnessing collective strengths, PAA amplifies positive impact and accelerates action to address the pressing environmental and social challenges of our time. PAA's flagship programme is the annual *Philanthropy Asia Summit*, a platform for global partners across the public, private, and philanthropic sectors to connect and catalyse collective action.



### **Temasek Shophouse**

Temasek Shophouse is a social impact hub located in the heart of Singapore and works closely with partners from the Public, Private, and People sectors to convene changemakers, foster collaborations, and catalyse solutions for positive impact. It is also home to the TT ecosystem and like-minded co-working partners.

Since its launch in 2019, Temasek Shophouse has enabled more than 300 programmes including community engagement events, educational exhibitions, and workshops on a range of social and environmental issues.

## Lending a Helping Paw to Seniors



*Madam Tan Guat Choo, 97, and dog owner Paula Lim guiding Tobi, a West Highland White Terrier, to complete an obstacle course*

For two months last year, Madam Tan Guat Choo spent her mornings bonding with dogs such as a Cavapoo, a Golden Retriever, and a Singapore Special.



The 97-year-old great-grandmother guided the dogs, alongside their owners, to complete obstacle courses. Madam Tan, who sat on a wheelchair pushed by her helper, held on to one leash and the owners held on to the other leash as the dogs hopped over poles and jumped through hoops. On other days, she played Bingo, which involved the dogs picking up balls with numbers on them, made cards with photos of herself and the dogs, or petted the smaller dogs as they sat on her lap.

“Playing with them brought back happy memories of the dogs that my family had when I was growing up,” said Madam Tan in Mandarin.

Madam Tan was among 16 seniors who took part in *Canine Partners*, a programme that aimed to improve the well-being of the participants as they interacted with the dogs over a series of curated activities.

The programme, which was supported by [Temasek Foundation's OSCAR Fund](#), was run by social enterprise [Animal-Assisted Interactions Singapore \(AAISG\)](#). The funding helped to cover costs such as equipment and refreshments for the seniors. The programme was conducted over seven one-hour sessions that were held at an active ageing centre run by non-profit organisation [Care Corner](#) in Toa Payoh.





## Improving Well-being of Seniors

Research has shown that animal-assisted interactions can reduce stress and anxiety among the elderly and improve the quality of life of people suffering from dementia.

AAISG founder Adele Lau said the dogs help her, AAISG programme manager Sarah Chin, and around 40 members, who are dog owners, to connect better with the seniors.



| Madam Tan, dog owner Paula Lim (left), and AAISG Founder Adele Lau (middle) guiding Tobi to complete an obstacle course

“

Some seniors are very withdrawn and unwilling to converse with us. However, when we introduce our dogs to them, we find that the seniors are more willing to open up. We may start off talking about dogs, but the seniors usually end up sharing more about themselves.

**Adele Lau**

Founder, AAISG

”

Before taking part in *Canine Partners*, the members go through a 10-hour training programme over the span of 10 sessions, conducted by Adele and Sarah. The members, whose main responsibility is to facilitate the interactions with their pets and the seniors, learn tips on communicating with seniors and the importance of being mindful of the needs of their dogs to ensure that the sessions are enjoyable for both their pets and the seniors.

For member Paula Lim, retiree, 65, taking part in *Canine Partners* was an opportunity to share the joy that her 11-year-old West Highland White Terrier, Tobi, has brought to her and her family.

“Tobi is friendly and likes being around seniors. I also have an auntie who is bedridden and she always smiles when she sees Tobi,” said Paula who has worked with AAISG since 2022.

Care Corner Assistant Programme Executive Glynis Lee has seen the positive impact that taking part in *Canine Partners* has made on the seniors.

“Some of the seniors may have difficulty moving around. But as they play fetch or go for walks with the dogs, they regain their confidence as they feel they are accomplishing something,” she said.



| Madam Tan bonded with Tobi over activities organised by Animal-Assisted Interactions Singapore

“

I looked forward to seeing the dogs. They made my worries go away.

**MADAM TAN GUAT CHOO**

Participant of *Canine Partners*

”

### **Building Bonds**

Adele hopes that more seniors in Singapore can benefit from animal-assisted interactions.

“The presence of dogs creates a unique and special connection that cannot be replicated through conversation alone,” she added.

Madam Tan said she enjoyed bonding with the dogs and is grateful to *Canine Partners'* members for dedicating their time and effort.

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# Acknowledgements

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