

Report on the Management of the Government's Portfolio

2020/21



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1.1

Letter from the CEO

Dear Stakeholders,

2021 marks a key milestone for us, as we celebrate 40 years of pursuing our purpose to secure Singapore's financial future.

Back in 1981, our founding leaders, namely the late Mr Lee Kuan Yew and Dr Goh Keng Swee, entrusted us with the mission to preserve and enhance the value of Singapore's foreign reserves. The founding team built GIC from scratch – our first Managing Director, the late Mr Yong Pung How, began his tenure with only a desk and an unusable telephone. They succeeded through sheer grit and resourcefulness, and laid the strong foundation of a global investing organization.

Today, GIC has assets in over 40 countries and offices in 10 key financial cities. We have come a long way from being a small team comprising 14 government officers and fresh university graduates led by three expatriate fund managers, to having over 1,800 employees globally. We have developed capabilities to invest across a wide range of asset classes, including



Lim Chow Kiat
Chief Executive Officer, GIC

Today, GIC has assets in over 40 countries and offices in 10 key financial cities. We have come a long way from being a small team comprising 14 government officers and fresh university graduates led by three expatriate fund managers, to having over 1,800 employees globally.

We would not be here without our founding leaders and generations, for their foresight to recognise the importance of reserves management for Singapore and the boldness to set up GIC, the first global non-commodity-based sovereign wealth fund.

equities, fixed income, private equity, real estate, and infrastructure.

We would not be where we are today without the commitment and contributions of many, especially –

Our founding leaders and generations, for their foresight to recognise the importance of reserves management for Singapore and the boldness to set up GIC, the first global non-commodity-based sovereign wealth fund;

Our Client, the Government of Singapore, for their clear mandate and trust in empowering us to invest the best we can for Singapore;

Our Board and advisors, for their insights and wisdom to help us navigate the challenging and ever-changing market environment;

Our partners, for ensuring that our capital is safeguarded and invested successfully;

The many GICians through the decades, for contributing tirelessly to ensure that we grow from strength to strength internationally, to do our job well;

And finally, our ultimate stakeholders – the Singaporean public – for powering our purpose every day.

It has been a long and demanding journey, with more challenges ahead.

Cautious on macro, positive on micro

The global economy is on a recovery after an unprecedented and challenging year of the COVID-19 crisis, socioeconomic unrest, and political turmoil. Despite the turbulence, GIC's portfolio performance has remained resilient. As at 31 March 2021, for the 20-year period from 1 April 2001, the annualised USD nominal return of our portfolio was 6.8%. Adjusting for global inflation, the annualised 20-year real return was 4.3%.

Moving forward, we anticipate a differentiated global economic recovery across countries and sectors, with a wide range of potential outcomes over the medium and long term. Countries will each have to deal with different extents of economic scarring, recovery, and reorientation of their economies and markets due to the pandemic. The pace and success rates of vaccine rollouts and reopenings will vary, as will different macro policy actions. The outsized and speedy monetary and fiscal stimulus actions in the US will likely drive its near-

term recovery strongly, outpacing others even as it grapples with uncertainties such as inflation. China's success in containing the pandemic has also allowed for robust recovery without resorting to large stimulus. Most other countries are expected to only emerge from the pandemic slowly given the vaccination challenges and lack of policy space.

The pandemic has also magnified vulnerabilities and awareness of rising social inequalities. The push towards greater adoption of technology and automation will boost productivity, but could cause more job displacement, particularly for lower-skilled workers, widening the social divide. Broad inequality correlates with weaker economies, less stable politics, higher risk premiums, and more risk to long-term equity returns – all of which will impact global investors.

The pandemic has also magnified vulnerabilities and awareness of rising social inequalities.

Investment markets are currently pricing in expectations of a strong economic recovery, rendering them vulnerable to alternative scenarios given stretched valuations. Credit spreads are at historically tight levels implying low compensation for taking on default risk. Given the uncertain macro environment and stretched valuations, we expect returns from a broad range of asset classes to be low for the next five to 10 years.

At the same time, we see a broad range of bottom-up opportunities. Our investment teams are identifying and capitalising on key emerging long-term themes. In addition to actively pursuing opportunities with good risk-reward across different scenarios, our teams also seek to diversify across asset classes and geographies to make our portfolio more robust. We are planning to set up our 11th office in Sydney, Australia, in 2022, to bolster our

ground capabilities to source for more opportunities.

Long-term trends to watch: Sustainability, Technological transformation, and Geopolitics

Three long-term trends were accentuated by the pandemic and will continue to affect markets and drive GIC's investment strategy.

First, there is growing global recognition that more resilient, long-term global economic growth will depend on a shift to sustainable practices. Investors must consider sustainability issues that can affect businesses and investments in the long term. Thus climate change is a key concern for long-term investors like GIC, as it will affect the value of physical assets and companies over time. By integrating climate change considerations into our portfolio, investment strategy and processes, and actively engaging and supporting companies in their transition to greener business models, we improve our overall portfolio resilience and drive

positive long-term societal outcomes. As a long-term investor managing Singapore's reserves, sustainability is core to our mandate. We have made progress in the past year, including establishing an internal Sustainable Investment Fund to capitalise on the shifts towards a lower-carbon and more sustainable economy.

Second, COVID-19 has accelerated digitalisation and other technological disruptions that we have long observed. The pandemic has forced many activities to go virtual, boosting developments such as telemedicine, digital payments, and online entertainment. The need for greater resilience has also encouraged more technology adoption in the management of supply chains. Investors must keep pace with the myriad changes to quickly identify and mitigate risks, and seize opportunities as they arise.

Third, the ongoing geopolitical tensions reflect intense rivalry among great powers. Conflict is not inevitable, and there are many imperatives and opportunities for global cooperation, such as in addressing climate change and building greater

pandemic resilience. However, domestic political pressure and opposing strategic ambitions will create friction and divisions. These, in turn, may stymie the exchange of goods, services, people, and ideas, to the detriment of growth and returns. The wide range of possible outcomes calls for more thoughtful diversification, greater portfolio agility, and a keener eye for growth than ever before.

Reflecting on the significance of reserves and our role as a custodian

The COVID-19 crisis has clearly shown the importance of reserves as a rainy day fund. In Budget 2021, the Singapore Government rolled out the S\$11 billion COVID-19 Resilience Package – to continue its support for public health, businesses, and sectors under stress. Together with previous budgets rolled out in 2020, the draw on past reserves over the past two financial years could come up to S\$53.7 billion¹. For the current fiscal year, the annual Net Investment Returns Contribution (NIRC) – the investment returns from MAS, GIC, and Temasek,

and the single largest contributor to the Government's Budget – is an estimated S\$19.6 billion. This underscores the importance of preserving and enhancing the long-term value of the reserves to fund the country's operations. As the manager of Singapore's reserves, we continue to feel the weight of our responsibility to invest Singapore's foreign reserves prudently.

Giving back to our communities

2020 was a particularly challenging year for many, and GICians worldwide were committed to giving back to our communities through various donation drives and volunteering efforts. We established our *With Love, GIC* programme – a fund to support ground-up initiatives from employees who wished to contribute to their communities. These activities included putting together and distributing food packs, healthcare supplies and other essential items, facilitating online learning for students, and enabling our charity partners to scale up their outreach and capacity.

¹ Source: [Ministry of Finance: Budget Speech For Budget 2021](#)

We continue to champion social impact projects with like-minded partners via our flagship programmes such as *GIC Sparks & Smiles* and *The Purple Symphony*. A key highlight in the past year was the recognition for our community efforts with a national award – Champions of Good 2020 – by the National Volunteer and Philanthropy Centre in Singapore. This award recognises organizations that are exemplary in doing good and have also been engaging their partners and stakeholders on a collaborative journey.

Commemorating 40 years of investing to secure Singapore's financial future

In all that we do, we are guided by our purpose to invest well for the long-term stability of Singapore's finances. To commemorate our 40th anniversary, we launched *Gift A Tree* – an enterprise-led initiative where each employee plants a tree – as a mark of our commitment to a sustainable future. We will also be publishing our GIC History book to recount the long-term vision of our founding

In the past four decades, through the many market ups and downs, we have been anchored by our purpose and values.

leaders in setting up GIC; the many challenges that they faced, and how they overcame them by sheer will and tenacity. Finally, we will be introducing the *GIC Investing Principles* curriculum to help the Singaporean public understand our investing principles and how these relate to them.

Anchored by our purpose in the past, present, and future

In the past four decades, through the many market ups and downs, we have been anchored by our purpose and values. All GICians across our 10 global offices are united by our shared purpose of securing Singapore's financial future. Going forward, we remain guided by the vision of our founding leaders and will play our part by investing well for present and future generations of Singaporeans.



Lim Chow Kiat
Chief Executive Officer, GIC



Welcome

[Mr Ong Chong Tee](#) was appointed to our Risk Committee on 15 April 2021.

He is Deputy Chairman of Accounting and Corporate Regulatory Authority (ACRA).



Thank you

It has been our privilege to have benefitted from the experience and expertise of [Mr Léon Bressler](#), who stepped down from the GIC International Advisory Board and the Investment Board in September 2020.



We would also like to express our appreciation to [Mr Suppiah Dhanabalan](#), who stepped down in July 2020 from the GIC Board. We are grateful for his commitment and contributions, having guided GIC's growth in the formative years, and more recently in his second stint on the GIC Board.

02

Investment Report

GIC's mandate is to achieve good long-term returns above global inflation, and preserve and enhance the international purchasing power of the reserves placed under our management.

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2.1 Overview: Long-term Investment Performance

GIC's mandate is to preserve and enhance the international purchasing power of the reserves under our management over the long term. The primary metric for evaluating GIC's investment performance is the annualised rolling 20-year real rate of return, which recorded 4.3% this year. Similar to recent years, large asset price moves at the start of the 20-year window affected the rolling 20-year return. The rolling off of a year of poor returns in FY2000/01 arising from the dot-com crash coupled with a

strong rebound in risk assets over the past year contributed meaningfully to this year's 20-year return. See the next page for more detail on the mechanics behind the calculation of the 20-year rolling return.

As set out in Figure 1, GIC achieved a real return of 4.3% above global inflation per year for the 20-year period to 31 March 2021.

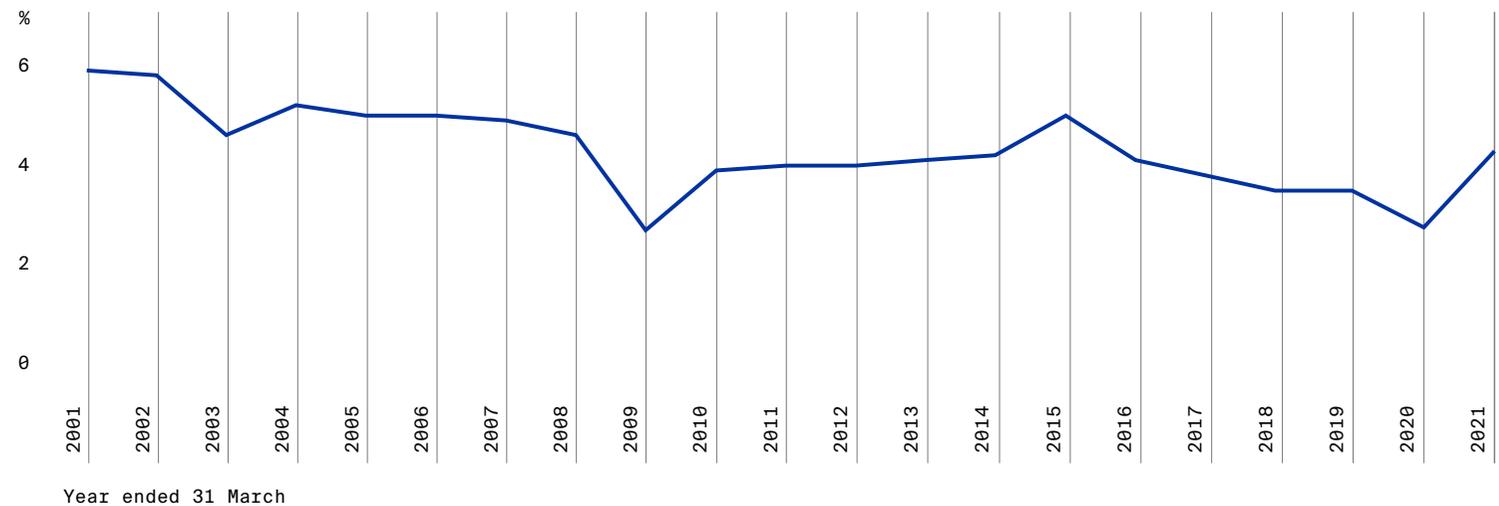


Figure 1: Annualised rolling 20-year real rate of return of the GIC Portfolio since 2001

Understanding the Mechanics of the Annualised 20-Year Rolling Return

GIC reports its performance as an annualised 20-year real return, which is the average time-weighted portfolio return over that period. A time-weighted return¹ essentially measures the fund manager's ability to generate returns, as it removes the impact of cashflows into or out of the portfolio and directly attributes the performance to the investment decisions made by the portfolio manager.

The return figure is a rolling return, which means that last year's 20-year return spans the period 2001 to 2020, this year's 20-year return spans 2002 to 2021, and next year's return will span 2003 to 2022. For each new year added, the earliest year is dropped out of the measurement window. The change in this rolling return

figure is therefore determined by the returns from the earliest year that drops out and the latest year that is added.

Even though the rolling 20-year real rate of return is intended to measure returns over the long term, it can still reflect a significant cyclical element. This is particularly evident when the cycles are very pronounced at the start or end of the 20-year window. For example, a 20-year period from 1999 to 2018 would include the sharp rise in valuations resulting from the dot-com boom in 1999 and 2000 and the subsequent bust in 2001, whilst a 20-year period from 2001 to 2020 would be much more negatively affected by the large decline in asset prices from the dot-com bust in 2001.



1 A time-weighted return measures the total rate of return over a specific time period by compounding the returns across multiple sub-periods.

Figure 2: Illustration of a portfolio's rolling 20-year return

Over the long term, GIC's performance is largely driven by the dynamics of the global economy and our Policy Portfolio, which determines our asset allocation strategy. Skill-based strategies undertaken by our active strategy investment teams seek to add returns above market benchmarks. In total, we strive to achieve good and sustainable long-term returns for the GIC Portfolio across a broad range of economic scenarios, within the risk parameters set by the Client. This is described in greater detail in the chapter 'Managing the Portfolio'.

In 2020, following the lockdowns over broad swathes of the global economy aimed at curtailing the spread of COVID-19, the global economy shrank by 3.3%. This was far worse than the contraction of 0.1% experienced during the Global Financial Crisis². In contrast, equity markets, which fell sharply in March 2020, rebounded robustly in the subsequent year in response to the unprecedented speed and size of global policy intervention, with returns of ~55.3%³. The pace of recovery varied across regions, countries and sectors, depending on their valuation levels following the market drawdown in 1Q 2020, their level of success in controlling COVID-19, the size and efficacy of fiscal and monetary response, and the pandemic's impact on specific sectors. The markets priced in expectations of a strong economic recovery, given the substantial US fiscal stimulus plan and global rollout of vaccines, which resulted in bond yields rising over 1Q 2021.

Our diversified portfolio and cautious investment stance helped to cushion GIC's performance from the market correction in 1Q

Our diversified portfolio approach and cautious investment stance helped to cushion GIC's performance from the market correction in 1Q 2020.

2020. This posture has continued into FY2020/21 given elevated asset valuations and uncertainty arising from potential inflationary pressures. We have kept our emphasis on being prepared for multiple scenarios, maintained price discipline, added optionality, and expanded our bottom-up investment activities.

²
Source: IMF

³
Source: MSCI ACWI (All Country World Index), gross returns in USD

2.2

The GIC Portfolio

As set out in Table 1, over the year to end March 2021, the share of emerging market equities rose, while that of nominal bonds and cash fell, in line with the broader market trends described earlier. The share of private equity and real estate increased due to robust deal activity and strong asset performance over FY2020/21.

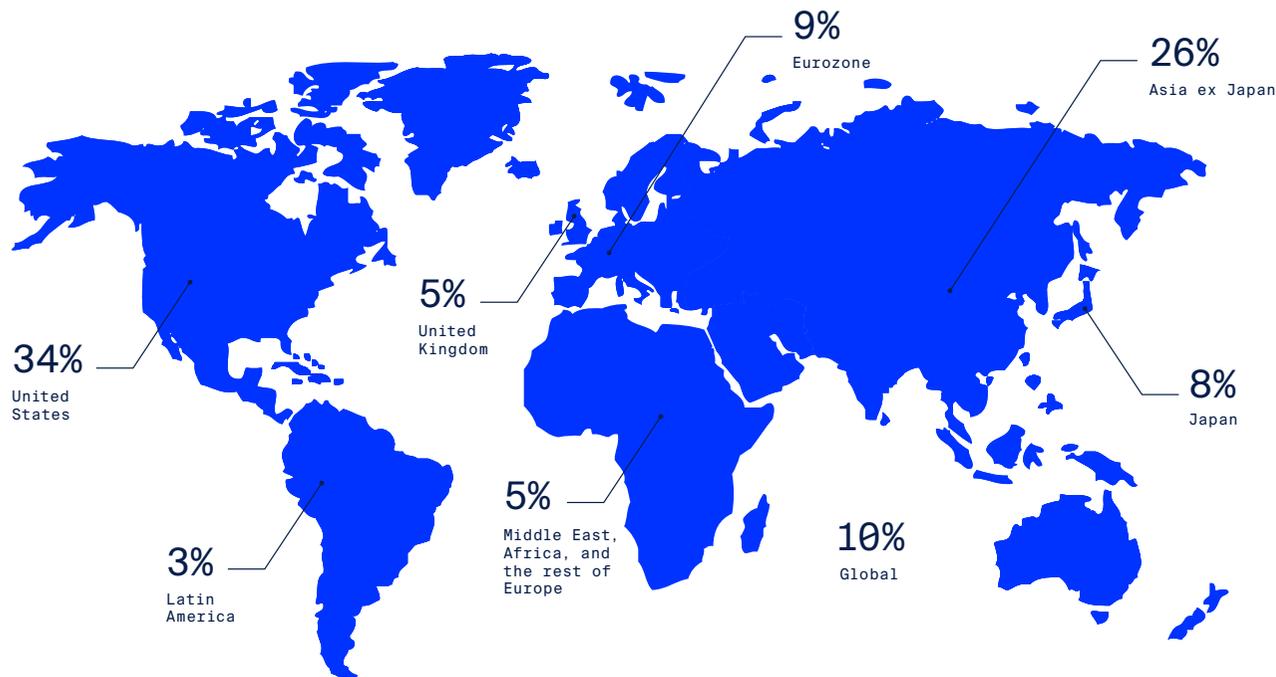
Asset mix	31 March 2021 (%)	31 March 2020 (%)
Developed Market Equities	15	15
Emerging Market Equities	17	15
Nominal Bonds and Cash	39	44
Inflation-linked Bonds	6	6
Real Estate	8	7
Private Equity	15	13
Total	100	100

Table 1: Asset mix of the GIC Portfolio

The geographical distribution⁴ of the GIC Portfolio as at 31 March 2021 is set out in Figure 3 below. This mainly reflects the global market composition of our asset allocation strategy and bottom-

up opportunities sourced by our investment teams worldwide. While we do not allocate our assets by geography, we monitor our exposures across them.

⁴ Geographic mix was refined to reduce potential distortions arising from currency hedges.



Geographic mix ⁴	
	March 2020 (%)
United States	36
Latin America	2
United Kingdom	5
Eurozone	10
Middle East, Africa, and the rest of Europe	5
Japan	14
Asia ex Japan	20
Global	8

Figure 3: Geographic mix of the GIC Portfolio as at 31 March 2021

2.3 Intermediate Markers of Investment Performance

While the primary metric for tracking GIC's investment performance is the 20-year returns above global inflation, we also monitor its ongoing intermediate investment performance. Table 2 shows the nominal (i.e. not adjusted for inflation) USD returns over 10 years and five years and the corresponding portfolio volatility. We include 20-year nominal numbers for completeness here⁵.

Over the 20-, 10- and 5-year periods, the GIC Portfolio returned 6.8%, 6.2%, and

8.8% in nominal USD terms respectively, in line with the broader asset markets. The 5-year return was more pronounced due to the greater weight of the strong market recovery in FY2020/21.

We also monitor the performance of a Reference Portfolio which comprises 65% global equities and 35% global bonds. The Reference Portfolio is not a performance benchmark for the GIC Portfolio, but represents the risk the Client is prepared for GIC to take in generating

GIC Portfolio		
Time Period	Nominal Return ⁶	Volatility ⁷
20-Year	6.8%	8.8%
10-Year	6.2%	7.5%
5-Year	8.8%	6.6%

Table 2: Nominal annualised return and volatility of the GIC Portfolio (in USD, for periods ending 31 March 2021)

⁵ GIC's primary performance measurement metric is the rolling 20-year real rate of return, which we described earlier in this chapter.

⁶ The GIC Portfolio rates of return are computed on a time-weighted basis, net of costs and fees incurred in the management of the portfolio.

⁷ Volatility is computed using the standard deviation of the monthly returns of the GIC Portfolio over the specified time horizon.

⁸ The Reference Portfolio was adopted from 1 April 2013, and reflects the risk that the Government is prepared for GIC to take in its long-term investment strategies. It comprises 65% global equities and 35% global bonds. For more details, please refer to the chapter on 'Managing the Portfolio'.

good long-term investment returns. On occasions when GIC's risk preference differs from the risk profile of the reference portfolio, such as when market exuberance leads to heightened valuations, GIC may choose to lower its risk exposure. Conversely, GIC may increase its risk exposure when the opportunity arises. This is part of a disciplined, professional approach to long-term value investing. For example, given weakening fundamentals and rising market uncertainty, GIC reduced risk-taking in markets that appeared overpriced before 2020.

Table 3 shows the **nominal USD returns** over 20 years, 10 years and 5 years and the corresponding volatility for the Reference Portfolio⁹. Over all three time periods, and particularly over the

last five years, the GIC Portfolio had lower volatility than the Reference Portfolio due to its diversified asset composition and pre-emptive measures to lower portfolio risk in recent years. Over a 20-year period, the GIC portfolio saw a similar return but with much lower risk than the Reference Portfolio. This reflected the value of our long-term investment approach and mandate, which is to first protect and then grow the reserves under our management.

Reference Portfolio		
Time Period	Nominal Return ¹⁰	Volatility ¹¹
20-Year	6.8%	10.9%
10-Year	7.2%	9.8%
5-Year	9.9%	10.0%

Table 3: Nominal annualised return and volatility of the Reference Portfolio (in USD, for periods ending 31 March 2021)

9
The figures exclude adjustments for costs that would be incurred when investing.

10
The Reference Portfolio rates of return are provided on a gross basis, i.e. without adjustment for costs and fees.

11
Volatility is computed using the standard deviation of the monthly returns of the Reference Portfolio over the specified time horizon.

GIC's Partnership Approach

GIC not only has an internal operation to invest directly, but also works with external partners to enhance our capabilities. These partnerships have expanded our investment universe and network, widened our perspectives, and deepened our business and operating expertise.

Our approach started with allocating funds to external managers, but has now extended to other asset owners, investee companies, past and present senior leaders of prominent global companies, family offices and leading entrepreneurs.

As outlined, having a long-term perspective on our investments and relationships and local presence in both the developed and emerging markets (see Figure 4 overleaf) have been helpful to our partnership effort:

These partnerships have expanded our investment universe and network, widened our perspectives, and deepened our business and operating expertise.

1. Long-term and flexible capital

Our long investment horizon gives certainty to our partners to commit to ventures which may take time and endurance of volatility to see results. In addition, our flexibility in deploying capital across the private, semi-private and public markets supports different capital needs as our partners go through different phases of growth. Not only can we invest from the start-up phase through multiple funding rounds, but also follow through to post-IPO and subsequent placements; or even in reverse via public to private transactions.

2. Capacity to execute co-investments

Our long history of co-investing with select external managers and our direct investing effort have enabled

us to be responsive to co-investment opportunities. We strive to support our partners with speed, clarity, and fair terms.

3. Global connector, particularly to Asia

Our experience and network in the Asian region have allowed us to be a useful partner to the US and European-based investors and investee companies for their Asian ventures. This remains a key strength given Asia's favourable economic and business growth potential.

4. Multi-faceted investment partnership

As an asset owner investing in multiple asset classes, our linkages with major partners tend to be multi-faceted. With our major direct investees, we may be simultaneously their shareholder, bondholder, and landlord. With our most trusted fund managers, beyond investing in their multiple funds, we are regularly co-investors and counterparts in large transactions.

5. Constructive engagement and sharing of network

We engage our partners on important structural themes like digital disruption and sustainability as we believe these trends will impact the longer-term prospects of assets and companies. In addition, we actively share our global relationships through bilateral introductions and several exclusive networking initiatives for our partners. Our annual flagship event, GIC Insights, brings together a select group of top business leaders to connect with GIC and each other and discuss relevant long-term issues. In addition, our Silicon Valley-based Bridge Forum, a collaboration with the Singapore Economic Development Board (EDB), facilitates not only the exchange of ideas with leading technology companies but also the one-on-one meetings curated between next-generation start-ups and global corporations. Finally, our GIC Investment Advisors programme (GIA), comprising a select group of prominent senior leaders and CEOs who are familiar with GIC and our investing

approach from their past careers, helps our investee companies navigate business challenges through board participation and other ways.

By offering long-term capital, internal and external expertise and global connections, we strive to add

meaningful value to our partnerships and investments. Amidst the challenging investment environment, we see being a partner of choice as critical for our mission.

**Global scale, presence, and network
Investing globally for 40 years**



Figure 4: GIC's global presence via our offices around the world

Transitioning to a Post-Pandemic World

Cautious on Macro

The COVID-19 pandemic in 2020 has been one of the toughest economic times in modern history. Not only did we see the largest global economic contraction since World War II, but also the highest synchronisation of national recessions in

over 150 years¹². In contrast, global equity markets recovered sharply from its low in March 2020, rising by 55% over the year to reach new highs by end March 2021 (see Figure 5), as the unprecedented speed and scale of policy intervention¹³ globally helped to support jobs, incomes and the capital markets.

¹² Source: [World Bank](#)

¹³ Fiscal stimulus amounted to US\$12.7 trillion in 2020 (14% of 2019 world nominal GDP). Since March 2020, 92 central banks have cut policy rates a total of 241 times, with additional monetary and prudential measures to boost liquidity and ensure financial stability, such as direct asset purchases.

Sources: [United Nations February 2021 Report](#); [World nominal US\\$ GDP in 2019 was sourced from World Bank](#).



Figure 5: Global Equity Market Total Returns Index in USD
Sources: MSCI ACWI Gross USD Returns Index; Bloomberg

Major central banks in developed markets have declared their intention to keep interest rates low as business and employment conditions will take time to normalise, notably in the markets and sectors hardest hit by the pandemic. Globally, the accommodative policy setting, COVID-19 vaccination rollout

and large fiscal stimulus, particularly in the US, are expected to boost economic growth significantly in the near term. Many emerging markets will also benefit from a recovery in global activity, though the cyclical and structural growth story remains highly differentiated.

However, as we extend the horizon of the outlook, the range of outcomes widens substantially. The strength of the global demand upturn depends on the uncertain trajectory of the pandemic. While policy stimulus in major economies has helped cushion the impact of lockdowns on household income, job losses, and



Figure 6: Global government debt to GDP

Sources: IMF Historical Debt Database, IMF WEO; Maddison Database Project; GIC Calculations

corporate insolvencies, exiting from such extraordinary policies could be challenging. A strong recovery amidst abundant liquidity may boost inflation, which could limit policy accommodation. Should bond yields rise and economic growth lag, governments in economies

that rely on external funding or lack strong institutional credibility may need to hike taxes or cut spending to cover the budget shortfalls, constraining their policy room. This scenario is also particularly concerning given the sharp rise in global government debt¹⁴, which reached 87% of

global GDP by end 2020 (see Figure 6), the highest level since World War II. Coupled with elevated equity valuations, notably in the US (see Figure 7), this high degree of uncertainty has made us macro-cautious.

14
Sources:
IMF;
[OECD Sovereign
Borrowing Outlook in
OECD countries](#)
(Feb 2021)



Figure 7: Market capitalisation to GDP
Sources: World Federation of Exchanges; Bloomberg; IMF; GIC Calculations.

Positive on Micro

As we transition to a post-pandemic world, we believe that over the longer term, three major trends will drive markets and open up new areas of growth. These are best captured by our bottom-up portfolio managers and specialists across our offices globally. While we remain macro-cautious, we are micro-positive on these opportunities.

First is the accelerating technological transformation¹⁵, including new scientific and engineering solutions to be commercialised. Already intensifying digitalisation has enabled companies to scale quickly and spawn new businesses, as discussed in our past reports. New technology will likely disrupt existing business models in many industries including finance, healthcare, automotive, energy and infrastructure. Investors have much to grapple with.

Second, sustainability will continue to be a key priority for GIC. We expect consumer preferences and government policies to continue emphasising the importance

of climate-friendly practices. As a long-term investor, we seek to invest into this trend whilst protecting our portfolio assets from being negatively affected; integrate sustainability into our portfolio and investment processes holistically, taking into account the diversity of the industries and markets we operate in; and engage and support our investees and partners in their transition towards sustainability.

Third is the growing influence of geopolitics on capital markets. While geopolitics has always been an important factor for investors to consider in their assessment of opportunities, the increasing rivalry between major powers has elevated its importance in recent years. Indeed, on one particular measure, global political risk rose to a multi-year high in 2020¹⁶. The range of issues impacted by the strategic competition has broadened beyond trade, and now include technology, data, and market access. Investors will need to navigate these dynamics by diversifying their portfolios while responding nimbly to changing situations.

The COVID-19 crisis has led to fundamental changes in the macro and micro environments. We expect to see continued uncertainty as new norms evolve. We will stay anchored in our mandate, values and investing principles, by emphasising diversification, long-term approach, building optionality, pursuing bottom-up opportunities, and adding value to our partnerships and investments.

15
Based on a [McKinsey Global Survey of Executives done in July 2020](#), companies accelerated the digitisation of their customer and supply-chain interactions and internal operations by three to four years, and the share of digital or digitally enabled products in their portfolios by seven years.

16
Source: [Ernst and Young GeoStrategy Outlook 2021](#)

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Managing the Portfolio

GIC's investment strategy is to build a portfolio of asset classes and strategies that generates good long-term real returns, while adhering to the Client's (the Singapore Government) risk parameters.

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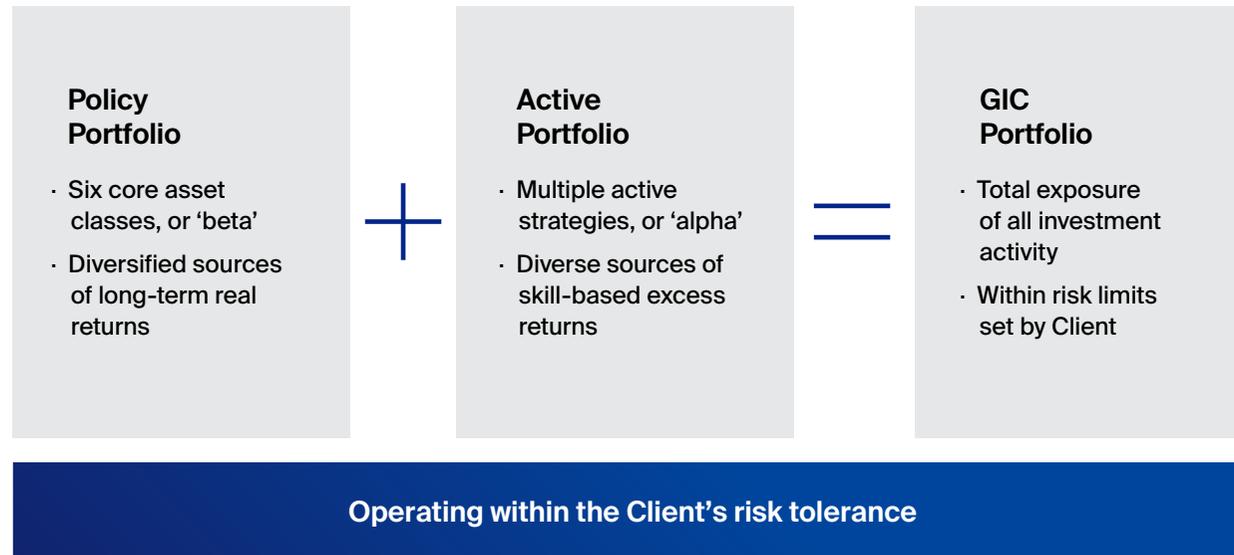
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3.1 Overview: Our Portfolio and How We Manage It

Our mission is to preserve and enhance the international purchasing power of the reserves placed under our management by delivering good long-term returns above global inflation.

In 2013, we established an investment framework to help guide us in an increasingly complex and challenging investment

environment. This framework maximises GIC's strengths, including our long investment horizon, significant capital pool, global reach, best-in-class capabilities, and robust governance structure.



GIC's investment framework

3.2 Building the Portfolio

The Client owns the funds that GIC manages and decides on the overall risk that the GIC Portfolio can take in pursuit of good long-term returns.

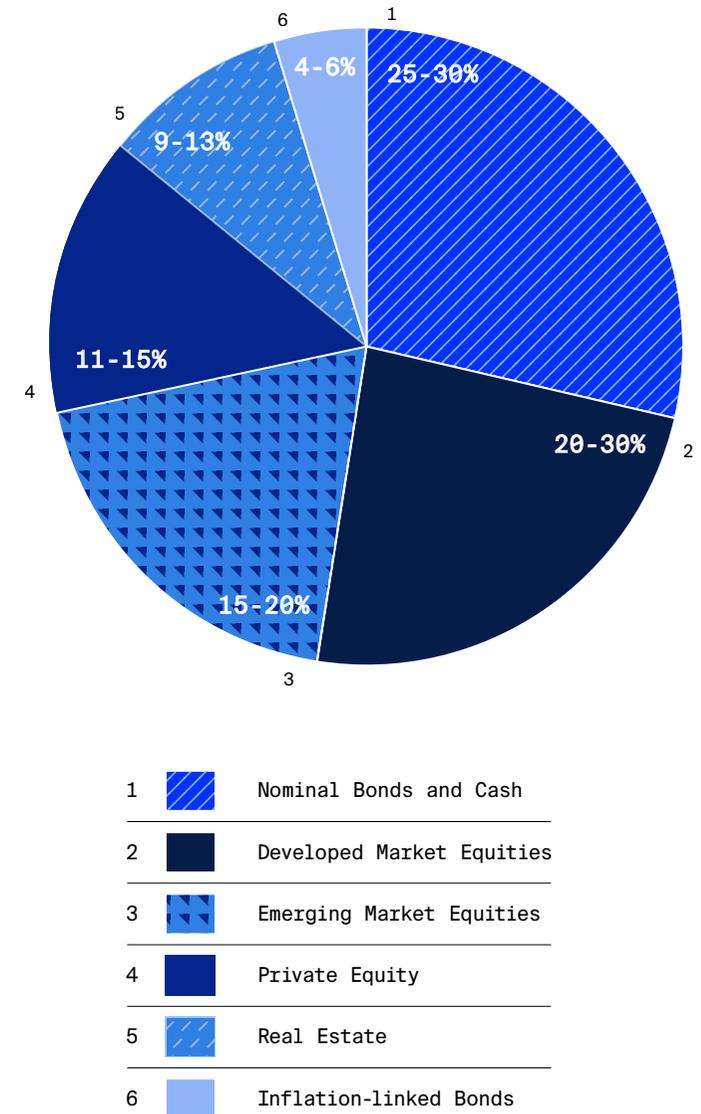
GIC's investment process begins with the Policy Portfolio, which defines the key asset classes that drive the GIC Portfolio's long-term returns. The Active Portfolio aims to add value to the Policy Portfolio through skill-based, active strategies, while preserving the exposure to systematic market risks. Together, the *Policy Portfolio* and *Active Portfolio* form the *GIC Portfolio*.

Policy Portfolio: Key investment driver

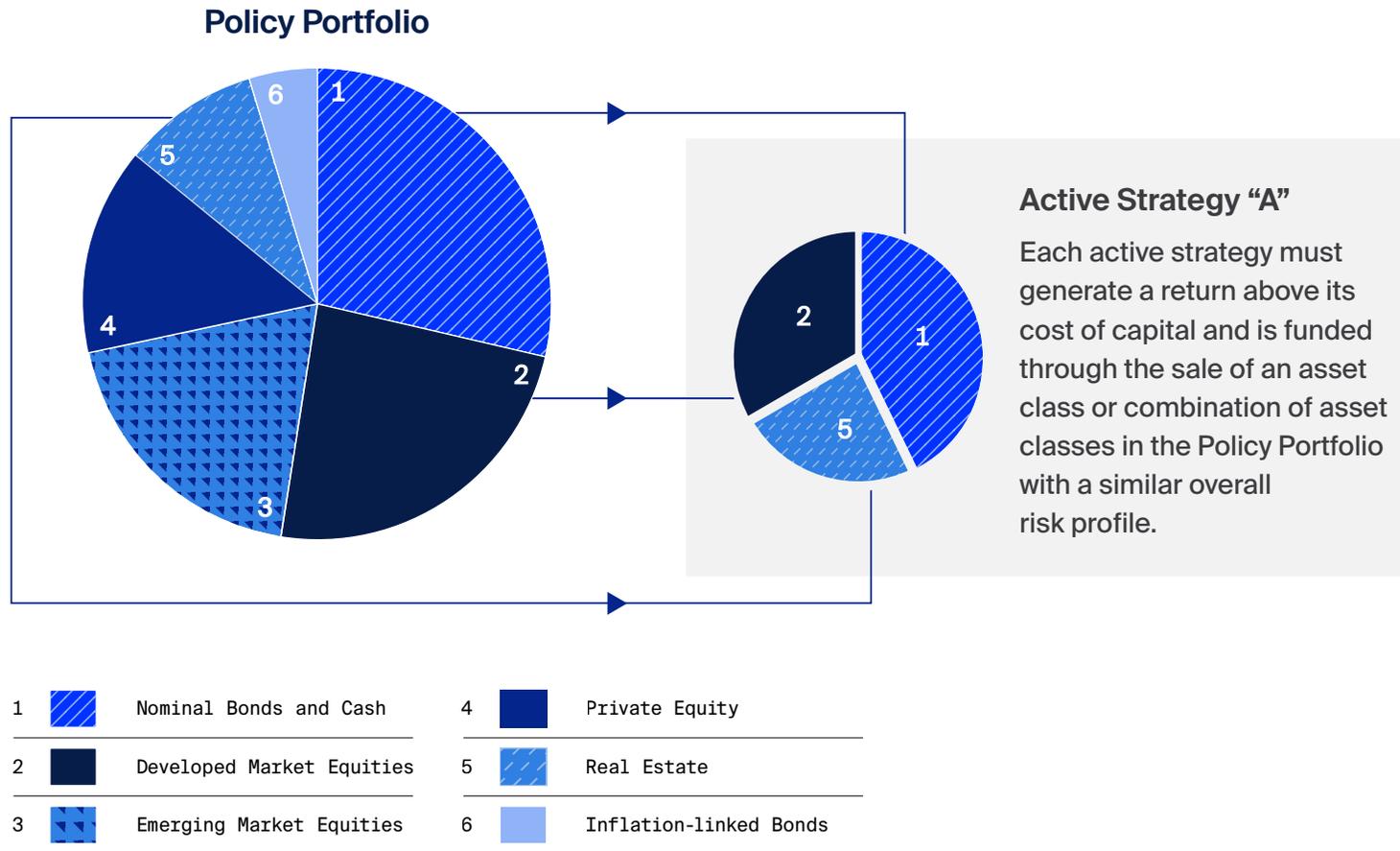
The Policy Portfolio represents GIC's asset allocation strategy over the long term. It accounts for the bulk of the risk and return potential of the GIC Portfolio and seeks to balance the way different asset classes respond to different economic environments.

The Policy Portfolio comprises six asset classes: Developed Market Equities, Emerging Market Equities, Nominal Bonds and Cash, Inflation-linked Bonds, Private Equity, and Real Estate. Diversification enables the Policy Portfolio to generate good risk-adjusted returns over a 20-year period.

The Policy Portfolio has a long investment horizon and is generally maintained through market cycles. GIC's approach to rebalancing ensures we keep to the allocated ranges of asset classes in the Policy Portfolio. Rebalancing involves systematically buying



Asset class distribution in the Policy Portfolio



assets that have decreased in price and selling assets that have increased in price, to keep the asset composition in our portfolio steady over time. When an asset class such as equities does particularly well, the rebalancing rule compels us to sell. Conversely, when equities do poorly, such as after the bursting of an economic bubble, rebalancing calls for us to buy. There will be rare occasions when GIC adjusts our Policy Portfolio's asset allocation temporarily, in response to medium-term dislocations in the global investment environment in particular assets or in countries.

Active Portfolio: Skill-based strategies

The Active Portfolio comprises a group of investment strategies that adds value to the Policy Portfolio while broadly maintaining the same level of systematic risk.

Construction of an Active Strategy from the Policy Portfolio

The illustrative active strategy "A" has a similar overall risk profile as the weighted combination of three asset classes – Developed Market Equities, Nominal Bonds and Cash, and Real Estate. Strategy "A" is therefore expected to generate a return above that of the combination.

'Alpha' is the additional return achieved by active strategies over and above passive buy-and-hold market returns (or 'Beta'). At GIC, active alpha activities are separated

from beta activities to manage different return and risk drivers clearly. GIC's alpha activities aim to earn returns from our teams' skills and competitive advantages.

Each active strategy is funded by the sale of a Policy Portfolio asset class or combination of asset classes with a similar overall risk profile. This funding is the cost of capital for the active strategy, over which the strategy is required to generate additional returns. For example, active strategies designed to outperform public equities are funded from passive public equity holdings in the Policy Portfolio. This way, passive investments in the Policy Portfolio are replaced by an active strategy with the potential for greater returns without increasing the systematic risk of the portfolio.

The GIC Board sets an active risk budget that the GIC Management can use for its alpha strategies. These strategies are stress-tested so we can understand and quantify their performance under various extreme but plausible market conditions, including macroeconomic and geopolitical events. The active risk budget

establishes the total level of risk for the Active Portfolio. For example, marketable alternatives or hedge funds typically invest in liquid markets and vary their market exposures via a combination of long and short positions, depending on market conditions. The risk and return profile of this strategy is similar to a combination of Developed Market Equities as well as Nominal Bonds and Cash, and will be funded by these asset classes.

GIC Portfolio

Through the Policy Portfolio and Active Portfolio, the GIC Portfolio is diversified across asset classes, with each carrying a different risk and return profile. Growth assets such as equities generate higher returns but are riskier. Defensive assets such as sovereign bonds offer lower returns for lower risk, and protect the portfolio in market downturns.

The GIC Portfolio is constructed to be resilient across a broad range of possible market and economic conditions, while generating good returns above global inflation in the long term.

The GIC Board sets an active risk budget that the GIC Management can use for its alpha strategies.

Principles of Portfolio Construction

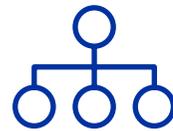
In GIC, portfolios are constructed to give them the best chances of achieving their intended purposes over appropriate horizons and within appropriate risk limits. For the GIC portfolio as a whole, this means achieving good long-term returns over 20 years while limiting potential downside over the shorter term.

In GIC, portfolio construction is founded on the following principles that define the fundamental basis upon which we allocate capital:



Playing to one's strengths

We allocate to asset classes and active strategies within the GIC portfolio according to our investment capabilities. This means putting more capital in areas where we think GIC has better access to market opportunities, better understanding and ability to structure and manage the investments, and greater confidence that our investment theses will play out.



Portfolio diversification

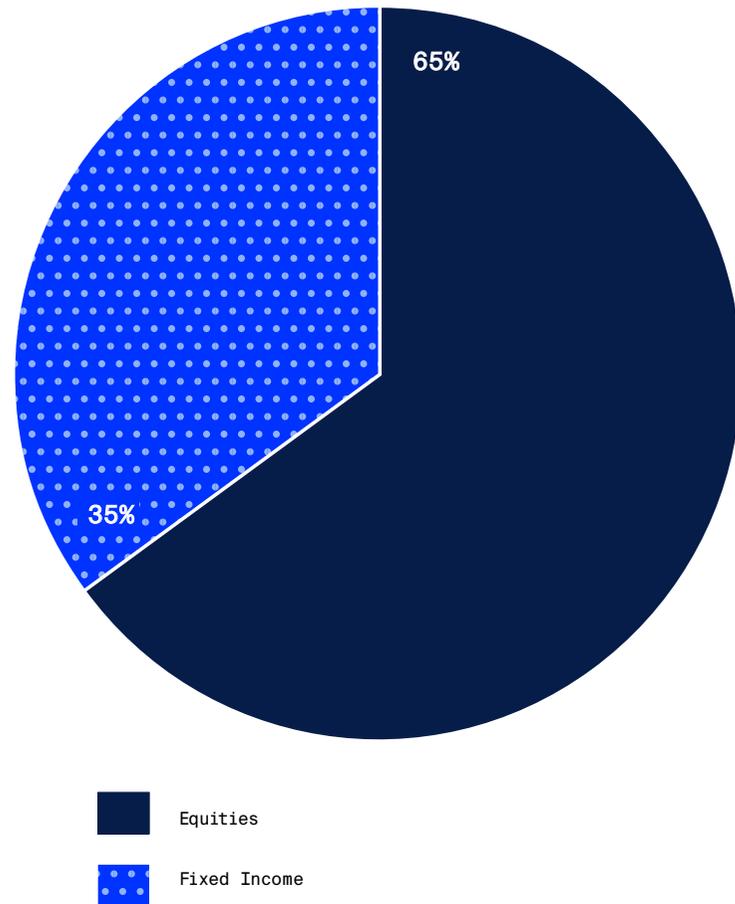
This starts with a clear understanding of the real underlying risks of each investment in various scenarios. Then we put together different combinations of investments in various amounts, and stress-test their overall risk. Finally, we choose the portfolio combination that abides by our risk limits even in bad scenarios, and that also gives us the best prospective return. Such a portfolio will invariably be diversified to a large extent, taking advantage of the fact that risks are not perfectly correlated and therefore they work best in combination rather than in concentration.



Disciplined and judicious portfolio management

It is important to ensure that ongoing management of investment portfolios is disciplined and based on good analysis and judgment. The GIC portfolio is rebalanced regularly to preserve the intended asset class mix. Actively managed portfolios are reviewed regularly in light of changing market conditions and developments in our active management capabilities.

Reference Portfolio



Distribution of asset classes in the Reference Portfolio which characterises the Client's risk preference

Operating within the Client's risk tolerance

GIC's client is the Government, who owns the funds that GIC manages, and has characterised its risk preference using a portfolio of 65% global equities and 35% global bonds ("65-35"). We refer to this as the *Reference Portfolio*. The Reference Portfolio is not a benchmark, but an expression of the overall risk that the client is prepared for the GIC Portfolio to take.

GIC's investment strategy is to build a portfolio comprising asset classes that can generate good long-term returns above global inflation while adhering to our Client's risk parameters. There will be differences in exposures and level of risk between the GIC Portfolio and the Reference Portfolio. GIC allocates to a better diversified range of assets beyond just equities and bonds. We may also adjust our level of risk in times of market exuberance or when significant opportunities arise. This is all part of a disciplined, professional approach to long-term investing.

Governance of the investment framework

The investment framework encapsulates the various long-term risk and return drivers for GIC. It also reflects the responsibilities of the GIC Board and Management. The Reference Portfolio characterises the Client's risk appetite, while the GIC Board approves the Policy Portfolio that is designed to deliver good, long-term returns. GIC Management is empowered to add value within the risk limits stipulated by the GIC Board through the Active Portfolio which comprises active, skill-based strategies.

The Investment Board provides an independent layer of oversight on GIC's active investment management and process. Investment Board members come from the private sector and are not necessarily GIC Board Directors.

Together, they offer extensive experience in various types of investments across geographies. The Investment Board ensures that GIC invests in a sound and disciplined manner. It also ensures that GIC takes into account potential reputational risks arising from investment activities.

The table below summarises the governance of the investment framework.

Governance of the investment framework	
GIC Board	<ul style="list-style-type: none"> Approves the Policy Portfolio and active risk budget
Investment Strategies Committee	<ul style="list-style-type: none"> Reviews GIC Management's recommendations on the Policy Portfolio and active risk budget
Investment Board	<ul style="list-style-type: none"> Oversees GIC's active strategies and large investments Ensures GIC does not incur undue reputational risk in pursuit of returns
Risk Committee	<ul style="list-style-type: none"> Advises the GIC Board on risk matters Sets the overall direction of risk management policies and practices in GIC Reviews significant risk issues arising from GIC's operations and investments
GIC Management	<ul style="list-style-type: none"> Designs and recommends the Policy Portfolio Adds value by constructing and managing the Active Portfolio within the risk tolerance in GIC's mandate set by the Client
Investment Teams	<ul style="list-style-type: none"> Implement the Policy Portfolio and active strategies

3.3 Investment Process

As a disciplined, long-term value investor, we take a systematic, patient, and diversified approach in seeking investment opportunities, differentiating between an asset's current price and its intrinsic value.

GIC's investing approach is underpinned by our discipline to distinguish price from value. In the short term, an asset's price is driven largely by market sentiment, while its value lies in its fundamental worth.

Anchored by this perspective, we appraise value diligently and adhere to price discipline, even when it sometimes means going against prevailing market sentiment.

To determine where true fundamental value lies, we use both top-down and bottom-up analyses. We identify and assess drivers of long-term value as a core part of our investment process. In the top-down analysis, we review a country's macroeconomics, politics, currency, and corporate governance culture, as well as sector fundamentals such as industry structure, drivers, and trends. This top-down approach is similar for both public and private markets. Our bottom-up analysis is more varied and depends on

GIC's investing approach is underpinned by our discipline to distinguish price from value. An asset's price is driven largely by market sentiment, while its value lies in its fundamental worth.

the assets we invest in. For example, in public equities, we focus on the stock's fundamentals, such as the company's business model and its competitive strengths, balance sheet, profitability, and management. In real estate, our teams conduct bottom-up analyses based on property-specific factors such as location, building quality, tenant mix, lease expiry profiles, and income stream outlook. Our value investing mindset is the common underlying principle.

In all our analyses, looking for value is key. To deliver good long-term returns, we consider all opportunities and risks that could drive investment value in the long run. These considerations, which include track record, ability, and integrity of management teams and business practices, are integral to our investment process. We expect our investee

companies to comply with applicable laws and regulations and apply appropriate corporate governance and stakeholder engagement practices.

We also actively advocate long-term thinking in the wider community. We participate in initiatives such as Focusing Capital on the Long Term Global (FCLTGlobal), the International Forum of Sovereign Wealth Funds (IFSWF), and the Task Force on Climate-related Financial Disclosures (TCFD).

3.4 Technology- Driven Investing

As a long-term investor with global networks, GIC is well-placed to invest across stages of the life cycle of technology companies. Our long-term orientation and flexibility in deploying capital across the private, semi-private, and public spaces enable us to grow alongside them, and is further enhanced by our multi-asset experience and global footprint. We capitalise on our broad exposure to curate purposeful connections between our partners for meaningful value creation. As technology continues to progress and reshape industries, spawning new businesses, we refine our approach to finding good companies, technologies and business models, and apply these to our investment and organizational strategies to give us a competitive edge in today's challenging environment.

Technology in our Portfolio

GIC has been investing in the technology space since our founding. We started with technology companies listed on the major stock markets, and then expanded into venture capital funds when we opened

our San Francisco office in 1986. We went into private venture capital earlier than most other institutional investors. Our technology investments also cover all stages of the financing lifecycle of a company: seed (start-up), venture capital (growth), IPO/public equity (maturity and exit). This has enabled GIC to build up strong partnerships with leading technology investment managers and founders over the years.

We are organised to cover both strategic positioning and ground level investing. Our Technology Business Group comprises specialists from different asset classes and regions. It monitors and assesses industry trends, and recommends GIC's overall technology portfolio size and composition, and partnership strategy. Our Technology Investment Group handles most of our early stage investments, through venture capital funds, co-investments, and direct investments. We also have sector specialists for public and private market investments.

Given the uncertain and rapid nature of technological disruption, we manage

investment risk by diversifying, maintaining a robust investment process, adhering to strict pricing discipline, understanding the risk-reward calculus, and sizing the investment.

We leverage our core strengths to invest in technology:

Core strengths to investing in technology	
Long-term Orientation	<ul style="list-style-type: none"> • Apply a long-term, fundamentals-based approach • Stay invested for the long term, including post-IPO for newer companies
Broad Investment Mandate	<ul style="list-style-type: none"> • Invest directly and through external fund managers in start-ups, growth companies, pre- and post-listed companies • Flexibility in capital structure, investment size, sub-sector, geography and duration of our investments
Global Presence	<ul style="list-style-type: none"> • Local presence in innovation hubs such as Silicon Valley and Beijing, complemented by our global presence through eight other offices • Able to spot leads and lags across regions, and capture unique opportunities
Collaborative & Committed Partner	<ul style="list-style-type: none"> • Seek to be a lifetime partner and build multiple touch points with our investee companies • Share our insights and relationships with our investee companies and external fund managers • Through our Bridge Forum platform, we add meaningful value by curating connections between innovative companies and our global network of corporate leaders for potential business opportunities

Technology in GIC

Technology has always had a place in GIC's business. In recent years, the acceleration in technological progress and adoption has made technology an increasingly disruptive force, transforming traditional industries and spawning new businesses. We have expanded our investing and organizational efforts in this area, as well as evolved the way we invest and adapt to digital disruption significantly. For more information on how GIC approaches and invests in technology, please refer to our [feature article](#) in our FY2017/18 Report.

New technology is also being applied more intensively in the investment management business. At GIC, we have stepped up our operational capabilities to leverage technology more effectively, to harness data, deepen insights, and sharpen our competitive edge. We invest significantly in new systems, software and infrastructure to improve decision making and efficiencies across the entire asset management process.

3.5 Investment Implementation

At GIC, long-term portfolio construction and asset allocation are undertaken by Economics & Investment Strategy, while our investment teams find attractive bottom-up investment opportunities. Our core investment groups are Public Equities, Fixed Income, Private Equity, Real Estate, and Infrastructure. In addition, our Integrated Strategies Group evaluates and invests across the public and private asset markets. Our External Fund Managers supplement the expertise of our core investment groups, while the Portfolio Execution Group and Investment Services further support the implementation of the investment decisions made.

We are open to investing in all countries outside of Singapore, but do not invest in countries that are subject to United Nations Security Council sanctions. We monitor our investee companies and exercise ownership rights, with the intent of preserving and enhancing long-term investment value and protecting the financial interests of our Client.

Teams involved in GIC's investment implementation process

Asset Allocation	
<ul style="list-style-type: none"> Economics & Investment Strategy 	
<p>Constructs long-term portfolio policy, undertakes medium-term asset allocation, as well as innovates alternative investment models</p>	
Public Markets	Private Markets
<ul style="list-style-type: none"> Public Equities Fixed Income Portfolio Execution External Fund Managers 	<ul style="list-style-type: none"> Private Equity Infrastructure Real Estate External Fund Managers
<p>Invests across developed and emerging markets in equities and fixed income, constructing a diversified portfolio to produce sustainable, risk-adjusted performance</p>	<p>Invests in opportunities that have the potential to generate high long-term real returns and the ability to diversify our portfolio</p>
Cross-Asset	
<ul style="list-style-type: none"> Integrated Strategies 	
<p>Invests across the public and private asset markets and in less conventional investment opportunities, develops thematic investment strategies, and actively expands the GIC network of relationships beyond traditional domains</p>	
Investment Services	
<p>Support the public and private market investment activities</p>	

We manage a diversified portfolio to produce good risk-adjusted performance.

Economics & Investment Strategy

Economics & Investment Strategy articulates GIC's strategic outlook, determines asset exposures and benchmarks, analyses, and implements new return streams and investment models, and optimises the risk-reward of the GIC Portfolio. The department is responsible for GIC's long-term Policy Portfolio, medium-term asset allocation, as well as capital allocation to internal active strategies.

Investment Groups in Public and Private Markets

GIC invests in both the public and private markets. In public markets, we invest in public equities in both developed and emerging markets, absolute return strategies (hedge funds), fixed income, and cash. We manage a diversified portfolio to produce good risk-adjusted

performance. In private markets, we invest in opportunities that have the potential to generate high long-term real returns and the ability to diversify the portfolio. Real estate assets, in particular, also serve as a hedge against inflation.

Public Equities

Our equity investing effort is carried out by a team of in-house research analysts and portfolio managers, organized along product groups specialising in total return, relative return, and quantitative strategies. The team conducts in-depth due diligence and research to identify businesses with the potential to generate good long-term returns.

Fixed Income

The Fixed Income group is broadly organised along three areas: Global Macro, Global Credit, and Cross-asset Systematic investing. We invest across

the entire fixed income spectrum which includes government bonds, emerging market bonds, corporate bonds and loans, convertible bonds, hybrid securities, securitised products, structured credit, and global currencies. Our multi-asset macro and systematic strategies also invest in asset classes such as equities and commodities.

Portfolio Execution

The Portfolio Execution group seeks to deliver top-tier trade execution, to efficiently manage total portfolio liquidity and to enhance asset utilisation. Our trading teams operate around the clock across three centres – Singapore, London, and New York – to execute investment decisions for all public market asset classes and provide timely market intelligence to the investment groups. We leverage market and microstructure insights generated by our in-house research team to execute efficient trading, portfolio implementation and rebalancing strategies.

Our role encompasses trading, total portfolio rebalancing, liquidity management, equity beta replication, and securities finance.

Private Equity

Our private equity universe includes buyouts, minority growth, pre-IPOs, venture capital, private credit, and special situations such as distressed debt, and secondary private equity. We invest in companies directly and through funds. The direct investment programme is focused on taking minority equity positions and providing junior and senior debt financing in buyouts. Our funds strategy aims to identify, and invest with, leading private equity, venture capital, private credit, and special situations funds globally, and grow with them in the long run. We have built up a network of over 100 active fund managers. The investment teams add value to the boards and management of the investee companies by providing advice and access to a global network of business links.

Infrastructure

Our Infrastructure group takes a multipronged approach to investing. We invest mainly in private infrastructure assets with a high degree of cash flow visibility and which provide a hedge against inflation. These include mature, low- to moderate-risk assets in developed markets, complemented by investments with higher growth potential in emerging markets. We also invest in infrastructure funds, non-investment grade infrastructure debt, and structured investments in listed infrastructure companies.

Real Estate

GIC was an early entrant among institutional investors in real estate. Our investments in the space now include traditional private real estate (brick-and-mortar assets), public equities, real estate investment trusts, and real estate-related debt instruments. Our real estate assets span multiple property sectors, including traditional office, retail, residential, industrial, and hospitality; and newer economy sectors such as data centres,

life sciences buildings and healthcare properties.

Through active asset management, GIC can further generate income and enhance the market value of its assets through tenant management, market positioning, leasing, and capital improvements.

Integrated Strategies

Our Integrated Strategies group invests across the public and private asset markets and in less conventional investment opportunities, develops thematic investment strategies, and actively expands the GIC network of relationships beyond traditional domains. Our team has developed strong relationships and invests with family offices, family-owned businesses/entrepreneurs, corporates, and individuals with specific expertise (fund-less sponsors). We provide bespoke solutions to our partners for various uses including growth capital, M&A financing, shareholding restructuring, etc. With a flexible investment mandate, we can invest across the capital structure and hence find the right investment structure for our partners.

External Fund Managers

GIC engages external fund managers to access investment capabilities and opportunities in various sectors and geographies. External managers enable GIC to gain exposure across public and private markets. They also provide us with valuable investment insights.

Investment Services

GIC has a dedicated investment services team that supports public and private market investment activities. They provide support for deal closing, investment and data operations, investment reporting, management reporting, portfolio accounting, valuation, and financing.

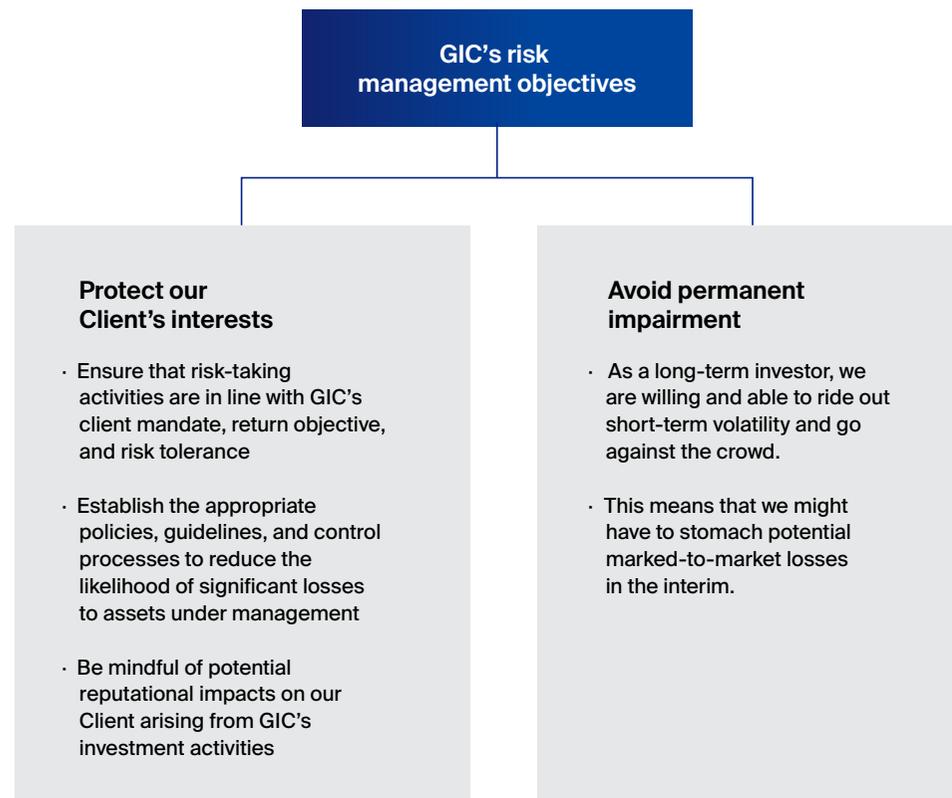
3.6 Managing Risks

Investing involves prudent risk-taking. Identifying and managing risk is therefore a core responsibility of every GIC staff. Each employee has individual accountability and clearly defined responsibilities within our risk management framework. This ensures risks taken are in line with the risk tolerance set by the Client.

Risk Management Objectives

GIC's risk management objectives are to ensure that:

1. The investment strategies pursued are consistent with the risk tolerance set by the Client, and within defined bounds authorised by the Client, Board, and Management.
2. The risks associated with each investment are understood well.
3. Policies, guidelines, and control processes are in place to reduce the likelihood of significant losses.
4. Any reputational impact due to our actions is carefully managed.



GIC's risk management objectives

Risk governance

The GIC Board provides ultimate risk oversight. The Board approves the Policy Portfolio, which is constructed with our Client's long-term real return objective and risk tolerance in mind. Deviation of asset allocation exposure from policy benchmarks is constrained by a set of operating bands around the Policy Portfolio's target weights. In addition, the GIC Board sets an active risk budget to limit the risk arising from the deviation of the Active Portfolio from the Policy Portfolio. The GIC Board is supported by the Board Risk Committee, which advises the Board on risk matters. The Board Risk Committee sets the overall direction of risk management policies and practices in GIC. In addition, it reviews significant risk issues arising from GIC's operations and investments.

The Group Executive Committee is the highest management body in GIC. It deliberates on investment and risk issues before they are submitted to relevant board committees. It is also the forum that

assesses and makes determinations on fiduciary risk and reputational risk issues.

The Chief Risk Officer (CRO) is a member of the Group Executive Committee and reports to the Chief Executive Officer (CEO) and Chairman of the Board Risk Committee. The CRO is accountable to the Board of Directors, primarily through the Board Risk Committee, on all risk-related matters.

The CRO chairs the Group Risk Committee that is vested with responsibility to oversee implementation of risk policies, review significant risk issues from investments and operations, as well as to ensure the resolution of these issues.

Three Lines of Defence

GIC's risk management model operates along "three lines of defence", which ensure that there is clarity and transparency in risk ownership and accountability:

1. First Line: Operating units

People are the cornerstone of any risk management system. All GIC staff are expected to act with integrity and exercise sound judgement; they need to understand, evaluate, and carefully manage the risks that they take.

All operating units own, and are primarily accountable for, the risks inherent in their activities. They are responsible for ensuring that an appropriate risk-and-control environment and robust processes are in place as part of their day-to-day operations. Our risk assessments are forward-looking and form an important element of our long-term approach. We consider a broad spectrum of risks with potential long-term impact, including sustainability risks and risks

from activities managed by appointed agents.

2. Second Line: Independent risk functions

Risk management and control functions independent of the risk-taking business units are the second line of defence. They provide appropriate day-to-day risk oversight and control. These functions include risk management, legal and compliance, information and technology risk management, as well as tax and finance. While they each have their defined set of responsibilities, they also work collectively to provide the

requisite checks and balances to the risk-taking activities of GIC's investment groups.

3. Third Line: Internal audit

Our Internal Audit Department (IAD) forms the third line of defence. IAD provides independent assessment and assurance on the adequacy and effectiveness of our internal risk management controls. It reports functionally to the Chairperson of the Audit Committee, and administratively to the CEO.



Three levels of risk management

Risk management approach

Our approach to risk management is multipronged:

- I. Managing portfolio investment risk to ensure that risk taken is consistent with our mandate and commensurate with expected returns;
- II. Managing legal, regulatory, and compliance risk to safeguard the reputation and interests of GIC and our Client, and to comply with applicable laws and regulations;
- III. Managing tax risk to ensure compliance with the tax laws of applicable jurisdictions;
- IV. Managing operational risk through an effective system of internal controls and processes to support GIC operations;
- V. Managing cyber security, technology and information risk to ensure that our technology resources and information are well-protected;

VI. Managing counterparty credit risk to minimise the impact to GIC if any counterparties were to default;

VII. Managing reputational risk; and

VIII. Managing people risk.

This multipronged approach to risk management, complemented by the three lines of defence, ensures that risks within the portfolio are looked at in a comprehensive manner. While risks remain, they are well-identified and managed within an established risk tolerance.

Managing portfolio investment risk

Policies, guidelines, and processes are established to ensure consistency and clarity across the firm, while reducing the likelihood of significant unexpected losses to the assets under management. The policies and guidelines translate our investment mandate and risk management principles into standards that guide our day-to-day activities. For example, the

GIC's mandate is to generate good long-term risk adjusted returns.

GIC's risk management objectives

1. The investment strategies pursued are consistent with the risk tolerance set by the Client, and within defined bounds authorised by the Client, Board, and Management.
2. The risks associated with each investment are well-understood.
3. Policies, guidelines and control processes are in place to reduce the likelihood of significant losses.
4. Any reputational impact due to our actions is carefully managed.

Risk types

Investment Risk	Tax Risk	Cyber Security, Technology, and Information Risk	Reputational Risk
Legal, Regulatory, and Compliance Risk	Operational Risk	Counterparty Credit Risk	People Risk

GIC's risk management principles

group-wide investment approval framework sets out the approving authorities for investments based on size. Another example is the cost-of-capital framework which determines an appropriate performance hurdle for each active strategy that includes the cost of funding these strategies and a premium for additional risk undertaken.

We identify, measure, report, and monitor all the risks that are assumed. GIC employs a suite of measures including volatility, risk concentrations, sensitivities to risk factors, liquidity profile, and expected shortfall to identify and analyse the risks in the portfolio from both top-down and bottom-up perspectives. Each measure is designed to highlight a specific aspect of the portfolio that could lead to an undesirable outcome. These statistical measures are supplemented by a set of stress tests and scenario analyses. Reverse stress tests further help to identify otherwise undetected risks that could lead to large or sustained drawdowns. The risk management function sets and monitors performance and risk review thresholds independently to highlight potential changes in risk-taking behaviour

and inconsistencies with the stated risk and return assumptions.

Managing legal, regulatory and compliance risk

Legal and regulatory risks relate to uncertainties in the interpretation and application of laws and regulations, the enforcement of rights or the management of potential litigation, breaches in contracts, laws or regulations. Compliance risk refers to the risk of legal or regulatory sanctions, financial loss or reputational damage arising from non-compliance with applicable laws and regulations.

GIC's compliance programme comprises robust policies, procedures, effective controls, monitoring, surveillance and the enforcement of disciplinary actions against violations. The implementation of a rigorous compliance programme is underpinned by a strong culture of ethics, risk management, and compliance. All staff are required to observe the policies and procedures set out in GIC's Compliance Manual (incorporating the Code of Ethics), comply with all applicable laws and regulations, uphold

exemplary conduct, and to act with integrity at all times. Regular and targeted training is conducted and an annual compliance quiz is administered to reinforce awareness and understanding, and to strengthen GIC's risk and compliance culture. The compliance programme also requires that all staff adhere to their confidentiality obligations and responsibilities.

The investment and operations teams collaborate with the legal and compliance function to manage legal, regulatory, compliance, and reputational risks arising from the group's investment and operational activities. The legal and compliance function monitors compliance with laws and regulations, including laws on securities trading and investment, competition law requirements, financial crimes compliance, and licensing and regulatory approvals. Emerging legal and regulatory issues and proposed regulatory changes are also

We identify, measure, report, and monitor all the risks that are assumed.

closely monitored. Additionally, the in-house legal team works with external lawyers to address legal risks.

Managing tax risk

GIC's Tax Governance Framework underscores our commitment to be compliant with tax laws, rules, regulations, and obligations set by the respective governments of the jurisdictions in which we invest and operate. We ensure that tax-related decisions are handled with professional skill, care and diligence, and with the relevant documentation that evidences the facts, considerations and decisions taken. We seek written advice, opinion or confirmation, where appropriate, to substantiate our tax positions. Our tax positions and obligations are clearly represented in line with applicable tax laws and regulations. We also engage with tax authorities in an open, constructive, and professional manner.

Managing operational risk

All investment and operations staff are required to identify, evaluate, manage,

and report risks in their own areas of responsibility, and to comply with established risk policies, guidelines, limits, and procedures. For example, new investment products or strategies are subject to a risk identification and assessment process conducted by a cross-functional group. This ensures that all risks associated with the new product or activity are identified and analysed prior to investment or engagement. We must be satisfied that the required people and infrastructure, including systems, risk modelling, procedures, and controls, are in place to manage these risks before the investment is permitted.

We continuously assess the control environment to ensure that any control weakness is promptly identified and addressed. Policies and procedures are established to safeguard the physical security and integrity of GIC's technology

and data assets. Throughout the year, internal and external auditors scrutinise all operations and business processes. Any deficiencies identified must be addressed within set time frames and reported to senior management. Our business continuity plan is tested and reviewed regularly to ensure that our procedures and infrastructure can support operations in the event of a business disruption. This enhances corporate resilience and safeguards the group's operations.

Managing cyber security, technology, and information risk

As GIC adopts advanced information technologies (IT), we recognise the importance of having strong cyber security defences and robust internal controls for our operating environment. A dedicated team of cyber security and IT risk management professionals maintains

Policies and procedures are established to safeguard the physical security and integrity of GIC's technology and data assets.

our cyber defence capabilities, as well as oversees technology operations and the use of IT across the organization. With the evolution of our business and the IT landscape, we continue to invest in people, processes, and tools to protect GIC's technology resources and information.

Managing counterparty credit risk

GIC adopts a strong control orientation in managing counterparty credit risk, trading only with financially sound and reputable counterparties. A stringent selection and approval process is in place to appoint counterparties. We review the counterparties and monitor our counterparty exposure against set limits. Counterparty profiles are regularly reported to senior management. Other measures to mitigate credit risk include using netting agreements and programmes requiring counterparties to pledge collateral.

Managing reputational risk

Managing reputational risk is part of GIC's overall risk management framework. Our governance and investment processes

ensure that we exercise caution and do not take on undue reputational risk in our pursuit of returns.

Managing people risk

We require our staff to observe the applicable laws and regulations, GIC's internal policies and procedures, to conduct ourselves in an exemplary manner at all times and uphold GIC's fiduciary duty to our Client.

Consistent with our long-term orientation, GIC's remuneration policies and practices support and reinforce a prudent risk-taking culture, as well as recognise and reward our people on the basis of long-term results, behaviours and PRIME values. We are committed to developing our employees to their full potential through learning programmes and career growth opportunities. We continue to develop a strong leadership bench for GIC, to build new investment capabilities and extend our investment and operating platforms, while reinforcing organisational culture and conduct.

People are at the heart of our business. Our

PRIME values serve as the compass in the management of our people, processes and portfolio. The assessment of these values is included in our staff appraisals.

We continuously assess the control environment to ensure that any control weakness is promptly identified and addressed.

Managing the Business Amidst Disruption

GIC establishes clear guidelines and processes to reduce the likelihood of significant unexpected losses to the portfolio. Similarly on the operations front, we maintain a robust crisis management and business continuity programme to ensure that we are well-equipped to respond to crisis events and manage the return to “business as usual.”

Crisis events can include, but are not limited to, threats to staff safety or the continuity of GIC’s business operations. A recent example is the COVID-19 pandemic. Having learnt from the experience of the 2003 SARS outbreak, our Business Continuity Management (BCM) team had put in place a detailed response plan for an infectious disease outbreak. These were routinely stress-tested through regular exercises and updated to be in line with industry best practice.

When it became clear that the COVID-19 situation was escalating, our business continuity programme enabled us to respond to the rapidly evolving situation and the challenge of having all our offices

affected by COVID-19 within a short period. The urgent situation compelled us to put in place safety measures and protocols across all our offices, including monitoring, interpreting and adapting to local situations and government advisories across our offices globally.

As the work environment extended beyond our offices to our homes, we reviewed how we could support new work norms by putting in place provisions for home office, adapting our employee engagement programmes and conducting pulse surveys to understand and address issues faced by our people. Our technology applications and execution systems were operational throughout, and investment and organizational activity continued as our employees were equipped to work from home productively.

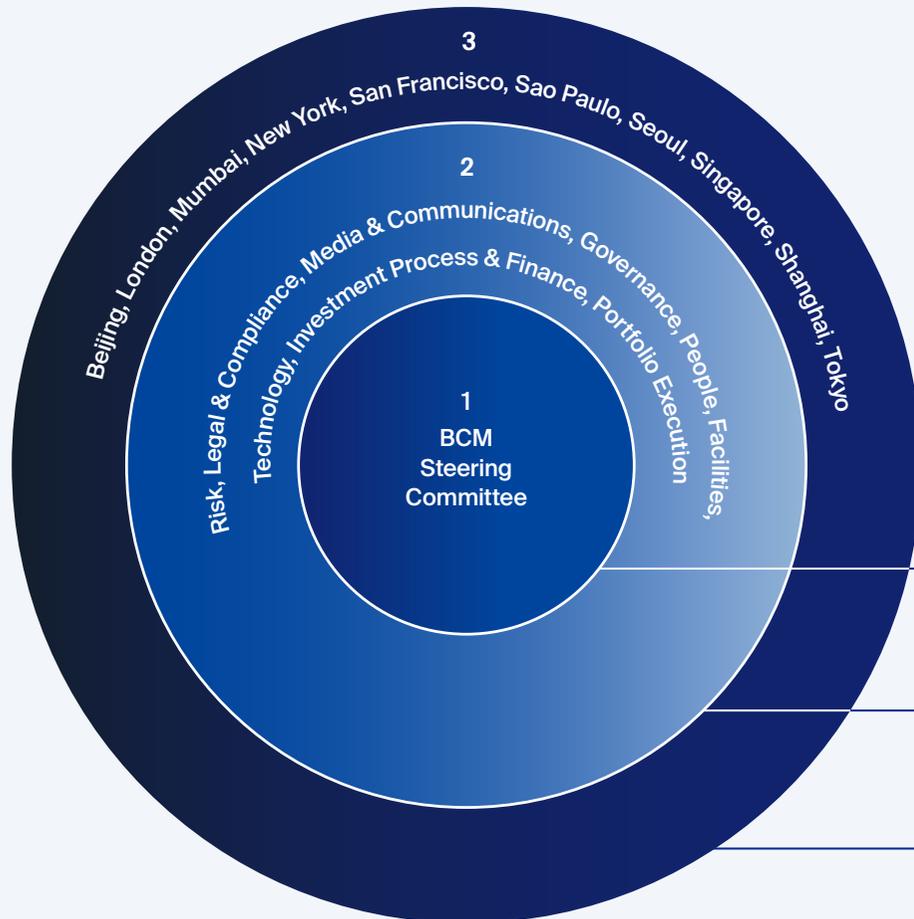
However, given the unprecedented high proportion of staff working from home globally, we reviewed our business processes and where appropriate, implemented increased vigilance and additional controls amidst the dynamic market volatilities. Our key priorities are

the health and safety of our staff and our fiduciary duty to the Client, while ensuring alignment with local government advisories and industry best practices.

A coordinated, global response to disruptions

Given the potentially extensive impacts of any crisis event, ensuring business continuity is a coordinated effort that involves representatives from all of GIC’s offices and departments.

The BCM Steering Committee, chaired by the Chief Operating Officer, oversees the development and review of GIC’s overall BCM framework, and reports to GIC’s Group Executive Committee. The BCM Steering Committee manages crises with the BCM Working Group and local BCM Incident Management Teams who implement response activities on the ground. During a disruption, they collectively ensure consistent communication, coordination and monitoring across GIC globally, and timely activation of business continuity plans so that critical business operations can



- 1 Management oversees the BCM programme from GIC's headquarters in Singapore
- 2 Department representatives appointed to ensure smooth execution of any BCM plans
- 3 Local BCM incident teams ensure consistent and coordinated responses that reflect national standards and latest developments

proceed. Additionally, the local teams adjust and implement measures based on the latest national standards and developments.

We also leverage technology for the efficient management of our business continuity programme. A standardised tool for GIC's risk assessment is used for data collection, analysis and development of strategies. The tool serves as the central repository for all BCM resources, enabling clarity and transparency.

Continuous improvement

GIC's BCM programme was established in 1999. To meet evolving standards and business needs, our business continuity plans are reviewed regularly, through external certifications and internal exercises. Our global programme is certified under ISO 22301, the international standard for business continuity management.

We apply lessons from past crises to the continuous improvement of our BCM programme. In responding to the COVID-19 pandemic, we started with plans developed from our experience with SARS in 2003 and H1N1 in 2009. Ranging from split operations, to new practices such as contact tracing and quarantine orders, we recalibrate our internal processes to address changing conditions. Through these experiences, we recognise the importance of agility and flexibility to adapt broad plans to cater to each situation.

Business Continuity Management processes

04

Investing Sustainably

Investing sustainably is core to our mandate as a long-term investor managing the reserves for Singapore. Companies with good sustainability practices offer prospects of better risk-adjusted investment returns over the long-term.

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4.1 Our Beliefs

Sustainability is integral to GIC's mandate: to preserve and enhance the international purchasing power of the reserves under our management. We believe that companies with strong sustainability practices offer prospects of better risk-adjusted returns over the long term. We believe that this relationship will strengthen over time as market externalities are priced in and incorporated into the decisions of regulators, businesses and consumers. Sustainability issues such as climate change have a material impact on companies, affecting their operations and financial performance, and shaping their long-term value.

We take a holistic and long-term approach towards sustainability across our investment and corporate processes. Investments may entail trade-offs between different sustainability objectives, especially in the shorter term. One example is the potential conflict between environmental and social considerations, especially in emerging markets. For example, forcing coal-fired

power plants to be retired on an aggressive timeline may be positive for the environment, but without a holistic transition plan in place, could hurt affected communities through loss of livelihoods and increased costs of living. GIC integrates sustainability into our investment and corporate processes in a way that recognises the diversity of the industries and markets in which we operate, and the trade-offs and time needed for companies to make the transition.

We believe that it is more constructive to actively engage and support companies in their transition towards long-term sustainability, rather than to mechanically divest from certain industry sectors. By directly engaging with company management on how to operate more sustainably, we believe that we can create more value and more beneficial outcomes for our stakeholders over the long term.

“GIC’s mandate is to preserve and enhance the international purchasing power of Singapore’s reserves. As this is a fund for the current and future generations of Singapore, by design sustainability is core to our mandate. Sustainability is an investment issue, and climate risk is an investment risk.”

Liew Tzu Mi

on GIC’s approach to sustainability

Chief Investment Officer
for Fixed Income
Chair, Sustainability
Committee

4.2 Our Approach



Figure 1: GIC's O-D-E framework

Sustainability is a key investment consideration and top management priority at GIC. The GIC Board, along with its supporting committees – the Investment Strategies Committee, Investment Board, and Risk Committee – have oversight of GIC's sustainability approach and management's considerations on climate-related risks and opportunities.

GIC's Sustainability Committee, comprising senior leaders from our investment, risk and corporate functions, is tasked to implement the sustainability framework, and monitor and respond to Environmental, Social, and Governance (ESG) issues. The Committee routinely engages the Group Executive Committee and Board Committees on broad trends and emerging issues that may affect our portfolio, as well as potential investment opportunities.

When we first started our sustainability journey, we mainly focused on defensive strategies. We have since broadened our approach, and today our sustainability efforts across investment and corporate processes are aligned with GIC's Offence-Defence-Enterprise Excellence (ODE) Framework (refer to Figure 1).

4.3 Defence: Protecting our Portfolio

Sustainability issues across the domains of the environment, social, and business governance pose investment risks. We protect our investments by:

- Regularly screening our existing portfolios for a variety of sustainability issues;
- Conducting additional due diligence for companies exposed to greater sustainability risks and adjusting our long-term valuation and risk models accordingly; and
- Developing a set of climate scenarios to stress-test our portfolio.

Climate Change

Climate change is one of the defining long-term issues of this era, and its impact to investment returns and company valuations is material. Climate change affects investment portfolios through three channels:

- **Physical risk** – this comprises chronic (or gradual) physical risks, such as water or heat stress, that would impact labour/agricultural productivity growth, and acute physical risks, such as extreme weather events, that would affect assets through direct damage or business disruption;
- **Transition risk** – this arises from policy shifts, such as the implementation of carbon pricing, and disruptive technological changes, such as renewable energy, green hydrogen, and/or battery storage; and
- **Market impact** – this refers to the process and speed by which markets price in future climate-related transition and physical risks.

All industries must prepare for physical risks to their assets, and transition risks that could potentially impair or “strand” assets. New investment opportunities will emerge as industries are disrupted. However, how these climate change-related risk factors will evolve are highly uncertain across different countries, industries, and in terms of magnitude and timing. Translating climate change-driven temperature pathways, policies and regulations, and technological outcomes into financial impact at the asset class and individual security levels is critical for investors to appreciate the impact of climate change on their portfolios.

Climate scenarios are used to identify portfolio-level risks.

In collaboration with the Monetary Authority of Singapore (MAS), GIC developed a set of climate scenarios¹, which we have applied to stress-test our portfolio. The scenarios cover the 1.5°C to 4°C range of global warming outcomes by 2100, and map broadly to the three reference scenarios recommended by the Network of Central Banks and Supervisors for Greening the Financial System (NGFS)

in June 2020. The risk drivers behind each scenario include:

- Timing and magnitude of policy action on emissions and, therefore, potential temperature outcomes;
- The impact of various energy technology pathways (where energy demand is primarily met either with renewable electricity, or with a combination of fossil fuels and carbon capture and sequestration technology); and
- Timing and extent to which markets would price in future climate-related risks.

GIC identifies risks and opportunities in the portfolio by triangulating top-down scenario analysis, sector estimates that consider total portfolio, asset class and security-level impacts, and impact estimates from third party studies.

Outputs from scenario-based stress-testing are integrated into investment management.

The key macro outputs from our scenario analysis process include the impact of climate change drivers on macro-economic variables and broad asset classes, along with the evolution of the energy system (growth rates of coal consumption, electric vehicles, etc.) in the transition scenarios. Key outputs at the individual company level comprise metrics such as Weighted Average Carbon Intensity (WACI), the impact of carbon prices on a company's earnings, and Value-at-Risk measures from climate change drivers.

Climate change has a negative impact on growth and inflation, driven largely by both chronic and acute physical risks (refer to Figure 2 overleaf). In the Paris Orderly and Delayed Disorderly scenarios, transition risks are not expected to have a meaningful adverse impact on activity and can be stimulative. Policy actions in the form of the re-distribution of higher carbon tax receipts back to consumers, subsidies for clean energy, and investments and innovation in clean energy sectors can more than offset the decline in demand for traditional fossil fuel. In these two

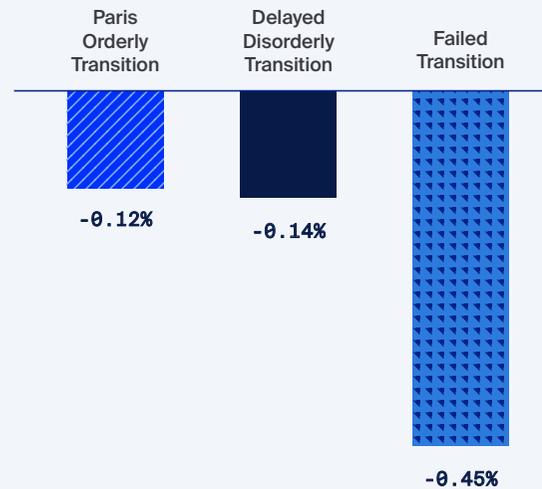
¹ Details on the scenarios can be found on GIC ThinkSpace: [The Role of Climate Change Scenarios in Investment Portfolios](#)

scenarios, transition effects have the potential to dampen the overall negative impact from physical risks.

Global inflation is negative as the model currently captures the deflationary impacts of physical risks on growth in the longer term². However, we note that transition risks exert upward pressure on inflation due to higher carbon prices and an increase in investment spending in clean technologies in the near term. Inflation pressures would be higher if the transition is delayed, as the costs of financing the energy transition would rise, and more of these costs may also be passed on to consumers.

GIC uses the derived outputs, amongst other factors, for asset allocation, risk management and integration efforts, and also for identifying companies better positioned to weather the adverse impact of climate change over the long term within industries. Climate-related risks and opportunities are managed through a combination of offensive and defensive strategies, implemented via top-down monitoring and bottom-up integration.

Impact on Global GDP



Impact on Global CPI



Figure 2: Macro impact of climate change risks across scenarios³ over the next 40 years (annualised)⁴

2
However, physical risks may also result in scarcity of resources, which would exert upward pressures on inflation.

3
Paris Orderly Transition is characterised by an orderly, early and ambitious transition to a below 2°C trajectory by the end of the century. It includes physical risks associated with 2°C and the market's pricing in of transition and physical related risks are smoothed out.

Delayed Disorderly Transition assumes the world is slow to implement ambitious climate policy, but when a series of extreme weather events occur the world shifts gear and acts. Over time, economies and markets recover. Strong policy actions will eventually stabilise the climate at around 2°C.

Failed Transition is a high-warming scenario that assumes only current policies measures are implemented. It is characterised by severe climate-related physical impacts – both slow-onset and extreme weather conditions – as global temperatures increase to nearly 4°C by 2100 above pre-industrial levels. The pathway sees markets pricing-in physical risks so that financial impacts are felt before the physical impacts actually manifest.

4
Source: Research by Ortec Finance and GIC.

4.4

Offence: Capturing Opportunities

GIC recognises that new investment opportunities will open up as regulators, consumers, and businesses increasingly act on sustainability issues. We aim to capture these opportunities by:

- Integrating sustainability into our investment processes, for example, considering sustainability factors in due diligence, risk assessment, and monitoring;
- Actively engaging our portfolio companies on corporate governance best practices and advocating for positive environmental and social outcomes;
- Investing in thematic opportunities arising from climate change and other sustainability topics, for example, renewable energy assets, “green” buildings, and technologies that support the low-carbon transition;
- Taking active steps to develop or retrofit our assets to be environmentally sustainable, and to strengthen the assets’ resilience to future climate change risk for long-term value enhancement; and
- Incorporating sustainability signals into quantitative strategies, for example, using proprietary data and analyses.

Integration

Our investment groups across public and private markets integrate sustainability considerations into their due diligence and risk assessments. These are sustainability factors assessed to be most material to each company's long-term economic prospects. For example, our investment groups examine the carbon intensity of

companies in the Energy sector relative to their peer group and may consider the impact of different carbon prices.

Teams maintain regular dialogue with portfolio companies on sustainability risks and opportunities, and always vote responsibly. We also engage with new and existing external fund managers on their sustainability policies and practices

and ensure our investments with them are managed in a manner consistent with GIC's sustainability approach. In addition, cross-department workgroups are deepening research into themes such as renewable energy, urban transport, battery technology, sustainable food and agriculture, and environmentally friendly building technologies.

Active Ownership through Voting and Engagement

We are guided by GIC's stewardship principles to promote sound corporate governance and sustainable business practices. GIC exercises active ownership of its investee companies with long-term value creation in mind, through voting, and more importantly, through focused and deliberate efforts to engage portfolio companies.

GIC votes with a long-term value perspective.

GIC votes responsibly and in the best interest of our clients and other

shareholders. GIC's votes are aligned with our beliefs on sustainability, and we do not outsource our voting decisions. Examples of issues that GIC voted on include management and board compensation, elections of directors, and environment-related disclosures.

We engage investee companies to convey GIC's views on sustainability.

GIC's portfolio managers routinely engage companies in our active portfolio on a range of topics, in their interactions with

company boards and management. We prioritise our engagement on sustainability with investees we assessed would be most materially affected by sustainability and climate change risks and opportunities, and have started thematic, dedicated engagements with these companies.

We calibrate our investment decisions on the strength and clarity of the plans that these companies share with us, for instance, deploying capital to support companies with transition efforts that will put them on the pathway towards Paris-alignment. Conversely, we would not favour companies that resist taking action on sustainability issues that materially affect their long-term economic prospects in our investment decisions.

In FY2020/21, we met with companies affected by sustainability-related controversies to understand their intent and capacity to take remedial actions to address the source of those risks. We also specifically identify companies with higher carbon intensity businesses to engage on the topic of carbon transition risk and their longer-term strategy to mitigate it.

In addition to bilateral engagements, as an investor signatory to CDP, Climate Action 100+, and the Asia Investor Group on Climate Change (AIGCC), we have joined fellow asset owners and investors in collaborative efforts to encourage companies to disclose climate-related metrics in line with recommendations by the Financial Stability Board's Task Force for Climate-related Financial Disclosures (TCFD), and take action on known climate-related risks. In FY2020/21, we supported CDP in its engagement of over 3,500 listed companies in our public equities portfolio.



Case Study 1: Shift to higher carbon savings

GIC is a long-term investor in a European specialty chemicals company, which is a supplier to the industrial and consumer sectors. The company develops innovative new products which help its customers reduce the amount of materials needed in their construction and industrial processes. Such savings also translate to reductions in carbon emissions. We encouraged the company to clearly communicate to both investors and

customers the carbon-saving nature of its products, which it has done in presentations.

We also discussed a series of diagnostic questions with the company, to further develop its methods for measuring and managing the full product life-cycle carbon footprint of its products and operations. The company is now more widely recognised as a provider of effective solutions in the global effort to reduce carbon emissions.



Case Study 2: Disclosures on climate-related lobbying

One of the majors in the oil and gas industry had been at the centre of climate change issues due to its significant contribution to global greenhouse gas emissions. During its 2020 annual general meeting (AGM), a shareholder proponent requested the company to disclose its lobbying activity for Paris-alignment. Other shareholders also expressed concerns that lobbying activities inconsistent with the Paris goal could expose investors to regulatory, systemic economic, legal, and



reputational risks. GIC believes that it is important for companies to be aware of the material climate-related risks facing their businesses, and to communicate their strategies to address those risks. Thus, GIC voted in support of the shareholder's proposal.

Case Study 3: Data privacy governance

In 2019, a human resources subsidiary of an investee company was found to have collected personal data and used it commercially without the users' consent. This data privacy breach raised concerns regarding the company's sustainability practices. In response, the company proposed several mitigation measures during its 2020 AGM, including the establishment of an advisory committee on data usage and a revamped data privacy policy. These efforts by the company to enhance its corporate governance gave GIC the confidence to support the re-election of their CEO at the company's 2020 AGM. Following the AGM, GIC further engaged with the company to share best practices on governance

standards and disclosures, and to encourage the company to continue to improve its overall governance practices.



Sustainable Investment Fund

The Sustainable Investment Fund (SIF) was launched in July 2020 as a dedicated investment portfolio to accelerate sustainability integration across all asset classes. The SIF is an internal effort coordinated across both public and private markets to identify and invest in sustainability-related opportunities that generate good financial risk-returns over time. With the investable green universe sized at US\$4.5 trillion in market capitalisation across

emerging and developed markets, there are abundant climate alpha opportunities for the SIF to consider.

Through a bottom-up process of carefully evaluating individual companies, the SIF will invest in those that are leaders in sustainability, as well as those that have a strong potential to successfully transition towards more sustainable business practices.

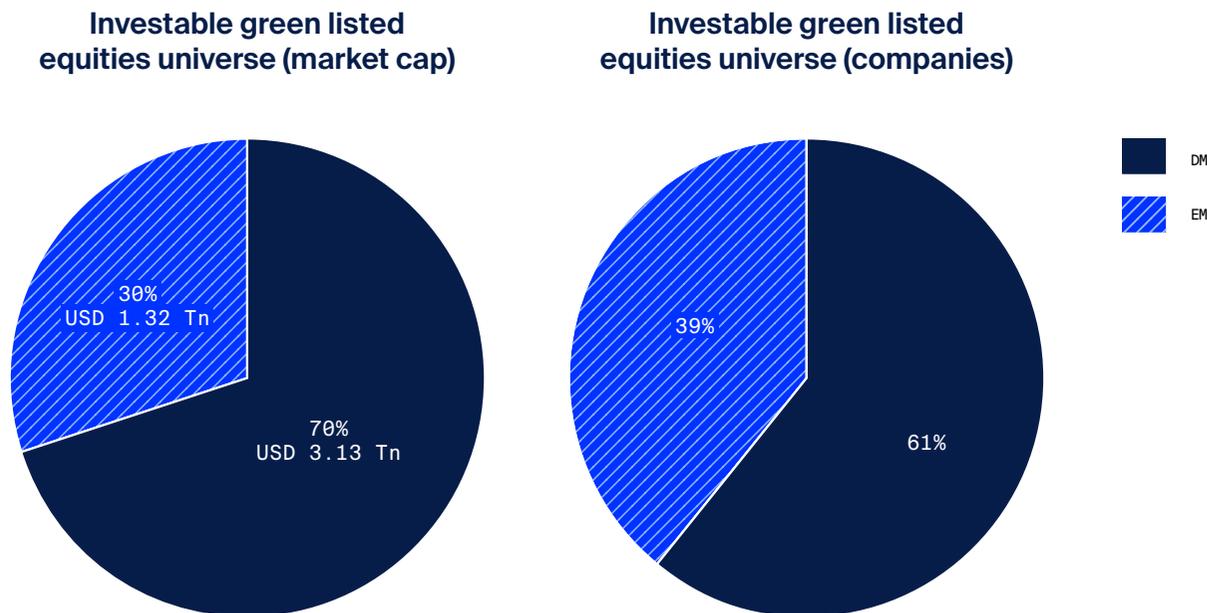


Figure 3: Market capitalisation and distribution of investable green listed equities⁵

5 Source: Green revenues estimates sourced from FTSE Russell's Green Revenues Database; free-float adjusted market cap and distribution based on MSCI ACWI as of 28 Feb 2021; GIC calculations.

As with the other investment groups, the SIF adds value through active engagement with companies, to encourage and guide them in their respective sustainability transitions. The SIF also develops analytical tools and data required by its investment approach. This will catalyse the journey of sustainability integration and deepen GIC's capabilities in this space across all asset departments.

“Investors are rapidly incorporating sustainability into decision-making processes. GIC’s asset departments have always embedded Governance considerations into how they invest and are now expanding their focus to other aspects of sustainability that are material to companies’ long-term risk-reward prospects.

The SIF is about capturing the expanding set of opportunities where sustainability and investment returns go hand in hand.”

Ken Lim

on the role of the SIF

Deputy Head, Asia Pacific Equities
Portfolio Lead, SIF

Examples of SIF investments



Reducing food waste through technology

A US-based company has developed a plant-based edible coating that slows down the decay of fresh fruits and vegetables. By spraying it on produce after harvest, the tasteless, colourless and odourless coating effectively doubles the shelf life of fresh produce. This helps reduce food waste and enables other supply chain efficiencies that conserve natural resources and avoid carbon emissions.



To support this company's efforts, GIC led a financing round in early 2020, bringing the company's valuation to over US\$1 billion. The company has since progressed well, expanding their product offerings through partnerships with major retail chains and suppliers in North America, Europe, Africa, Latin America, and Asia.



Supporting the transition to Electric Vehicles

The adoption of Smart Electric Vehicles (EVs) has been one of the most notable trends in recent years. This is due to a mix of advances in battery technology, shifting consumer preferences and regulatory moves to incentivise greener transportation amid global efforts to reduce carbon emission and focus on smart mobility solutions. The result is a global automotive industry that faces significant disruption. We are now entering a new Smart EV era, where many tech giants and start-ups are entering the industry as new opportunities unfold. In 2020, GIC started increasing its position in a global automotive manufacturer, who is an industry leader



in the commercialisation of hydrogen fuel cell technology and invested early into the transition to EVs. The company's favourable positioning in the EV space is demonstrated as they were one of the first to launch EVs on dedicated platforms among global automakers and achieved higher market share in New Energy vehicles.

4.5

Enterprise Excellence

How we operate sustainably as an organization is as important as the way we invest. We do this by:

- Communicating clear expectations for sustainable behaviour by our business partners;
- Managing our resource use through environment-conscious office design and smart technology to monitor and improve our energy efficiency;
- Achieving carbon-neutrality in our operations by FY 2020/21 across our 10 global offices; and
- Fostering a culture that embraces diversity of skills and views, and promotes respect and active contribution, for greater collective impact.

GIC's corporate carbon footprint

We seek to manage the environmental impact of our global operations and have achieved our target to become carbon neutral in our global operations by FY2020/21. We started measuring our global corporate carbon footprint in 2019 and have developed a dashboard to help us track and manage our carbon footprint. We now have a view of the emissions profile of our operations, pre-pandemic, and for the past year for Scope 1 and 2⁶ and business travel emissions.

GIC has put in place measures to actively reduce the emissions profile of our operations, and will offset the remaining emissions using Gold Standard-certified projects in the near term. We obtained third-party verification for our emissions calculations.

While we saw an increase in staff strength over FY2020/21, our corporate carbon emissions fell significantly year-on-year over the same period. This decrease was driven mainly by COVID-19 travel restrictions as GIC's air travel emissions

decreased significantly. While air travel will continue to be integral to our business, GIC remains committed to monitoring and managing our footprint by avoiding and reducing unnecessary carbon emissions even as COVID-19 restrictions ease in the future.



GICians kicking off *Gift A Tree* at Windsor Nature Park, Singapore

6 Scope 1 covers direct emissions from owned or controlled sources, while Scope 2 covers indirect emissions from the generation of purchased electricity, steam, heating and cooling.

4.6 Partnerships

By collaborating with fellow asset owners through organizations and initiatives such as the AIGCC, CDP, Climate Action 100+, and TCFD, we help to accelerate the overall pace of transition.

As a long-term investor, we welcome progress in global sustainability initiatives that help investors and companies make better business decisions that improve long-term value. Sustainability is a field that continues to evolve, and all organizations, including GIC, can benefit from learning from one another as new standards are developed. By collaborating with fellow asset owners through organizations and initiatives such as the AIGCC, CDP, Climate Action 100+, and TCFD, we help to accelerate the overall pace of transition.

For example, GIC, together with 12 other members of the AIGCC, is participating in the Asian Utilities Engagement Program, a new investor-led initiative to engage with major utility companies in Asia that are not within the Climate Action 100+ focus list. Through collaborative effort with like-minded investors, we will support these companies in their transition towards greater sustainability, by helping them reduce emissions while strengthening disclosure and governance standards.

05

Feature Article

This year marks the 40th anniversary of GIC. We highlight the milestones of our progress as an investment management company and the people and events behind these accomplishments.

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40 years of securing Singapore's financial future

A photograph of a modern glass skyscraper at sunset. The sun is low on the horizon, creating a warm, golden glow and long shadows. In the foreground, several people are walking and cycling on a paved path. The building's glass facade reflects the sky and the sun. The overall scene is a mix of urban architecture and human activity.

This year marks the 40th anniversary of GIC. We highlight the milestones of our progress as an investment management company and the people and events behind these accomplishments.

1981

Bold vision to create unique solutions



Deputy Prime Minister for Singapore,
Dr Goh Keng Swee, in Sydney, June 23, 1980.

GIC was born of bold vision, the brainchild of Dr Goh Keng Swee, then Deputy Prime Minister and Chairman, Monetary Authority of Singapore (MAS). Departing from prevailing convention, Dr Goh recommended the creation of an entity dedicated to investing Singapore's surplus reserves for better long-term returns. GIC was the outcome of that vision. In retrospect, GIC was the prototype Sovereign Wealth Fund.

The inaugural Board, under the chairmanship of Lee Kuan Yew, then Prime Minister, emphasised three foundational principles that have defined GIC since: the essence of GIC's ethos would be integrity, meritocracy and boldness of vision; GIC would be a long-term investor; and its primary role would be to assure Singapore's financial security.

1987

Leadership to set the foundations

Under the watchful eyes of inaugural Managing Director Yong Pung How, GIC was incorporated as a private limited company so that it could focus solely on managing the foreign reserves. The singular focus was critical as GIC began operations in 1981 when financial markets were stressed by high US interest rates and an emerging market sovereign debt crisis. These did not impede its development.



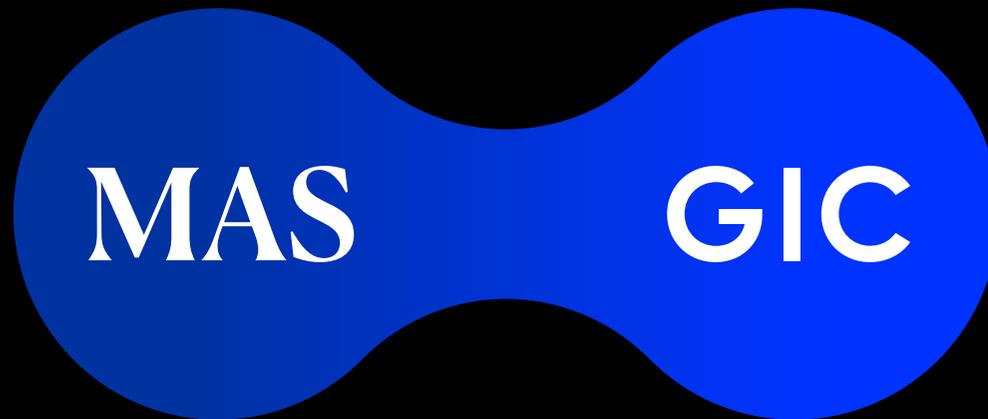
The old SIA building on Robinson Road (tower block at extreme left of image) housed GIC's first office.

Source: Ministry of Information and the Arts Collection, Courtesy of National Archives of Singapore

A man with curly hair, wearing a dark suit, white shirt, and dark tie, is speaking at a podium. The podium has the word "neptune" written on it in a stylized font. There are several microphones in front of him. The background is dark with some bokeh lights.

GIC witnessed quantum organizational advances during J Y Pillay's tenure as Managing Director in the second half of the 1980s.

Source: The Straits Times © Singapore Press Holdings Limited.
Reproduced with permission



Under his leadership, GIC was weaned from MAS, which it had relied on for essential corporate and investment services. A Singaporean management team was groomed, a systematic effort to hire and develop staff started and a structured investment process and robust performance measurement system was installed.

THE WALL STREET JOURNAL.

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PRINCETON, NEW JERSEY

50 CENTS

TUESDAY, OCTOBER 20, 1987

The Crash of '87

Stocks Plunge 508.32 Amid Panicky Selling

The foundations were tested in 1987's Black Monday when global stock markets tumbled. It was GIC's baptism of fire, but its diversified portfolio weathered the financial market turbulence. GIC learnt first-hand the fortitude it took to live up to the foundational principle set by its Board to be a long-term investor.



Source: Knight Ridder Tradecenter

A Repeat of '29?

Depression in '87 Is Not Expected

Banking System Safeguards And Federal Mechanisms Are Viewed as Adequate

NEW YORK — The stock market crashed yesterday. The Dow Jones Industrial Average plummeted an astonishing 508.32 points, or 22.6%, to 1738.42. The drop far exceeded the 12.8% decline on the notorious day of Oct. 29, 1929, which is generally considered the start of the Great Depression.

Panic-driven trading on the New York Stock Exchange reached 604,801,000 shares, nearly double the prior record volume of 398.5 million shares set last Friday when the Dow plunged a then-record 108.3 points.

Commodities prices also plunged, except for precious metals and especially gold, which surged \$10.10 an ounce to \$481.70, a 4 1/2-year high. The bond market, a refuge for much of the capital bled out of the stock market, recovered from steep early losses to end the day higher.

This article was prepared by Wall Street Journal staff reporters Tim Metz, Alan Murray, Thomas E. Ricks and Beatrice E. Garcia.

The industrial average tumbled the 130 points in the final 30 minutes of the session. The decline yesterday and last week totaled 743.79 points, or 30%. By way of comparison, the total drop on Oct. 29, Oct. 29, 1929 was 71.15 points, or 23.0%.

With yesterday's drop, the industrial average has given up all its 1987 gains. It now shows an 8.3% loss for the year. Its Aug. 25 high of 2722.42, it has a 36.1% decline.

Virtually every other measure of

What's News

Business and Finance

THE STOCK MARKET CRASHED as panic selling swept the Dow Jones industrials down 508.32 points, or 22.6%, to 1738.42. The record decline far exceeded the drop on Oct. 29, 1929, when the average slid 12.8%. Most other market indicators also skidded to record lows, as Big Board volume soared to 604.8 million shares, nearly double the previous record.

(Stories in Columns 6, 5 and 4)

Treasury bond prices rallied from an early slide, winding up with huge gains in heavy trading. Some 30-year Treasury issues closed up over three points. The dollar also plunged in early trading but recovered slightly.

Gold surged to 4 1/2-year highs in reaction to the stock market crash and Mideast tensions. But a broad range of other commodity prices fell.

(Stories on Pages 59, 52 and 62)

The plunge by London stocks could threaten a record \$12.2 billion share offering by British Petroleum later this month. Meanwhile in France, the record drop on the Paris bourse could have political repercussions.

Treasury Secretary Baker met with West German officials, winning a small victory as Bonn moved to stem a recent rise in interest rates. Both countries hinted after the meeting that the February accord to stabilize exchange rates may be altered.

(Story on Page 3)

World-Wide

THE U.S. BOMBARDED an Iranian oil platform in the Persian Gulf. The strike by U.S. Navy warships, ordered by Reagan in retaliation for Friday's attack on a U.S.-flagged Kuwaiti tanker by Tehran's forces, destroyed the platform, which had been converted to a military command center in the gulf. Casualties weren't reported. Following the assault, U.S. forces boarded the platform and destroyed some radar and communications gear, the Pentagon said. The attack was presented by the U.S. as a moderate military response, but one that demonstrated Washington's willingness to respond with force to Iranian provocation. (Story in Column 1)

Iran's president said that the U.S. attack was a "big mistake," and that Tehran would "take decisive retaliatory action." Moscow also faulted the action.

NAKASONE SELECTED Noboru Takeshita to succeed him as Japan's premier. The choice by Nakasone came after the former finance minister and his two rivals were deadlocked over who should be named president of the ruling Liberal Democratic Party. Because the conservative party controls the parliament, the winner of the top party post also becomes prime minister. Although Japan's policies won't change radically under Takeshita, 63, his lack of forceful leadership could weaken Japan's foreign policy.

(Story on Page 4)

Indian troops captured a Tamil separatist stronghold in the town center of Jaffna after penetrating Sri Lanka rebel defenses, officials in New Delhi and Colombo said. Casualty figures weren't reported. In eastern Sri Lanka, at least 40 Tamil refugees were killed when a guerrilla land mine exploded near Batticaloa, police said.

Market Fallout
The bears ran wild on Wall Street in the stock market's worst one-day plunge ever. The reaction by market professionals and traders was one of disbelief. Stories include:

- Trading on index-futures at the Chicago Merc led a shaky market into a full-fledged panic, page 22.
- The lucrative boom in takeover stocks had dried up, crippled by the plunge and other factors, page 23.
- How some market bears got out of stocks before the plunge, page 22.
- Some brokerages are steering their clients into foreign stocks that trade over-the-counter market, page 24.
- European markets were battered by the plunge on Wall Street, page 50.
- Tokyo's Nikkei stock average also dove, page 50.

The Market Debacle Rouses Worst Fears Of Little Investors Many Are Beginning To Talk Terms of Doomsday; Big Investors Are Braver

A WALL STREET JOURNAL NEWS ROUNDUP
The little investor doesn't know where to turn, although bigger ones are putting up a brave front.

"I'm scared," says Julie Ianotti, an executive in Houston. "My stock is my nest egg, for a house or something. Should I sell? Tell me, should I sell?"

When a mother suggested the price drop could portend a new depression, the young Ms. Ianotti at first scoffed at the idea. "I said, 'Yeah, sure, Mom. It'll go back up.'" But as the Dow Jones Industrial Average was taking a record plunge yesterday, Ms. Ianotti says she began giving more thought to her mother's stories about subsisting on water and sugar in the Depression.

Although small investors like Ms. Ianotti were starting to talk in doomsday terms, other cats seemed more

Source: S&P Dow Jones Indices

1990s

Readiness to explore new investment horizons

In the 1990s, GIC ventured into new markets and advanced its real estate and private equity capabilities. These advances reflected a readiness to explore new sources of returns for diversification and adapt to unfamiliar investment situations. Lee Ek Tieng, who succeeded J Y Pillay, oversaw these shifts.

Lee Ek Tieng, 1994

Source: National Archives of Singapore





The major policy shift was getting GIC to foray into emerging Asia. It was a strategic response to the unprecedented transformations in the region, especially in China. GIC's early pivot gave it a head start in a fast-growing region. As most emerging Asian markets then were relatively undeveloped, GIC's public and private market groups had to scour for good investments that met GIC's risk guidelines. The Asian Financial Crisis, which erupted in 1997, did not shake GIC's conviction in this region. In fact, GIC stepped up its efforts to co-invest with regional partners, usually experts in target sectors, to ensure it seized investment opportunities with good risk-adjusted returns.

In addition to the growth of the portfolio in Asia, GIC's real estate and private equity investment groups developed dramatically in the same period. This was catalysed by the corporatisation of these groups as subsidiaries, which gave them the autonomy and focus to continue exploring new investment areas.

2000s

Clarity of purpose and investment objective

The early 2000s saw two reviews on GIC's investment policy and strategy, specifically on its asset allocation policy. Their most consequential finding was that the reserves managed by GIC should be viewed as more than a contingency fund. It was also a financial endowment for Singapore. GIC's mission to generate good long-term returns above global inflation had to meet these two needs.

Reserves
managed by GIC

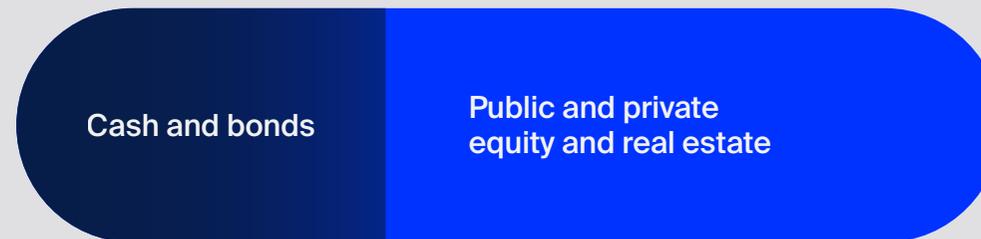
Rainy Day
Fund

Financial
Endowment

AFTER 2000s

That reserves were also endowment assets had two important implications. The first was that GIC's portfolio could be less liquid and not so tied to cash and bonds, thus giving GIC more room to invest in other asset classes. As a result, GIC's strategic allocation pivoted to more public and private equity and real estate.

Strategic allocation



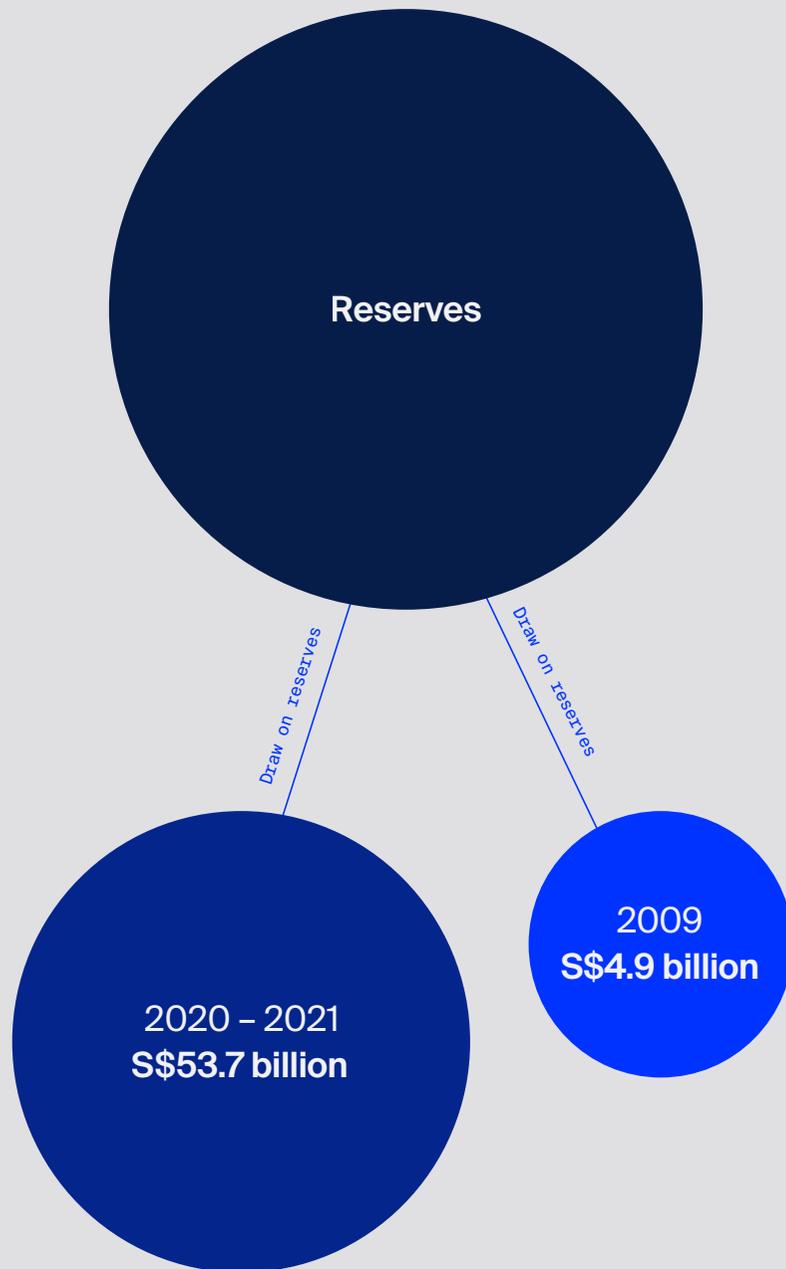
Second was a Constitutional Amendment for a Net Investment Return (NIR) framework. The NIR framework enabled the Government to spend up to 50% of the expected long-term real rate of return of the net assets managed by GIC and MAS (Temasek would be added to the NIR framework in 2016). The NIR framework expresses a spending rule that is aimed at providing for present and future generations of Singaporeans, once again underlining the endowment principle.

2010s

A long-term view to navigate crises

The Global Financial Crisis and the COVID-19 market disruptions have been the two biggest global crises for GIC yet. In both, a prior reduction of equities protected GIC's portfolio. More significantly, GIC committed to its long-term orientation, maintained its strategic holdings and saw through the short-term, marked-to-market losses in the two episodes.

Through the crises, GIC's Board and Client stood by the principle that a long-term investor had to be prepared to bear short-term losses.



The GFC resulted in the Government drawing on past reserves for the first time. This was for a “Resilience Package” which totalled S\$20.5 billion. Of which, up to S\$4.9 billion was to be drawn from the reserves to protect jobs and help businesses. The President’s approval was sought and granted¹. The actual amount drawn was S\$4.0 billion, and in 2011, the Government put back this amount drawn from past reserves². More than a decade later, COVID-19 prompted the next draw on the reserves. In 2020 and 2021, the Government announced Budget measures of over S\$100 billion in response to COVID-19.

Altogether, the expected draw on past reserves over the two financial years will come up to a total of S\$53.7 billion³. This is ten times more than that for the GFC and is equivalent to over 20 years of accumulated budget surpluses. These draws vividly demonstrate the importance of the strategic role of reserves as a rainy day fund to Singapore.

¹ Source: [Singapore Ministry of Finance](#)

² Source: [Singapore Ministry of Finance Budget Statement 2011](#)

³ Source: [The Business Times](#)

A new phase for GIC



Lim Siong Guan, Group President, 2016

Source: Photograph by Lim Weixiang for Mothership.sg

The 2010s saw GIC enter a new phase under the leadership of Lim Siong Guan. These changes manifested GIC's inherent drive to adapt and re-shape itself to improve portfolio performance.

There were two concurrent transformative developments. First, we incepted the New Investment Framework (NIF) which was implemented in April 2013. The NIF clarified governance and risk management; positioned the portfolio for a challenging financial landscape; and enabled better collaboration among the different asset groups. Second was a corporate make-over. The focus was on refreshing GIC's value system, leadership rejuvenation and a re-alignment towards a "OneGIC" model based on a more collaborative culture among GIC investment groups and strengthening the operating framework, talent practices, and corporate infrastructure.

Under the current management team, GIC adapted its strategy for active investments in response to a changing investment environment. The influx of large institutional investors had resulted in a more crowded field for conventional active investments like stock selection and investing in funds. To find value, GIC expanded its investment types that leveraged its unique strengths and capabilities: its long-term orientation, expertise in private and public markets, flexibility to invest in a wide range of situations and its rich network of partners. The strategy shift saw GIC transforming from a largely passive to an active investor aiding its investee companies to grow their businesses.

As the GIC management was charting these developments, the GIC Board saw several changes during the same period. In 2011, Lee Kuan Yew retired as Chairman, GIC and Dr Tony Tan, Executive Director, stepped down to take public office. Lee Hsien Loong, Prime Minister, assumed the chairmanship.

Now & Future

**Bold vision needed to
prepare, not predict**



GIC is pivoting for the future. To continue fulfilling its purpose of securing the financial future of Singapore, GIC must demonstrate bold vision as the future augurs radically different conditions:

Weaker growth prospects across large economies with rapid growth in public and private debt and ageing populations, low interest rates, high starting valuations across asset classes and technological disruption in all sectors.

Aware of the challenges ahead, GIC is primed to transform its investment approach in significant ways. Strategies being examined include optimising GIC's total portfolio exposures in both alpha and beta, tapping new sources of alpha, improving capabilities to invest in trends like the transition to a lower-carbon economy and deploying technology to sharpen investment decisions.

Culture and talent remain key as GIC looks to expand the power and scope of the existing OneGIC model, to execute with purposeful ambition and agility, and to harness diversity for performance.



1981



1990s - 2020



2021



GIC

is regenerating
itself once more.

06

Governance

The Government, represented by the Ministry of Finance (MOF), sets the investment objective, risk parameters, and investment horizon for the portfolio. It also ensures a competent board of directors is in place.

The GIC Board is responsible for the Policy Portfolio that determines GIC's long-term asset allocation and is accountable to the Government for the overall performance of the portfolio.

The GIC Management is responsible for formulating and executing investment strategies and for individual investments. The Management also reports to the Government on the risk and performance of the portfolio.

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the CEO

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Sustainably

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Our People

6.1 Governance Overview

GIC was incorporated in 1981 under the Singapore Companies Act and is wholly owned by the Government of Singapore. It was set up with the sole purpose of managing Singapore's foreign reserves and currently invests well over US\$100 billion globally in a wide range of asset classes and instruments. As a rule, GIC invests outside Singapore.

Source and Purpose of Funds

GIC is a fund manager for the Government, and does not own the assets that it manages. The sources of the Government's assets managed by GIC, as stated by the MOF, include proceeds from the issuance of Singapore Government Securities (SGS) and Special Singapore Government Securities (SSGS), Government budget surpluses, and proceeds from the Government's land sales.

The Government does not specify to GIC the proportion of assets from each source. The Government mandates GIC to manage all assets in a single pool, on an unencumbered basis, and without

regard to their source, with the aim of achieving good long-term real returns. (An explanation of the Government's framework for managing its assets and liabilities is available on MOF's [website](#).)

Each year, part of the GIC Portfolio returns is tapped by the Government for its annual Budget and spent on key public services that improve the lives of Singaporeans.

Under the Constitution, the Government is allowed to spend up to 50% of the long-term expected real return on the net assets managed by GIC and those owned by the Monetary Authority of Singapore and Temasek Holdings in its annual budget. The Government's reserves therefore provide a stream of returns that benefit present and future generations of Singaporeans.

Each year, part of the GIC Portfolio returns is tapped by the Government for its annual Budget and spent on key public services that improve the lives of Singaporeans.

The President of Singapore

Since 1991, the Constitution of Singapore has provided for the President of Singapore to be elected directly by Singaporeans every six years. The President is independent of the Government and must not be a member of a political party.

The Constitution gives the President discretionary powers to protect the reserves not accumulated by a government during its current term of office. This is achieved using the two-key system: past reserves can be drawn down only in exceptional circumstances, if the President, after consulting the Council of Presidential Advisers, agrees with the Government's proposal to draw on the past reserves. Past reserves have been drawn to fund special Budget measures

rolled out during the Global Financial Crisis, and more significantly in response to the COVID-19 pandemic.

As a Fifth Schedule company (a category that comprises key statutory boards and Government companies that are listed in the Fifth Schedule under the Constitution), GIC is directly accountable in a number of key areas to the Singapore President. The President is empowered to access any information needed to safeguard the country's reserves, and has full information about the size of the reserves. No one may be appointed to or removed from the GIC Board without the President's concurrence. This additional layer of control ensures that the company appoints only people of integrity who are competent and can be trusted to safeguard these assets.

The Government

The Government mandates GIC to manage Singapore's foreign reserves with the aim of achieving good long-term real returns. The mandate sets out the terms of appointment, investment objectives, investment horizon, risk parameters, and investment guidelines for managing the

reserves. In particular, the overall risk that the Government is prepared for GIC to take in generating long-term investment returns is characterised by the Reference Portfolio.

The Government, represented by the MOF, holds the GIC Board accountable for the overall portfolio performance. It does not direct or influence GIC's decisions on individual investments.

GIC provides monthly and quarterly reports to the Government through the Accountant-General of Singapore. These reports contain the financial statements, holdings and bank account balances. They also provide detailed performance and risk analytics, as well as the distribution of the portfolio by asset class, country and currency.

Once a year, the GIC Management formally meets the Minister for Finance and his officials to report on the risk

and performance of the portfolio in the preceding financial year.

The Auditor-General of Singapore

The Auditor-General, who is appointed by the President of Singapore, submits an annual report to the President and Parliament on his audit of the Government and other bodies managing public funds. This audit includes the Government's portfolio managed by GIC and the main companies in the GIC Group - GIC Asset Management, GIC Real Estate, and GIC Special Investments. These companies are also audited by GIC's internal audit.

Other companies in the Group and the investment holding companies are audited by public accounting firms.

The Government mandates GIC to manage Singapore's foreign reserves with the aim of achieving good long-term real returns.

The GIC Board

The GIC Board is responsible for GIC's Policy Portfolio that determines the long-term asset allocation strategy and for the overall performance of the portfolio. GIC's asset allocation operates within the risk constraints determined by the Government in its mandate to GIC.

The Board is supported by five board committees.

Board Committees

1. Investment Strategies Committee

The Investment Strategies Committee reviews and evaluates management recommendations on asset allocation before they are submitted to the GIC Board for decision. The GIC Management reports to this committee on the performance of the portfolio. The committee recommends the key drivers for GIC's return and risk outcomes, and does not decide on specific deals.

2. Investment Board

The Investment Board provides oversight of GIC's investment processes and its implementation, with particular attention to large individual investments. It is not involved in the asset allocation decisions, which are the responsibility of the GIC Board. It also ensures GIC does not take on undue reputational risk in pursuit of good returns.

3. Risk Committee

The Risk Committee advises the GIC Board on risk matters and supervises the effectiveness of risk management policies and practices. It reviews GIC's risk profile and significant risk issues arising from operations and investments.

4. Audit Committee

The Audit Committee reviews and assesses the adequacy and effectiveness of internal controls. These include financial, operational and compliance controls, as well as risk management policies and systems. It also supervises and evaluates the effectiveness of the

internal audit function. The committee reviews the integrity of the financial reporting process and other related disclosures for GIC companies, significant ethics violations, the impact of changes in the regulatory and legal environment, and issues of fraud and financial loss.

5. Human Resource and Organization Committee

The Human Resource and Organization Committee oversees organizational matters in GIC, including compensation policies, talent development, succession planning, and organizational development.

International Advisory Board

The International Advisory Board provides the GIC Board, board committees, and the GIC Management with global and regional perspectives on geopolitical, economic and market developments. The advice and perspectives cover a range of investment-related matters; in particular, global investment trends, emerging asset classes, and new growth opportunities.

GIC Management

GIC Management formulates and executes investment strategies. Once the long-term asset allocation strategy (as set out in its Policy Portfolio) is decided by the GIC Board, the management seeks to add value through an overlay of active, skill-based strategies (i.e. Active Portfolio). The management comprises five committees with clear reporting lines and accountability.

1. Group Executive Committee

The Group Executive Committee is the highest management body in GIC, bringing together the Group's functional and investment heads. The committee reviews and approves major business, governance, investment and risk policy issues which apply to the entire group, and oversees organizational management initiatives, business planning, and personnel matters (including succession planning, talent development, compensation and performance management).

2. Investment Management Committee

The Investment Management Committee assists the Group Executive Committee in the review and implementation of investment policies and active strategies. It manages investment performance within the investment framework agreed by the Group Executive Committee, through active monitoring markets for investment themes and investible opportunities for the Portfolio, and managing the risk-reward of the Active Portfolio.

3. Group Risk Committee

The Group Risk Committee provides oversight for the risk management policies and practices for the GIC Group. The committee approves frameworks and policies relating to the risk management in areas such as investment, credit, operations, IT, tax, regulations, and compliance. It reviews the effectiveness of controls and monitors GIC's risk profile across all risk types. The committee also acts as a forum for the Chief Risk Officer to solicit views on the strategic risk management issues that would enable him to carry out his duties.

4. Corporate Management Committee

The Corporate Management Committee oversees enterprise-wide business frameworks and programmes for corporate management and business planning. These include policies on human resource, corporate administration, operations, office, and technology that are applicable to the organization.

5. Sustainability Committee

The Sustainability Committee reviews and implements GIC's sustainability policy. The Committee decides on matters relating to GIC's stance on sustainability issues, drives the integration of sustainability into investment and corporate processes, coordinates GIC's partnership with global sustainability organisations and initiatives, and monitors and responds to emerging sustainability issues. The committee reports on GIC's sustainability profile and activities to the Group Executive Committee on a regular basis.

Governance Structure Overview

The following chart summarises the accountability of the GIC Board, International Advisory Board, and board committees.

Terms of Reference											
GIC Board	<ul style="list-style-type: none"> Responsible for the Policy Portfolio which determines GIC's long-term asset allocation strategy and for the overall performance of the GIC Portfolio Does not approve individual investments which are the responsibilities of the GIC Management 										
International Advisory Board	<ul style="list-style-type: none"> Provides views on market developments generally and, in particular, the medium to long-term outlook for investment opportunities around the world 										
Board Committees	<table border="1"> <tbody> <tr> <td>Investment Strategies Committee</td> <td> <ul style="list-style-type: none"> Assists the GIC Board in evaluating GIC Management's recommendations on asset allocation, and in its oversight of overall portfolio performance Recommends the key drivers for GIC's return and risk outcomes Does not approve individual investments </td> </tr> <tr> <td>Investment Board</td> <td> <ul style="list-style-type: none"> Assists the GIC Board in its oversight of GIC's investment process, with particular attention to large individual investments </td> </tr> <tr> <td>Risk Committee</td> <td> <ul style="list-style-type: none"> Oversees the effectiveness of risk management policies and practices in the GIC Group </td> </tr> <tr> <td>Audit Committee</td> <td> <ul style="list-style-type: none"> Looks into the effectiveness of the internal control systems for safeguarding company assets and Client's investment portfolios Reviews integrity of the financial reporting process, significant ethics violations, compliance with regulatory and legal requirements, and issues of fraud and financial losses </td> </tr> <tr> <td>Human Resource and Organization Committee</td> <td> <ul style="list-style-type: none"> Oversees organizational matters in GIC, including compensation policies, talent development, succession planning, and organizational development </td> </tr> </tbody> </table>	Investment Strategies Committee	<ul style="list-style-type: none"> Assists the GIC Board in evaluating GIC Management's recommendations on asset allocation, and in its oversight of overall portfolio performance Recommends the key drivers for GIC's return and risk outcomes Does not approve individual investments 	Investment Board	<ul style="list-style-type: none"> Assists the GIC Board in its oversight of GIC's investment process, with particular attention to large individual investments 	Risk Committee	<ul style="list-style-type: none"> Oversees the effectiveness of risk management policies and practices in the GIC Group 	Audit Committee	<ul style="list-style-type: none"> Looks into the effectiveness of the internal control systems for safeguarding company assets and Client's investment portfolios Reviews integrity of the financial reporting process, significant ethics violations, compliance with regulatory and legal requirements, and issues of fraud and financial losses 	Human Resource and Organization Committee	<ul style="list-style-type: none"> Oversees organizational matters in GIC, including compensation policies, talent development, succession planning, and organizational development
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Human Resource and Organization Committee	<ul style="list-style-type: none"> Oversees organizational matters in GIC, including compensation policies, talent development, succession planning, and organizational development 										
GIC Management	<ul style="list-style-type: none"> Formulates and executes investments strategies Constructs Active Portfolio, with an overlay of active, skill-based strategies 										

6.2 GIC Board, Board Committees, and Management Committees

Board of Directors

Chairman
[Lee Hsien Loong](#)

Deputy Chairman
[Tharman Shanmugaratnam](#)

Directors
[Heng Swee Keat](#)
[Teo Chee Hean](#)
[Lawrence Wong](#)
[Lim Hng Kiang](#)
[Ang Kong Hua](#)
[Peter Seah Lim Huat](#)
[Chew Choon Seng](#)
[Hsieh Fu Hua](#)
[Loh Boon Chye](#)
[Gautam Banerjee](#)
[Koh Boon Hwee](#)
[Dr Tony Tan Keng Yam](#)
[Seck Wai Kwong](#)
[Lim Chow Kiat](#)
[Dr Jeffrey Jaensubhakij](#)

Board Committees

Investment Strategies Committee

Chairman
[Tharman Shanmugaratnam](#)

Deputy Chairman
[Peter Seah Lim Huat](#)

Members	Advisors
Heng Swee Keat	Dr Martin L Leibowitz
Lawrence Wong	G Leonard Baker Jr
Chan Chun Sing	Dr Mohamed El-Erian
Lim Hng Kiang	Carsten Stendevad
Ang Kong Hua	Glenn Hutchins

Investment Board

Chairman
[Ang Kong Hua](#)

Members
[Hsieh Fu Hua](#)
[G Leonard Baker Jr](#)
[Koh Boon Hwee](#)
[Glenn Hutchins](#)

Risk Committee

Chairman
[Lim Hng Kiang](#)

Members	Advisor
Loh Boon Chye	Dr Martin L Leibowitz
Lam Kun Kin	
Seck Wai Kwong	
Ong Chong Tee	

(appointed 15 April 2021)

Audit Committee

Chairman
[Chew Choon Seng](#)

Members
[Loh Boon Chye](#)
[Gautam Banerjee](#)

Human Resource and Organization Committee

Chairman
[Peter Seah Lim Huat](#)

Members
[Chew Choon Seng](#)
[Hsieh Fu Hua](#)
[Gautam Banerjee](#)

International Advisory Board

Chairman
[Teo Chee Hean](#)

Members
[G Leonard Baker Jr](#)
[Dr Mohamed El-Erian](#)
[Uday Kotak](#)
[Carsten Stendevad](#)
[Glenn Hutchins](#)

Management Committees

Group Executive Committee	Investment Management Committee	Group Risk Committee	Corporate Management Committee	Sustainability Committee
<p>Chairman</p> <p>Lim Chow Kiat <i>Chief Executive Officer</i></p>	<p>Chairman</p> <p>Dr Jeffrey Jaensubhakij <i>Group Chief Investment Officer</i></p>	<p>Chairman</p> <p>Jin Yuen Yee <i>Chief Risk Officer</i></p>	<p>Chairman</p> <p>Tay Lim Hock <i>Deputy Group Chief Investment Officer and Chief Operating Officer</i></p>	<p>Chairman</p> <p>Liew Tzu Mi <i>Chief Investment Officer, Fixed Income</i></p>
<p>Members</p> <p>Dr Jeffrey Jaensubhakij <i>Group Chief Investment Officer</i></p> <p>Tay Lim Hock <i>Deputy Group Chief Investment Officer and Chief Operating Officer</i></p> <p>Lim Kee Chong <i>Deputy Group Chief Investment Officer, President (Americas) and Director, Integrated Strategies</i></p> <p>Jin Yuen Yee <i>Chief Risk Officer</i></p> <p>Deanna Ong <i>Chief People Officer</i></p> <p>Wu Choy Peng <i>Chief Technology Officer</i></p> <p>Choo Yong Cheen <i>Chief Investment Officer, Private Equity</i></p> <p>Liew Tzu Mi <i>Chief Investment Officer, Fixed Income</i></p> <p>Bryan Yeo <i>Chief Investment Officer, Public Equities</i></p>	<p>Members</p> <p>Jin Yuen Yee <i>Chief Risk Officer</i></p> <p>Liew Tzu Mi <i>Chief Investment Officer, Fixed Income</i></p> <p>Choo Yong Cheen <i>Chief Investment Officer, Private Equity</i></p> <p>Bryan Yeo <i>Chief Investment Officer, Public Equities</i></p> <p>Ang Eng Seng <i>Chief Investment Officer, Infrastructure</i></p> <p>Lee Kok Sun <i>Chief Investment Officer, Real Estate</i></p> <p>Kevin Bong <i>Director, Economics & Investment Strategy</i></p> <p>Betty Tay <i>Director, External Managers</i></p> <p>Sam Kim <i>Director, Portfolio Execution</i></p> <p>Dr Prakash Kannan <i>Chief Economist</i></p> <p>Arjun Khullar <i>Head, Integrated Strategies</i></p>	<p>Members</p> <p>Charles Lim <i>General Counsel</i></p> <p>Kevin Bong <i>Director, Economics & Investment Strategy</i></p> <p>Chan Hoe Yin <i>Director, Investment Services (Private Markets and Finance)</i></p> <p>Leong Wing Kwan <i>Director, Investment Services (Public Markets)</i></p> <p>Sam Kim <i>Director, Portfolio Execution</i></p> <p>Daniel Loo <i>Head, Portfolio Solutions Group, Fixed Income</i></p> <p>Ravi Balasubramanian <i>Head, India Equity Investments, Public Equities</i></p> <p>Goh Chin Kiong <i>Head, Research & Strategic Planning and Head, Asia Strategic Investments Group, Real Estate</i></p> <p>William Ng <i>Head, Investment Risk Management, Risk and Performance Management</i></p> <p>John Tang <i>Co-Head, Global Investments, Strategy & Risk, Private Equity</i></p>	<p>Members</p> <p>Deanna Ong <i>Chief People Officer</i></p> <p>Wu Choy Peng <i>Chief Technology Officer</i></p> <p>Charles Lim <i>General Counsel</i></p> <p>Wong Ai Chiat <i>Director, Corporate Administration & Infrastructure</i></p> <p>Jason Leow <i>Director, Corporate Affairs & Communications</i></p> <p>Shang Thong Chie <i>Director, Enterprise Strategy</i></p> <p>Peter Goh <i>Director, Human Resource & Organization</i></p> <p>Vincent Cheang <i>Director, Internal Audit</i></p> <p>Chan Hoe Yin <i>Director, Investment Services (Private Markets and Finance)</i></p> <p>Leong Wing Kwan <i>Director, Investment Services (Public Markets)</i></p> <p>Elaine Chan <i>Deputy Director, Investment Services (Private Markets and Finance)</i></p> <p>Taran Khera <i>Head, Data Strategy</i></p> <p>William Ng <i>Head, Investment Risk Management, Risk and Performance Management</i></p>	<p>Members</p> <p>Shang Thong Chie <i>Director, Enterprise Strategy</i></p> <p>Elaine Chan <i>Deputy Director, Investment Services (Private Markets and Finance)</i></p> <p>Rachel Teo <i>Head, Futures Unit, Economics & Investment Strategy</i></p> <p>Doe Tien Xuan <i>Head, Research, Public Equities</i></p> <p>Boon Chin Hau <i>Head, Infrastructure (Asia, Latin America & Credit)</i></p> <p>William Ng <i>Head, Investment Risk Management, Risk and Performance Management</i></p> <p>Wolfgang Schwerdtle <i>Head, Direct Investments Group, Latin America, Private Equity</i></p> <p>Tracy Stroh <i>Region Head, Real Estate, Europe</i></p> <p>Hannah Garcia <i>Co-Head, Equities, External Managers</i></p> <p>Ken Lim <i>Deputy Head, Asia Pacific Equities</i></p>

6.3 Organizational Structure

Board of Directors

Board Committee

Investment Strategies Committee Risk Committee Human Resource and Organization Committee
Investment Board Audit Committee

Group Executive Committee

[Lim Chow Kiat](#)

Chief Executive Officer

[Dr Jeffrey Jaensubhakij](#)

Group Chief Investment Officer

[Tay Lim Hock](#)

Deputy Group Chief
Investment Officer and
Chief Operating Officer

[Lim Kee Chong](#)

Deputy Group Chief
Investment Officer

[Jin Yuen Yee](#)

Chief Risk Officer

[Deanna Ong](#)

Chief People Officer

[Wu Choy Peng](#)

Chief Technology Officer

[Choo Yong Cheen](#)

Chief Investment Officer,
Private Equity

[Liew Tzu Mi](#)

Chief Investment Officer,
Fixed Income

[Bryan Yeo](#)

Chief Investment Officer,
Public Equities

Corporate Headquarters

[Wong Ai Chiat](#)

Corporate Administration
& Infrastructure

[Jason Leow](#)

Corporate Affairs &
Communications

[Shang Thong Chie](#)

Enterprise Strategy

[Deanna Ong](#)

Governance & Client Relations

[Peter Goh](#)

Human Resource &
Organization

[Vincent Cheang](#)

Internal Audit

[Chan Hoe Yin](#)

Investment Services
(Private Markets and Finance)

[Leong Wing Kwan](#)

Investment Services
(Public Markets)

[Charles Lim](#)

Legal & Compliance

[Jin Yuen Yee](#)

Risk & Performance
Management

[Wu Choy Peng](#)

Technology

Investment Groups

Public Equities

[Bryan Yeo](#)

Chief Investment Officer

Fixed Income

[Liew Tzu Mi](#)

Chief Investment Officer

Private Equity

[Choo Yong Cheen](#)

Chief Investment Officer

Real Estate

[Lee Kok Sun](#)

Chief Investment Officer

Infrastructure

[Ang Eng Seng](#)

Chief Investment Officer

Integrated Strategies

[Lim Kee Chong](#)

Director

External Managers

[Betty Tay](#)

Director

Portfolio Execution

[Sam Kim](#)

Director

Economics & Investment Strategy

[Kevin Bong](#)

Director

[Dr Prakash Kannan](#)

Chief Economist

Global Offices

[Lim Kee Chong](#)

President (Americas)

[Arjun Gupta](#)

President (Europe)

[Sharon Sun](#)

Beijing

[Kishore Gotety](#)

Mumbai

[Eric Wilmes](#)

San Francisco

[Wolfgang Schwerdtle](#)

São Paulo

[Cai Wenzheng](#)

Seoul

[Li Yu](#)

Shanghai

[Ken Sugimoto](#)

Tokyo

International Advisory Board

6.4 Board, Board Committee Members, and Advisors



Lee Hsien Loong
Prime Minister

Lee Hsien Loong has been Singapore's Prime Minister since 2004. Mr Lee is the Secretary-General of the People's Action Party (PAP). He was first elected Member of Parliament (MP) in 1984, and has been re-elected eight times, most recently as an MP for the Ang Mo Kio Group Representation Constituency. Mr Lee is Chairman of GIC, and also chairs the Research, Innovation and Enterprise Council, an international panel that provides strategic direction for Singapore's Research and Development efforts.

Before becoming Prime Minister, Mr Lee had held various Ministerial appointments, including being Deputy Prime Minister, Minister for Finance, Minister in the Prime Minister's Office, Minister for Trade and Industry and Second Minister for Defence. He was concurrently the Chairman of the Monetary Authority of Singapore from 1998 to 2004. Before joining politics, Mr Lee had served in the Singapore Armed Forces, retiring as a Brigadier-General.

Mr Lee holds a B.A. in Mathematics and a Diploma in Computer Science from the University of Cambridge. He holds a Master in Public Administration and is a Mason Fellow at the Harvard Kennedy School.



Tharman Shanmugaratnam
*Senior Minister and
Coordinating Minister
for Social Policies*

Tharman Shanmugaratnam is Senior Minister of Singapore. He is also Coordinating Minister for Social Policies, and advises the Prime Minister on economic policies. He is, concurrently, Chairman of the Monetary Authority of Singapore. He is Deputy Chairman of GIC and chairs the Investment Strategies Committee. Tharman was Deputy Prime Minister from 2011 to 2019, and served as Minister for Finance from 2007 to 2015. Tharman chairs the Group of Thirty, an independent global council of economic and financial leaders. He co-chairs the G20 High Level Independent Panel on financing the global commons for pandemic preparedness and response. He is also on the External Advisory Group to the IMF Managing Director and the World Economic Forum's Board of Trustees, and co-chairs the Global Education Forum. He earlier led the G20 Eminent Persons Group on Global Financial Governance and the International Monetary and Financial Committee, the key policy forum of the IMF.

Tharman studied economics at the London School of Economics and Political Science and Cambridge University. He later obtained a Master in Public Administration at Harvard's Kennedy School, where he was given the Lucius N Littauer Fellow award.



Heng Swee Keat

Deputy Prime Minister and Coordinating Minister for Economic Policies

Heng Swee Keat is Deputy Prime Minister and Coordinating Minister for Economic Policies. He is a member of the GIC Investment Strategies Committee. Mr Heng chairs the Future Economy Council and the National Research Foundation. He also served as Minister for Education from 2011 to 2015 and Minister for Finance from 2015 to 2021. Before entering politics in 2011, he was Managing Director of the Monetary Authority of Singapore. He also served as Permanent Secretary of the Ministry of Trade and Industry, as well as CEO of the then-Trade Development Board. Between 1997 and 2000, he was Principal Private Secretary to then-Senior Minister Lee Kuan Yew.

Mr Heng holds a Master of Arts in Economics from Cambridge University, and a Master in Public Administration from the Kennedy School of Government at Harvard University.



Teo Chee Hean

Senior Minister and Coordinating Minister for National Security

Teo Chee Hean is Senior Minister and Coordinating Minister for National Security. He chairs the GIC International Advisory Board. He currently oversees the Smart Nation and Digital Government Group, National Security Coordination Secretariat, National Population and Talent Division, and National Climate Change Secretariat under the Prime Minister's Office. He was Deputy Prime Minister from 2009 to 2019, and has held ministerial appointments in Home Affairs, Defence, Education, Finance, Environment, and Communications. Prior to entering politics in 1992, he was the Chief of Navy holding the rank of Rear Admiral.

Mr Teo graduated with a Bachelor of Science (First Class Honours) in Electrical Engineering and Management Science from the University of Manchester. He holds a Master of Science (Distinction) in Computing Science from Imperial College and a Master in Public Administration from Harvard University.



Lawrence Wong

Minister for Finance

Lawrence Wong is Minister for Finance. He is a member of the GIC Investment Strategies Committee. He is Deputy Chairman of the Monetary Authority of Singapore. He also chairs the Singapore Labour Foundation, and is a member of the Research Innovation and Enterprise Council and the National Research Foundation Board. Mr Wong began his career as a civil servant, and held positions such as Chief Executive of the Energy Market Authority and the Principal Private Secretary to Prime Minister Lee Hsien Loong. He was elected a Member of Parliament in May 2011 and subsequently held ministerial appointments in Defence, Education, Communications and Information, Culture, Community and Youth, and National Development.

Mr Wong obtained his Bachelor's and Master's degrees in Economics from the University of Wisconsin-Madison and the University of Michigan, Ann Arbor, respectively. He also holds a Master in Public Administration from the Kennedy School of Government at Harvard University.



Lim Hng Kiang

Special Advisor to Ministry of Trade & Industry

Lim Hng Kiang is the Special Advisor to the Ministry of Trade and Industry. He chairs the GIC Risk Committee and is a member of the Investment Strategies Committee. He sits on the Monetary Authority of Singapore board. Previously, Mr Lim was Minister for Trade and Industry from 2004 to 2015, when the Ministry was carved into two portfolios. He was then appointed Minister for Trade and Industry (Trade) until he stepped down in May 2018. In his current appointment, Mr Lim provides advice on the Ministry's economic strategies to grow Singapore's capabilities and international economic space. He has held ministerial appointments in National Development, Health, Foreign Affairs, Finance and the Prime Minister's Office. Before entering politics in 1991, he was Deputy Secretary in the Ministry of National Development.

Mr Lim graduated from Cambridge University with First Class Honours (Distinction) in Engineering. He later earned a Master in Public Administration from Harvard University.



Ang Kong Hua

*Chairman
Sembcorp Industries*

Ang Kong Hua is the Chairman of Sembcorp Industries. He chairs the GIC Investment Board and is a member of the Investment Strategies Committee. He has helmed several of Singapore's biggest companies, bringing years of experience spanning the manufacturing, services and financial sectors. Mr Ang started his career at the Economic Development Board. He then joined DBS Bank at its inception in 1968 and pioneered its investment banking division. From 1974, he was CEO of NSL (formerly NatSteel) until he retired in 2003, and stayed as its Executive Director until 2010. He was previously Chairman of Singapore Telecommunications and Singapore Post, Vice Chairman of Neptune Orient Lines, and a Director of DBS Bank, CIMC Raffles Offshore (Singapore) and k1 Ventures.

Mr Ang holds a Bachelor of Science (Honours) in Economics from the University of Hull.



Chew Choon Seng

*Former Chairman
Singapore Exchange Ltd*

Chew Choon Seng chairs the GIC Audit Committee and is a member of the Human Resource and Organization Committee. He was the CEO of Singapore Airlines from 2003 until his retirement in 2010, and a Governor of the International Air Transport Association from 2003 to 2010 and its Chairman from 2006 to 2007. He was a board director of the Singapore Exchange from 2004 and its Chairman from 2011 to 2016, and Chairman of the Singapore Tourism Board from 2011 to 2016. From 2017 to 2018, he was Chairman of the Council that revamped Singapore's Code of Corporate Governance.

Mr Chew graduated with a Bachelor of Mechanical Engineering (First Class Honours) from the University of Singapore. He also holds a Master of Science in Operations Research and Management Studies from the Imperial College of Science and Technology at the University of London.



Peter Seah Lim Huat

*Chairman
DBS Group Holdings Ltd*

Peter Seah Lim Huat is the Chairman of DBS Group Holdings. He chairs GIC's Human Resource and Organization Committee, and is Deputy Chairman of the Investment Strategies Committee. He heads the boards of Singapore Airlines, LaSalle College of the Arts, and chairs the National Wages Council. He was a banker for 33 years before retiring as Vice Chairman and CEO of the former Overseas Union Bank in 2001. He was also President and CEO of the Singapore Technologies Group. Mr Seah also serves on the boards of Fullerton Financial Holdings and STT Communications.

Mr Seah holds an honours degree in Business Administration from the University of Singapore.



Hsieh Fu Hua

*Co-Founder and Advisor
PrimePartners Group*

Hsieh Fu Hua is Co-Founder and Advisor to the PrimePartners Group, Chairman of Asia Capital Reinsurance Group Pte Ltd and Chairman of Eastspring Investments Group Pte Ltd. He is a member of the GIC Investment Board and the Human Resource and Organization Committee. He also serves on the boards of several non-profit organizations. He chairs the National University of Singapore and the National University Health System. Previously, he was President of the National Council of Social Service, and Chairman of Stewardship Asia Centre and Chairman of the National Gallery Singapore. Mr Hsieh started his career in merchant banking and capital markets in 1974 when he joined Morgan Grenfell Asia Holdings upon graduation, eventually rising to head the organization. He subsequently served as Group Managing Director of BNP Prime Peregrine Group Hong Kong, CEO of Singapore Exchange, President of Temasek Holdings, Chairman of Tiger Airways, and Chairman of United Overseas Bank.

Mr Hsieh graduated from the NUS Business School.



Loh Boon Chye

*Chief Executive Officer
Singapore Exchange Ltd*

Loh Boon Chye is the CEO of Singapore Exchange. He is a member of the GIC Risk and Audit Committees. With close to 30 years of experience in the financial industry, he has played a key role in the development of Southeast Asia's capital markets. Prior to SGX, he was Deputy President and Head of Asia Pacific Global Markets, and Country Executive for Singapore and Southeast Asia at Bank of America-Merrill Lynch. He spent 17 years in Deutsche Bank where his last role was the Head of Corporate and Investment Banking for Asia Pacific. He started his career with the Monetary Authority of Singapore and Morgan Guaranty Trust Co. of New York. He serves on the boards of Singapore Economic Development Board and World Federation of Exchanges.

Mr Loh holds a Bachelor of Engineering degree from the National University of Singapore.



Koh Boon Hwee

*Chairman
Altara Ventures Pte Ltd*

Koh Boon Hwee is the Chairman of Altara Ventures Pte Ltd. He sits on the GIC Investment Board. He is also the Chairman of Sunningdale Tech, Far East Orchard, Rippledot Capital Advisers, the Securities Industry Council and Agilent Technologies. He started his career in 1977 at Hewlett-Packard and rose to become its Managing Director in Singapore from 1985 to 1990. He was Executive Chairman of the Wuthelam Group from 1991 to 2000. Mr Koh was also the Chairman of Singapore Telecom, Singapore Airlines and DBS Bank at various times.

Mr Koh holds a Bachelor's Degree (First Class Honours) in Mechanical Engineering from Imperial College London, and a Master in Business Administration (Distinction) from Harvard Business School. He also received an honorary doctorate from Imperial College London.



Gautam Banerjee

*Senior Managing Director
and Chairman
Blackstone Singapore*

Gautam Banerjee is a Senior Managing Director and Chairman of Blackstone Singapore. He is a member of the GIC Audit Committee and the Human Resource and Organization Committees. Before joining Blackstone, Mr Banerjee spent over 30 years with PricewaterhouseCoopers, serving as Executive Chairman of PwC Singapore for nine years until he retired in 2012. He serves on the boards of Singapore Airlines, Singapore Telecommunications Ltd and Piramal Enterprises. He is also the Chairman of Singapore Centre for Social Enterprise (raiSE).

Mr Banerjee holds a Bachelor of Science (Honours) in Accounting and Financial Analysis and an Honorary Doctor of Laws (LLD) from the University of Warwick. He is a Fellow of the Institute of Chartered Accountants in England and Wales, the Institute of Singapore Chartered Accountants and the Singapore Institute of Directors.



Dr Tony Tan Keng Yam

*Special Advisor
GIC*

Dr Tony Tan Keng Yam has served as the Minister for Finance, Trade and Industry, Education and Deputy Prime Minister and Co-ordinating Minister for Security and Defence. He was the Chairman and CEO of OCBC Bank from 1992 to 1995. In September 2005, after leaving the Cabinet, Dr Tan was appointed Deputy Chairman and Executive Director of GIC, Chairman of the National Research Foundation and Chairman of SPH. In July 2011, Dr Tan contested in the Presidential Election and was sworn in as the seventh President of the Republic of Singapore on 1 September 2011 for a 6-year term. In September 2017, he was appointed the Honorary Patron and Distinguished Senior Fellow at Singapore Management University.

Dr Tan graduated from the University of Singapore with a First Class Honours Degree in Physics. He holds a Master of Science degree from MIT and a PhD in Applied Mathematics from the University of Adelaide.



Seck Wai Kwong

*Chief Executive Officer
Eastspring Investments*

Seck Wai Kwong is the Chief Executive Officer of Eastspring Investments, the Asian investment management arm of Prudential Plc. He is a member of the GIC Risk Committee. He joined Eastspring in April 2019 from State Street Bank and Trust Company, where he was Chief Executive Officer, Asia Pacific. Prior to joining State Street, he was Chief Financial Officer of the Singapore Exchange from 2003 to 2011 and has held senior positions in the Monetary Authority of Singapore, GIC, Lehman Brothers and DBS Bank. He is a Trustee and chairs the Investment Committee at the Singapore Police Force's pension fund. He serves on the Advisory Council of the Hong Kong University of Science and Technology Business School.

Mr Seck graduated with First Class Honours in Economics from Monash University where he is a Vice Chancellor Professorial Fellow. He also holds a Master in Business Administration from the Wharton School at the University of Pennsylvania.



Chan Chun Sing

*Minister for Education,
Minister-in-charge of
Public Service*

Chan Chun Sing is Minister for Education. He is concurrently Minister-in-charge of the Public Service. Mr Chan served with the Singapore Armed Forces (SAF) from 1987 to 2011. He was elected a Member of Parliament in May 2011 and subsequently held positions in various ministries, including as Minister for Social and Family Development, 2nd Minister for Defence and Minister for Trade and Industry. Mr Chan was also Secretary-General of the National Trades Union Congress and Minister in the Prime Minister's Office.

Mr Chan holds a Bachelor's degree (First Class Honours) in Economics from Cambridge University under the SAF (Overseas) and President's Scholarship. He was awarded the Distinguished Master Strategist Award 1998 by the US Army Command and Staff College. In 2005, he completed the Sloan Fellows Programme at the Massachusetts Institute of Technology under the Lee Kuan Yew Scholarship.



Lam Kun Kin

*Former Senior Executive
Vice President,
Former Head of Global
Treasury & Investment
Banking
Oversea-Chinese
Banking Corporation
(OCBC)*

Lam Kun Kin was Senior Executive Vice President and Head of Global Treasury & Investment Banking at OCBC Bank. He is a member of the GIC Risk Committee. Previously at OCBC, he was responsible for the Global Markets businesses and Asset Liability management, and also had oversight of the Global Investment Banking businesses till early 2020. Prior to joining OCBC, Mr Lam held senior management positions at GIC, Citibank Singapore and Temasek Holdings. He was appointed by the Monetary Authority of Singapore as Co-Chairman of the Singapore Foreign Exchange Market Committee and Chair of the enhanced SIBOR committee till 2020. Mr Lam held previous Board positions in Adira Finance (Indonesia), OCBC Securities (Singapore), Bank of Singapore and AVIC Trust (China). Currently, he serves as deputy President on the board of REACH Community Service Society.

Mr Lam holds a Bachelor of Accountancy (Honours) from the National University of Singapore. He is a Chartered Financial Analyst, Fellow Chartered Accountant of Singapore, and Institute of Banking and Finance (IBF) Distinguished Fellow.



Ong Chong Tee

*Deputy Chairman
ACRA*

Mr Ong Chong Tee is Deputy Chairman of Accounting and Corporate Regulatory Authority (ACRA) from April 2021. He is a member of the GIC Risk Committee. Previously, Mr Ong was with the Monetary Authority of Singapore (MAS) for 35 years and held senior positions in the areas of reserve management, central banking monetary operations and market development. Mr Ong was MAS' Deputy Managing Director of Financial Supervision overseeing the financial sectors of banking, insurance, capital markets, payment services as well as technology and money laundering risks from 2014 to 2021.

Mr Ong holds a Honours Degree in Chemical Engineering from the National University of Singapore. He was awarded the Public Administration (Gold Medal) in August 2007 by the President of Singapore.



Dr Martin Leibowitz

*Senior Advisor
Morgan Stanley*

Dr Martin L. Leibowitz is a Senior Advisor of Morgan Stanley, and Vice Chairman of its Research Department. He advises GIC's Investment Strategies and Risk Committees. Prior to joining Morgan Stanley as a Managing Director in the Research Department, Dr Leibowitz was the Vice Chairman and Chief Investment Officer of TIAA-CREF, responsible for the management of more than US\$300 billion in equity, fixed income and real estate assets. He was also Director of Global Research at Salomon Brothers, and has received wide recognition for his writings on various financial topics and investment analysis. He now serves on the investment advisory committees of The Rockefeller Foundation, The Carnegie Foundation, the IMF Pension Fund, the American Academy of Arts and Sciences, and The Institute for Advanced Study.

Dr Leibowitz holds both Bachelor of Arts and Master of Science degrees from the University of Chicago and a PhD in Mathematics from the Courant Institute of New York University.



Dr Mohamed El-Erian

*Chief Economic Advisor
Allianz*

Dr Mohamed El-Erian is President of Queens' College Cambridge, Chief Economic Advisor at Allianz, and Chair of the Gramercy Funds. He is an advisor to the GIC Investment Strategies Committee. He serves on the boards of Barclays and Under Armour. Previously, he was CEO and co-CIO of PIMCO from 2007 to 2014, and former chair of President Obama's Global Development Council. He was President and CEO of Harvard Management Company, Managing Director at Salomon Smith Barney/Citigroup, and Deputy Director at the International Monetary Fund in Washington, DC. Dr El-Erian writes regularly, and is a Financial Times Contributing Editor and Bloomberg View columnist. He has two New York Times' best sellers – the 2008 "When Markets Collide" and the 2016 "The Only Game in Town" – and was named four years in a row to the Foreign Policy list of Top Global Thinkers.

Dr El-Erian holds a BA in Economics from Cambridge University, as well as a Master's and PhD in Economics from Oxford University.



G. Leonard Baker

*Limited Partner
Sutter Hill Ventures*

Leonard Baker is a Limited Partner at Sutter Hill Ventures. He advises GIC's Investment Strategies Committee and sits on the Investment Board. He was a trustee of Yale University, where he chaired the Finance Committee and served on the Yale Investment Committee from 1990 to 2015. Mr Baker is a board member of Stanford Management Company, advises the David and Lucile Packard Foundation Investment Committee, and is a board member of the US Environmental Defense Fund. He is also a member of the Board of Trustees of Berklee College of Music in Boston. In 2005, he was conferred the Public Service Star Award in Singapore for his contributions in the areas of education and investment management.

Mr Baker holds a Bachelor of Arts in Mathematics from Yale University and a Master in Business Administration from Stanford University.



Uday Kotak

*Managing Director and
CEO
Kotak Mahindra Bank*

Uday Kotak is Founder, Managing Director and Chief Executive Officer of Kotak Mahindra Bank Limited (KMBL). He has led the group in a broad range of financial services for over 35 years. Mr Kotak believes that the true measure of performance is sustainable value creation. Today, KMBL is among India's most efficient, high-performing and trusted banks. The Group's vision for equitable prosperity extends beyond financial services. The Kotak Education Foundation works with some of India's most economically underprivileged communities, attempting to alleviate poverty through education and livelihood programmes. Mr Kotak is a member of the International Advisory Panel of Monetary Authority of Singapore. He has been awarded the Ernst & Young World Entrepreneur of the Year Award in 2014.

Mr Kotak holds a Bachelor's degree in Commerce and a Master's in Management Studies degree from Jajmalal Bajaj Institute of Management Studies, Mumbai.



Carsten Stendevad

*Co-Chief Investment
Officer for Sustainability
Bridgewater Associates*

Carsten Stendevad joined Bridgewater in 2017. He serves as Co-CIO for Sustainability and oversees the firm's activities in China. Mr Stendevad is an advisor to the GIC Investment Strategies Committee. He is also a Board Member of Novo Holdings and the Danish Recapitalization Fund. Prior to Bridgewater, Mr Stendevad was the CEO of ATP and a Managing Director in Citi's Investment Banking Division. Earlier in his career, Mr Stendevad worked at McKinsey & Company and the Central Bank of Denmark. He served on the Global Steering Committee for the Blended Finance Taskforce, and on the Danish Committee for Corporate Governance.

Mr Stendevad holds a Bachelor of Science and Master of Science degree in Economics from the University of Copenhagen and a Master of Public Policy from the Harvard Kennedy School of Government. He is a recipient of the Order of Dannebrog awarded by HMQ Margrethe II of Denmark.



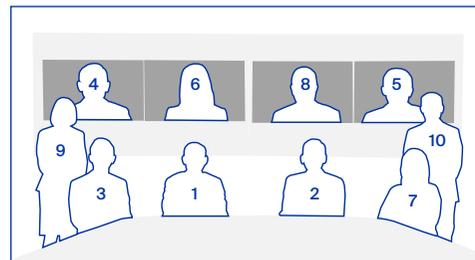
Glenn Hutchins

*Chairman
North Island*

Glenn Hutchins is Chairman of North Island and North Island Ventures and a co-founder of Silver Lake. He is an advisor to the GIC Investment Strategies Committee and sits on the Investment Board. He is a director of AT&T, Virtu Financial and Digital Currency Group; Co-Chairman of the Brookings Institution and CARE; Vice Chair of the Obama Foundation; on the Executive Committee of the Boston Celtics Basketball Team; and a board member of the New York Presbyterian Hospital. He also founded the Hutchins Family Foundation to manage his philanthropic initiatives in academic research and public policy. Mr Hutchins was Director and Chair of the Audit and Risk Committee of the Federal Reserve Bank of New York from 2011 to 2020. He previously served President Clinton in both the transition and the White House as a special advisor on economic and healthcare policy.

Mr Hutchins holds a Bachelor of Arts from Harvard College, a Master in Business Administration from Harvard Business School, and a Juris Doctor degree from Harvard Law School.

6.5 Executive Management



- 1 **Lim Chow Kiat**
Chief Executive Officer
- 2 **Dr Jeffrey Jaensubhakij**
Group Chief Investment Officer
- 3 **Tay Lim Hock**
Deputy Group Chief Investment Officer and Chief Operating Officer
- 4 **Lim Kee Chong**
Deputy Group Chief Investment Officer, President (Americas) and Director, Integrated Strategies
- 5 **Jin Yuen Yee**
Chief Risk Officer
- 6 **Deanna Ong**
Chief People Officer
- 7 **Wu Choy Peng**
Chief Technology Officer
- 8 **Choo Yong Cheen**
Chief Investment Officer, Private Equity
- 9 **Liew Tzu Mi**
Chief Investment Officer, Fixed Income
- 10 **Bryan Yeo**
Chief Investment Officer, Public Equities



Lim Chow Kiat
Chief Executive Officer

Lim Chow Kiat was appointed Chief Executive Officer in January 2017. He chairs the Group Executive Committee in governing and reviewing all key investment, risk and business decisions. He is overall responsible for the performance of GIC, and oversees the development and execution of long-term strategies. Mr Lim was previously Group Chief Investment Officer of GIC and Deputy Group President. He joined GIC as a portfolio manager upon graduation in 1993 and rose to head the Fixed Income, Currency and Commodities Department. He was President, Europe in 2009, overseeing investments and relationships in Europe, Africa and the Middle East before his appointment as President of GIC Asset Management in 2011. Mr Lim is the Chairman of the Wealth Management Institute and serves on the boards of Nanyang Technological University, National Research Foundation, Enterprise Singapore and FCLTGlobal. He is also a member of Agence France Trésor's Strategic Committee, the UK Government Investment Council and the WEF International Business Council.

Mr Lim holds a Bachelor's degree (First Class Honours) in Accountancy from Nanyang Technological University.



Tay Lim Hock
Deputy Group Chief Investment Officer and Chief Operating Officer

Tay Lim Hock was appointed Chief Operating Officer in July 2019, concurrent to his role as Deputy Group Chief Investment Officer. He oversees investment services, technology, and corporate administration to deliver ongoing business services and long-term operational capabilities, and supports the Group CIO in overseeing GIC's entire investment portfolio. He joined GIC's Asian Private Equity (PE) team in 1995, and was posted to London in 2000 as Head PE Europe and to San Francisco in 2003 as Head PE US. He became PE's Global Head of the Funds and Co-Investment Group in 2008, and President of PE & Infrastructure in 2011. Mr Tay returned to London as President (Europe) and Deputy Group Chief Investment Officer in 2017. Prior to GIC, he worked as an Aeronautical Engineer with the Republic of Singapore Air Force.

Mr Tay holds a Masters in Aeronautical Engineering from l'Ecole Nationale de l'Aviation Civile, and completed the Stanford Executive Program.



Dr Jeffrey Jaensubhakij
Group Chief Investment Officer

Dr Jeffrey Jaensubhakij was appointed Group Chief Investment Officer in January 2017. He oversees GIC's total investment portfolio, and works with investment group heads to manage and monitor investment activities across all asset classes. He also leads the development of short- and long-term investment policies to optimize the risk-reward of the total portfolio across changing investment environments. He joined GIC in 1998 as a Senior Economist covering the US economy and was subsequently appointed Co-Head of Asset Allocation Strategy in the Economics & Strategy Department. He was Head of Total Return Equities and the US Equities teams based in GIC's New York Office from 2003 to 2011. He was subsequently appointed President, Europe in 2011 coordinating GIC's investment activities in Europe across public and private asset classes, President, Public Markets and Director of Public Equities in 2013, and Deputy Group Chief Investment Officer in 2016.

Dr Jaensubhakij holds a Bachelor of Arts degree in Economics from Cambridge University, as well as a Master's and a PhD in Economics from Stanford University.



Lim Kee Chong
Deputy Group Chief Investment Officer, President (Americas) and Director, Integrated Strategies

Lim Kee Chong was appointed Deputy Group Chief Investment Officer and Director of Integrated Strategies Group in April 2013. He is concurrently President (Americas) and is based in GIC's New York office. He provides leadership oversight for GIC's operations in Americas and drives regional strategic collaboration, business development and culture across the GIC teams. He extends GIC external business networks with partners, regulators and policymakers to strengthen GIC's platform in the Americas. Mr Lim supports the Group CIO in overseeing GIC's entire investment portfolio. He joined GIC in 1987, and built his career in the Equities Department. He was appointed Head of Global Equities in 2010. During his tenure at GIC, he has managed portfolios running the gamut of developed market equities, as well as global sector and global equities portfolios. As Director of Integrated Strategies, he heads a unit that looks at opportunities in both public and private companies.

Mr Lim holds a Bachelor's degree in Economics from the University of Tokyo, where he studied under a government scholarship.



Jin Yuen Yee
Chief Risk Officer

Jin Yuen Yee was appointed Chief Risk Officer in April 2020. He heads the overall risk function for GIC, and oversees the implementation of risk policies, manages significant risk issues from investments and operations. Prior to this, he was Deputy Chief Risk Officer and Director of Risk and Performance Management Department. Since joining GIC in 2002 as a portfolio manager in Foreign Exchange, Mr Jin has held several roles such as Head of Treasury and Currency Management, Head of Real Return Programme, Head of Fixed Income Global Macro, and Head of Fixed Income Macro Research and Strategy. Mr Jin served as the Senior Special Assistant to the Chief Executive Officer and Group Chief Investment Officer from 2015 to 2017. Mr Jin serves on the Temasek Polytechnic Board of Governors

Mr Jin holds a Diploma in Marketing from the Chartered Institute of Marketing, a Master of Science in Wealth Management from Singapore Management University and a Master of Engineering from the Technical University of Berlin.



Wu Choy Peng
Chief Technology Officer

Wu Choy Peng was appointed Chief Technology Officer in August 2017. She oversees the development, delivery, and operations of application systems, data and technology platforms, and core infrastructure to drive operational efficiencies and to enable strategic business outcomes. Before joining GIC, she was Group Chief Information Officer of Singapore Telecommunications Limited and held the same role in Neptune Orient Lines Group from 2006 to 2012. Ms Wu joined the National Computer Board upon graduation, and held various senior appointments including the Singapore Government's Chief Information Officer, Deputy Chief Executive (Industry) of the Infocomm Development Authority and Chief Information Officer of the Ministry of Education. Ms Wu is on the board and executive committee of the National University Health System, and chairs its Board IT Committee. She is also on the board of Infocommunications Media Development Authority Integrated Health Information Systems.

Ms Wu holds a Bachelor of Science (Honours) degree in Computer/Communication Science/Mathematics and a Master of Science in Computer Science/Engineering, from the University of Michigan, Ann Arbor.



Deanna Ong
Chief People Officer

Deanna Ong was appointed Chief People Officer in April 2017. She oversees human resource strategy to attract, develop and retain talent for enterprise performance, seeded with the right values and culture for GIC. Her areas of focus include leadership development, reward and engagement for business effectiveness, and organizational culture. She has been responsible for Human Resource & Organization and Corporate Governance since 2012. Ms Ong was Director, Finance from 2009 to 2014, during which she headed the Finance Group responsible for financial management across GIC's portfolio, covering financing arrangements for assets, tax planning, investment holding structures, accounting and management of group revenue and expenditure. Prior to joining GIC in 1994, she was a tax accountant with Arthur Andersen. Ms Ong is currently a board member of Swiss Re Ltd and the International Forum of Sovereign Wealth Funds.

Ms Ong holds a Bachelor of Accountancy from Nanyang Technological University. She has completed the Stanford Executive Program from the Stanford University Graduate School of Business.



Choo Yong Cheen
Chief Investment Officer
Private Equity

Choo Yong Cheen was appointed Chief Investment Officer for Private Equity in July 2016. He oversees the Private Equity portfolio, which includes investments in buyouts, minority growth, Pre-IPOs, venture capital, private credit and special situations. He joined GIC in 1996 and held various roles in the Economics and Strategy Department. Mr Choo transferred to the Equities Department in 2002, where he managed an Asia regional equities portfolio, specialising in China. He transferred to GIC Special Investments to run GIC's Private Equity business across Asia in 2011, before being posted to London in 2014 to run the European Private Equity business. Mr Choo is also currently the Head of GIC's China Business Group.

Mr Choo holds a Bachelor of Science (First Class Honours) and a Master of Science (with Distinction) in Econometrics and Mathematical Economics from the London School of Economics and Political Science. He has also completed the Senior Executive Programme from the London Business School.



Liew Tzu Mi

*Chief Investment Officer
Fixed Income*

Liew Tzu Mi was appointed Chief Investment Officer for Fixed Income in July 2016. She oversees the Fixed Income portfolio which includes investments in macro, credit, securitized products, convertibles, and cross-asset systematic investing. She joined GIC in 1998 and built her career in the Fixed Income department. She was responsible for the Emerging Markets and Foreign Exchange business from 2008 to 2010, headed up the Macro Research and Strategy team at its inception in 2011 and the Global Macro business from 2011 to 2016. She chairs GIC's Currency Risk Management Committee which is responsible for managing the currency exposure of the total portfolio and the Sustainability Committee which drives the integration of sustainability into GIC's investment and corporate processes. Ms Liew is a member of the Ministry of Defence SAVER-Premium Board of Trustees and the Central Provident Fund Board.

Ms Liew holds a Bachelor of Arts (First Class Honours) in Engineering and Master of Arts from the University of Cambridge, and a Master of Science in Engineering from Princeton University. She has completed the Advanced Management Program from INSEAD.



Bryan Yeo

*Chief Investment Officer
Public Equities*

Bryan Yeo was appointed Chief Investment Officer for Public Equities in June 2016. He focuses on capital allocation, drives the aggregate equities portfolio construction and oversees the equities portfolio which invests across global developed markets and emerging markets. He joined the GIC Fixed Income Department as a portfolio manager in 2003 and rose to take on senior roles including Head of Credit Markets, Head of Fixed Income (Americas) based in New York, and Head of Credit Research and Strategy. He was based in GIC's London Office in the early part of his career.

Mr Yeo holds a Bachelor of Arts (First Class Honours) in Engineering from the University of Cambridge and a Master of Science in Financial Mathematics from the University of Chicago. He has completed the Stanford Executive Program from the Stanford University Graduate School of Business.

07

Our People

At GIC, people are our biggest investment. Preparing and equipping them to fulfil GIC's purpose - to secure Singapore's financial future - while enabling them to thrive, is vital to our success. Our focus is anchored on GIC's mandate and what we call the PRIME values, as well as an unwavering concern for our people's well-being.

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7.1

Our Purpose and Values

As Singapore's sovereign wealth fund, GIC's mandate is to preserve and enhance the international purchasing power of the reserves under our management over the long term. As we pursue our mission, we remain committed to our vision to become the leading global long-term investor.

We are anchored on our PRIME values, which serve as our organizational compass for how we make decisions, how we think, and how we act:

PRUDENCE

Use sound judgement to take appropriate and informed risks.

RESPECT

Treat everyone with dignity and value the perspectives and work of others.

INTEGRITY

Be honest, ethical, and trustworthy. Do what's right.

MERIT

Reward both achievements and behaviours equitably.

EXCELLENCE

Be ambitious and agile, while remaining anchored in GIC's purpose. Be the best version of ourselves.

7.2

We Are OneGIC

We have over 1,800 employees across 45 nationalities, operating from our Singapore headquarters and nine offices in key financial centres of the world - Beijing, London, Mumbai, New York, San Francisco, São Paulo, Seoul, Shanghai, and Tokyo. We are planning to set up an office in Sydney to better support the growth and management of GIC's overall portfolio.

GICians, our employees, come from a range of diverse backgrounds, work experiences, and academic disciplines. This diversity enables GIC to leverage global market insights, networks, and functional expertise to invest well for Singapore.

Organizational Resilience During COVID-19

The COVID-19 crisis has underscored the importance of having organizational resilience. Through these challenging times, GIC has taken several steps to enhance it.

Focusing on employee well-being

At the height of the COVID-19 crisis, we were proactive in providing regular

updates to employees on office safety measures and travel advisories. We continue to do so to reassure and educate our people about efforts to keep them safe.

We continually seek ground feedback through workplace pulse surveys and employee polls to identify issues early and finetune measures accordingly.

During the period of lockdown and restricted mobility, we recognised that people were working longer hours at home, while simultaneously dealing with the stresses and anxieties of caring for families. To help support employees'

mental and emotional well-being, we implemented initiatives such as:

- **Year-End Leave Incentive:** additional year-end leave that recognises employees' commitment and hard work, while encouraging them to take the time to recharge.
- **Resilience for Performance:** a curriculum to help employees understand the art and science of building resilience so that they can remain purpose-driven, and sustain energy physically, mentally and emotionally, for performance and well-being.

7.3 Equipping and Nurturing Our People

Equipping and nurturing our people

In developing our people, we emphasise continuous learning and a growth mindset. Our collegial work environment provides on-the-job learning opportunities to help employees develop skillsets and grow their careers. This is complemented by GIC School, our dedicated learning and development academy, where we empower employees with learning resources and exposure opportunities.

GIC School curates individual and team development programmes to expand the capacity of our people for sustained high performance and to thrive in the new normal, extending their range of functional competencies through continuous learning.

New hires go through a customised onboarding journey to help them assimilate well into GIC. We emphasise the importance of the onboarding process to ensure acculturation. A Manager's Toolkit helps the team manager in this process – from preparing for the new hire's first day, nominating a buddy and recommending colleagues the new hire should speak with, to engaging him/her on work goals and development objectives.

Our Foundation Programme prepares employees at every stage of their career for the responsibilities and challenges at each level of appointment. Emerging and experienced leaders are developed to take on wider enterprise responsibilities through strengths-based coaching and leadership programmes that amplify influence and resilience. These programmes ensure that

our leaders maximise their impact on teams and cultivate talent in the organization.

Building effective teams is key to GIC's long-term success. Our People Manager Programme equips all GIC managers to create the right climate for their teams. It provides skills-based training for managers to develop key managerial mindsets and behaviours to lead high-performing teams by enhancing coaching skills and reinforcing an open, collaborative, and respectful environment. Likewise, our Effective Team Player Programme addresses the important roles of individual contributors to building a high-performing team climate and meaningful relationships to strengthen goal alignment and results.

**Building effective teams is key to
GIC's long-term success.**

To support employees' long-term career aspirations, we launched a career portal which serves as a one-stop platform with resources that help our people discover and pursue their career journey within GIC. From internal transfers to attachments, our employees can tap on opportunities within GIC to broaden their perspectives and skillsets.

To date, we have created 140 openings and filled more than 50 positions across our investment and corporate services departments.

To help jobseekers in Singapore build up valuable industry-relevant experience as a step towards permanent jobs during a soft labour market, GIC participated as a host organization in the SGUnited Traineeship Programme and the SGUnited Mid-Career Pathways Programme, offering job attachments to graduates and mid-career jobseekers.

Based on business needs, our department leaders and team managers crafted traineeship roles and development plans for each role. To date, we have created 140 openings and filled more than 50 positions across our investment and corporate services departments.

7.4 Our Compensation Principles

GIC's compensation policies and practices are governed by the Human Resource and Organization Committee, a committee of the GIC Board of Directors. Our framework is based on principles that enable us to attract and retain talent to meet our business needs in the markets and sectors we operate in. These principles include long-term orientation, performance accountability, and industry pay benchmarks. The compensation structure is tied to long-term portfolio performance and reinforces an informed risk-taking culture, along with the PRIME values. A portion of the remuneration for senior management staff is deferred and subject to clawback.

These principles include long-term orientation, performance accountability, and industry pay benchmarks.

7.5 Key Organizational Movements

Strong leadership is key to our continued success, and we engage in succession planning for renewal at the top levels of management to ensure that we benefit from a steady leadership pipeline and fresh insights.

We welcomed new Managing Directors this year: Mr Amit Kunal, Mr Ankur Meattle, Mr Henry Ormond, Mr Jeremy Kranz, Mr Jesse Hom, Mr Kwong Hong Huat, Mr Shang Thong Chie, Dr Tammam Mouakhar, Mr Taran Khera, Mr Wesley R. Bonewell, and Ms Yap Siao Teng.

We bade farewell to three Managing Directors: Ms Madeleine Cosgrave, Mr Tham Chiew Kit, and Mr Sam Liew. We extend our heartfelt thanks to Ms Cosgrave, Mr Tham, and Mr Liew for their significant contributions to GIC.

An inclusive workplace

While we recruit and reward our people on merit to build a diverse talent pool globally, our inclusive culture promotes respect and active contribution to ensure our people collaborate effectively for results and thrive in overcoming challenges as a team.

Our long-term success has been made possible by a working environment where everyone is enabled to contribute at their highest level and can bring their best selves to work, to invest well for Singapore. We embrace and harness the diversity of experiences and perspectives in our teams for better performance, creativity, and innovation.

We remain committed to providing our employees a safe, dignified, and non-intimidating workplace where people are treated with respect and feel psychologically safe to bring their whole selves to GIC. Our Dignity at Work policy sets clear expectations and provides guidance on conduct towards employees and external parties in the workplace and work-related settings beyond the office. Employees have been guided on when and how to speak up, in the event they encounter inappropriate behaviours or harassment at work. Under our Whistleblowing Policy, employees can also raise and report incidents to the CEO and/or the Chairman of the Audit Committee.

GIC adopts inclusive hiring policies to ensure equal opportunities for people with disabilities. We have a *Differently Abled* programme where we proactively offer internships to students

with disabilities so that they can be prepared for the workplace through the experience.

Recognising the different roles that our employees juggle – partner, parent, or caregiver, among others – and to support them and their families better, we enhanced our benefits in multiple areas, including increasing leave days for maternity, paternity, marriage, and caregiving. Exclusion clauses to pre-existing conditions and the age cap for children with disabilities have been removed in the dependents' medical coverage scheme. Mental health treatment costs are also covered under our medical coverage benefits.

Our long-term success has been driven by our ability to create an environment where everyone is enabled to contribute at their highest level and can bring their best selves to work, to invest well for Singapore.

Over the past year, we have actively implemented concrete actions in our journey towards these goals:

Further integrate conscious inclusion in our employee-centred practices

Our practices include leadership accountability where leaders are expected to proactively invite and leverage diverse perspectives and skills, as well as promote openness through annual 360° feedback. We enable continuous learning through a mandatory e-learning course on unconscious bias developed in partnership with the NeuroLeadership Institute, to equip employees with effective, research-driven strategies towards mitigating common biases when making decisions in the workplace.

Increase awareness of team composition

We implemented a Diversity Dashboard to increase awareness among department leaders of their team composition. The dashboard is used to facilitate a review on diversity in talent, skills, and cognitive styles. It also allows leaders to check for potential biases. GIC continues to strongly uphold non-discriminatory policies and practices in talent management.

Create a more gender-balanced organization

A Women in GIC (WinG) taskforce has been set up to lead efforts in achieving a more gender-balanced organization. The taskforce identifies issues and opportunities pertaining to women representation and inclusion in GIC and champions the implementation of specific actions in areas like recruitment, learning and networking, and leadership pipeline.

Our practices include leadership accountability where leaders are expected to proactively invite and leverage diverse perspectives and skills, as well as promote openness through annual 360° feedback.

7.6 Building Confident Communities to Create Greater Impact

Supporting local communities impacted by the pandemic

GIC stepped up social impact efforts during the pandemic as local communities were hit hard. In addition to our existing social impact programmes, our Group Executive Committee took a pay reduction for the amount to go towards relief and response efforts for students at Institutes of Higher Learning in Singapore. Similarly, our Board private sector directors¹ donated a portion of their fees to relief efforts. GIC also launched dollar-for-dollar matching programmes for employees to fund COVID-19 donation drives.

In recognition of our employees' desire to contribute to the disadvantaged and underserved communities in their locations, we started With Love, GIC – a S\$1.05-million initiative that supports ground-up projects. Led by employees across our 10 offices who can determine how they wish to contribute based on their skills, passion, and interests, With Love, GIC has generated close to 100 projects. These projects were co-created directly with community partners, so employees got a first-hand look at the charities' operations and the communities they served. Projects that have been implemented include distributing food packs for the needy; enabling home-based learning for students in high-needs households; funding mobile connectivity for vulnerable members of the community; and building confidence in children from disadvantaged backgrounds. Each project is targeted at helping ground-up community partners scale their impact. Funds provided have been used to upgrade community kitchens with industrial-grade appliances or to purchase high-quality technical equipment to enable community partners to effectively conduct outreach activities, among other examples.

¹ Public sector directors do not receive a fee for serving on the GIC Board.

GIC's community programmes are designed to deliver long-term impact. In 2020, GIC was named a Champion of Good, a national recognition conferred by the National Volunteer and Philanthropy Centre (NVPC)² under the Company of Good programme. The programme recognises organizations that are exemplary in doing good and committed

to multiplying corporate giving efforts by engaging their partners and stakeholders on a collaborative journey.

At the corporate level, we champion education to help build capacity within individuals to become confident leaders who actively contribute to the community. Through education, we believe we can

spark a multiplier effect on various facets of our community, including economic security, collective well-being, and environmental sustainability, which in turn creates long-term impact. GIC employees are encouraged to put PRIME values into action by volunteering their time and skills, and this effort also supports professional and personal development.

² The National Volunteer and Philanthropy Centre (NVPC) is an independent, not-for-profit organization that advocates giving in Singapore.

As we commemorate our 40th anniversary this year, we have launched Gift A Tree.

As we commemorate our 40th anniversary this year, we have launched Gift A Tree – an enterprise-led initiative where each employee will plant a tree to tangibly demonstrate support for GIC's commitment to environmental sustainability. Employees are actively involved in the tree-planting process and are instilled with the mindset to care for the environment and its biodiversity as long-term assets that benefit our future generations.



GICians from our Shanghai office planting trees at the Shanghai Huakai Haishang Ecological Park

We have established strong relationships with various educational institutions and community partners in Singapore and have co-developed impactful programmes that inculcate life-long mindsets and behaviours in different communities, from secondary schools and students from the Institute of Technical Education (ITE), polytechnics, and tertiary institutions; to individuals with special needs and various disabilities; as well as youths and SME (small-to-medium enterprise) executives in Singapore.

GIC Sparks & Smiles ("GIC Sparks")

Now in its sixth year, *GIC Sparks & Smiles* is our flagship leadership programme that empowers Singaporean youths from high-needs households to be changemakers who pay it forward in their own communities. *GIC Sparks* awardees receive a grant to support their studies, are trained by experienced social service practitioners, engage with GIC senior leaders, and volunteer in the community. Since its launch in

2015, more than 700 students have collectively volunteered approximately 17,600 hours to mentor disadvantaged children and youth. These activities have developed the skills, confidence, and leadership of our GIC Sparks awardees, while also supporting our community partners in their outreach and bringing benefits to the wider community.

GIC X Change

The *GIC X Change* is a mentorship and volunteering programme where like-minded GIC mentors and youth mentees come together to develop community service projects that are asset-based and build on the strengths of the community. In the process, ideas are also exchanged, mentor-mentee bonds are forged, and participants gain experiences and skills that serve them in their professional and personal capacities. The programme pilot saw 12 GIC mentors and 23 youth mentees join hands with community partners to co-create projects that engage young

children from families struggling with personal and family-related issues, and at-risk youths aged 7-13 who have at least one parent incarcerated, among others.

The Purple Symphony: Training Award Programme

GIC is a close partner of The Purple Symphony, Singapore's largest inclusive orchestra made up of musicians with and without special needs. The Training Award Programme, which GIC funds, allows persons with special needs and disadvantaged individuals to enjoy equal access to music lessons and performing opportunities. By learning and performing, recipients of the award can hone their musicianship skills and grow in confidence. GIC's support, through the award and employee volunteering efforts, has enabled the orchestra to pursue more performances at the national level. Since GIC's partnership with The Purple Symphony began in 2016, we have supported more

than 90 recipients who in turn, have contributed to creating an avenue for musicians to learn and share music with one another, celebrating and demonstrating abilities, spreading the message of inclusion, and inspiring others.

GIC Computing for the Community Fellowship Award

GIC supports the NUS Computing for Voluntary Welfare Organizations (CVWO) programme where undergraduate students apply their computing skills to build capacity for VWOs. The award helps CVWO advance its mission to equip students from the NUS School of Computing with the requisite soft skills and ethos of service to become effective leaders in Singapore. Since our partnership began in 2017, IT systems of at least eight VWOs have been enhanced, allowing these VWOs to serve their communities more effectively. In 2020, a project team under CVWO was recognised as 'Tech Heroes in Crisis' for co-developing a national

contact tracing system with the Singapore Armed Forces (SAF) to support the Ministry of Health in combatting COVID-19 in Singapore.

Financial literacy programmes

To increase financial literacy among youths in Singapore, we collaborate with schools and organizations through our community outreach programmes such as *Safehouse*.

Safehouse is an experiential game of trade-offs, where players gain first-hand experience of key investing principles such as risk diversification and value-versus-price, drawn from GIC's experience of safeguarding Singapore's reserves. More than 400 students in secondary schools, junior colleges, and ITE have gone through this programme.

Co-created by GIC and The Thought Collective (TTC), our *Investing Principles Curriculum* comprises five core modules based on GIC's principles of long-term strategic

thinking, infused with TTC's focus on developing social-emotional and leadership competencies. GIC employees participate as panellists to share real-world application of the principles. The curriculum was first launched as a pilot with the Singapore Business Federation (SBF) and the National Youth Council (NYC), which reached more than 1,700 youths and 800 SMEs. This year, we operationalised the curriculum in partnership with SBF to offer a fully funded online learning programme for SME leaders and SME professionals who want to prepare themselves and their organizations to take on long-haul challenges. Similarly, we are partnering with NYC to contribute content from the curriculum to Youthopia.SG, an online portal offering news, social causes, and learning resources for youths.

GIC-MOE Partnership

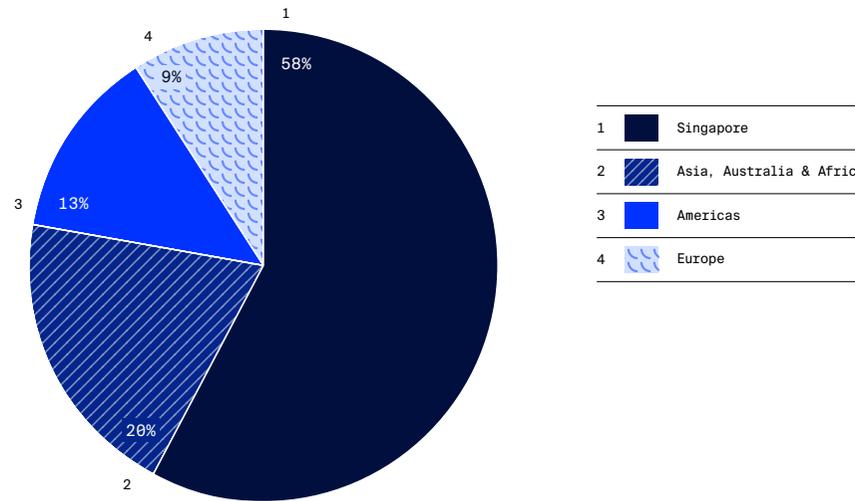
To prepare Singaporean students to thrive in an increasingly complex, ambiguous, and rapidly changing

future, GIC School collaborates with the Ministry of Education, Singapore ("MOE") on initiatives for the national school curriculum to help develop future-ready young Singaporeans.

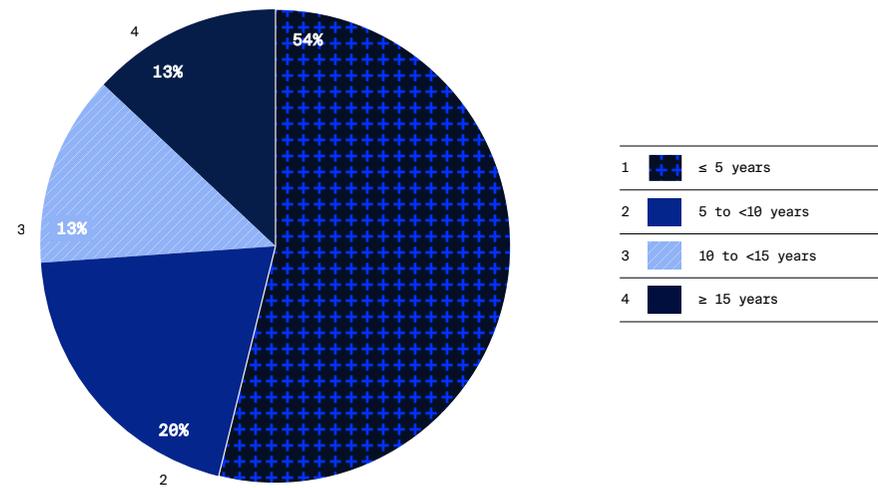
Leveraging our core expertise as a global investor, the MOE-GIC partnership produces educational resources and programmes with real-world applications across topics such as financial literacy education, covering core concepts in: personal finance and national reserves management; the global economy and long-term trends; and the future of work and careers in investment management. This supports the national effort to develop a Singaporean core in our financial services industry. The programmes are delivered through student seminars, workshops, and teaching packages. Digital resources are also available on the MOE Student Learning Space and [FutureReady-GIC Microsite³](#), which enables students and educators to access them easily for home-based learning.

3 Visitors can access the resources upon creating an account.

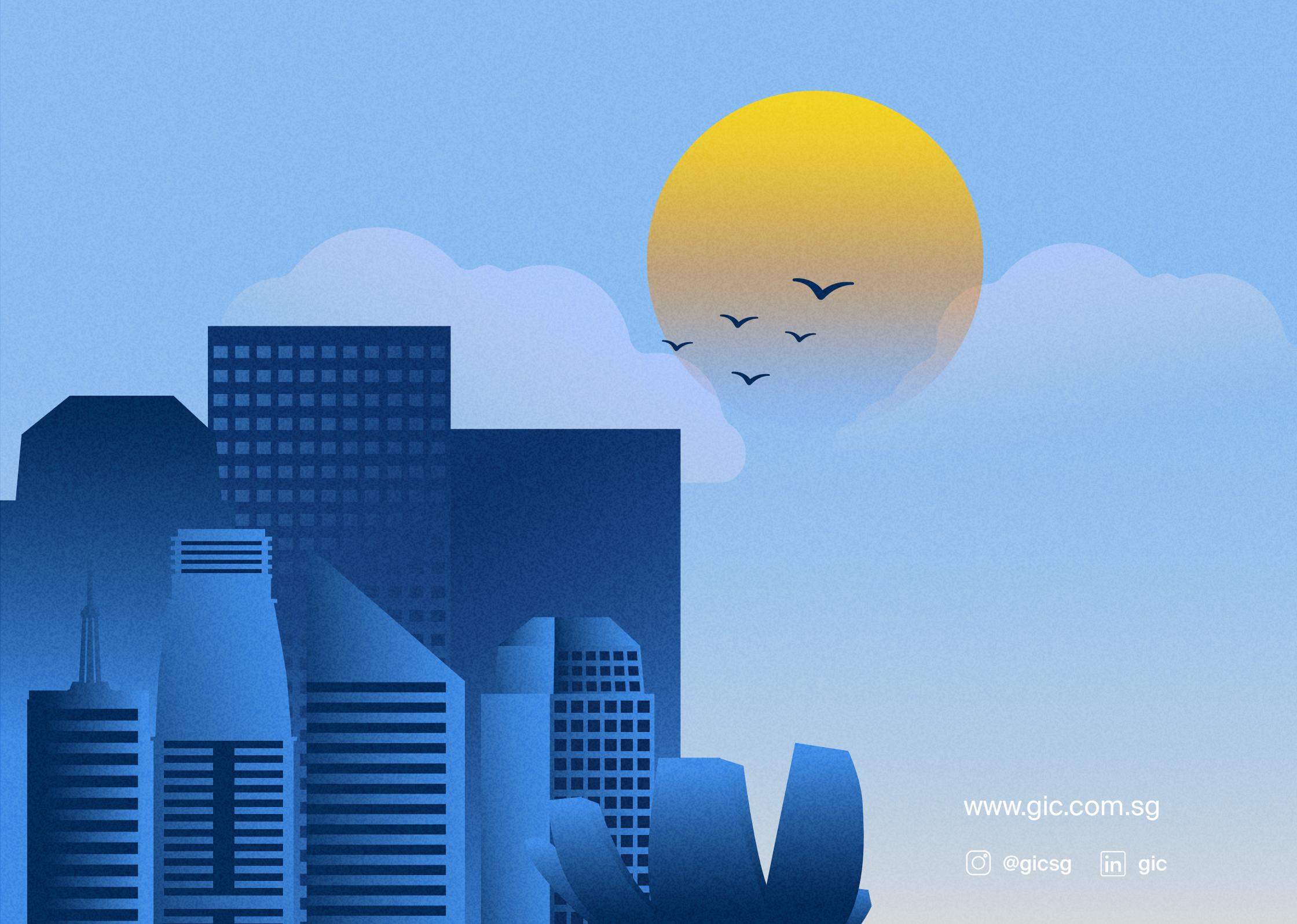
Our Employee Demographics



Where our employees come from



Years in GIC



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