NGS Super carbon intensity calculation methodology

Table of Contents

Introduction 3
The measurement 3
    Which emissions? 3
    The unit of measurement 3
    Acknowledging the data challenges 3
    Transition path & emissions attribution 4
What is included in our calculation? 4
    DAA for MySuper Diversified as at 30 June 2022 5
What isn't included in our calculation? 5
Australian Shares, International Shares and Corporate Bonds (Fixed Income), Listed Property and Listed Infrastructure 6
    Calculation methodology 6
    Estimates & proxies 6
Unlisted Infrastructure, Unlisted Property and Alternatives 7
    Calculation methodology 7
    Estimates & proxies 7
Private assets and bond alternatives 7
Methodology changes since the last reported carbon intensity figure 7
    Changes to calculation methodology from 2021 to 2022 8

Introduction

This document outlines how we calculate the scope 1 and 2 carbon intensity of our investment portfolio. This is by its nature a highly technical document and is provided for the information of interested members.

In 2021, NGS Super set a 2030 target for a carbon-neutral investment portfolio.[1] This meant that we needed to complete a baseline measurement of the carbon intensity of the portfolio, and make the same measurement annually to understand our rate of decarbonisation and how we are tracking against both our 2030 end target and our 2025 interim target (a 35% reduction in carbon).

From year to year, there will be amendments to the calculation methodology as we become more sophisticated in our calculation capabilities and as better information becomes available.

The measurement

Which emissions?

When NGS calculates the carbon intensity of the investment portfolio, we are calculating only the scope 1 and 2 emissions attributed. These are deemed in-scope emissions. At this stage we are not considering scope 3 emissions as part of our carbon-neutral goal and therefore this measurement methodology does not consider scope 3 carbon emissions of NGS's investments.

The unit of measurement

We acknowledge that there are 2 generally accepted methodologies to measure the carbon intensity, which are:

- Intensity per $million invested: scope 1 + scope 2 emissions x $million invested / Enterprise Value Including Cash (EVIC), or
- Intensity per sales: scope 1 + scope 2 emissions / $million in sales

There are positives and negatives for both measurements. NGS has adopted the first methodology as it allows us to compare our entire portfolio, which is invested in diverse asset types.

NGS defines carbon intensity as the tonnes (t) of carbon dioxide (CO2) equivalent per million dollars (AUD) invested and displays this as tCO2e[2]/$million invested (AUD).

This can also be referred to as "financed emissions", which are the indirect greenhouse gas emissions attributable to NGS as a financial institution due to its involvement in providing capital or financing to the original emitter.

Acknowledging the data challenges

While climate change isn't a new investment risk, the data we need to measure carbon intensity is emerging. For NGS to measure the carbon intensity of its portfolio, we need access to the scope 1 and 2

[1] Diversified MySuper option.

[2] tCO2e is carbon dioxide and equivalents. This is a measure that includes all greenhouse gases and brings them back to a common unit of measure, allowing comparison.

carbon emissions of the investments within our portfolio. For listed companies, NGS mainly relies on carbon emissions data provided by Morgan Stanley Capital International (MSCI).

Currently, it is not mandatory for businesses and organisations to report their scope 1 and 2 emissions. As a result, scope 1 and 2 emissions reported direct from our investments are not always available. Therefore, there is an element of estimation required for companies and/or assets which do not report scope 1 and scope 2 emissions (see 'What isn't included in our calculations?' below). Our methodology is to accept the scope 1 and 2 emissions reported by the company/investment in the first instance, and only apply estimates where there is no reported figure as at the estimation date. We also take the last reported figure available at the time of performing the calculation.

As soon as investment and/or asset reported scope 1 and 2 emissions data becomes available, we will include these in subsequent calculations, overriding any prior estimation. We acknowledge that this may artificially inflate or deflate our subsequent calculations, depending whether our previous estimation was over- or understated. However, we acknowledge that data perfection is not possible and do not consider that an excuse for inaction. It is also inappropriate to exclude investments that don't report scope 1 and scope 2 emissions from our overall calculation as this is not a fair representation of these emissions within the investment portfolio.

Transition path & emissions attribution

Given the data challenges, coupled with the transition trajectories of certain high-emission but necessary sectors, [3] we acknowledge that both our transition and the overarching economic transition to the low-carbon economy will not be linear. We do not expect a neat year-on-year reduction in our portfolio emissions or those of our investee companies as we head towards our 2030 target. For some sectors in the economy, it may take longer for emissions to fall, or they may even rise in the short term, due to the innovations and transition required to enable those sectors to operate in the low-carbon economy.

We acknowledge that the carbon intensity measure we adopt is also subject to market volatility. A company may be reducing its emissions, but if the value of the company falls significantly due to adverse market movements, then the carbon intensity measure will increase.

We will investigate and interrogate outliers in terms of increased carbon intensity to ensure that the increase is justifiable and for the greater good in transitioning to the low-carbon economy.

Each year, we undertake an attribution of any reduction or increase in the NGS financed emissions to understand their drivers. This provides us with the opportunity to take any necessary action, which may include divestment, engagement and other changes to portfolio construction.

What is included in our calculation?

Almost all of NGS's investments within the portfolio as at the calculation date (30 June) each year will be deemed 'in scope'. This includes co-investments.

However, not all investments will have reported their actual scope 1 and 2 emissions. NGS and/or any appointed data provider used within this process may apply estimates for investments that:

[3] Necessary for our successful transition to a low carbon economy.

- do not have or have not reported scope 1 and 2 emissions data available
- are deemed immaterial (in terms of value)
- are in assets in wind-down phases, i.e. the investment life has ended and they are slowly returning capital to the fund, or
- have been scheduled for divestment in the next 12 months.

It is important to note that NGS calculates the carbon intensity of the Diversified MySuper investment option and if, as at the calculation date the MySuper Diversified investment option's dynamic asset allocation (DAA) to a sector was 0%, while they are included in the methodology for calculation, they will not form part of the calculation. For the 30 June 2022 calculation, this was the case for listed property and listed infrastructure.

DAA for MySuper Diversified as at 30 June 2022

The DAA for the MySuper (Diversified) investment option as at 30 June 2022 (below) was used as a key basis for the calculation of the carbon intensity of the portfolio.

Sector	DAA of Diversified (MySuper) at 30 June 2022
Australian shares	26%
International shares	28%
Listed property	0%
Property	10.6%
Infrastructure	9.55%
Listed infrastructure	0%
Private Assets	7.6%
Bond alternatives	7.3%
Corporate bonds	2.15%
Other	8.8%
Total	100%

What isn't included in our calculation?

Cash (including term deposits), commodities and derivatives outside the Australian and international equity sectors were deemed out of scope. Foreign exchange overlays were also deemed out of scope.

The table below provides a summary of the NGS sectors and whether they are included in the carbon intensity calculation for the Diversified MySuper investment option.

Sector of MySuper Diversified investment option	In scope	% of the assessment based on reported data	% of the assessment based on estimates[4]
Australian shares	Yes	70%	30%
International shares	Yes	75%	25%
Listed infrastructure	Yes	n/a	n/a
Infrastructure	Yes	64%	36%
Alternatives	Yes	0%	100%

[4] For the Diversified (MySuper) investment option, approximately 46% of the scope 1 and scope 2 emissions calculations for the option were based on estimates, with approximately 54% based on reported data.

Sector of MySuper Diversified investment option	In scope	% of the assessment based on reported data	% of the assessment based on estimates[4]
- Private Asset **- Bond Alternatives**			
Alternatives **- Commodities** **- Growth Alternatives**	No	n/a	n/a
Listed property	Yes	n/a	n/a
Property	Yes	21%	79%
Fixed income **- Corporate Bonds**	Yes	84%	16%
Fixed Income **- Government Bonds**	No	n/a	n/a
Cash (including term deposits)	No	n/a	n/a

Australian Shares, International Shares and Corporate Bonds (Fixed Income), Listed Property and Listed Infrastructure

Calculation methodology

NGS is subscribed to the MSCI carbon data and uses this data and associated methodology to calculate the carbon intensity of the Australian shares, international shares and corporate bonds portfolios.

MSCI classifies carbon emissions per the Greenhouse Gas (GHG) Protocol.

We use enterprise value including cash, i.e. the market cap plus the short and long-term debt for the basis of the calculation. MSCI data is used to source emissions data. Bloomberg and RIMES are used to source market cap and debt data in order to calculate the tCO2e/$million invested (AUD).

Estimates & proxies

Where companies report their scope 1 and 2 emissions, the MSCI data will reflect this reported company data. It should be noted that there are many protocols (audited and unaudited) which companies can use to calculate their scope 1 and 2 emissions. MSCI will report what the company has reported first and foremost. We acknowledge that this lacks consistency but it is the industry norm.

Where companies do not report their emissions, MSCI estimates these using an agreed estimation model. MSCI's estimation allows for use of three models, choosing the best model for the disclosed data available. The three models are:

1. Production model – mainly used for power-generating utilities
2. Company-specific intensity model – used where there is past reported emissions data (but not data available for all years)
3. Industry segment-specific model – used for other companies and involves determining a company's emissions based on other companies within their segment.

When emissions data for a company was missing from the MSCI data, the average intensity for the company's Global Industry Classification Standard (GICS) sub-industry was used. Outliers were omitted for the purposes of calculating industry averages for the Australian, international shares and corporate bonds sectors.

An outlier was defined as any emission datapoint that was larger than the 3rd quartile of emissions for the sub-industry plus 1.5 times the interquartile range.

For the Australian and international share sectors, where there was a derivative based on an equity index, the notional equivalent in the underlying company holdings was used.

> *For example, a swap on $100million notional of the ASX50 TR Index is replaced with the weighted holdings in the 50 underlying stocks for the purposes of the emissions calculation.*

Unlisted Infrastructure, Unlisted Property and Alternatives

Calculation methodology

There is no public or private data provider that collates and provides scope 1 and scope 2 carbon intensity data. As of 30 June 2022, NGS sources the scope 1 and scope 2 of its in-scope private or unlisted assets directly from the investment manager and/or asset and where this is not provided, we apply estimates as outlined in the "What is included in our calculation?" section of this document.

We acknowledge that each investment manager or asset operator will have its own methodology or process to calculate the scope 1 and scope 2 emissions which introduces data variability. This is a known limitation to the methodology.

Estimates & proxies

Where investment managers and/or asset operators were unable to provide scope 1 and scope 2 data, NGS will apply an estimate. There are three agreed methods for applying estimates within the unlisted portfolio:

1. For assets with like characteristics (i.e. airport v airport), the basis for the estimates applied can be based on other like assets (with reported data) within the portfolio.
2. If there are no like or comparable assets within reported data, or the reported data is deemed flawed, sector averages can be applied to the investments/assets.
3. When no accurate fit between assets in the portfolio is found, a listed proxy is used.

In the NGS working files for each calculation, we record the details of the estimate basis used.

Private assets and bond alternatives

Private assets emissions intensity is based on listed GICS sector proxies from assets assessed in a report (dated 29 October 2021) commissioned by NGS Super from South Pole on financed emissions. Updates were made to the total emissions figure to reflect the size of the sectors. In the 2022/23 calculation and going forward we intend to use look-through data made available by our custodian bank.

Methodology changes since the last reported carbon intensity figure

30 June 2021 was the baseline carbon intensity calculation.

Each year investments may fluctuate between having reported figures and unreported figures where estimates or proxies need to be applied by NGS, and/or a data provider. These changes are not considered to be a change in methodology.

Changes to calculation methodology from 2021 to 2022

In 2021 we engaged a consultant to calculate and provide a report for the scope 1 and scope 2 emissions of the unlisted portfolio. This calculation involved a combination of both manager and asset reported data and proxies based on like equivalents in listed markets.

In 2022, we decided to complete this work in-house and surveyed our investment managers and/or asset operators requesting their scope 1 and scope 2 emissions. Where data was not provided, we applied estimates or used proxies as outlined in this methodology document. We also added corporate bonds to this year’s in-scope sectors.