Financed Emissions Methodology

Bendigo and Adelaide Bank

During FY22 BEN's financed emissions were calculated as of 30 June 2020 using the five asset classes used by Partnership for Carbon Accounting Financials (PCAF) as follows:

- Listed equity and corporate bonds
- Business loans and unlisted equity
- Commercial real estate
- Residential mortgages
- Motor vehicle loans

A sixth asset class, Project Finance was deemed not relevant for BEN. BEN's lending activities are typically secured by property and not project cash flows. BEN has no exposure to financing fossil fuel projects.

Consultancy Point Advisory were engaged to review these calculations against the relevant standards and guidance to assess alignment with guidance for the financial sector from the Science Based Targets Initiative (SBTi) and PCAF.

The methodology for each asset class is outlined below noting that the exercise has highlighted some opportunities to improve data and methodologies.

ASSET CLASS	BOUNDARY	DATA QUALITY	ATTRIBUTION OF EMISSIONS:	EMISSIONS CALCULATIONS:
Listed equity and corporate bonds	100% of other bank bonds, held for liquidity purposes were included. Two types of other bank bonds were held - listed and private banks. While sovereign/ central bank bonds were held, they were not included as they are beyond the scope of PCAF methodology. BEN did not have any on balance sheet exposure to listed equity.	Score 1-2 Option 1: Reported emissions	*Listed banks:* Outstanding amount / Enterprise value including cash (EVIC) EVIC = Market capitalisation + Total debt + Minority Interests *Private banks:* Outstanding amount / (Total equity + debt)	The emissions from corporate bonds have been calculated using a mixture of verified and unverified Scope 1&2 emissions from the bank bonds in BEN's portfolio which correspond to data quality Score 1 and Score 2, respectively. Reported emissions were obtained for the issuer of 97.25% of the bonds by market value and estimated for the remaining 2.75% where published Scope 1 & 2 emissions were not evident.
Business loans and unlisted equity	100% of business loans were included which sit across three sub-categories of loans including (1) SME loans, (2) Corporate loans: other long-term debt and (3) Corporate loans: short-term debt. Unlisted equity has been excluded.^	Score 4 Option 3a Economic activity – based emissions	The attribution factor calculation has been used for loans to private companies. The numerator used is BEN's total exposure for a given sector (equivalent to the actual outstanding loan amount for all companies in that sector). For the denominator, the sum of the total assets of companies within the sector (equivalent to total balance sheet value for companies within that sector) has been used.	The calculation of emissions from business loans is broken down into the following stages: 1. Emissions intensity (EI) of sector: GHG emissions per sector / Revenue per sector · The GHG emissions from each ANZSIC sector was derived from the Australian Government's 2020 National Inventory by economic sector · The Revenue per sector is derived from the ABS 2020 Economic Activity Survey and business tax data sourced from the Australian Tax Office 2. Total Customer emissions per sector: EI is then multiplied by BEN's Customers' Total FY20 Revenue in each sector. 78% of total revenue data came from BEN's customers' financial records and were calculated using the attributed BEN Share of Emissions. In addition, for Sector K. Financial and Insurance Services, there are three sub-sectors that sit below: 62 - Finance, 63 - Insurance and Superannuation Funds, 64 - Auxiliary finance and insurance services. The ABS only provides income data for 64. Therefore, the EI for Total Commercial Services (which includes K. Financial and Insurance Services) will be slightly overstated as the total emissions for this sector are divided by revenue (less the revenue from 62 and 63).

ASSET CLASS	BOUNDARY	DATA QUALITY	ATTRIBUTION OF EMISSIONS:	EMISSIONS CALCULATIONS:
Commercial real estate	93% of commercial real estate mortgages were included. All commercial real estate mortgages were included except for those for vacant land designated for development/ subdivision.	Score 5 Option 3 Estimated building emissions based on number of buildings is the closest data quality score to the approach taken.*	When calculating financed emissions, a building's annual emissions are attributed to the mortgage provider using a loan-to-value approach. Thus, the attribution is equal to the ratio of the outstanding amount at the time of GHG accounting to the property value at loan origination. The value of security properties in place of property value at origination has been used in the attribution calculations, such that attribution = total exposure value (current) / security property value. Using the value of security properties is not strictly in line with PCAF Guidance. BEN's data has a current valuation which could be a) at origination or b) a more recent valuation obtained to support a credit assessment. As it was not feasible to distinguish between these, the security property value was used in place of the value at origination. The latest available valuation has been used to represent total current value in all cases.	The emissions of buildings are calculated as the product of an estimation of a building's energy consumption and specific emission factors for each source of energy consumed. The energy consumption has been estimated based on the known floor area, and national averages of energy efficiency (MJ/M2) data for each building type. The proportion of each energy source (electricity, natural gas, LPG, diesel and petrol) are based on national averages for each building type. Electricity emissions have been calculated using the state-based emission factors sourced from the National Greenhouse Accounts factors. Emissions from other energy sources have been calculated using the Australia-wide emission factors sourced from the National Greenhouse Accounts factors. Land development/ subdivision loans have not been estimated as it was deemed that an accurate estimation using energy consumption per square metre would not be possible.
Residential mortgages	100% of residential mortgages were included	Score 5 Option 3 Estimated building emissions based on number of buildings	When calculating financed emissions, a building's annual emissions are attributed to the mortgage provider using a loan-to-value approach. Thus, the attribution is equal to the ratio of the outstanding amount at the time of GHG accounting to the property value at loan origination. The outstanding amount to value at origination ratio (%) (excluding non-residential security) was used.	The emissions of buildings are calculated as the product of a building's energy consumption and specific emission factors for each source of energy consumed. The Australian Energy Regulator's 2020 postcode level electricity and gas average annual energy use based on an average household size of 3 people (Australian Bureau of Statistics data for 2021 has average household size of 2.55persons/ house). This postcode level energy data is multiplied by postcode level mortgage numbers. Electricity emissions have been calculated using the state-based emissions factor sourced from the National Greenhouse Accounts factors. National gas emissions have been calculated using the Australia wide emission factors sourced from the National Greenhouse Accounts factors.

ASSET CLASS	BOUNDARY	DATA QUALITY	ATTRIBUTION OF EMISSIONS:	EMISSIONS CALCULATIONS:
Motor vehicle loans	100% of secured loans and equipment finance for motor vehicles were included.	Score 5 Option 3b Estimated vehicle-unspecific emissions is the closest data quality score to the approach taken.#	Across both secured and equipment finance: Loan to Value Ratio (LVR) = Sum(All vehicle current balance)/ Sum(all vehicle original value)	Secured loans: Financed emissions = Number of loans/vehicles x Australian average emissions intensity (g CO2-e/km) x Australian average distance travelled (km). Source for average emissions intensity: Australian Government Green Vehicle Guide for average new light vehicle in 2017. Source for average distance travelled: ABS 2020 Survey of Motor Vehicle use, average distance for all vehicles across Australia. Equipment finance: Financed emissions = Number of loans/vehicles [by fuel type] x Australian average emissions intensity (g CO2-e/km) [by fuel type] x Australian average distance travelled (km) Source for split of fuel types: Manual review of loan data. Source for average emissions intensity: National Transport Commission Carbon Dioxide Emissions Intensity for New Australian Light Vehicles 2018 information paper Source for average distance travelled: ABS 2020 Survey of Motor Vehicle use, average distance for all vehicles across Australia

^ Unlisted equity was excluded from this calculation for two reasons. First, there is some overlap between these holdings and BEN's operational emissions. Second, both the value and the expected emissions is immaterial. While these entities do not disclose their carbon footprint externally, when deriving their footprint from emissions from other financial services organisations, the value is approximately 1 tonne.

* Due to some variation applied as noted in the attribution of emissions and emissions calculations, this is not strictly aligned with PCAF Guidance. BEN will seek guidance from PCAF and update calculations if required.

\# While the attribution of emissions for motor vehicle loans is in line with PCAF guidance, the current calculation methodology does not apply the specific vehicle efficiency and fuel type and is therefore not fully aligned with PCAF.