



Quantifying Risk, Enabling Opportunity.

# CSI Update: Highlights from recent projects

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Version: v.0.0

# DATA<sup>TO</sup> THE PEOPLE



COMOTION DASH



New Gen Mortality Study

COVID-19 Dashboard

Namibian Mortality Study

Annuitant Study

Critical Illness Study



## New Gen Mortality Study

**m**omentum

 **Sanlam**

 **OLDMUTUAL**

 **LIBERTY**

 **Discovery**

**11 876 275 years of exposure**

**23 049 deaths**

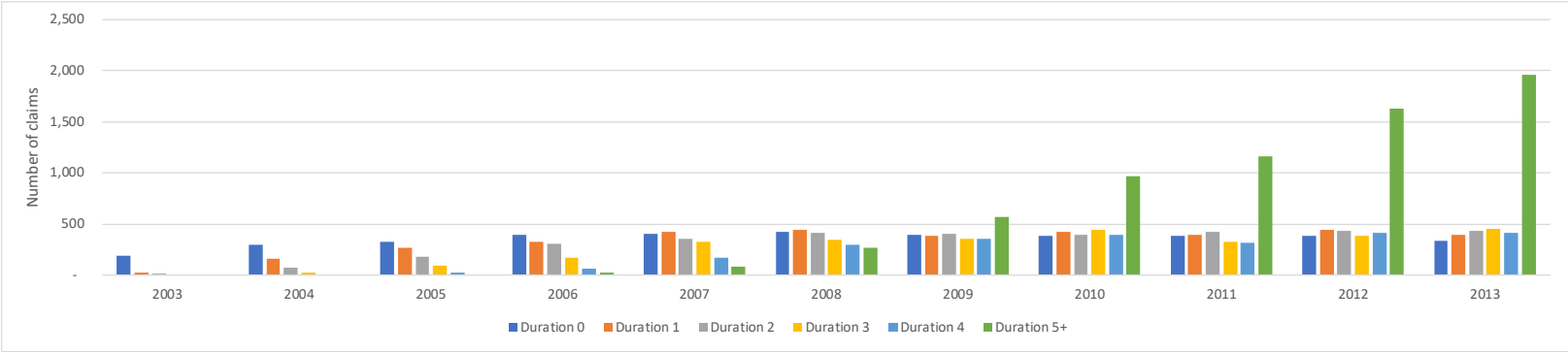
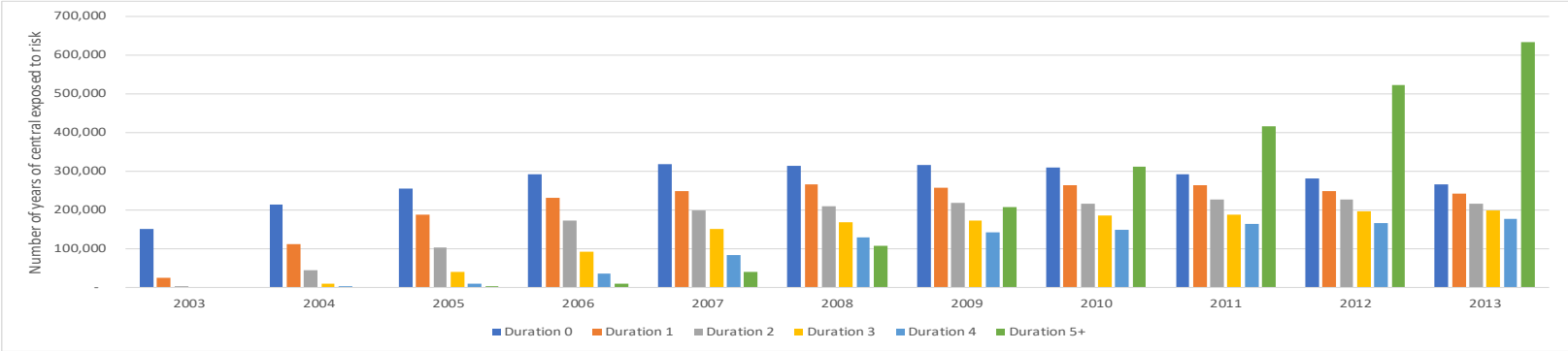
**2003 – 2013**



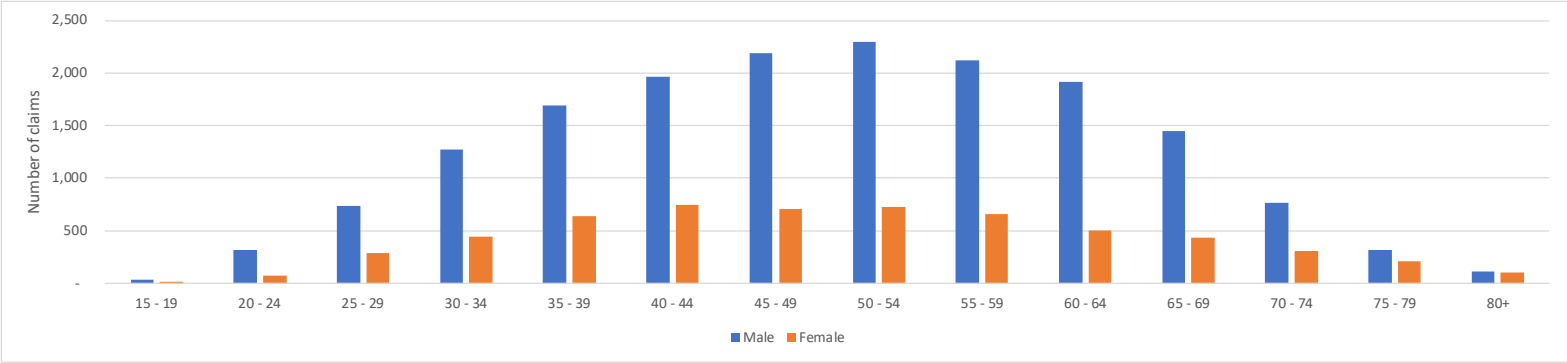
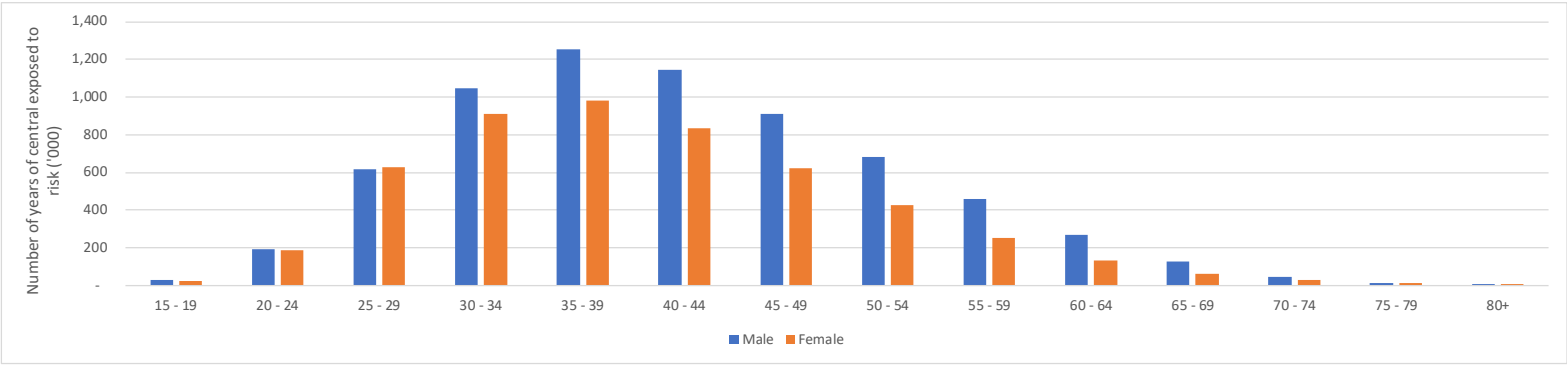
# Material assumptions and limitations

- Significant improvement in data quality compared to previous studies
- IBNR not set up due to substantial delay between end of study period and date of data submissions
- Substandard risks have been excluded and an assumption made that underwriting practices are similar between companies, meaning remaining lives are homogeneous with regards to other rating factors
- Lives with an unknown medical rating status have been assumed to be standard risks based on the experience observed
- Reliant on contributing companies' classification of lives by SEC. These differ between companies and can change over time.
- Not possible to do a per life analysis
- Province and cause of death were unavailable in a substantial number of cases
- Ultimate duration was set at 3+, although arguments could be made to extend that further

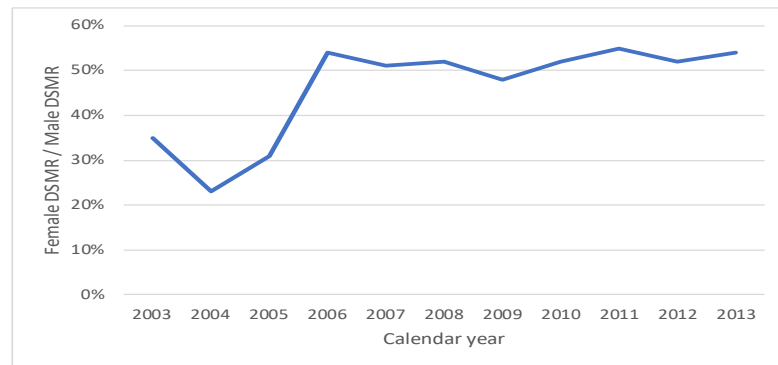
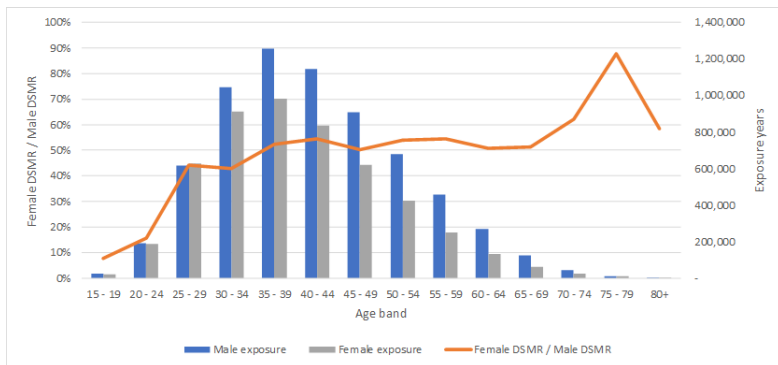
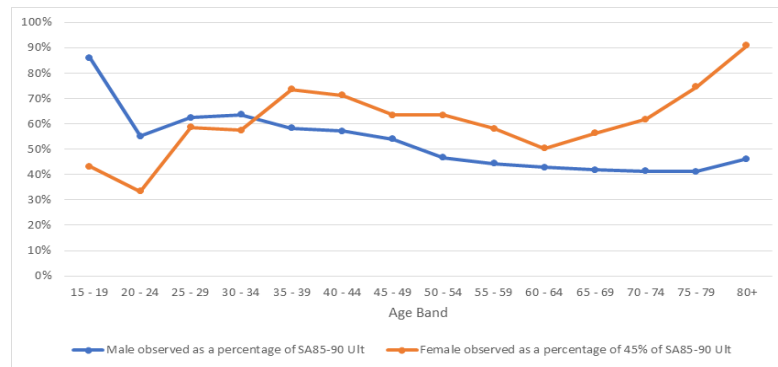
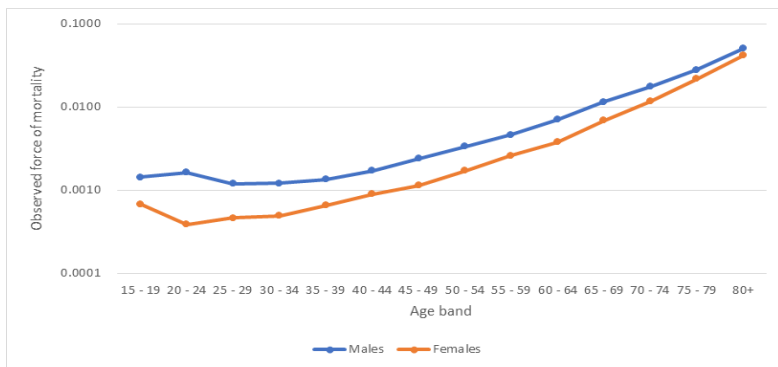
# Exposure and claims by duration and year



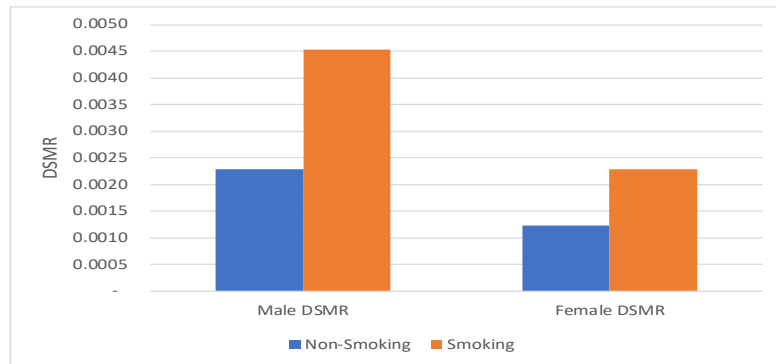
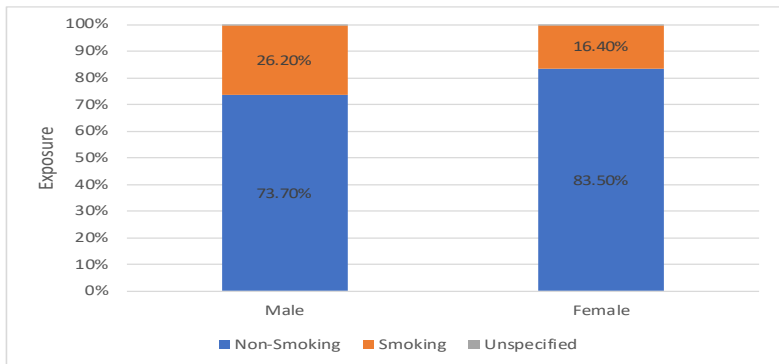
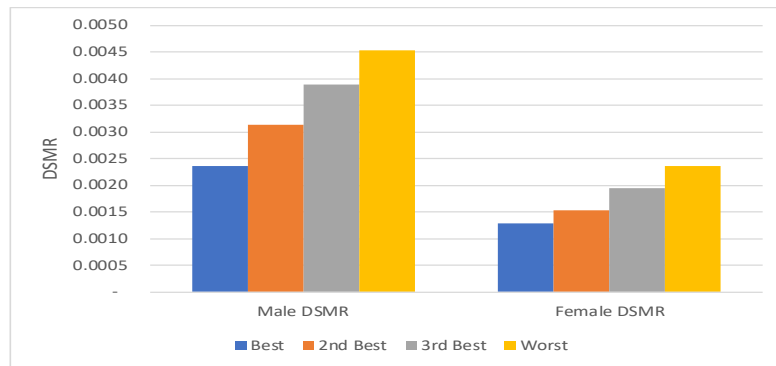
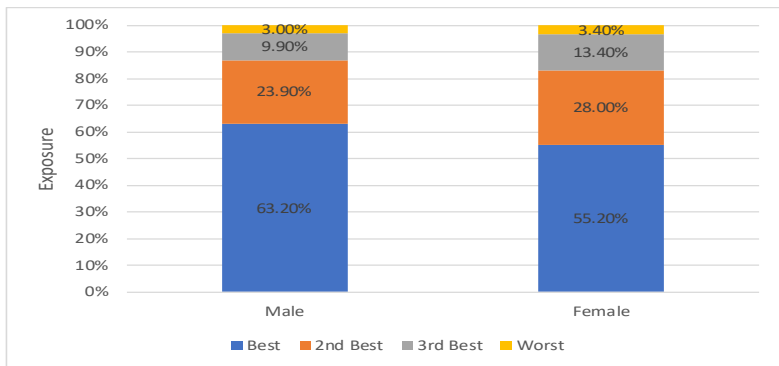
# Exposure and claims by age and sex



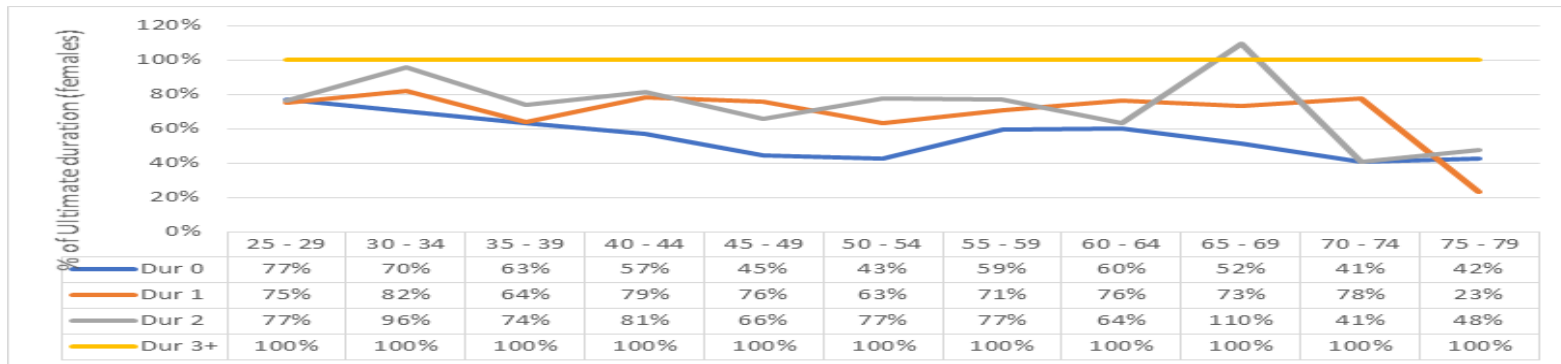
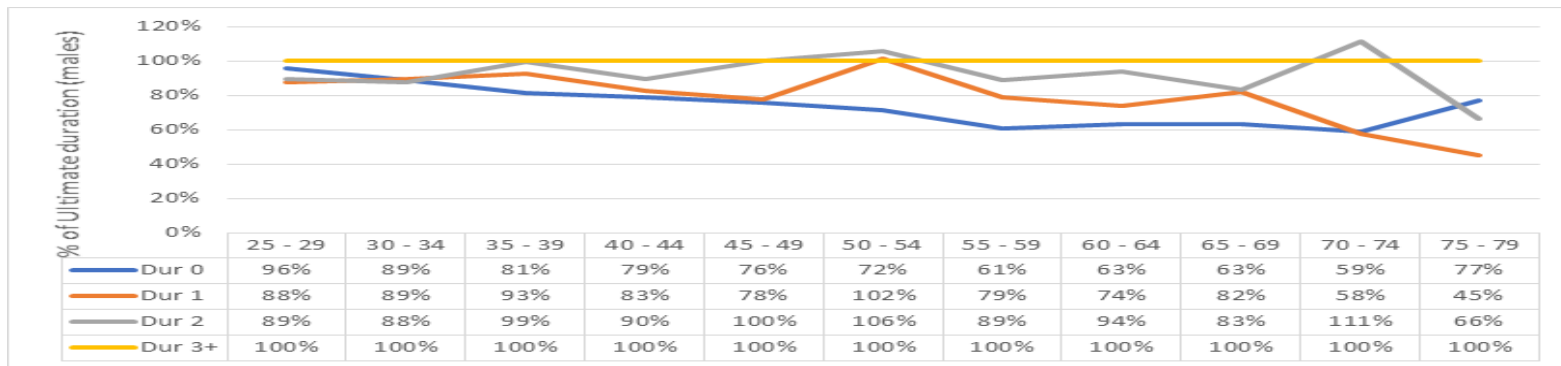
# Exposure and claims by age and sex



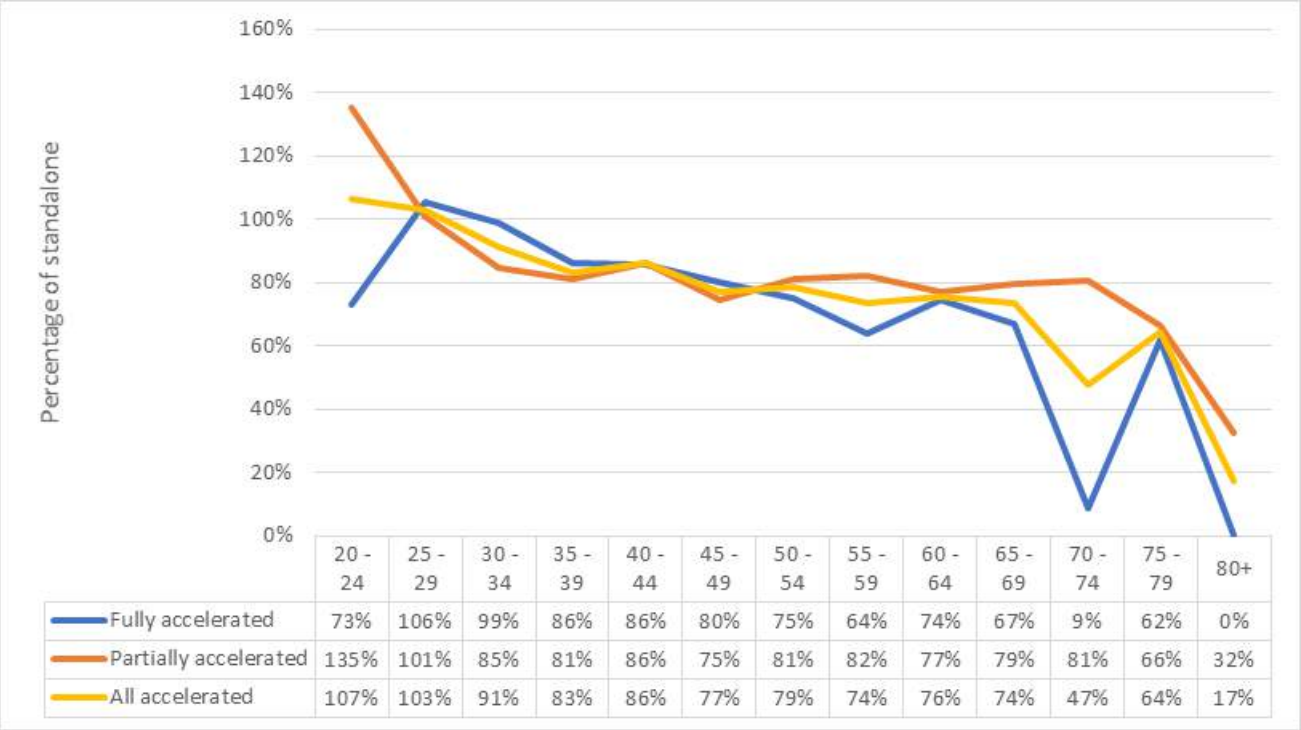
# Force of mortality and DSMR by SEC and smoker status



## DSMR by duration

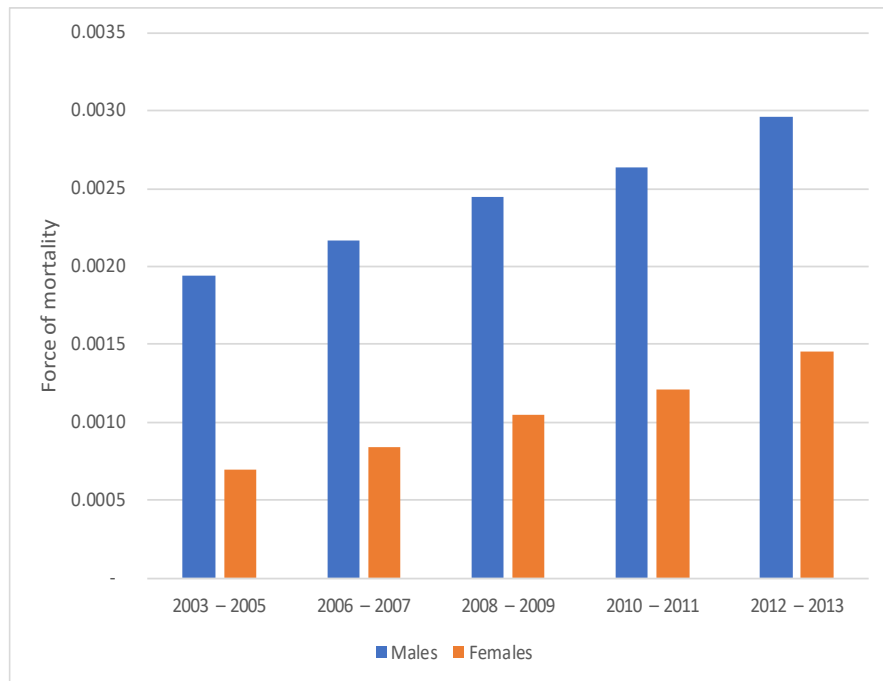


# DSMR by accelerator status

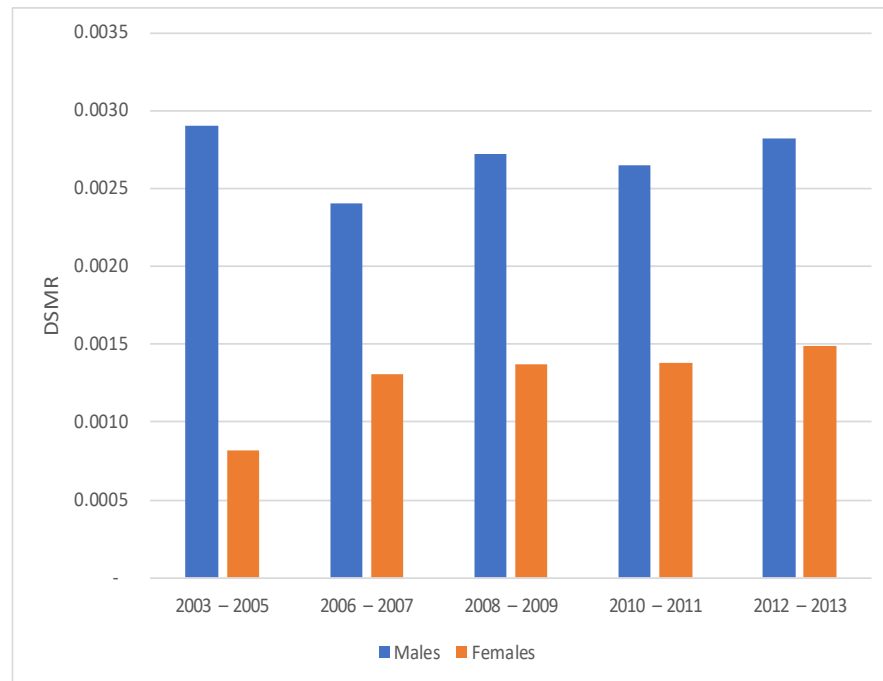


# Time trends

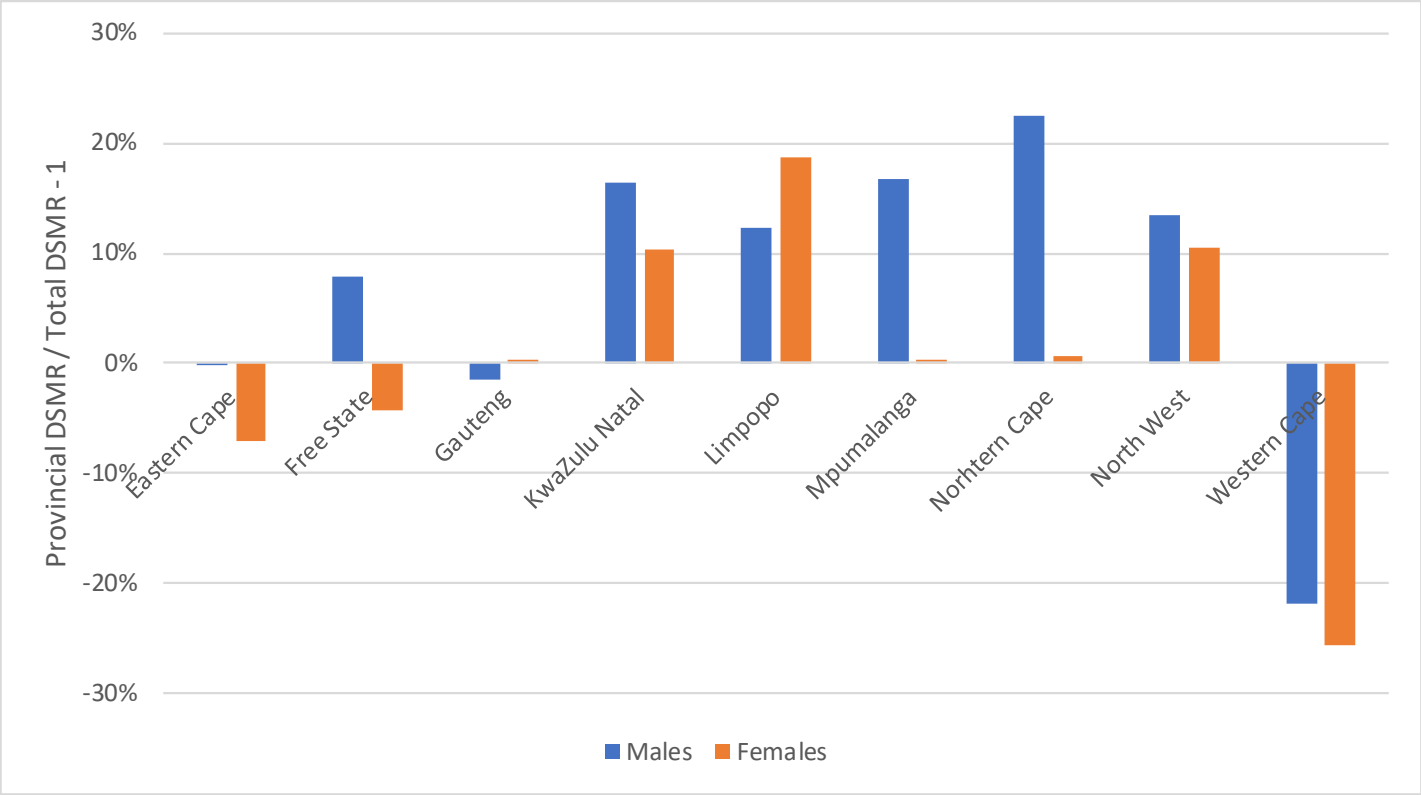
## Force of mortality



## DSMR



# Province



# Industry dashboard for COVID-19

**Fully underwritten mortality**

**70% of the market**



# Industry dashboard for COVID-19

**1.859** excess death rate

**5.140** total death rate



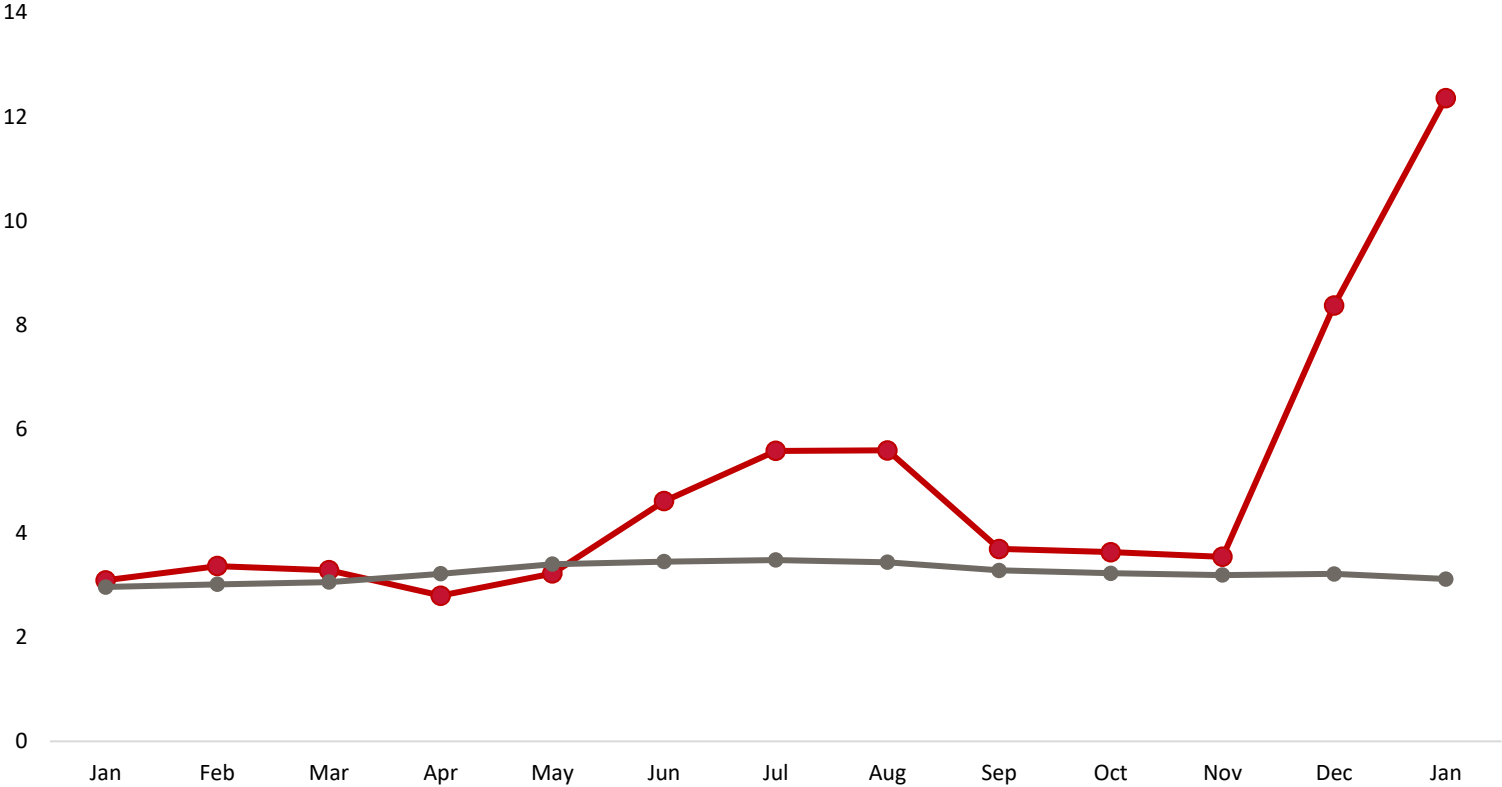
# By gender

| sex    | Total Claims | COVID Claims | COVID rate per mille | Excess rate per mille | Total rate per mille |
|--------|--------------|--------------|----------------------|-----------------------|----------------------|
| Female | 2179         | 445          | 0.707                | 1.250                 | 3.460                |
| Male   | 4861         | 1070         | 1.446                | 2.376                 | 6.570                |

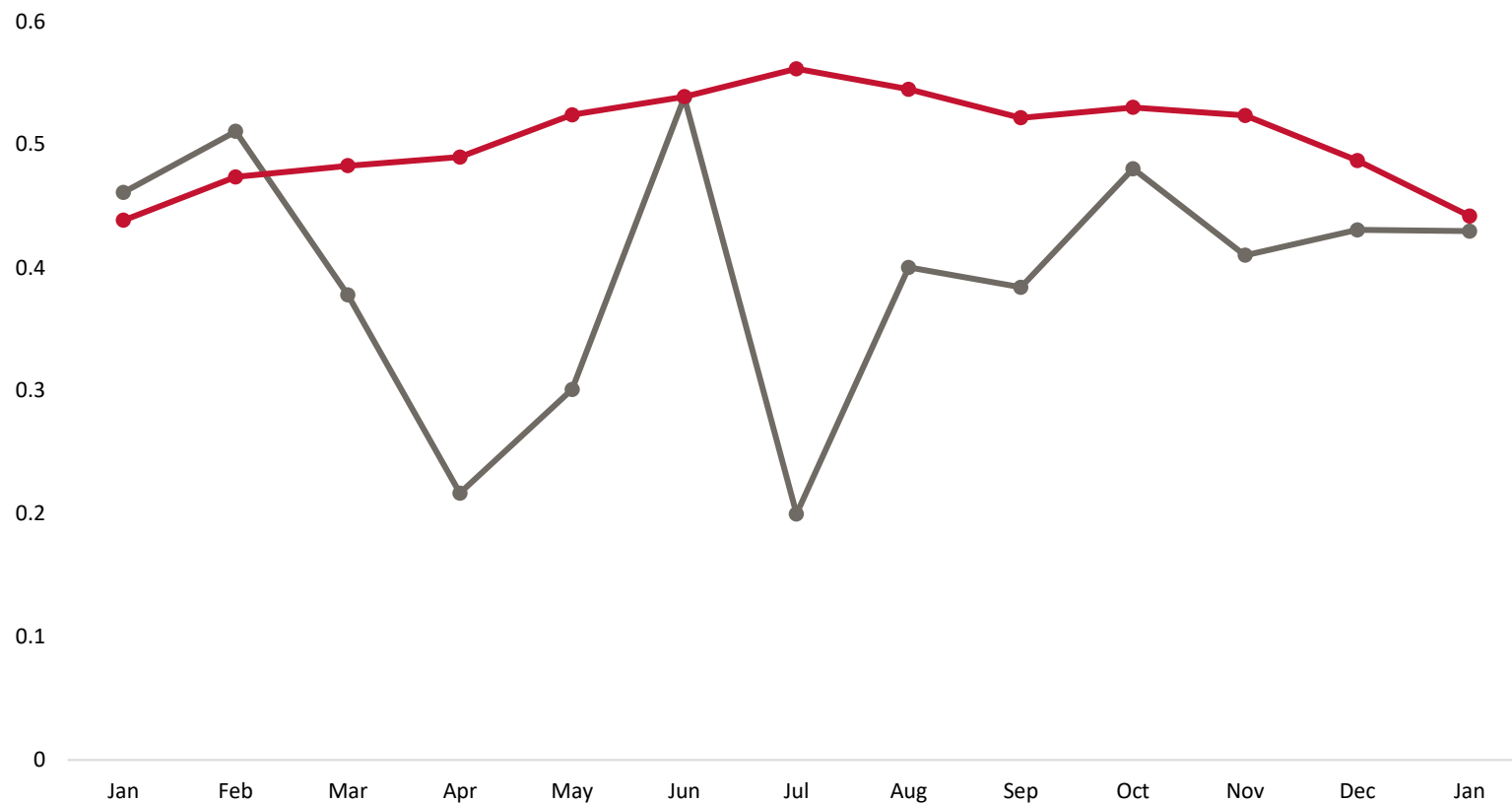
## By age

| age_band | Total Claims | COVID Claims | COVID rate per mille | Excess rate per mille | Total rate per mille |
|----------|--------------|--------------|----------------------|-----------------------|----------------------|
| <20      | 1            | 0            | 0.000                | 0.165                 | 1.603                |
| 20 - 29  | 46           | 3            | 0.043                | 0.052                 | 0.662                |
| 30 - 39  | 402          | 81           | 0.235                | 0.385                 | 1.165                |
| 40 - 49  | 956          | 261          | 0.627                | 0.800                 | 2.296                |
| 50 - 59  | 1769         | 447          | 1.399                | 2.034                 | 5.537                |
| 60 - 69  | 2191         | 467          | 2.781                | 5.143                 | 13.046               |
| 70+      | 1675         | 256          | 5.064                | 11.127                | 33.134               |

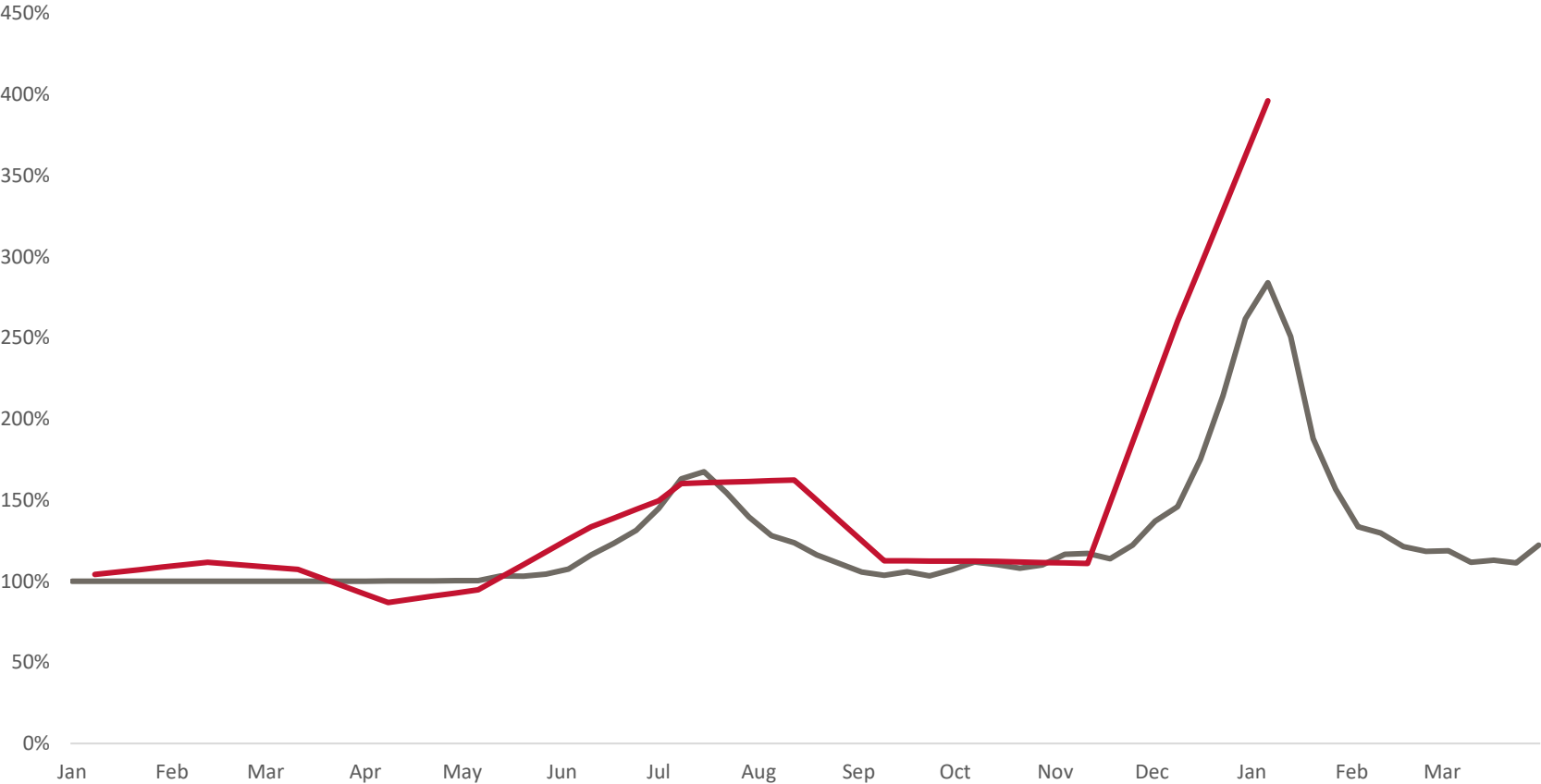
# 2020 – 2021 Total Mortality by month



# 2020 – 2021 Unnatural Mortality by month



# Population vs Insured Excess Deaths



## Link to dashboard

<https://assa.comodash.io/>



A high-angle, wide shot of a marathon race taking place on a wide, tree-lined city street. The road is filled with hundreds of runners of various ages and ethnicities, all moving away from the camera towards the horizon. The runners are wearing colorful athletic gear. The street is flanked by tall, mature trees with autumn-colored leaves. On the left side, there are parked cars and buildings. The overall atmosphere is one of a large-scale public event.

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**Brice Salence**

**Kobus Bekker**

**Niel Fourie**

**Louis Rossouw**

**Karsten Roux**

**Paul Turner**



Quantifying Risk, Enabling Opportunity.

**Thank you!**

Presentation Name: Title

Author: Name Surname

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