

## PCRIC's standard earthquake product:

PCRIC's standard earthquake product is intended to provide a rapid payout to support emergency response costs after major earthquakes and/or earthquake-induced tsunamis that cause significant financial loss. The goal is to provide timely payouts when earthquakes impact key economic centres. The payout will be higher when an earthquake impacts a more populated area with more assets.

PCRIC's standard product is a national level 'modelled loss' product, with the trigger for a payout based on the estimated disaster response cost as calculated by an internationally recognized catastrophe model<sup>1</sup>.



## Indicative payouts for the September 2022 earthquake event:

Payouts are calculated on a per-event basis for active policyholders by an independent third-party calculation agent, and so it is not possible for PCRIC to calculate the exact payout for the September 2022 event<sup>2</sup> had PNG purchased an earthquake policy from PCRIC prior to the event occurring. However, PCRIC is able to analyse simulations of similar earthquake events impacting PNG which indicate the payout from the September 2022 event could have been as follows:

<sup>1</sup> See PCRIC's Knowledge Product, '[Understanding the Uniqueness of PCRIC Parametric Risk Pool Insurance Policies](#)' for more information on the modelled loss approach and how a payout is triggered.

<sup>2</sup> <https://earthquake.usgs.gov/earthquakes/eventpage/us6000iitd/executive>

|   | Indicative payout (US\$m)      |                                  |                                |
|---|--------------------------------|----------------------------------|--------------------------------|
|   | Annual policy premium = US\$1m | Annual policy premium = US\$2.5m | Annual policy premium = US\$5m |
| Likely payout <sup>3</sup>                  | \$6.0m                         | \$14.9m                          | \$29.8m                        |
| Upper bound of possible payout <sup>4</sup> | \$14.8m                        | \$37.1m                          | \$74.3m                        |

### Benefits of a PCRIC modelled loss product:

A modelled loss product differs to a pure parametric product (for example a product based on reported earthquake magnitude) in that it takes into account where key assets are located. So, rather than a payout being provided solely on the magnitude or epicentre of an earthquake, PCRIC's product provides payouts based on the estimated damage to assets from any magnitude of earthquake. This means a weaker earthquake impacting an area with a high level of assets may provide the same payout as a stronger earthquake impacting an area with a lower level of assets.



### PCRIC can design and develop bespoke products for the Government of PNG:

One of PCRIC's strengths is the technical capability to develop tailored products for specific needs. For example, if the Government of PNG desired the security of a payout after an earthquake of particular magnitude impacting a pre-defined area (e.g. a magnitude 6.0 earthquake impacting Port Moresby), then PCRIC could develop such a product and provide indicative pricing very quickly.



<sup>3</sup> Calculated based on the median modelled-loss based on PCRIC simulations of similar earthquake events impacting PNG.

<sup>4</sup> Calculated based on the indicative coverage limit assuming the policy has an attachment point of the emergency response cost equivalent to a 1-in-10-year event, and an exhaustion point of the emergency response cost equivalent to a 1-in-50-year event. The attachment point is the \$ value above which modelled emergency response costs must exceed for a payout to be triggered. The exhaustion point is the \$ value of modelled emergency response costs at which the maximum payout is reached - the payout is fixed at this maximum value even for larger modelled emergency costs.