

NGM Benefits & Use Cases Touchstone

Next Generation Models (NGM) improve both the accuracy and flexibility of modeling complex policy terms and conditions and provide fully probabilistic financial modeling at all levels.

The new models incorporate additional financial terms and support contracts that capture all insurance coverage and geospatial dependencies in loss accumulation. These features provide a more complete view of tail risk.

NGM business benefits

NGM offers important business benefits.

More accurate estimates of single-risk gross loss and support for more complex terms

With the current financial engine, as soon as site or combined terms are applied to a single risk, the individual coverage distributions of that risk are convolved, making it difficult to apply individual coverage limits afterwards. With NGM these coverage distributions are now maintained, enabling users to place individual coverage terms on top of site terms. This also applies to higher tiers of policy terms, such as cases where there are separate physical damage and business interruption layers for commercial/specialty lines.

Accurate modeled results where sublimits are present

Previous Touchstone versions support entering layers by coverage; however, during the analysis, the layer terms are pushed down to the sublimit level. This can cause inaccurate modeled results where sublimits are already present. With the new modeling framework, the software can handle these situations, workflows where site terms need to be applied before coverage terms, for example when there are site terms at the location and then layers by coverage.

No duplication of locations and overestimation of loss

Though it supports coding exposures for specific sub-perils, the current financial module has not always been able to propagate the losses correctly through these terms. With NGM, the new framework will ensure sub-peril losses are maintained and financial terms are applied to the intended loss distributions. This means no more duplication of exposures to view overall losses as well as losses by sub-peril.

Higher granularity of loss output

The sub-peril loss distributions provide the option to save event losses by sub-peril, providing a higher granularity of loss output.

More accurate gross losses and improved back-allocation methodology at location level

 Nested or multi-tiered sublimit support: NGM supports second and third tier sublimits, and improving the accuracy of gross losses.



• Improved back-allocation methodology: With NGM, you can more accurately allocate contract losses to the underlying locations.

NGM use cases

Sample NGM use cases.

Modeling residential and small commercial lines of business

- · More realistic representation of uncertainty for residential and small business lines
- In-depth analytics on potential loss magnitudes for insurers' portfolios
- Accurate capture of geographic, coverage, and sub-peril correlations
- Detailed tail modeling of loss for all insurance coverages
- Explicit modeling for secondary sub-perils
- · Actuarial accuracy in representation and computation of contracts

Modeling commercial lines

- · Explicit accounting for geospatial coverage and sub-peril correlations
- More accurate representation of specific and aggregate terms for main and secondary perils in loss analyses
- · Realistic capture of insured losses for multi-layered and nested contracts
- NGM generally reduces the losses retained by the insurer:
 - The aggregate limit protects the insurer from the accumulation of claims and losses from multiple catastrophe events in the contract year.
 - By the same token, the aggregate deductible protects the insured from the accumulation of retained losses in the case of multiple events and claims in the same contracted year.
 - NGM enables you to structure policies with annual aggregate terms at all three insurance tiers supported in Touchstone: location, sublimit, and layer.
- Support for the nested, per-risk reinsurance workflow : NGM enables you to derive the actuarial netof-treaty loss distribution in a fully probabilistic form—by event and by location
- Flexibility for creating multi-tiered and nested policies that addresses market demand for the accurate rendering of insurance and reinsurance terms, conditions, and clauses.

Modeling direct, facultative, and treaty lines

- · Accounts for all types of insurance workflows and accounts for sublimits.
- More accurately captures the geographical dependencies in clustered reinsurance portfolios.
- Provides accurate and complete view of risk for:
 - the facultative contract underwriter
 - the per-risk XOL treaty underwriter
 - the insurer net of facultative and treaty loss
- Accumulations of layered and non-layered insured perils with new reinsurance placement and workflow.
- Accumulations of layered and non-layered insured secondary sub-perils with new reinsurance placement and workflow.