**Email Draft – Functional Requirement Scope**

**Subject:** Risk-Loss Process & NPI Scoring – Functional Requirement Scope (Draft)

Dear [Client Name],

As part of our ongoing discussions, please find below the draft functional requirement scope for the **Risk-Loss Process and NPI Scoring**. This document is intended to outline the objectives, scope, and deliverables of the initiative in alignment with actuarial and underwriting requirements.

**1. Objective**

To design and implement the **Risk-Loss Process** incorporating BCE (Base Class Equivalent) exposures and NPI-based scoring methodology, leveraging SQL transformations on client-provided data. The solution will support actuarial analysis, underwriting insights, and standardized risk reporting.

**2. In-Scope**

**Data Sources & Ingestion**

* Client-provided SQL scripts for Risk-Loss Process logic.
* Input data files: Submission Data, DHC Data, and Internal System Data.
* Actuarial data (historical claims, exposures, and NPI attributes).
* Import and storage into SQL/Cognisure/Snowflake environments.

**Core Calculations & Logic (as per client methodology)**

* **BCE Metrics**:
  + BCE\_BASE – On-leaved exposure for providers (territory, class, limit adjusted).
  + BCE\_ST – State-adjusted BCE for cross-state comparison.
  + BCE\_FREQ – Frequency-adjusted BCE for claim analysis.
  + BCE\_ST\_FREQ – State & frequency adjusted BCE.
  + BCE\_ST\_TOT\_RPTD – BCE with frequency trend & total reported loss equivalent development factor (LDF).
  + BCE\_ST\_FREQ\_TOT\_CNT – BCE with frequency trend and claim count LDF for count-based comparisons.
* **NPI Scoring**:
  + Unique physician risk score derived from 13 attributes.
  + Applied on BCE-adjusted exposures.
  + Includes claim count exclusions (e.g., certain claim types, handhold MED LIC).
* **Actuarial Methods Embedded**:
  + Frequency analysis.
  + Severity analysis.
  + Loss Development Factors (LDFs).
  + Trend application (frequency/severity trend).
  + Magnitude-adjusted exposure base to remove distortion.

**Data Engineering Deliverables**

* SQL/Snowflake data model for ingestion & transformation.
* Data quality checks (deduplication, missing values, exposure base alignment).
* Process to generate BCE & NPI outputs in standard reporting format.
* Reports/tables for downstream actuarial & underwriting analysis.

**3. Out-of-Scope**

* Development of actuarial assumptions (e.g., creating new LDFs or trend selections).
* Manual underwriting judgment logic beyond SQL-implemented rules.
* Visualization/dashboard development (unless explicitly requested).
* Non-NPI based scoring models or ML experimentation.

**4. Assumptions & Dependencies**

* Client will provide final SQL queries for reference and validation.
* All actuarial methodologies (e.g., how LDF is derived) are client-defined.
* Data availability for all BCE and NPI attributes.
* Final reporting format to be validated by actuarial/underwriting teams.

**5. Deliverables**

* Final SQL/Snowflake Data Model.
* BCE & NPI scoring tables with applied logic.
* Documentation (Data Dictionary + Logic Flow).
* QA/Validation report on implemented logic.

This draft scope ensures alignment on:

* **Data inputs** (what goes in).
* **Calculation methodology** (what logic is applied).
* **Outputs** (what will be delivered).
* **Exclusions** (what is not part of this phase).

Please review and share feedback or additional requirements, so we can finalize the scope and proceed with implementation.