



# An AI Approach to Quantifying Social Inflation

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# Agenda

- Overview of social inflation in the United States
- How generative AI can combat the problem
- Perspectives from the Asia Pacific region

# Social inflation is a major concern in the US market

Social inflation loosely refers to the effect of rising jury verdicts over time. It is closely related to other disturbing legal developments:

- Increased plaintiff win rates
- The # of corporate nuclear verdicts has tripled since 2020\*
- It is driven by several factors including:
  - Increased use of litigation funding
  - An aggressive plaintiffs bar
  - Anti corporate sentiment
  - Increased medical costs

This has significantly reduced the profitability of liability insurers; many of whom are at risk of nuclear jury verdicts

**Number of Corporate Nuclear Verdicts: 2009-2024**



\*Nuclear verdict data obtained from Marathon Strategies 2025 Edition of "Corporate Verdicts Go Thermonuclear"

# AI can be used to leverage insights from unstructured data

- An MIT Sloan School of Management article noted that 80% - 90% of business data is unstructured<sup>1</sup>
- Actuaries can enhance their deliverables by leveraging insights from unstructured data
- Court dockets are one such source of unstructured data and consist of all the documents pertinent to a particular court case; they are mostly in PDF form and include a number of components such as:
  - The plaintiff complaint
  - Notes on expert witness testimony
  - Jury verdict details (rationale & breakdown of verdict)
- There are companies in the legal tech industry that are in the business of collecting PDFs of court dockets going back roughly two decades and spanning virtually all state and federal courts; court dockets for roughly 10M+ court cases can be made available to you for a fee. Examples of companies that have this data include:
  - Bloomberg Law
  - Lexis Nexis
  - Thomson Reuters

# Court dockets are an underutilized vast treasure trove of data that actuaries can leverage

- By leveraging AI insurers can derive valuable insights into their exposure to social inflation risk.
- These insights can be of use to multiple areas of the company including:
  - Actuarial
  - Claims
  - Underwriting
  - Investment portfolio management
- We will briefly discuss potential use cases in the following areas:
  - Case reserving
  - Bright spot analysis
  - Policy manuscripting
  - Asset liability management



# Case reserving is one use case for AI

## Identify key characteristics of claim

- Achieved through text mining and natural language processing
- Could result in findings such as marital status, number of dependents, nature of injury, venue for litigation etc.

## Use AI to scan the database of 10M+ court cases for “synonymous” cases

- Cases will never be 100% identical but would have many commonalities
- Human user can have the option to manually remove cases they don't consider to be synonymous

## Use synonymous cases as a basis to predict original claim being analyzed

- Normalization of synonymous cases to characteristics of original claim being investigated
- Adjust for trend with time series or related methods
- Projected case reserves and potentially confidence intervals are the end result

# Policy manuscripting & bright spot analysis workstreams are another application

- **Policy manuscripting:** The text analysis capabilities of AI can be used to identify common root causes of litigation and aid the insurer in drafting updated policy terms and conditions to avoid or minimize such litigation going forward. It can also assist with certain underwriting decisions.
- **Bright spot analysis:** In addition to simply performing a case reserve estimate on litigated claims, analysis could be done to determine common features in how litigation unfolded on lawsuits that were settled relatively favorably from the insurer's perspective.
  - This would effectively be a like a "GPS" guiding the claims department on how to handle the ongoing litigation in an effective manner
  - Suggested approaches could be uncovered that are not easily apparent to a human claims adjuster working 9 to 5



# AI driven social inflation analysis can influence an insurer's investment practices

- P&C actuarial involvement has traditionally been focused on the liability side of the balance sheet, but AI provides an opportunity for actuaries to assist their employers/managers with investment portfolio optimization
- Asset Liability Management - Armed with insights on changes in expected duration of law suits an actuary can provide these updates to investment portfolio managers who can in turn make adjustments to the duration and/or type of securities that make up the assets backing the loss reserves.
- Duration mismatches present a number of challenges to insurers such as liquidity risk (e.g. the risk of having to sell bonds at an unfavorable price to meet policyholder obligations).



# Perspectives from the Asia Pacific region

## Social Inflation is different - but not absent

- APAC has not (yet) seen US-style nuclear verdicts, but social inflation is real, driven by:
  - increasing plaintiff awareness & legal sophistication
  - globalization of legal practices
  - rising medical and care cost across Asia
- Social inflation in APAC tends to manifest more gradually, making early detection more challenging – but also more valuable

## Fragmented and unstructured data landscape

- Claims and court data across APAC are fragmented across jurisdictions, with varying levels of availability, consistency and transparency.
- Lack of legal tech companies that provide unstructured court dockets data.
- Lower performance and accuracy on LLMs in non-English language

## Practical Use Cases for AI

- Leveraging GenAI on court dockets for quantification of Social Inflation is a specific use case.
- For Asia Pacific, other GenAI use cases that may be considered:
  - Claims document summarization and insight extraction, for triaging and early severity signaling
  - Customer and intermediary interaction analysis
- Start the process of collecting court dockets

# Perspectives from the Asia Pacific region

Countries	Highlights
<b>China</b>	<ul style="list-style-type: none"><li>- Rapid growth in claims volumes, with increasing complexity in bodily injury and liability claims</li><li>- Court judgments increasingly digitized, but access remains fragmented</li></ul>
<b>Japan</b>	<ul style="list-style-type: none"><li>- Low frequency of extreme verdicts, with strong emphasis on negotiated settlements</li><li>- High data quality within insurers, but limited publicly accessible court-level data.</li></ul>
<b>India</b>	<ul style="list-style-type: none"><li>- Lengthy litigation timelines leading to significant reserving uncertainty</li><li>- Court data availability improving, but highly heterogenous across states</li></ul>
<b>Thailand</b>	<ul style="list-style-type: none"><li>- Medical inflation is a key growing driver of claims severity</li><li>- Fast improving market-wide data availability and quality</li></ul>
<b>Malaysia</b>	<ul style="list-style-type: none"><li>- Increasing consumer awareness and legal sophistication, though litigation severity remains controlled</li></ul>
<b>Singapore</b>	<ul style="list-style-type: none"><li>- Stable legal environment with predictable outcomes and strong governance</li><li>- High data quality and advanced digital infrastructure</li></ul>

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