

Workers Comp Carrier is Driving Smarter Claims & Stronger Underwriting Performance with Predictive Analytics



The MEMIC Group is improving the accuracy and timeliness of case level reserves and enabling earlier and more targeted intervention on claims through AI

The Challenge

As claims environments grow more complex, MEMIC identified an opportunity to improve:

- **Accuracy of case reserve estimates**
- **Timeliness of reserving decisions**
- **Alignment between claims and underwriting performance**

Traditional reserving approaches, while effective, left room for greater precision and earlier insight, particularly at the individual claim level.

The Solution

To address these challenges, MEMIC partnered with Gradient AI to implement the **Total Incurred Prediction (TIP) model**, alongside a benchmarking tool.

The TIP model leverages advanced analytics to:

- Predict the **total cost of claims earlier in their lifecycle**
- Provide **data-driven guidance for adjusters**
- Enable more **consistent and accurate reserving decisions**

MEMIC began deploying TIP within its claims' organization, building on an existing relationship with Gradient on the underwriting side.

"We partnered closely with the Gradient AI team to implement a new approach to leveraging the TIP model," said Matt Harmon, Senior Vice President of Claims for the MEMIC Group. "Specifically, we now use TIP predictions at the individual claim level to identify potentially under or over reserved claims at critical points throughout the data reporting lifecycle, particularly as they relate to NCCI Experience Modifications (X Mods).

NCCI Experience Modifications (X Mods) are one component used to determine the pricing strategy for workers' compensation coverage. They are calculated based on an employer's loss history compared to its industry peers and serve as a multiplier to increase or decrease premium costs. X Mods aim to predict future losses and appropriately price workers' compensation policies.

Implementation Approach

MEMIC took a measured, results-oriented approach:

- Integrated TIP into **claims workflows** to support adjuster and claim team manager decision-making
- Conducted an initial **6-month performance analysis**
- Engaged cross-functional stakeholders, including **actuarial, claims and underwriting leadership**
- Focused on **operational adoption**, not just model deployment

This disciplined rollout ensured that insights from the model translated into real business value.

Results & Business Impact

This approach enabled earlier and more targeted intervention on claims, allowing appropriate reserve adjustments to be posted sooner in the claim life cycle. As a result, reserve positions are more reflective of expected outcomes at each reporting interval. Specific outcomes included:

Improved Reserving Accuracy

- Enhanced **precision of case-level reserves**
- More consistent reserving practices across claims teams

Faster, More Informed Decisions

- Earlier visibility into **potential claim severity**
- Improved **timeliness of reserve adjustments**

Positive Underwriting Impact

- Early evidence of **favorable trends in experience modifiers (mods)**
- Contribution to **revenue growth in the first quarter**
- Stronger alignment between **claims outcomes and underwriting results**

While multiple factors influence underwriting performance, MEMIC leadership recognizes TIP as a **meaningful contributor** to these improvements.

“We went live with this enhanced process in May 2025, said Harmon. “A six month post implementation study demonstrated that reserve adjustments driven by TIP insights resulted in more timely updates to X Mods and improved accuracy in experience based policy pricing at renewal.”

Organizational Value

The impact of TIP extends beyond claims operations:

- **Strengthens collaboration** between claims and underwriting
- Embeds **predictive analytics into daily decision-making**
- Supports a more **proactive, data-driven culture**

As one senior leader noted, the initiative has already gained visibility and validation at the executive level, including discussions in leadership meetings.

“Improved reserve accuracy has given MEMIC underwriters greater confidence in renewal pricing decisions,” noted Harmon. “In many cases, this has supported more appropriate premium levels that more accurately reflect underlying risk. These changes have had a favorable impact on both revenue and overall profitability while supporting fair and transparent pricing for customers.”

Beyond the initial objective, MEMIC Group identified several additional use cases for the TIP model across multiple functional areas:

Claims and Underwriting

- Evaluating open claims at the individual policy level when an account leaves MEMIC to estimate future claim costs and profitability.
- Analyzing claims within an active policy to identify potential future development and inform renewal pricing strategies.
- Assessing claims associated with catastrophic loss events to provide earlier estimates of ultimate loss severity.
- Reviewing open claims across multiple policies when evaluating potential commutations or settlements with reinsurers for a specific accident year.

Actuarial

- Using TIP in conjunction with actuarial predictive worksheets to compare actual loss emergence against expected emergence.
- Assessing the individual impact of large losses on accident year development.
- Exploring expanded use of TIP across all open indemnity claims for older accident years. While still in early stages, we see meaningful potential in this application.

What's Next

MEMIC plans to expand its analysis of TIP's impact:

- Conducting a **12-month and 18-month follow-up study**
- Quantifying long-term benefits across **claims and underwriting**
- Continuing to refine and integrate predictive capabilities

These future milestones are expected to further demonstrate the sustained value of predictive analytics in driving business performance.

"Looking ahead, we are evaluating opportunities to integrate TIP model functionality more directly into our core claims system," said Harmon. "In addition, we are exploring other Gradient AI solutions to further enhance claims analytics, operational efficiency, and decision support.

A Partnership Focused on What Matters

MEMIC highlighted several differentiators in its partnership with Gradient AI:

- A focus on **high-impact priorities**, rather than spreading efforts too thin
- Commitment to **operationalizing solutions**, not just delivering models
- Ongoing alignment with **customer needs and strategic goals**

This approach has enabled MEMIC to steadily build value while maintaining focus on execution.

"Gradient AI has been an excellent business partner, working collaboratively with us to identify creative and practical applications of the TIP model across claims, underwriting, and actuarial teams," said Harmon.

Conclusion

By implementing the Total Incurred Prediction model, MEMIC has taken a significant step toward modernizing its claims operation and strengthening underwriting outcomes.

The result is a more accurate, timely, and strategically aligned organization, positioned to deliver better results for both the business and its policyholders.

Interested in learning more about how predictive analytics can transform your claims organization?

Let's start the conversation.

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Client Overview: About The MEMIC Group

The MEMIC Group includes MEMIC Indemnity Company, MEMIC Casualty Company, and its parent company, Maine Employers' Mutual Insurance Company. All companies are rated "A" (Excellent) by A.M. Best for financial strength and stability.

MEMIC is licensed to write workers' compensation coverage across all 50 states. We partner with more than 22,000 employers and support approximately 1 million of their employees through proactive safety services and compassionate injury management. Our teams are committed to helping workplaces thrive, from Maine to Florida and beyond.

In January 2026, The MEMIC Group acquired The Dakota Group® including Risk Administration Services Inc. Go to the full press release to learn more.

For more information, visit www.memic.com.