The objective of this project is to analyze and improve the performance of independent insurance agents using a supervised predictive framework. The dashboard enables segmentation based on key performance indicators such as growth rate, hit ratio, retention ratio, and product line activity. This empowers stakeholders to identify top-performing agents, quote system efficiency, and areas needing strategic improvement.

**Tools & Technologies Used:**

* Power BI Desktop
* Power Query Editor
* DAX (Data Analysis Expressions)
* Microsoft Excel (Data Source)

**Key Metrics Computed:**

* **Hit Ratio** = Bounds / Quotes (for each quote system)
* **Retention Ratio** = Retained Policies / In-force Policies
* **Growth Rate (3Y)** = ((Current Premium - Previous Premium) / Previous Premium) \* 100
* **Agent Segmentation** based on Growth and Retention Binning (High, Medium, Low)

**Dashboard Visuals:**

1. **Summary Table by Agency:**  
   Displays total premium, new business premium, policy count, retention ratio, and average hit ratio per agency.
2. **Product Line Analysis:**  
   Visual comparison of premium distribution between Commercial Lines (CL) and Personal Lines (PL).
3. **Retention Ratio – Agency & State:**  
   Bar chart highlighting agencies and states with the highest client retention performance.
4. **Hit Ratio by Quote System (PL/CL):**  
   Clustered column chart comparing hit ratios across various quote systems like MDS, eQT, APPLIED, etc., split by product line.
5. **Trend Analysis (2006–2013):**  
   Line chart showing premium growth over the years.
6. **KPI Cards:**  
   At-a-glance metrics such as average hit ratio, average retention ratio, and year-over-year growth.

**Segmentation Logic:**

* **Growth Band:**
  + High: Growth ≥ 10%
  + Moderate: 0% ≤ Growth < 10%
  + Negative: Growth < 0%
* **Retention Band:**
  + High: Retention Ratio ≥ 0.85
  + Medium: 0.6 ≤ Retention < 0.85
  + Low: Retention < 0.6

These bands are used in slicers and filters to drill down into specific agent groups.

**Outcome & Benefits:**

* Enabled clear visibility into agent performance across states and years.
* Identified high-performing quote systems for targeted investment.
* Facilitated data-driven segmentation for training, support, and strategic planning.
* Created a reusable framework for predictive agent scoring models.

**Conclusion:**

This Power BI dashboard provides a powerful analytical layer for insurance management teams to monitor, compare, and improve agent performance. Through intuitive visuals and dynamic filters, it supports informed decision-making and contributes to improved customer retention, system utilization, and business growth.