OPTISECURE INSURANCE – CAMPAIGN TARGETING & RENEWAL ANALYSIS REPORT

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1. Executive Summary

This report provides an in-depth analysis of OptiSecure Insurance's policy renewal trends, focusing on customer demographics, engagement behavior, financial profiling, and campaign responsiveness. The analysis was conducted using integrated datasets Customer Profile, Purchase Behaviour, and Campaign Performance —and enhanced through the latest visualization dashboard updates.

The overall policy renewal rate is **14.91%**, which indicates a moderate level of retention within the current base. However, predictive modeling reveals a significant opportunity: a "High Propensity" segment exists that is double the average performance.

The customer base consists of **2,240** policyholders, primarily educated professionals (Graduates and PhDs) with a strong presence in the "Married" and "Together" demographic.

Further analysis identified clear renewal drivers, particularly among customers with:

- **Higher Propensity Scores** (PhD and Master's degree holders showing scores of **0.29** and **0.28** respectively),
- **Specific Tenure Milestones** (Tenure year 13 showing a peak performance spike),
- **High Catalog Engagement**, and
- **Low Recency** (Active within the last 20 days).

Conversely, a critical inefficiency was detected in **Campaign 2**, which is statistically failing compared to the **5.96%** average acceptance rate. These findings present actionable opportunities to strengthen loyalty, optimize channel spend, and deploy targeted engagement strategies that reduce churn and improve customer lifetime value (CLV).

2. Data Overview

The analysis used a consolidated dataset comprising:

- **Customer Profile** Demographic details including Age, Education, Marital Status, and Income.
- **Purchase Behaviour** Transactional data across Web, Catalog, and Store channels.
- **Campaign Performance** Historical response data.

Key statistics:

- **Total customers:** 2,240

- **Average Renewal Rate:** 14.91%
- **Average Campaign Acceptance Rate:** 5.96%
- **Average Days Since Last Interaction (Recency):** 49 days
- **Dominant Segment:** Low Renewal Bucket (50% of base) vs. High Renewal Bucket (26%).

3. Data Quality and Transformation Process

All data was consolidated to ensure consistency, integrity, and analytical readiness for the dashboard.

3.1 Data Quality Checks

- **Duplicate Records:** Verified and removed to ensure unique Customer IDs.
- **Null Values:** Addressed minor gaps in `Income` by imputing median values based on Education levels.
- **Outliers:** Capped extreme income values (e.g., >£600k) to prevent skewing the average customer profile.

3.2 Feature Engineering

Several new columns were derived to enable segmentation and profiling:

- **Renewal_Bucket_2:** Classified customers into "High" (26%), "Mid" (24%), and "Low" (50%) propensity tiers.
- **Response_Score:** A predictive probability metric used to rank customers.
- **Income_Band:** Grouped earnings into Low, Mid, and High brackets.
- **Household_Type:** Derived from `Kidhome` and `Teenhome` to identify "Families" vs. "Empty Nesters".

4. Exploratory Data Analysis

4.1 Propensity Performance

- **High Propensity:** 26% of the customer base.
- **Mid Propensity:** 24% of the customer base.
- **Low Propensity:** 50% of the customer base.

4.2 Education Distribution & Impact

The dashboard highlights a correlation between education level and predicted renewal likelihood (Response Score):

- **PhD:** 0.29 (Highest Propensity)
- **Master:** 0.28
- **Graduation:** 0.27
- **2n Cycle:** 0.26
- **Basic:** 0.18 (Lowest Propensity)
- *Insight:* Higher education levels correlate with higher stability and renewal probability.

4.3 Tenure Trends

Analysis of the "Tenure vs. Renewal Rate" visualization indicates distinct spikes in customer loyalty.

- **Tenure Year 13:** Shows a significant outlier performance (peaking at **0.52** in the visual analysis), indicating a "Golden Cohort" of long-term loyalists.
- **Tenure Year 11 & 12:** Show lower comparative engagement (**0.22** and **0.08** respectively), suggesting a potential churn risk period that requires intervention.

5. Financial Profile & Customer Value

Income Band Performance:

- **High Income:** 18% Renewal Rate.
- **Mid Income:** 12% Renewal Rate.
- **Low Income:** 10% Renewal Rate.
- *Insight:* Financial stability is a key retention driver. High-income customers are nearly 2x more likely to renew than low-income customers.

Spending Power: There is a strong positive correlation between `Total Spent` and `Renewal`. The "High Propensity" segment spends significantly more (£1,946 avg) compared to the "Low Propensity" segment (£1,228 avg), confirming that retention efforts should be weighted towards value, not just volume.

6. Customer Engagement Profile

Channel Preferences:

- **Catalog:** The strongest differentiator. High Propensity customers make **2.3x more catalog purchases** than Low Propensity customers.
- **Web:** High volume but lower conversion leverage.
- **Store:** Consistent usage across segments.

Recency Factor: Engagement drops off sharply after **60 days**. Customers active within the last 20 days show the highest probability of renewal.

7. Churn Risk Segmentation

Using combined demographic, financial, and behavioral indicators, three churn risk categories were developed:

Risk Level	Segment	Characteristics
Low Risk	**High Bucket (26%)**	High income (>£67k), recent activity (<20 days), PhD/Master education.
Medium Risk	**Mid Bucket (24%)**	Average income, moderate tenure, selective shopper.
High Risk	**Low Bucket**	Low income, inactive >60 days, "Basic" education, zero campaign

(50%) history.

8. Deep-Dive Analysis Findings

Campaign Effectiveness: The overall **Average Campaign Acceptance Rate is 5.96%**. However, individual campaign performance varies drastically:

- **Campaign 4 & 5:** Top performers (above 7.2%).
- **Campaign 1:** Average performance (~6.4%).
- **Campaign 2: Critical Failure (~1.3%)**.

Key Insight: Campaign 2 is generating almost no ROI and drags down the global average. It performs ~5x worse than the top campaigns.

9. Key Insights

1. **Education Predicts Loyalty:** PhD and Master's degree holders have the highest propensity scores (0.29/0.28), making them ideal targets for premium policy cross-sells.
2. **The "Tenure 13" Spike:** Long-term customers (Year 13) are exceptionally loyal.
3. **Campaign 2 is a Budget Leak:** It is failing to resonate with the audience.
4. **Income Drives Renewal:** The 18% renewal rate in the High Income band vs 10% in the Low band suggests affordability is the primary churn driver.

10. Strategic Recommendations

Retention and Loyalty Programs:

- **Target the "Golden Cohort" (Tenure 13):** Implement a "Loyalty Anniversary" reward program to acknowledge their high value.
- **Support the "Risk Years" (Tenure 11-12):** Deploy proactive engagement campaigns to bridge the gap in this lower-performing tenure bracket.

Campaign Optimization:

- **Pause Campaign 2:** Immediately reallocate its budget to **Campaign 4** or **Catalog** distribution.
- **Leverage Catalogs:** Send physical mailers specifically to the "High Propensity" bucket, as they have proven responsiveness to this channel.

Propensity-Based Targeting:

- **High Propensity (PhD/Masters):** Focus on value-add services and comprehensive coverage.
- **Low Propensity (Basic Ed/Low Income):** Focus on flexible payment options and budget-friendly plans to reduce churn.

Churn Monitoring Dashboard:

- Continue monitoring the **"Propensity Performance"** and **"Recency"** metrics in Looker Studio to spot "at-risk" high-value customers before they exit.

11. Conclusion

The OptiSecure renewal analysis demonstrates that while the overall portfolio is stable at 14.9%, a vulnerable segment of customers exists alongside a highly valuable "High Propensity" group. By leveraging these insights specifically targeting the educated, high-income segment with Catalog campaigns and retiring the failing Campaign 2 OptiSecure can proactively improve retention. With data-driven decision-making, OptiSecure can:

- Increase the renewal rate toward **18-20%**,
- Maximize marketing ROI by cutting inefficient spend, and
- Strengthen long-term profitability.

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Company Details

OptiSecure Insurance Ltd: A Digital-First Approach to Personal Insurance

Company Profile

- **Founded:** 2011
- **Headquarters:** Manchester
- **Policyholders:** 350,000+
- **Specialisation:** Personal lines insurance

Established in 2011 by actuarial consultants, OptiSecure Insurance has carved out a distinctive position in the UK insurance market through innovation and customer-centricity. The company offers home, auto, life, and travel policies through digital channels, prioritising transparent communication and flexible pricing models.

OptiSecure's competitive edge lies in its sophisticated use of data analytics for customer insights. The firm operates a fully digital policy management system and has recently expanded into mobile app-based servicing, significantly improving self-service rates whilst maintaining award-winning customer satisfaction scores.