4th Webinar on Risk Management
18th June 2021

Fraud – Impact on Life (Re)Insurance & how analytics is being used to manage it

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Institute of Actuaries of India

All views are personal !!

Case Study

Insurer	Company A	Company B
Demographics		
Name	██████████	████ ████
Date of Birth	06/07/1976	06/07/1976
Address	Plot No. 5 , Khobragade Layout, ████████	442, Emtas Shale, Near Tajbagh, ████ ████
Marital status	Married	Married
Education	12th Pass	Graduate
Occupation	Self Employed - Contractor	Self Employed - Trading of Retail confectionaries
Income	500,000	532,620
Policy Details		
Product Type	Term Plan	Term Plan
Sum Assured	91,00,000	100,00,000
Riders Opted	NA	NA
Policy Term	20	32
Nominee	Wife	Wife
Nominee Name	Chandaniya ████	Phandanita ████
Nominee Date of Birth	12/04/1978	01/01/1980
Proposal Sign Date	12/03/2015	20/03/2015
Premium	22641	24000
Premium Frequency	Yearly	Yearly
Premium Mode	PNB (Auto debit)	Cheque (Andhra Bank)
Channel	Bancassurance	Bancassurance

Case Study

| UW Details		
Income Proof	Information awaited	ITR AY 2014-15
Age Proof	Pan card	Pan card
Address Proof	Electricity Bill	Voter ID card
Medicals	Yes	Yes
Medical centre	Information awaited	Hope Hospitals, Nagpur
UW decision	STD rates	STD rates.SA restricted to 7,080,000
RCD	13/03/2015	18/08/2015

Claim Details		
Date of Death	12/08/2016	12/08/2016
Cause of Death	Cardiorespiratory Arrest	Cardiorespiratory Arrest
Address at Time of Death	Brahmapuri, Chandrapur	Brahmapuri, Chandrapur
Claimant	Wife	Wife
Date of Claim intimation	07/04/2017	12/04/2017
Policy duration	1 year 5 months	11 months 24 days

Preliminary Investigation findings

- Life Assured called up at the customer care no. of Insurance company informing that he is 'Alive'

- Doctor who has issued the cause of Death certificate, travelled all the way from Chandrapur to Insurance company office in Mumbai. Request made for cancellation of cause of Death certificate

- The Life Assured is alive and sells Ice-cream on cart earning approx. INR 150 per day

- As per Life Assured and the nominee, they are not aware of any Insurance policy and have not paid the premiums

- Affidavit given by Life Assured to cancel the claim

- Policy with third insurer with RCD 28/06/2015 and SA INR 9,600,000 noted (confirmed and was lapsed).

- Total Industry exposure (Known till date) – INR 25,780,000.

Preliminary Investigation findings
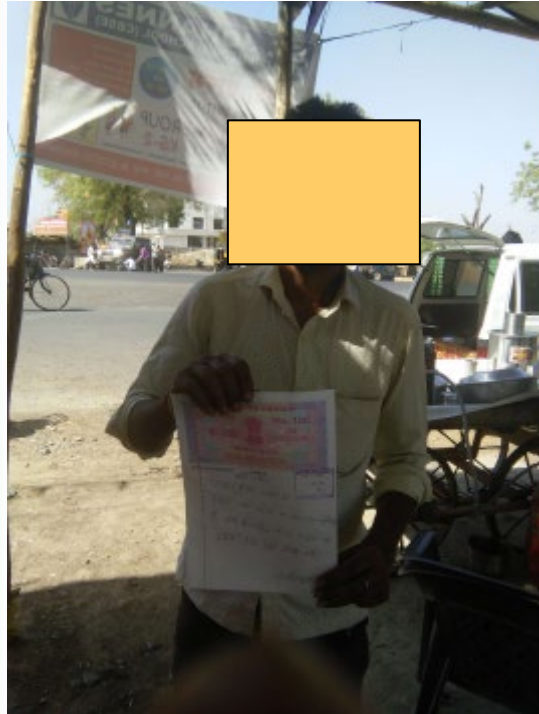
LA with affidavit for cancellation of claim

LA & Nominee under the Policy

LA's house

Preliminary Investigation findings
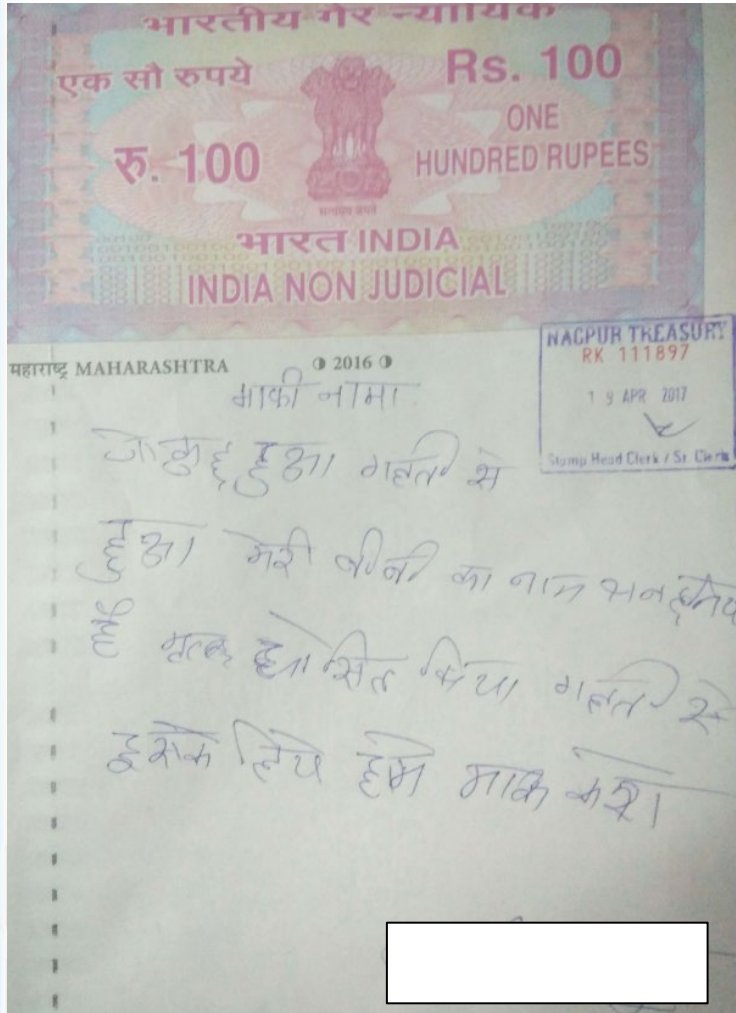
Apology letter from Life Assured

ITR filed 1 month before proposal

What have we learnt so far

➢ Fraudsters are getting more sophisticated and organized.

➢ Cost of fraud is being borne by all stakeholders including the policyholder.

➢ Insurers are actively trying to manage / minimize fraud risk.

Impact of frauds in Life Reinsurance

- Non-Term products, usually, have high surplus retentions; hence, incidence of frauds are low in the reinsured business compared to retained block. Having said, the sophistication of fraudulent claims are on a rise.

- Term products usually have relatively low retentions compared to average Sums Assureds but have more stringent underwriting requirements. Hence, overall incidence of fraud cases used to be relatively small. However, fraudulent cases are now being increasingly observed in the reinsured portfolio. Further, cases of anti-selection too are on the rise.

Fraud

- Fraud in insurance ….

is any **illegal act** committed to defraud an insurance process. It occurs when a claimant attempts to obtain some benefit or advantage they are not entitled to, or when an insurer knowingly denies some benefit that is due. (Source – Wikipedia)

Broadly, Fraudulent activities / behavior are observed in
➢ Establishing Identity
➢ Establishing Financial eligibility
➢ Establishing Health status

Anti-selection

- Anti-selection is defined as an increase in the chance for a person to take out an **insurance** contract because they believe their health risk is higher than what the **insurance** company has allowed for in the premium amount.

- Anti-selection arise due to asymmetry of information between the insurer and the insured.

- The simpler the issuance / underwriting requirements; higher the chances of anti-selection.

How Analytics is being used

Profile based Underwriting / risk management

➢ A *predictive analytics tool* that predicts a risk profile for an applicant based on multiple profile parameters.

➢ Risk here refers to the risk of adverse selection and/or fraud.

➢ The tool suggests risk checks and underwriting requirements dynamically, as appropriate for the risk profile.

➢ The overarching objective is to subject lives with poorer risk profiles to stringent evaluation while simultaneously ensuring a smoother on-boarding experience for better quality profiles.

➢ The tool works on the API based technology and provides a response in real time.

➢ It is purely a recommendation engine and the final underwriting decision rests with the underwriter.

Model Evaluation – Hold out dataset

Prediction timeframe – July 2018 – June 2019

All policies

- High Risk, 5%
- Medium Risk, 10%
- Preferred, 6%
- Standard, 79%

622,728

Early Claims

- Preferred, 1%
- High Risk, 25%
- Standard, 55%
- Medium Risk, 19%

504
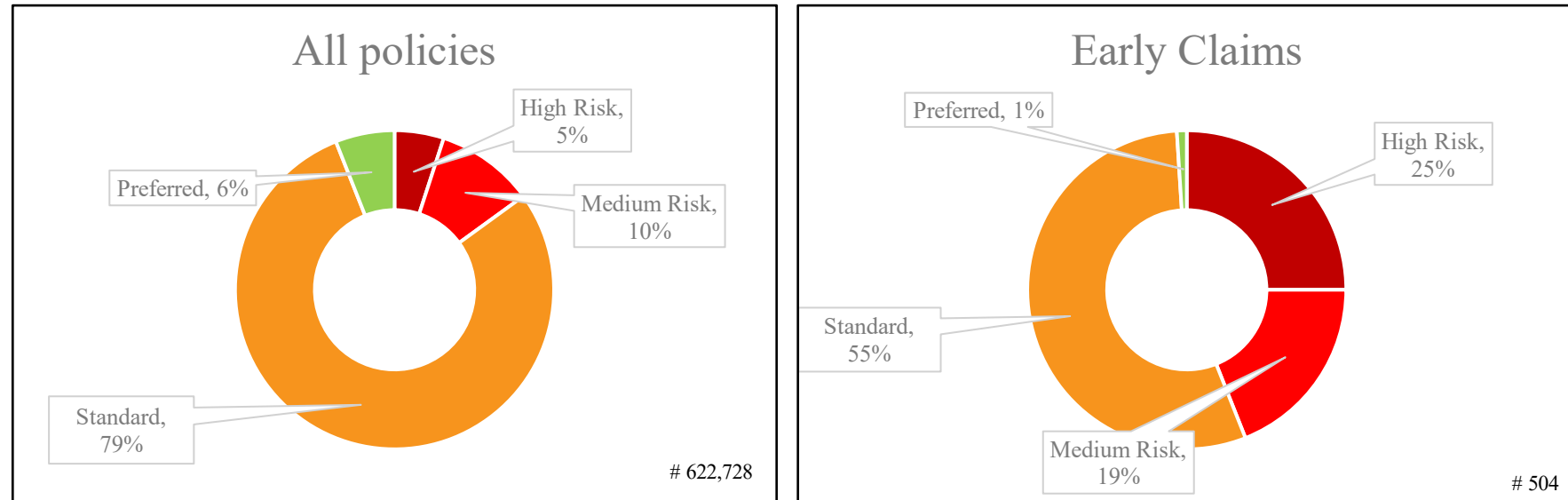
➤ 44% of the early claims (claims within 12 months of policy commencement) are incurred from policies classified into the risky buckets.

➤ At the same time, 6% of the business was classified under "Preferred" (low risk) and only 1% of the early claims are incurred from this category.
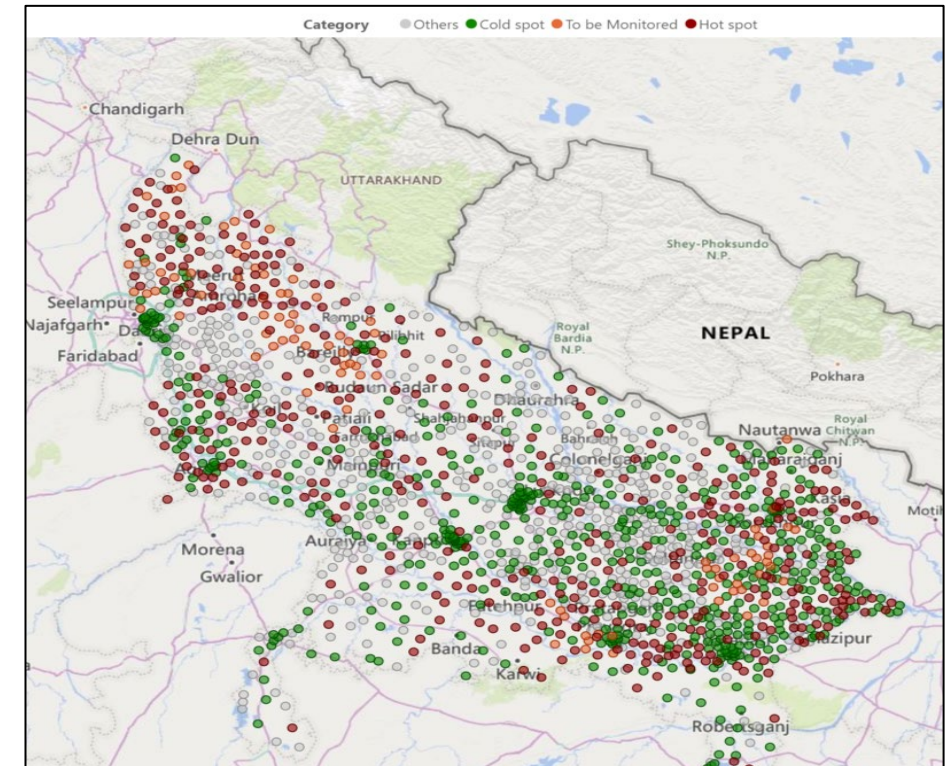
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How Analytics is being used

➢ **Location based intelligence**

A scientific and data backed approach to identify locations with higher incidence of fraud / early claims. The location tagging will be updated each time new claims data is updated and hence responsive to claims behavior.

Location based intelligence
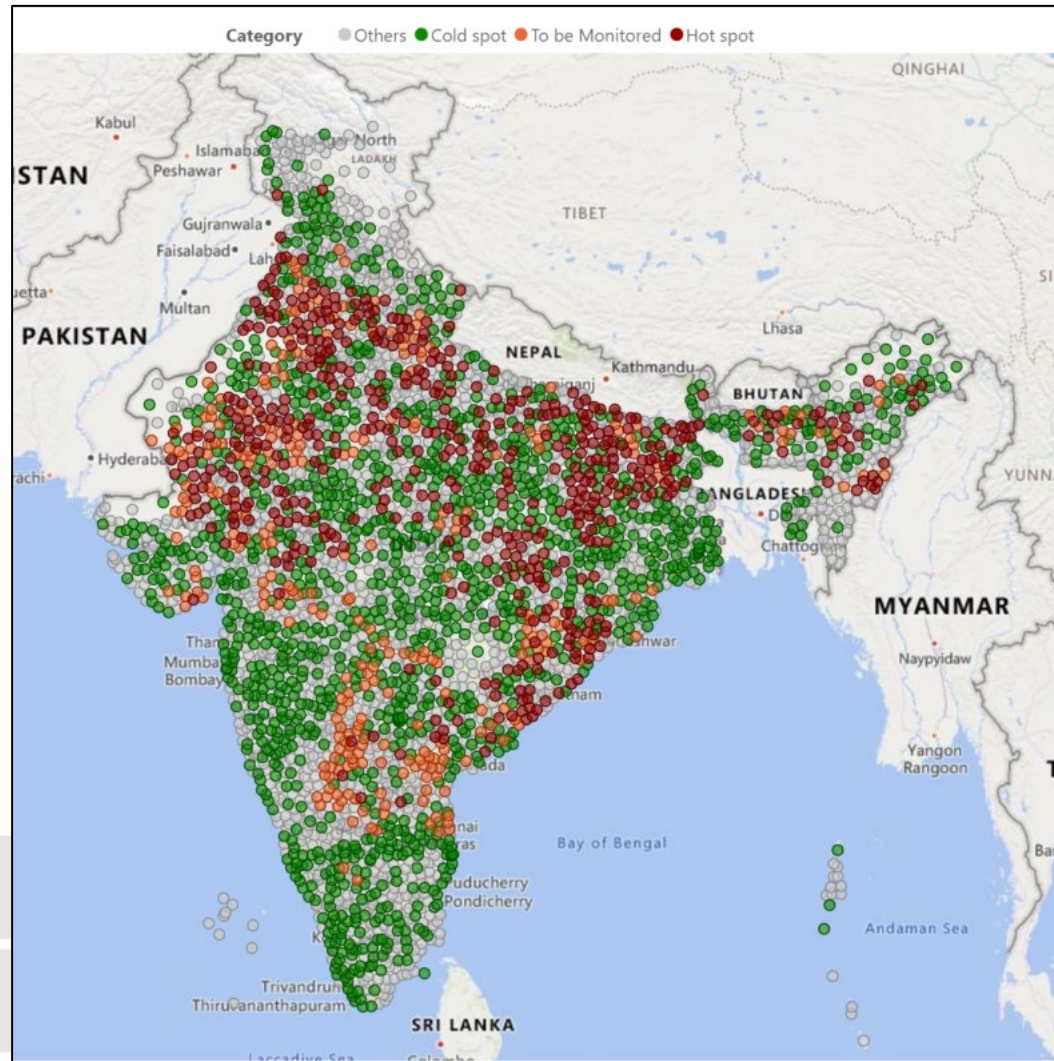
➤ In UP, 417 (23%) postcodes are identified as "HotSpots"
➤ Another 93 locations are classified by the model as emerging hotspots ("To be monitored").

What more can be done / being attempted

– Increase use of third-party data to authenticate / validate the declarations made in the application form. E.g. use of income tax or EPF data as a proxy to calculate the annual income of the applicants.

– Use of GST or similar databases to validate the information regarding the company provided.

– Create a central repository of medical test records to identify fraud diagnostic centers

– Analyse behaviour data from credit bureau to analyse if there exists a correlation with fraud / early claims.

What more can be done / being attempted

– Network Analysis to identify organized/systematic frauds.

– Use of distributor data to evaluate early claims experience, re-entry of agents involved in fraudulent practices.

– Estimation of BMI and age using photo / video.

– Use of nominee information to analyze early claims experience across companies.

– Analysing the voice and video of the applicant during the MER process to evaluate if the applicant is speaking truth.

Thank you for your attention!!