



Journey, Road ahead & Analytics

Insurance Information Bureau of India

Analytics @ Work for Better Insurance

July 2015

Background

For efficient functioning of the Insurance Sector, as well as protection of Policy holders

Reliable, timely and accurate data is
collected, processed and disseminated
by an *independent body*

Chairman, IRDA
Order dt.15th Oct,2009

Background

- “ IRDA derives authority to obtain data from all licensed operators in the Indian Insurance market, by virtue of Section 14 (2) (1) (e) of the IRDA Act, 1999.
- “ IIB is authorised, in turn by IRDA to execute this Data Collection function.

IIB registered as an Independent society in November 2012, under Andhra Pradesh Societies Registration Act.

IIB relocated to a separate premises in December 2013.

Current status

- “ Transactional Data being collected for:
 - Motor
 - Health
 - Fire and Engineering
 - Other Lines of Businesses
 - Declined lives
- “ Life data started to flow in from January 2015 onwards
- “ Output:
 - Regular Reports
 - Thematic Reports
 - Bespoke -On-Demand Reports
 - Projects





Impact of IIB initiatives

Impact Area 1

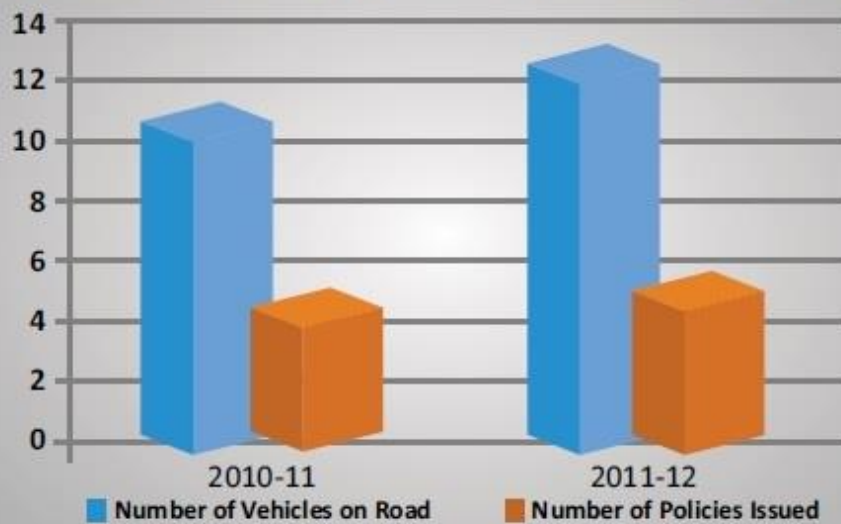
Road Safety

Background

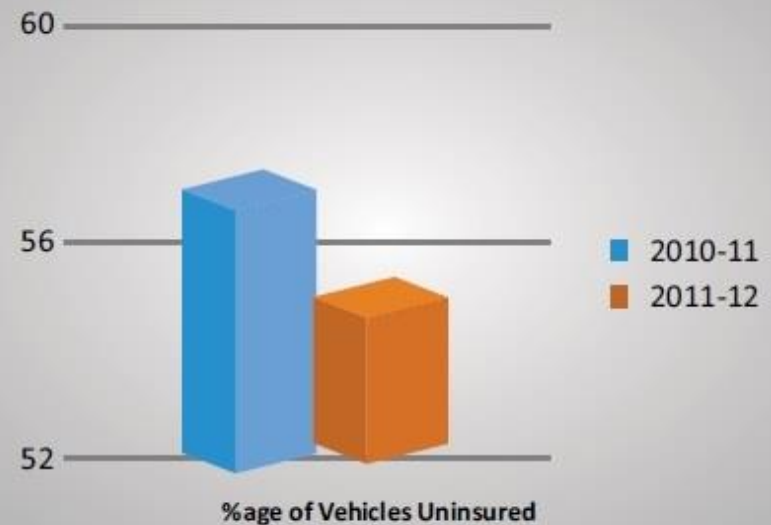
Not more than 45% of all vehicles on road have a valid Insurance policy.

An estimated 7 crore Vehicles are Uninsured in India.

Vehicles on Road vs Policies Issued (in Crores)



%age of Uninsured Vehicles

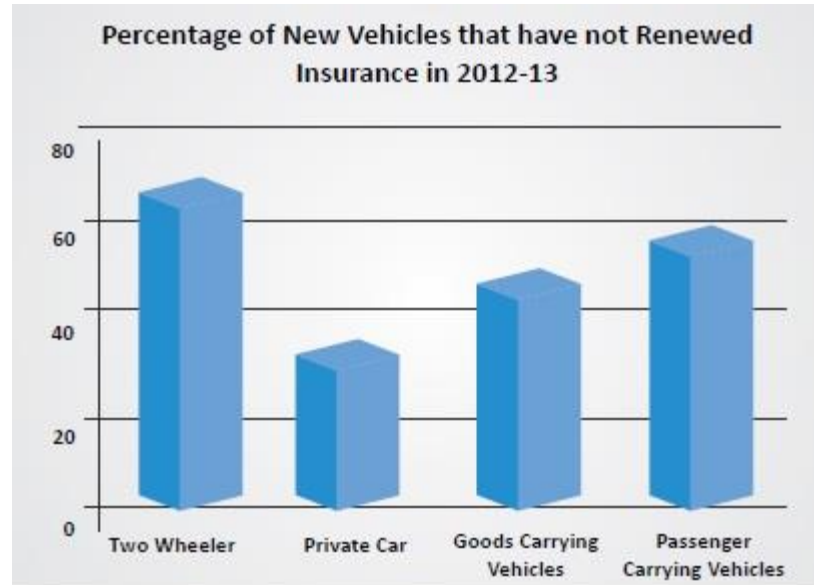


** Figures in Crores

Financial Year	No. of Registered Vehicles as on 31st March	No. of Registered Vehicles as on 31st March	Number of Vehicles on Road	Number of Policies Issued (excluding Trade and Transit Policies)	% of Vehicles Uninsured
2010-11	14.23 (2011)	3.10 (1995)	11.12	4.74	57
2011-12	15.95 (2012)	3.43 (1996)	12.52	5.58	55

* Tabulations & Charts in the presentation are generated from the data supplied by Non-Life Insurers for the period 2010-11, 2011-12 and 2012-13

2012-13 Snapshot by vehicle category



Category of Vehicle	New Vehicle in 2011-12	No. of Policies with Vehicle Age Greater than 1 and Less than 2 Year 2012-13	Percentage of New Vehicles that have not Renewed Insurance
Two Wheeler	1,15,28,298	38,07,928	67
Private Car	28,69,367	19,67,481	32
Goods Carrying Vehicles	10,12,150	5,00,841	45
Passenger Carrying Vehicles	3,84,914	1,71,712	55

Broad Impact on insurers and public

Victims of Road Accidents have difficult recourse

Loss of Premium for Insurers

Insurers still have to pay claims

The Cyberabad Initiative

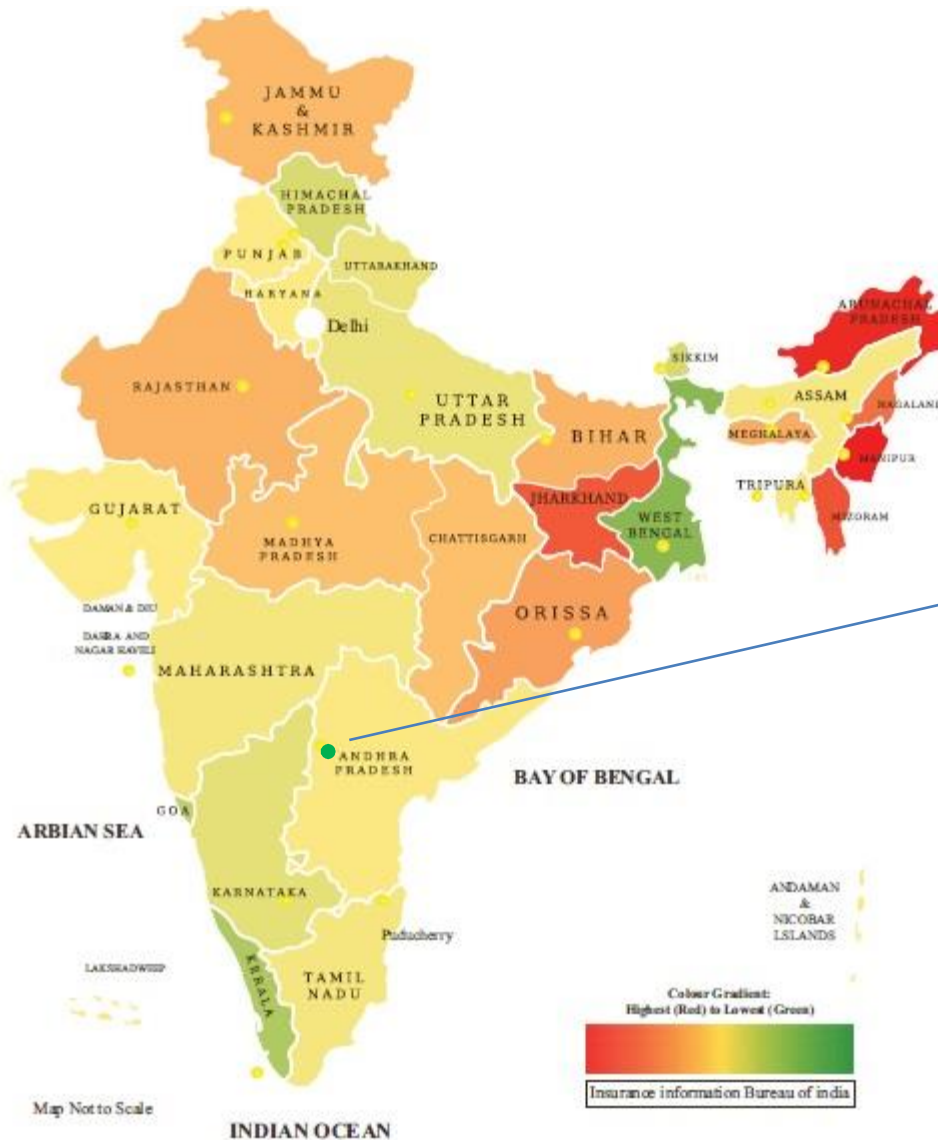
Why: To beef up road safety by bringing the uninsured within the insurance fold

What: Sharing of uninsured data with Cyberabad Police for taking appropriate actions & interventions

How: Matching the motor policy data of IIB with the registered vehicles data of Regional Transport Offices (RTOs) falling under the jurisdiction of the Cyberabad Police Commissionerate, a list of uninsured vehicles was drawn up

The Campaign

- ” Awareness
- ” Facilitating Purchase
- ” Reduce Uninsured Vehicles
- ” Wide reaching Social impact



Similar initiatives are being currently planned for :

É Delhi & NCR
É Gujarat
É Madhya Pradesh
É Kerala

Police, insurers, and the public can check whether a vehicle has a valid insurance policy or not at any point of time using this service.

Beneficiary	Description	Impact
Police	Vehicle Insurance Status Search system	Insurance status
		Stolen or not
		Stolen but recovered
		Immediate intimation of Accident
Public	Accident Vehicle Information Retrieval System	Immediate intimation of Accident
Insurer	Vehicle Claim History Verification System	Prevention of Leakages

Impact Area 2

Market Conduct

Referral Rating

Fire Class of Business

- “ Pricing of Fire Insurance policies not commensurate with risks.
- “ Burning Cost Analysis, that is the loss per Rs1,000 Sum Insured, done by IIB. The analysis and resulting rates would act as a guide for the industry for pricing.

Referral Rating

Health

- “ Group Health claims ratio
- “ Data inadequacies with respect to Group data
- “ Group = f{ Individual characteristics } like age, gender, location and occupation, etc.
- “ Crude (base) Burn Cost, which may be adjusted for factors like:
 - ✓ Variety in Cover
 - ✓ Different Co-Payment patterns (basic to wider)
 - ✓ Bulk discount in Group and Admin charges

Impact Area 3

Health Care

Health Insurance Hospital Registry

For the first time in India, IIB is creating a registry of Unique Hospitals in the Health Insurance network

- “ ~33000 Unique Hospitals
- “ Web-enabled application
- “ Globally Unique IDs
- “ Automated de-duplication
- “ Geo-tagging of hospitals
- “ Enhanced health insurance analytics
- “ Accelerate Medical Tourism

Unique Hospital IDs

- “ Plug leakages in Health Insurance outgo (including Government sponsored schemes, like RSBY)
- “ Cost Inflation control
- “ Disease pattern recognition
- “ Epidemic/ Endemic warning

35 private hospitals pulled up for fraudulent insurance claims

TNN | Mar 28, 2013, 05:58 AM IST





	Cost of treatment for Disease type Cholera				
	Database A	Database B	Database C	Database D	Database E
	ABC Hospital	The ABC Hospital & Emergency Services	ABC Hospitals Pvt. Ltd	ABC Hospital Group	ABC Group of Hospitals
Claim Paid 1	16,016	2,093	33,115	24,299	39,11
Claim Paid 2	16,577	27,929	22,919	19,366	26,343
Claim Paid 3	12,122	23,767	30,916	29,279	26,000
Claim Paid 4	16,134	25,958	31,108	21,147	15,500
Claim Paid 5	10,280	15,981	1,99,400	26,828	25,000
Average claim paid per hospital	14,226	19,146	63,492	24,184	26,391
Overall Average claim paid	29,488				

Highlight Outliers where Claim paid or amount claimed is above/below +/- 50% of the average for the hospital

	Database A	Database B	Database C	Database D	Database E
	ABC Hospital	The ABC Hospital & Emergency Services	ABC Hospitals Pvt. Ltd	ABC Hospital Group	ABC Group of Hospitals
Claim Paid 1	-	Outlier	Outlier	-	-
Claim Paid 2	-	-	Outlier	-	-
Claim Paid 3	-	-	Outlier	-	-
Claim Paid 4	-	-	Outlier	-	-
Claim Paid 5	-	-	Outlier	-	-

If the Hospital is identified as the same hospital in all databases, the average claim paid will be Rs 29,488/- across all 25 claims

	Database A	Database B	Database C	Database D	Database E
	ABC Hospital	The ABC Hospital & Emergency Services	ABC Hospitals Pvt. Ltd	ABC Hospital Group	ABC Group of Hospitals
Claim Paid 1	-	Outlier	-	-	-
Claim Paid 2	-	-	-	-	-
Claim Paid 3	Outlier	-	-	-	-
Claim Paid 4	-	-	-	-	-
Claim Paid 5	Outlier		Outlier	-	-

Impact Area 4

Insurance Penetration

Life Agency Density

- “ Presence (Lack) of Agency force versus Business Availability/ Development
- “ It is a Chicken and Egg story- a vicious cycle!
- “ IIB did a study on the Spread of Life Insurance Agents Across 611 districts in India
- “ Insurers can use it as directory in identifying potential locations for their proposed offices.
- “ The regulator can develop strategies for increasing penetration

The report acts as a guidepost in enhancement of financial inclusion and development of the sector.

Impact Area 5

Know Your Customer (KYC)

- “ IIB maintains the Central Index Server
- “ Digital platform for Insurers and Insurance repositories
- “ e-Insurance Account Details
- “ Look up and exchange e-KYC and Policy data
- “ De-duplication of e-accounts

No individual can have more than one e-account.

Impact Area 6

Regulatory Action

- “ IIB provides Analytics to assist:
 - IRDA: Third-party Motor insurance pricing.
 - Reserving for the Declined Risk Pool of Motor Third Party, The Indian Motor Third Party Insurance Pool
 - Solvency Monitoring

Peers Club

- “ World over, Insurance Rating Organizations are critical for market development, regulation and strategy formulation.
 - US: Insurance Services Organization (ISO)
 - Korea: Korea Insurance Development Institute (KIDI)
 - Taiwan: Taiwan Insurance Institute (TII)
 - Japan: General Insurance Rating Organization of Japan (GIRO);
are just a few examples.

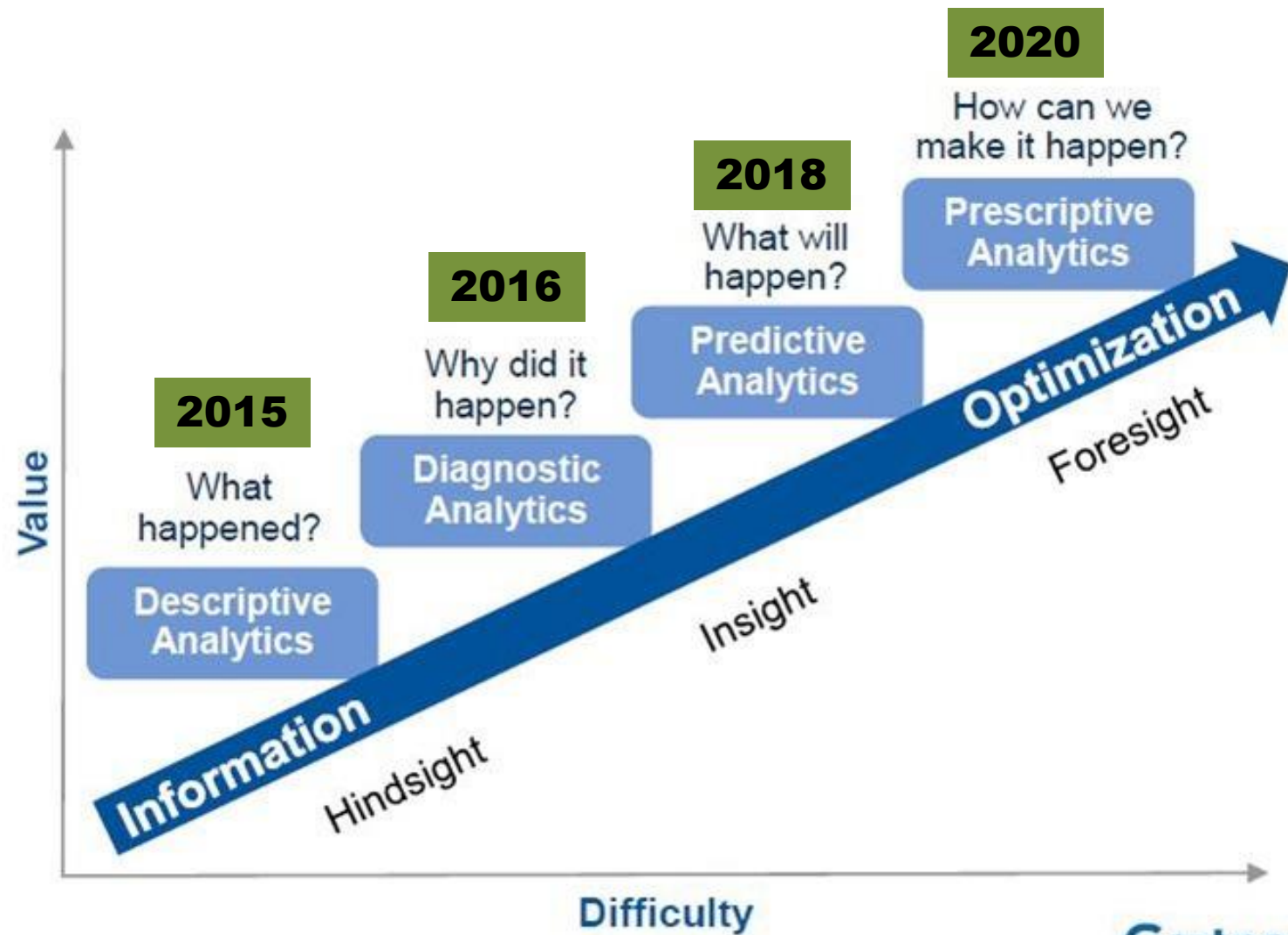
- “ IIB also has an MOU with Korea Insurance Development Institute (KIDI)

IIB is a member of the Insurance Information & Ratemaking Forum of Asia



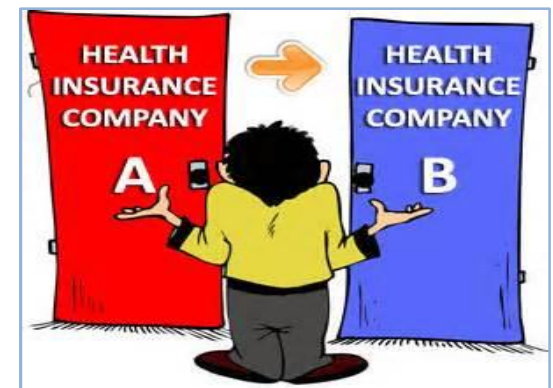
Road Ahead

NEAR – MID – LONG TERM GOALS



Verification of Claims History for Customers (Health Portability)

- “ Information asymmetry between the Porting-In insurer and the Porting-Out insurer
- “ As a result, the public is not getting the intended benefit of the portability scheme.
- “ IIB would provide a portal for claims history search for any health insurance policy.
- “ Impart Transparency Between Two Insurers to Facilitate Health Insurance Portability
- “ Porting-In insurer, without any hassle or dependence on the Porting-Out insurer can have access to claims history



Fraud Analytics

- “ Insurance frauds in India: ~ \$6.25* billion annually, or around 9 per cent of the industry’s revenues.
- “ Life & Health
 - ✓ Fake death certificate
 - ✓ Individuals masquerading as doctors
 - ✓ Policies fraudulently procured in the names of terminally-ill people
 - ✓ And many more cases of fraud

**India Forensic Center of Studies*

***<http://www.thehindubusinessline.com/features/blink/work/blowing-the-cover/article6768225.ece>*

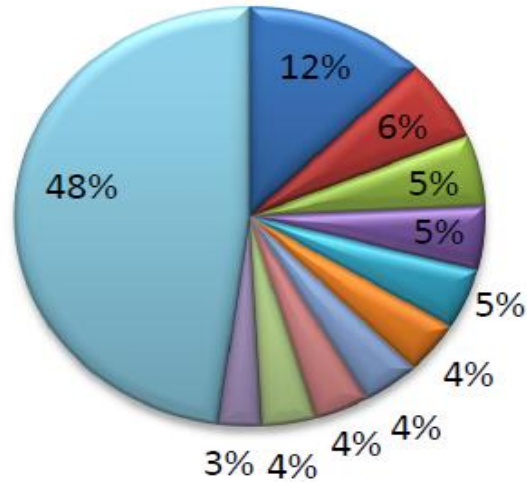
Fraud Analytics

- “ To reduce the extent of fraudulent claims by highlighting suspicious claims
- “ This will improve market efficiency
- “ Claims information also contain ICD 10 Code
- “ So, IIB will look for various things:
 - Providers costing far more than peers
 - Claims lodged by same patient with multiple insurers for the same event
 - Past claims & insurance history of the patient with other insurers
 - Fraud Prone Areas

IRDAI has laid down the guidelines requiring insurance companies to have in place the Fraud Monitoring Framework.

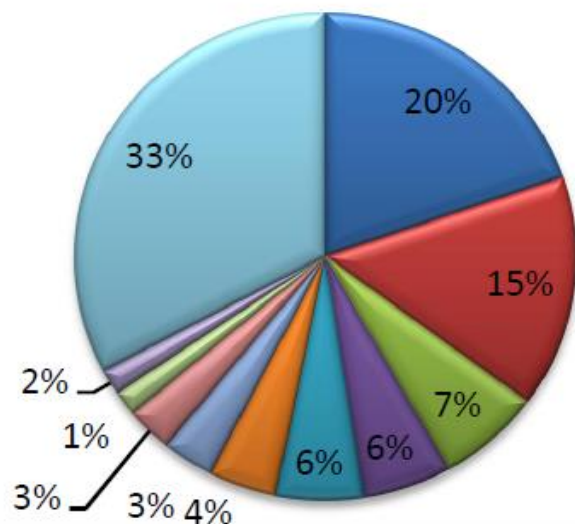
Nat Cat Events Analysis

Occupancies by Premium (Occupancy code in brackets)



- Dwellings(1001)
- Chemical Mfg(others), (2044)
- Plastic Goods Mfg (excluding Foam Plastics)(2148)
- Engg workshops(2075)
- Electric Generation Stations (Hydro Power) (2070)
- Laundries (1018)
- Soap Mfg(2173)
- Paper and Cardboard Mills (including Lamination)(2144)
- Indoor stadiums(1016).
- Cafes, Restaurants, Hotels etc(1017)
- All remaining occupancies including others(4999)

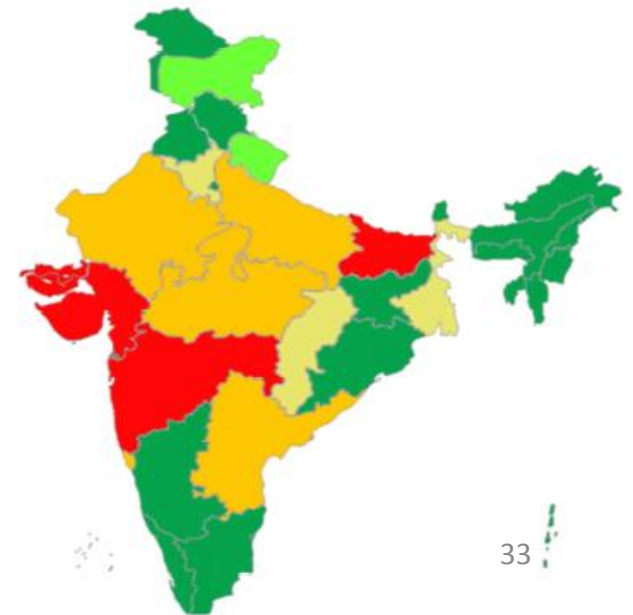
Occupancies by No. of Claims (Occupancy code in brackets)



- Cafes, Restaurants, Hotels etc(1017)
- Dwellings(1001)
- Indoor stadiums(1016).
- Shops (Others)(1023)
- Water Treatment Plants(3013)
- Shops-hazardous goods(1024)
- Electric Generation Stations (Hydro Power) (2070)
- Laundries (1018)
- Woollen Mills(2206)
- Storage of Category I hazaardous Goods(4002)
- All remaining occupancies including others(4999)

Disaster Financing for Nat Cat

- “ Nat Cat vulnerability mapping of entire country
- “ Detection of gap between Economic and Insured losses
- “ Market making for Insurance Linked Securities by providing Loss Hedging Indices
- “ Will also help Insurer Loss Reserve Monitoring





Insurance cannot thrive without Data and Analytics

IIB has been created to provide the same

SKY IS THE LIMIT





Thank you

<https://iib.gov.in>