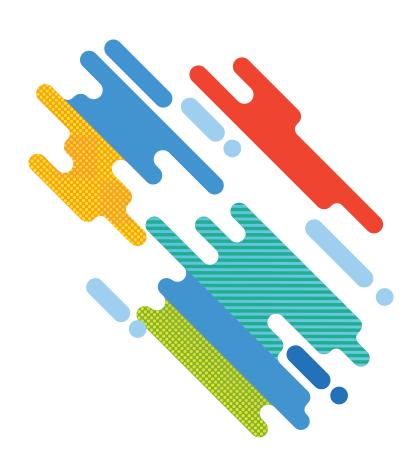


# MOTOR ANNUAL REPORT 2019-20





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# **MESSAGE FROM CEO, IIB**



Kunnel Prem
Chief Executive Officer
Insurance Information
Bureau of India

Data Analytics, aids business optimize their process and enhance performance and efficiency by understanding the insights drawn from the data to make better business decisions and strategy. Another significant field where Analytics plays an important role, especially in Insurance, is Fraud Identification and Mitigation. The advancement in technology coupled with the data sciences have made it possible for patterns & trends to be derived from the vast amount of data collected, relatively fast.

Looking at the ever-evolving needs and the paramount role data plays in the Insurance Industry, IIB was established by IRDAI as a Data Repository and Analytics Body with the objective of operating Industry-level Data Repositories, Search Engines, Fraud Mitigation Tools, Analytics and any other Data-based activities in the interest of the Insurance sector and its Stakeholders.

The Bureau publishes Annual Reports and Thematic Reports which provide Insurers with valuable information and insights into the granular trends and snap-shots of the Industry.

Additionally, the Bureau also provides a slew of services -VCHVS being one of them, which provides Policy & Claim history for all vehicles along with risk score for Private Cars. The Bureau has also entered into the realm of Predictive Analytics by developing a Risk Scoring model for Private Cars. The Fraud Triggers application provide Insurers advance alert of suspicious cases based on various matching algorithms in-built in the system.

Most of the Reports, Services & Models of the Bureau are done in-house by a rich pool of qualified and experienced personnel in the areas of Business, Analytics & Actuarial Sciences and IT.

The Bureau has been publishing the Motor Annual Report for the past few years and FY 2019-20 is the latest edition which contains comprehensive statistics on a range of aspects for Policy & claims. The Report would be of immense use to the Industry as it provides the audience with clear insights and trends to make data-based decisions, intervention and course-corrections, where required. The Report has become a reference point for the Industry owing to the vast and diverse information presented in it.

Motor continues to be the largest line of Business in the General Insurance Industry with gross underwritten premium in the Financial Year (FY) 2019-20 at Rs. 68,951.07 Crores with a growth rate of 7%. Interestingly, 6 states i.e. Maharashtra, Tamil Nadu, Uttar Pradesh, Karnataka, Gujarat and Kerala contribute nearly 50% of the total policies and claims. However, Uninsured vehicles still remain, an area of grave concern in India with 57% vehicles on road being uninsured similar to the previous year with 17 states reporting more than 50% uninsured vehicles.

The OD rates for FY 19-20 for the Industry as a whole remained stable at 1.8% for Private Cars and 1.25% for Two Wheelers vis-à-vis FY 2018-19. The average settlement amount for Death claims in FY 2019-20 was Rs. 9,14,181 and for injury claims it was Rs. 2,65,115,and both showed an increase over FY 2018-19. The highest average for Death claims was in Kerala, at Rs. 12.31 lakhs and lowest in West Bengal at Rs 6.3 lakhs. Generally, the Union Territories and the Southern States had a high average as compared to other States. The lag in reporting and settlement of TP claims didn't show much variation, in comparison to the previous two Financial Years.

To ensure reliability and efficacy of Analytics, the Bureau has put a lot of thrust on accuracy, timeliness and completeness of data. As Data Quality keeps evolving and improving, the granularity of checks employed have been tightened over the years in the Data Rule Engine and today it comprises more than 300 rules. Validity, Logical Relationship and Uniqueness of the data is checked by the Rule Engine, integrated in the Data Submission Application.

The Bureau publishes a Data Quality Manual comprising of a Data Quality Score for each Insurance company, bench-marking them against the Industry. The Manual enumerates the checks done and quantifies it for Quality and Completeness. In the latest edition of FY 19-20, it has now evolved to checking Consistency of Data across various formats (Policy & Claims) and multiple years.

One of the major concerns of the General Insurance Industry is the ever-increasing number of Uninsured vehicles plying on the road. To address the menace of Uninsured vehicles, IIB has extended support by undertaking a project of sending SMS to the uninsured vehicle owners. The Bureau so far has sent SMS for the states of Telangana, Tripura and Gujarat and in the second phase in the state of Telangana, bi-lingual SMS have been sent to uninsured vehicle owners.

The Bureau has also embarked on the journey of complete automation of services provided in Motor and Fraud Triggers is one of them, where the manual mechanism is being transformed into a web API for seamless integration by Insurers.

At the Bureau, we are committed to create value-add for the Industry and trust you will benefit from the insights provided in the Annual Report 19-20.

We look forward to your feedback.

Happy Reading.....

#### **Kunnel Prem**

Chief Executive Officer
Insurance Information Bureau of India

# **EXECUTIVE SUMMARY**

The total Gross Direct Premium for the Indian general insurance industry during Financial Year (FY) 2019-20 was Rs. 1,88,917 Crores as against Rs. 1,69,448 Crores in FY 2018-19 representing an annual growth of nearly 11.49%. The contribution of Motor segment for FY 19-20 was around 37% at Rs. 68,951.07 Crores giving an annual growth rate of 7%.

The number of Policies and total Premium distribution for FY 19-20 was very similar to the previous FY and 6 states contributed approximately 50% of the total motor policies. Maharashtra is the leading state in terms of total premiums collected from Motor business, followed by Tamil Nadu, Uttar Pradesh, Karnataka, Gujarat and Kerala. Nagaland is the only state where the share of Goods Carrying Vehicles is more than 50%. In Sikkim, Private Cars & Passenger Carriers form 75% of the total insured vehicles with Taxis forming more than half of the total Passenger Carriers.

In terms of Premium collected, Private Car contributes 43%, Two Wheelers 12%, Goods Carriers 28%, Passenger Carriers 12% and the rest is from other class of vehicles.

Even though the sale of vehicles fell in FY 19-20, the number of policies sold showed growth basically on account of the Long-Term Policies. This had a small impact on the number of uninsured vehicles as compared to the earlier year and it fell by from 57% to 56%.

The average OD premium was highest for Nagaland at Rs. 7,968. The average OD premium of Daman & Diu, Arunachal Pradesh and Dadra & Nagar Haveli was nearly Rs 7,000.

The Individual Agent channel has shown a reduction in overall procurement of policies for all states in FY 19-20 and in contrast, the Broker and Direct Online channels have shown an increase over the previous FY.

Passenger Carrying vehicles form the largest segment of electric vehicles in India and though Electric vehicle proportion is less than 5% of the Total vehicles insured, almost 42% of these policies came from Uttar Pradesh & Delhi.

The mean OD amount decreased nominally for both Private Cars and Two Wheelers as compared to FY 2018-19 but the claim incidence and severity remained largely stable for these segments, as compared to the previous FY. In FY 19-20, the Mean OD Claim Paid for losses arising from Natural Disaster was at Rs. 88,936 which has increased compared to FY 2018-19, despite no major floods happening.

The number of theft claims reported remained similar whereas the mean claims paid amount increased for Private Cars and Goods Carriers, as compared to the previous FY and for other classes it remained similar.

The Total number of TP claims reported was around 3.5 lakhs for the current FY. Overall Tamil Nadu, Kerala, Karnataka, Maharashtra, Madhya Pradesh, Rajasthan and Uttar Pradesh together contributed 2/3 of the total TP Claims reported in the country in FY 2019-20.

The share of Insurance claims in Kerala was nearly 85% of the total TP claims reported whereas Bihar had 81% of the TP claims reported on account of Death and for Jharkhand it was nearly 78%, consistent from the previous FY. Even states like Uttarakhand, Uttar Pradesh, Arunachal Pradesh, Mizoram, Punjab and West Bengal had a major portion, more than 60%, of their TP claims on account of Death.

# INTRODUCTION, DATA SOURCE AND METHODOLOGY

#### Introduction

#### **Data Source**

IIB collects data from all insurers in three formats i.e. Policy data, 'Own Damage' (OD) claims data and 'Third Party' (TP) claims data. This data is used for Analytics, Actuarial projects and various services provided by the Bureau.

# Methodology

All insurers submit data through online application of IIB with secured login access (https://iib.gov.in). The data is submitted to IIB as per the data dictionary already enumerated. The data has been analyzed using various dimensions like Type of Policy, Class of Vehicle, State& district, Type of distribution channel, Fuel type, Nature of Loss etc. for preparing this report.

To enhance Quality & bring consistency in data, IIB has conducted the data quality exercise and summary statistics on a granular level. The Bureau came out with the Data Quality Manual for FY 19-20 wherein quality of Motor data submitted has been measured in terms of Validity, logical consistency & reasonability and a score is assigned on a scale from 0-100. The Checks applied, the score assigned & the methodology of this exercise has been circulated to the industry for Cognizance & Action.

Premiums referred are the written premiums (except where specifically mentioned otherwise) and in the claims data the paid includes expenses and interest. The case reserve for each reported claim, as at the end of the year, has been considered for working out the incurred claims. As transactional data is submitted to IIB, the outstanding amounts therefore do not include Incurred but not reported (IBNR) or Incurred but not enough reported (IBNR) amounts and all amounts mentioned are gross amounts (gross of reinsurance).

Policies and Claims submitted to IIB include records which have a financial transaction in the year including policy endorsements. The case reserve or all the claims outstanding at the end or beginning of the year is also provided.

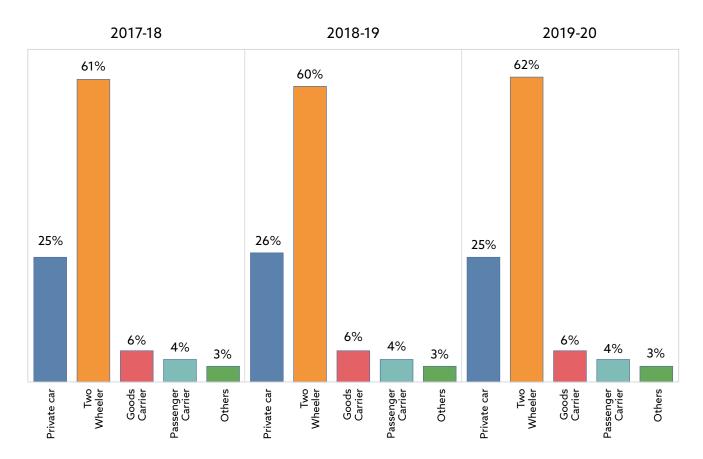
There is a variation of nearly 2% in premium, 4% in OD claims paid and 2% in TP claims paid at the end of the year as per the reconciliation with the Public Disclosure figures.

The districts are derived from the registration number of the vehicle and for new vehicles where the registration number is not available, the office codes have been used to identify the districts & State. In case of OD claims, an analysis has been done based on the location of the loss in which case the district of the accident has been used and the same is mentioned specifically.

# **POLICY ANALYSIS**

#### **Number of Policies**

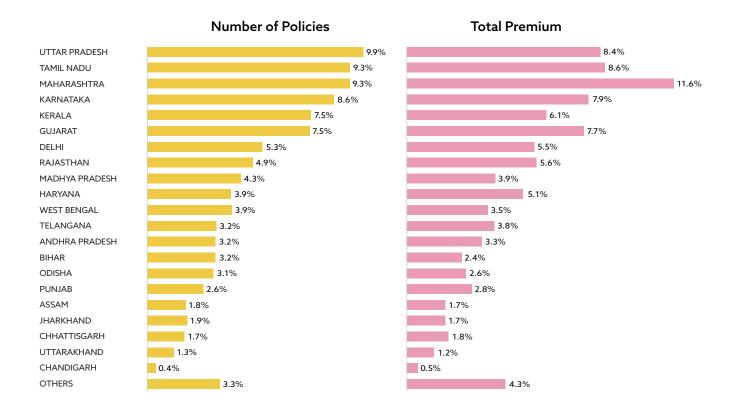
| FY 2017-18 | FY 2018-19  | FY 2019-20  |
|------------|-------------|-------------|
| 97,129,743 | 100,746,451 | 111,825,659 |



The above chart includes long term policies as well.

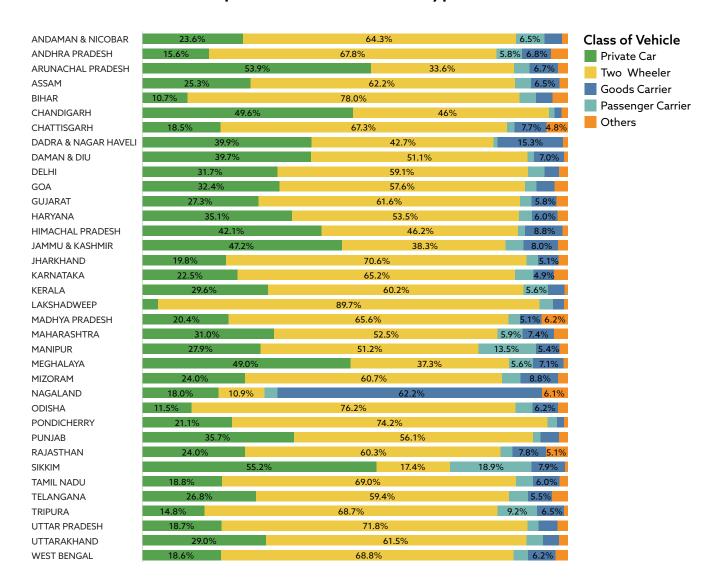
- In FY 2019-20, the domestic sales trend of vehicles saw 18% decline whereas the number of policies witnessed around 15% rise which is attributable to Long term policies (Since the TP Premium is accounted on yearly basis, hence the second year of policy is being treated as renewal in this chart and the same logic is applicable for uninsured vehicle count).
- · The jump in number of policies is majorly attributable to the two-wheeler segment.
- The total number of long term policies incepting in FY 19-20 in Private car and Two Wheeler segment is around 28 lakhs and 2 crores respectively.
- The total number of Long term policies in FY 19-20 incepting in FY 18-19 in private car and Two Wheeler segment is around 17 lakhs and 1 crore respectively.

#### Share of different states in terms of Total Policies and Premium



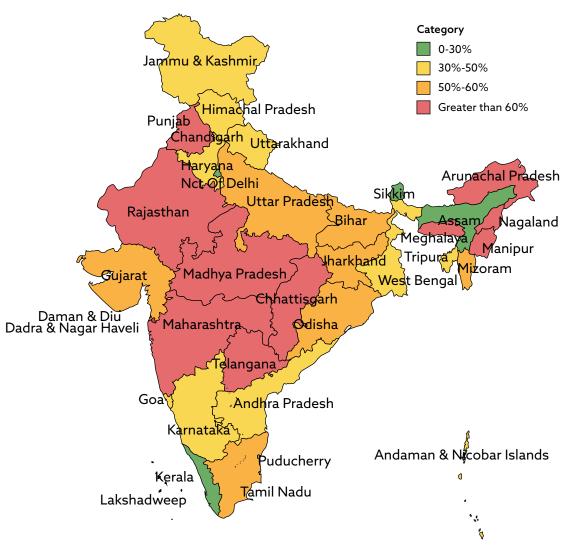
- Maharashtra & Tamil Nadu together accounts for nearly 1/5 of the total market in terms of premium while
  in terms of policy Uttar Pradesh and Tamil Nadu accounts for 1/5th of total market.
- Maharashtra, Karnataka, Kerala and Gujarat are the next in line having market shares in the range of 7% -9%. These top 6 states contributed almost half of the motor insurance policies written.
- 24% of policies consisted of Private Cars whereas the share in the Total Premium of this segment was 44%.
- The average Total Premium was highest for Haryana at Rs. 7,131 followed by Jammu & Kashmir and Himachal Pradesh at Rs. 7,103 and Rs. 6,877 respectively. The lowest average premium was in Kerala at Rs. 4,391.
- The overall average OD premium for Private Cars & Two Wheelers was Rs. 8,319 and Rs. 563 respectively.
- The overall average Total premium was around Rs. 6,000.
- The average OD premium was highest for Nagaland at Rs. 7,968. The average OD premium of Daman & Diu, Arunachal Pradesh and Dadra & Nagar Haveli was Rs 7,069.
- Even though the number of vehicles in Maharashtra and Tamil Nadu are similar, yet the share in Premium
  of Maharashtra is almost 3% higher than Tamil Nadu. This is on account of the difference in average OD
  premium as TP Premium is tariffed and is same for both states. The average OD premium among all the
  states is lowest in Tamil Nadu at Rs. 2,340.

#### Distribution of policies across Vehicle types for each state



- The northern states of Bihar, Jharkhand and Uttar Pradesh had more than 70% of the total insured vehicles in two-wheeler segment.
- Among all the states, 11 states had nearly 2/3rd of their insured vehicles in Two-Wheeler segment.
- Odisha has shown more than 13% growth in two-wheeler segment as compared to FY 2018-19.
- In Sikkim, Arunachal Pradesh, and Chandigarh, nearly half of the insured vehicles are private cars. In Sikkim, Private Cars & Passenger Carriers form 74% of the total insured vehicles with Taxis forming more than half of the total Passenger Carriers.
- Nagaland is the only state where the share of Goods Carrying Vehicles is more than 60%.
- In Private Car category, Maharashtra leads with more than 10% share followed by Kerala at 8.68%
- In Two Wheeler category, Uttar Pradesh leads with 10.06% share followed by Tamil Nadu at 9.64%
- In Goods Carrier category, Maharashtra leads with 11.26% share followed by Tamil Nadu at 9.43%
- In Passenger carrier category, Maharashtra leads with 13.25% followed by Kerala at 10.54%

# Uninsured Rate in India for FY 2019-20



· Kerala, Sikkim & Assam have the lowest number of uninsured vehicles.

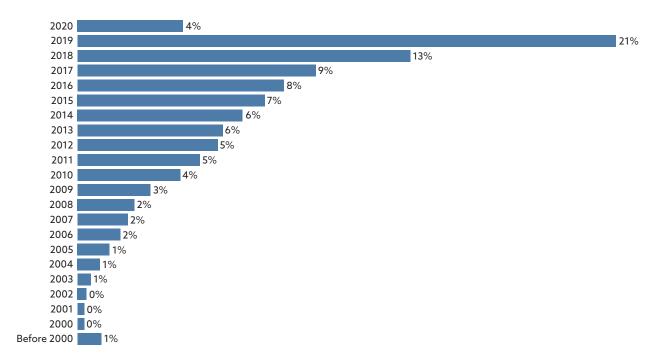
| Category            | 2015-16     | 2016-17     | 2017-18     | 2018-19     | 2019-20     |
|---------------------|-------------|-------------|-------------|-------------|-------------|
| Passenger Vehicles  | 27,89,208   | 30,47,582   | 32,88,581   | 33,77,436   | 27,73,519   |
| Commercial Vehicles | 6,85,704    | 7,14,082    | 8,56,916    | 10,07,319   | 7,17,593    |
| Three Wheelers      | 5,38,208    | 5,11,879    | 6,35,698    | 7,01,011    | 6,37,065    |
| Two Wheelers        | 1,64,55,851 | 1,75,89,738 | 2,02,00,117 | 2,11,79,847 | 1,74,16,432 |
| Quadricycle         | -           | -           | -           | 627         | 942         |
| Grand Total         | 2,04,68,971 | 2,18,63,281 | 2,49,81,312 | 2,62,67,156 | 2,15,45,551 |

(Source: Society of Indian Automobile Manufactures, New Delhi.)

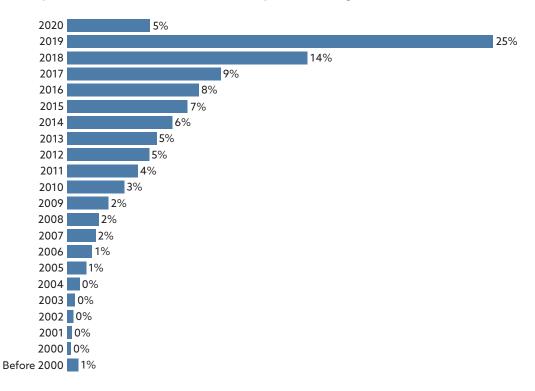
As can be observed from the above table, the sales of vehicle in India has dropped by around 50 Lakhs.
 In this grim scenario, it is a double whammy when more than half of the vehicles in the country are uninsured.

• Of the over 25.33 Crore vehicles on road in India as on 31st March 2020, the percentage of uninsured vehicles was nearly 56% whereas in 2018-19, of the nearly 23.12 crore vehicles on road it is 57%. Due to impact of Long term policies, the percentage of renewals has increased by around 10%. This has not made much impact on the number of uninsured vehicles and the uninsured rate remains almost constant in comparison to earlier years. Even though renewals have shown a growth, it remains to be seen what will be the impact once the tenure of Long term policies expire.

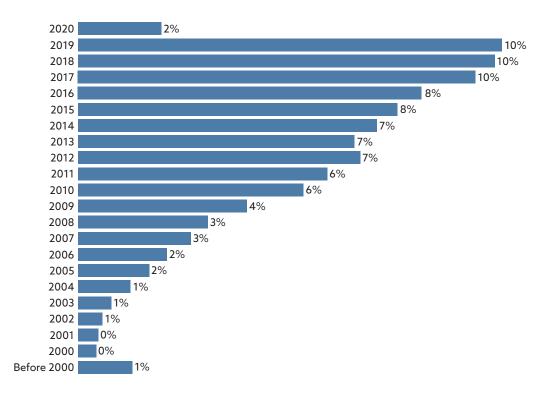
#### Percentage of policies written based on year of registration of the vehicles\*



# Percentage of policies written based on year of registration of the Two Wheeler\*

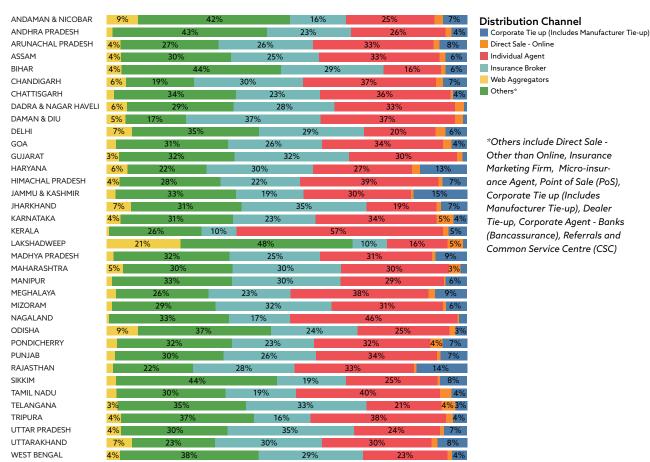


## Percentage of policies written based on year of registration of the Private Car\*



\*In the above charts, long term policies have also been considered.

# Distribution of policies across different distribution channel and state



#### **Distribution Channel-wise:**

- Individual Agent channel has shown a downward trend for all states in year on year basis for FY 2018-19 & 2019-20.
- ↑ In Contrast, the Insurance Broker and Direct Sale: Online channels have shown an increasing trend for all states in year on year basis for FY 2018-19 & 2019-20.
- In case of Taxis, 37% of policies come through Individual agents, 26% policies come through Insurance Brokers and 8% of policies come through Direct Sale (Online & Other than Online)

#### State-wise:

- Kerala has 57% of its policies sourced through Individual Agents followed by Nagaland, Tamil Nadu and Himachal Pradesh with 46%, 40% and 39% of its policies respectively.
- Uttar Pradesh and Jharkhand have 35% of its policies sourced through Insurance Brokers followed by Telangana, Chandigarh, Gujarat, Haryana, Maharashtra, Manipur and Uttarakhand with an average of 30%.

#### Class-wise:

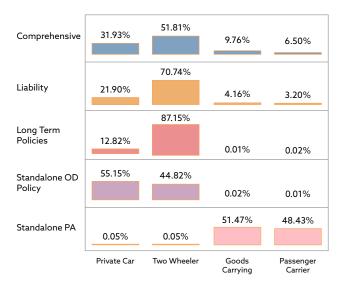
- Almost 30% of Two Wheelers policies are sourced through Individual agents whereas Insurance Brokers contribute 26%.
- Almost 31% of Private Car policies are sourced through Individual agents whereas Corporate Tie-ups and Brokers contribute almost 40%.
- Almost 42% of policies of Goods carriers are sourced through Individual agents whereas Direct and Bancassurance contributes around 10% and 6% each.
- Almost 37% of policies of Passenger carriers come from Individual agents and Insurance Broker channel contribute 19%.

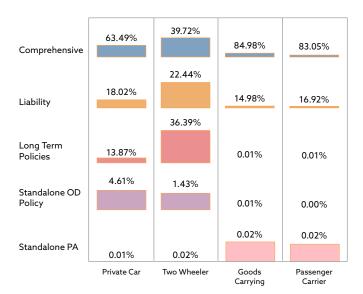
## Distribution of policies across Class of Vehicle and Fuel Type



 In Passenger Carriers, CNG vehicles constitute 14%, electric constitute 4% and Bi-fuel constitute 9% of the segment.

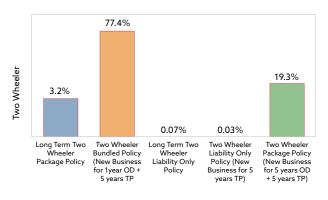
# Distribution of policies by Policy Type for Annual & Long Term Policies

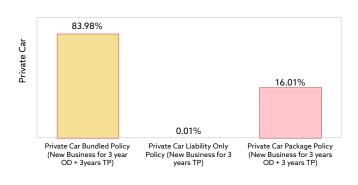




The above chart represents distribution of each Policy Type by Class of Vehicle

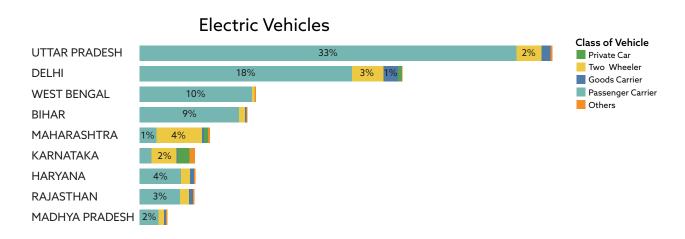
The above chart represents distribution of each class by the Policy Type



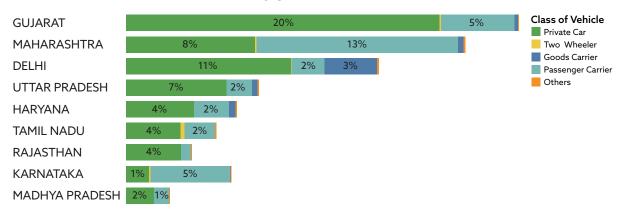


- Bundled policies constitute the majority of Long Term Policies, more than <sup>3</sup>/<sub>4</sub>, sold for both Private Cars & Two Wheelers.
- Bundled policies are preferred over Package policies as seen in the above graph.

# Distribution of policies across top states for Electric & Bi fuel Vehicles



#### Bi-fuel



- Passenger carrying vehicles still form the largest segment of electric vehicles in India on account of E-rick-shaws, predominantly in NCR region. Almost 55% of these vehicles are found in Uttar Pradesh & Delhi.
- Even though Electric vehicle proportion is less than 5% of the Total vehicles the number of private cars and two wheelers in this segment is over 4,000 and 36,000 respectively.
- The total number of private cars and two wheelers in CNG vehicle segment is 6.23 lakhs and 0.66 lakhs respectively.

# Distribution of policies across state by type of policy

Type of Policy

Liability

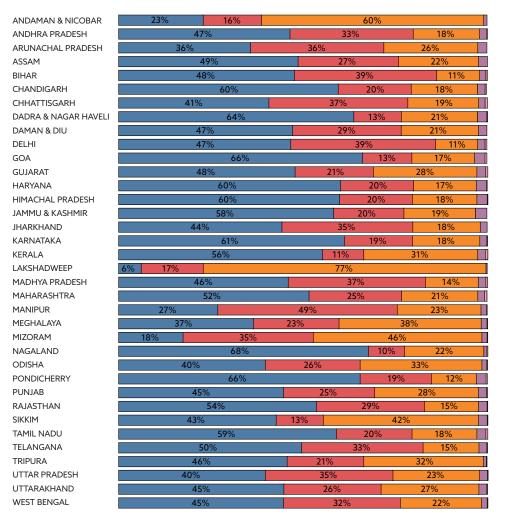
Others

Comprehensive

Standalone PA

Long Term Policies

Standalone OD Policy



#### a) Distribution of policies by Type of Policy:

- In Lakshadweep almost 77% total policies are Liability Only policies whereas Andaman & Nicobar Islands, Mizoram have 60% and 46% respectively.
- Among states, Nagaland and Goa leads with 68% and 66% of policies issued in the state being comprehensive policies, followed by Karnataka and Haryana at nearly 61% each.
- In Tripura, Sikkim, Odisha, Mizoram, Meghalaya, Lakshadweep and Andaman & Nicobar Islands nearly 1/3rd of policies issued, are Liability policies.
- The total number of Standalone PA Policies and Standalone OD policies is 3.5 lakhs and 25 lakhs respectively for the current FY.
- In Standalone PA category, Maharashtra leads with nearly 72,000 policies followed by Kerala with nearly 41,000 policies.
- In Standalone OD category, Tamil Nadu leads with nearly 2.7 lakh policies followed by Uttar Pradesh with nearly 2 lakh policies.

#### b) Distribution of policies by Class and Type of Policy:

#### ◆ Two Wheelers:

- ✓ Lakshadweep has 76% of the total policies issued as Liability Only policies and Two Wheelers constitute 77% of the total vehicles.
- ✓ For Comprehensive policies issued in this segment, Pondicherry leads with 64% followed by Goa and Karnataka respectively at 63% and 55%.
- ✓ In Liability Only policies, Uttar Pradesh leads with 12.39% followed by Kerala with 10.57%
- ✓ In Comprehensive policies, Tamil Nadu leads with 13.14% followed by Karnataka with 11.48%

#### Private cars:

- ✓ Mizoram leads with almost 52% of total policies being Liability Only policies whereas Lakshadweep, Sikkim, Meghalaya, Nagaland, Andaman & Nicobar and Islands and Manipur have 1/3rd of the total policies as Liability Only policies.
- ✓ In Liability Only policies, Kerala leads with 11.56% followed by Maharashtra with 10.4%
- ✓ In Comprehensive policies, Maharashtra leads with 11.5% followed by Kerala with 8.51%.

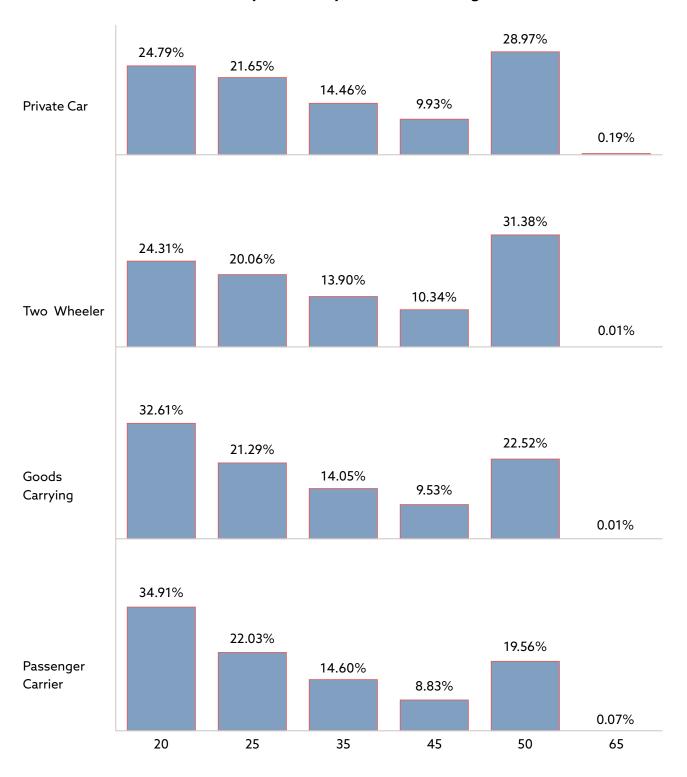
#### Passenger Carriers:

- ✓ Punjab leads with 96% of the policies being comprehensive policies, followed by Bihar and Manipur with nearly 94% each.
- ✓ Generally, this segment has 83% of the total policies as Comprehensive policies.
- ✓ In Liability Only policies, Kerala leads with 20.1% followed by Maharashtra with 10.86%
- ✓ In Comprehensive policies, Maharashtra leads with 13.73% followed by Tamil Nadu with 9.9%.

#### • Goods Carrier:

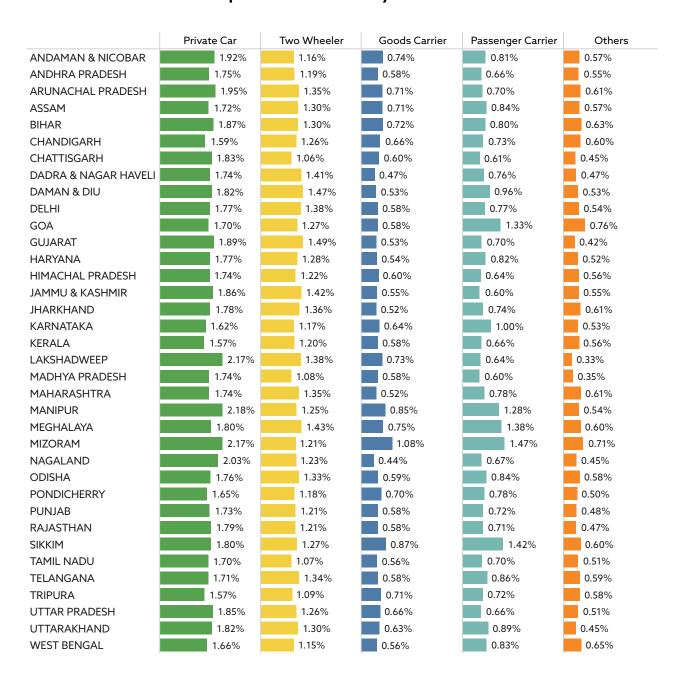
- ✓ In Haryana, Bihar, Punjab and Himachal Pradesh more than 90% of the Goods Carriers have a comprehensive cover.
- ✓ In Liability Only policies, Maharashtra leads with 12.84% followed by Tamil Nadu with 10.03%
- ✓ In Comprehensive policies, Maharashtra leads with 10.97% followed by Tamil Nadu with 9.33%.
- ✓ Lakshadweep followed by Andaman & Nicobar has more than 83% and 55% respectively of their total Goods Carriers covered by Liability Only policies.

## Distribution of No. of policies by NCB Percentage and Vehicle Class



- On an average, 1/4th of the policies (all classes) have 50% of No Claim Bonus
- Based on Annual Package policies, excluding 'New' vehicles, the overall percentage of vehicles with No Claim Bonus is 67.86%
- Nagaland leads with 81.27% of vehicles with No Claim Bonus
- Mizoram, West Bengal, Sikkim and Kerala have more than 75% of vehicles with No Claim Bonus.

#### Distribution of OD premium to IDV by State and class of vehicle



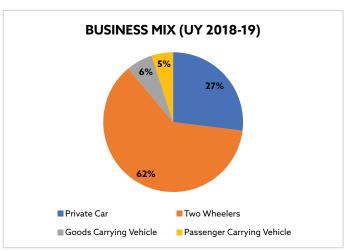
- The average OD rates for Two Wheeler segment is 1.25%, for Private Car segment it is 1.74%, for Goods Carrier segment it is 0.58% and for Passenger Carrier segment it is 0.77%.
- In case of Two Wheelers, the highest rate is in Gujarat at 1.49% followed by Daman & Diu at 1.47% and Meghalaya with 1.43%. Chhattisgarh with 1.06% is the lowest.
- In case of Private Cars, the highest rate is in Manipur at 2.18% followed by Lakshadweep & Mizoram at 2.17% each respectively and Nagaland at 2.03%. The lowest rate is in Kerala & Tripura at 1.57% each respectively.
- In case of Goods Carriers, the highest rate is in Mizoram at 1.08% followed by Sikkim at 0.87%. Lowest rate is in Nagaland at 0.44%.
- In case of Passenger Carrier, the highest rate is in Mizoram at 1.47% followed by Sikkim at 1.42%. Lowest
  rate is in Madhya Pradesh at 0.60%. The OD rate has shown a decrease compared to previous FY for all
  class of vehicles.

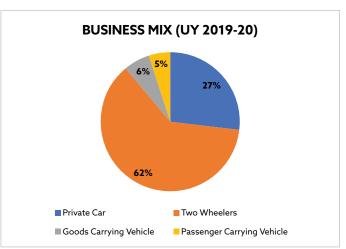
# **OD CLAIM ANALYSIS**

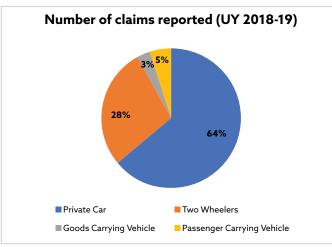
#### Introduction

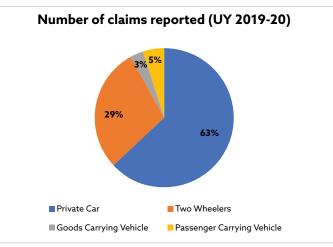
For the FY 2019-20, 81 lakhs OD claims were reported and nearly 76 lakhs i.e. 94% claims were fully settled (excluding repudiated and closed without payment). The paid amount for the settled claims was Rs. 19,464 Crores. All the analysis done in this section is based on settled claims during the year excluding Nil claims (where the claim paid is either less than 0 or 0) unless otherwise stated.

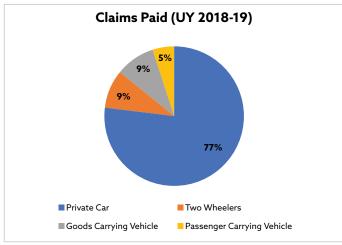
Below Pie chart represent business mix of Policies, number of reported claims and claims paid for FY 2018-19 & 2019-20 at Industry level by Class of vehicle.

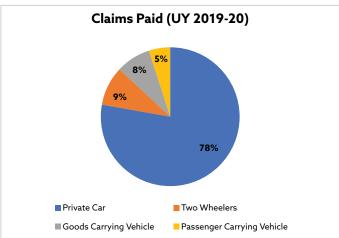












#### Summary by Vehicle Class

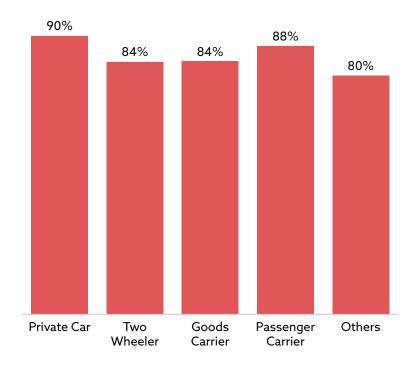
| Vehicle Class      | % of Settled<br>OD Claims | Mean OD<br>Claim Amount | Median OD<br>Claim Amount |
|--------------------|---------------------------|-------------------------|---------------------------|
| Private cars       | 65.87%                    | 27,286                  | 13,673                    |
| Two-wheeler        | 26.13%                    | 7,047                   | 4,530                     |
| Goods carriers     | 2.88%                     | 1,10,192                | 46,500                    |
| Passenger carriers | 4.50%                     | 31,349                  | 14,659                    |
| Other              | 0.61%                     | 50,180                  | 13,144                    |

#### Summary by Nature of Loss

| Vehicle Class           | % of Settled<br>OD Claims | Mean OD<br>Claim Amount | Median OD<br>Claim Amount |
|-------------------------|---------------------------|-------------------------|---------------------------|
| Accident External Means | 98.38%                    | 22,753                  | 10,304                    |
| Fire                    | 0.08%                     | 1,55,018                | 29,661                    |
| Natural Disaster        | 0.25%                     | 88,936                  | 27,508                    |
| Theft of entire vehicle | 0.91%                     | 1,53,181                | 45,377                    |
| Others                  | 0.39%                     | 45,044                  | 13,893                    |

• The total number of claims for theft of vehicle reported in FY 18-19 & FY 19-20 remained around 1 lakh and the median claim amount for settled theft claims was Rs. 45,000 in FY 18-19 which increased to Rs. 47,500 in FY 19-20.

# No. Of Total Claims Settled to Total Claims Reported ratio - FY 2019-20



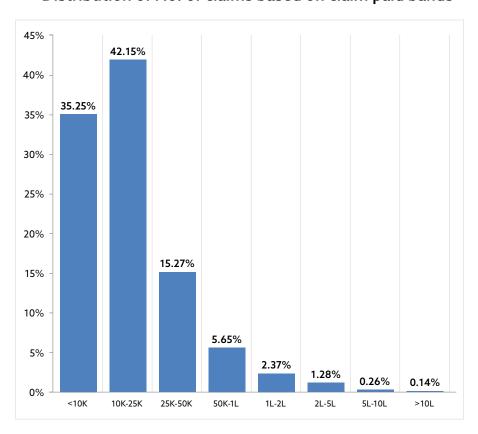
#### **Private Car**

#### NOL wise classification of Claims Paid

| NOL                     | % of Settled<br>OD Claims | Mean OD<br>Claim Amount | Median OD<br>Claim Amount |
|-------------------------|---------------------------|-------------------------|---------------------------|
| Accident External Means | 99.09%                    | 25,633                  | 13,477                    |
| Fire                    | 0.04%                     | 1,77,696                | 76,928                    |
| Natural Disaster        | 0.27%                     | 1,36,376                | 46,647                    |
| Theft of entire vehicle | 0.19%                     | 5,72,441                | 4,10,114                  |
| Others                  | 0.42%                     | 43,775                  | 16,367                    |

- In the private Car OD claims segment, accident by external means constitute around 99% of the total number of claims with a mean claim amount of Rs.25,633 and Median OD claim amount of Rs. 13,477 which is consistent with the previous FY.
- Of the total claims settled, Theft OD claims constituted 0.19% i.e. this is quite consistent with no. of the theft claims published by NCRB for this segment having a Mean OD claim amount of around Rs.5,72,441 and Median OD claims amount around Rs.4,10,114 which has risen over the previous FY.
- OD claims on account of Fire stand at 0.04% of the total OD claims settled which is same as previous FY but have a Mean OD claim amount of around Rs.1,77,696 which has decreased by nearly 8% compared to previous FY and Median OD claim amount of around Rs 76,928.

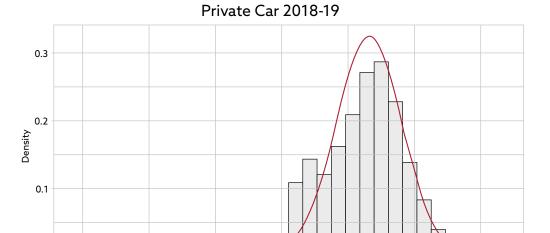
#### Distribution of No. of claims based on claim paid bands



 Maximum number of OD claims fall in Rs. 10,000-25,000 claims paid band at 42% followed by OD claims in less than 10,000 band at 35%. Almost 93% of the total claims settled are for amounts within Rs. 50,000, quite consistent with the previous FY.

**OD Claim Paid Amount** 

| Parameters | FY 2018-19 | FY 2019-20 |
|------------|------------|------------|
| μ          | 9.6728     | 9.2020     |
| σ          | 1.0211     | 1.4451     |



log(Claim\_Paid)

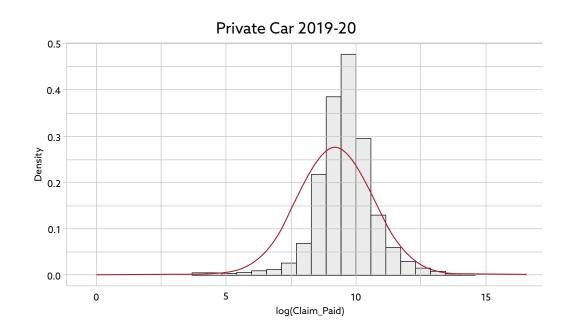
10

15

5

0.0

0



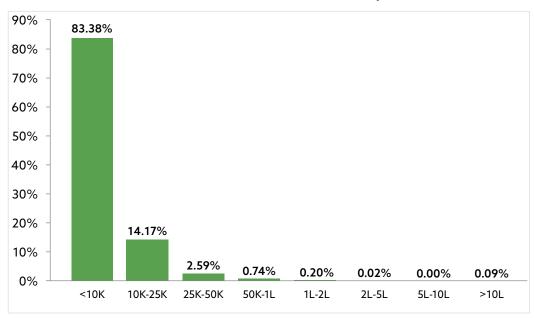
# Two Wheeler

#### NOL wise classification of Claims Paid

| NOL                     | % of Settled<br>OD Claims | Mean OD<br>Claim Amount | Median OD<br>Claim Amount |
|-------------------------|---------------------------|-------------------------|---------------------------|
| Accident External Means | 96.80%                    | 6,071                   | 4,410                     |
| Fire                    | 0.12%                     | 17,011                  | 8,200                     |
| Natural Disaster        | 0.19%                     | 7,103                   | 4,039                     |
| Theft of entire vehicle | 2.65%                     | 44,936                  | 39,150                    |
| Others                  | 0.25%                     | 15,414                  | 6,501                     |

- In the Two-Wheeler OD claims segment, accident by external means constitute around 97% of the total number of claims.
- Theft based OD claims are 2.65% of the total OD claims settled and have a Mean OD claims amount of Rs. 44,936and Median OD claims amount of Rs.39,150.
- Natural disaster claims are around 0.19% of the total OD claims settled which has decreased on account
  of no major floods during FY 2019-20 hence the average amounts have increased from 4,787 to 7,103,
  over the previous FY.
- Fire claims are around 0.12% of the total OD claims settled and have a Mean claim amount of Rs.17,011 and Median claims amount of Rs.8,200.
- The average amounts have consistency over the previous year for all the perils except natural disasters.

#### Distribution of No. of claims based on claims paid amount bands

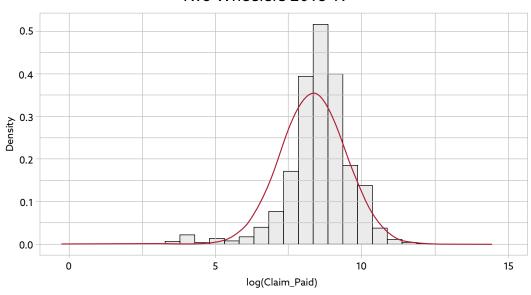


 Maximum number of OD claims fall in less than 10,000 band which is 83.38% of OD claims, followed by 10,000-25,000 paid band at 14.17%. Almost 95% of the total claims settled are for amounts less than Rs.25,000, consistent with the previous FY.

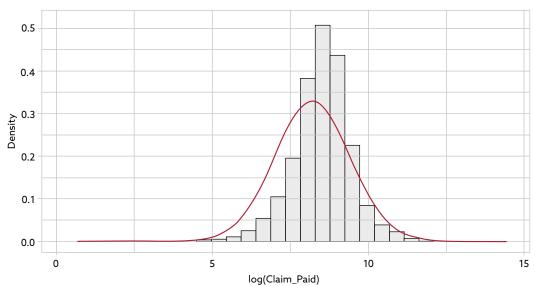
**OD Claim Paid Amount** 

| Parameters | FY 2018-19 | FY 2019-20 |
|------------|------------|------------|
| μ          | 8.3175     | 8.2307     |
| σ          | 1.4840     | 1.2084     |

Two Wheelers 2018-19



Two Wheelers 2019-20



# Passenger Carrying Vehicles

#### NOL wise classification of Claims Paid

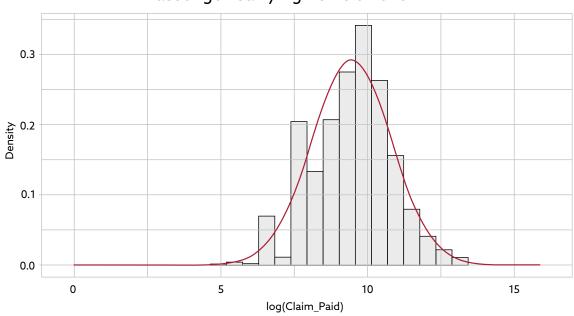
| NOL                     | % of Settled<br>OD Claims | Mean OD<br>Claim Amount | Median OD<br>Claim Amount |
|-------------------------|---------------------------|-------------------------|---------------------------|
| Accident External Means | 91.17%                    | 32,296                  | 16,592                    |
| Fire                    | 0.22%                     | 2,30,860                | 1,25,297                  |
| Natural Disaster        | 0.26%                     | 51,176                  | 18,736                    |
| Theft of entire vehicle | 0.89%                     | 1,42,818                | 84,164                    |
| Others                  | 7.46%                     | 77,500                  | 4,894                     |

• In the Passenger Carrier segment, accident by external means constitute around 91.17% of the total number of claims with a mean claim amount of Rs. 32,296 and Median OD claim amount of Rs.16,592.

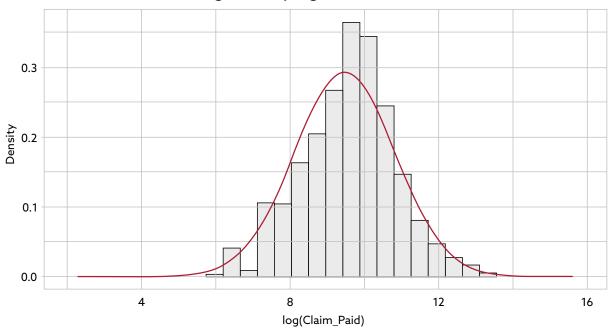
**OD Claim Paid Amount** 

| Parameters | FY 2018-19 | FY 2019-20 |
|------------|------------|------------|
| μ          | 9.3600     | 9.4656     |
| σ          | 1.4195     | 1.3641     |

## Passenger Carrying Vehicle 2018-19



#### Passenger Carrying Vehicle 2019-20



# **Goods Carrying Vehicles**

#### NOL wise classification of Claims Paid

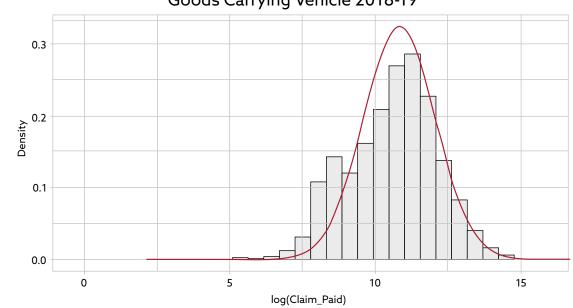
| NOL                     | % of Settled<br>OD Claims | Mean OD<br>Claim Amount | Median OD<br>Claim Amount |
|-------------------------|---------------------------|-------------------------|---------------------------|
| Accident External Means | 97.63%                    | 1,02,059                | 46,162                    |
| Fire                    | 0.36%                     | 4,59,984                | 1,96,734                  |
| Natural Disaster        | 0.31%                     | 78,094                  | 28,900                    |
| Theft of entire vehicle | 1.28%                     | 7,26,534                | 5,00,975                  |
| Others                  | 0.41%                     | 2,10,751                | 61,474                    |

- In the Goods Carrier segment, accident by external means constitute around 97.63% of the total number of settled claims with a mean claim amount of Rs. 102,059 and Median OD claim amount of Rs.46,162.
- Theft based OD claims are 1.28% of the total OD claims settled but have a Mean OD claims of Rs. 7,26,534 and Median OD claim amount of Rs.500,975.
- Natural disaster claims are around 0.31% of the total OD claims settled but have a Mean OD claim paid of Rs. 78,094 and Median OD claims amount ofRs.28,900.
- Fire based OD claims are around 0.36% of the total OD claims settled but have a Mean OD claims ofRs.4,59,984 and Median OD claims amount of Rs.1,96,734.

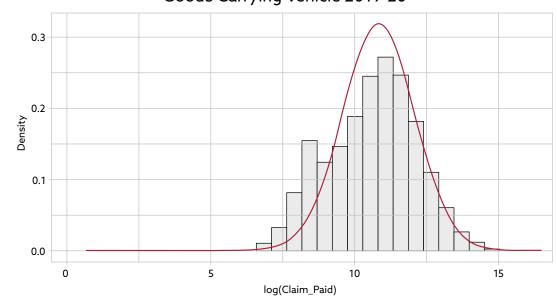
**OD Claim Paid Amount** 

| Parameters | FY 2018-19 | FY 2019-20 |
|------------|------------|------------|
| μ          | 10.6365    | 10.8333    |
| σ          | 1.3295     | 1.2511     |



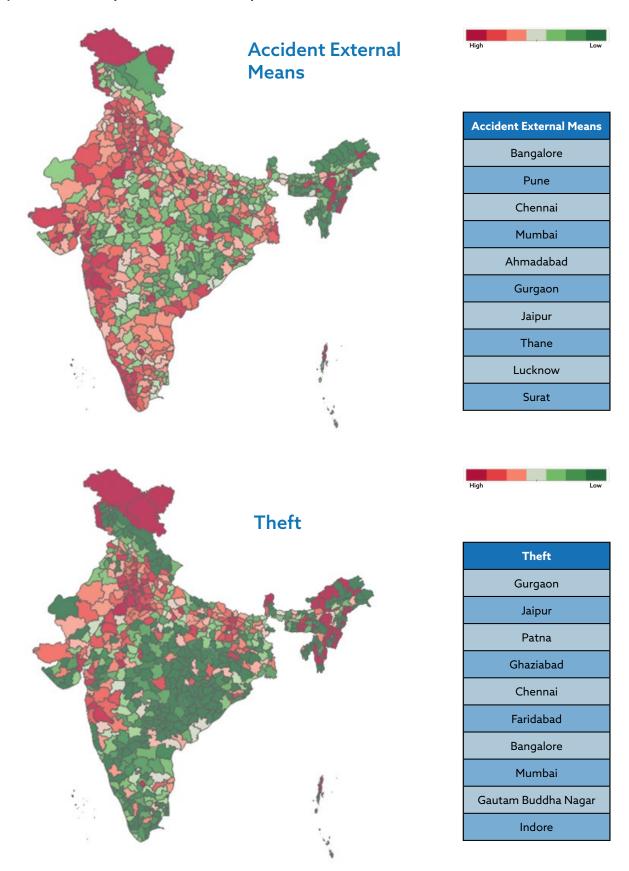


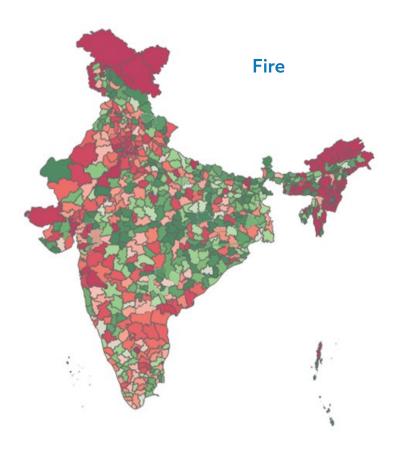




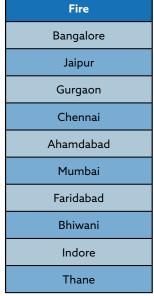
# Distribution of Top Districts based on location of accident and amount paid by Nature of Loss

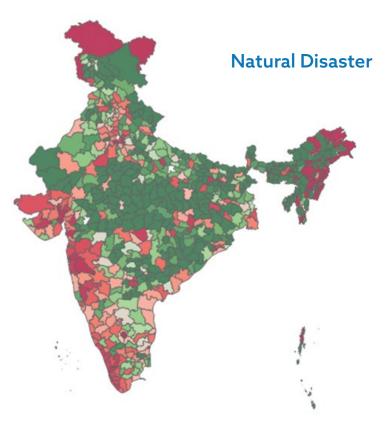
(The above analysis is based on the product of number of Claims and the Claim Paid amount)







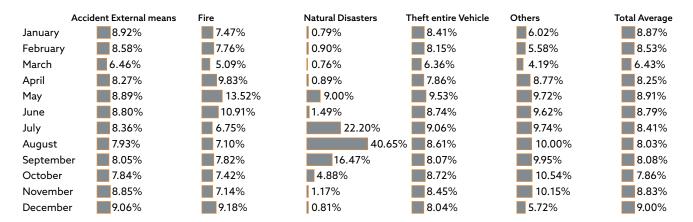






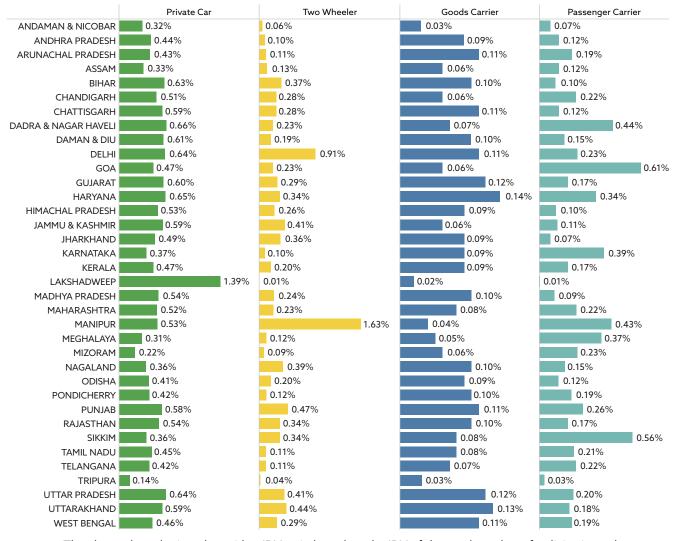
| Natural Districts |  |  |
|-------------------|--|--|
| Bangalore         |  |  |
| Ahmadabad         |  |  |
| Mumbai            |  |  |
| Pune              |  |  |
| Thane             |  |  |
| Chennai           |  |  |
| Surat             |  |  |
| Vadodara          |  |  |
| Ernakulam         |  |  |
| Gurgaon           |  |  |

# Distribution of Number of Reported Claims by Month of accident and Nature of Loss



- Highest rate of OD claims is reported in the month of December at 9% followed by May & January at 8.91% & 8.87% respectively. Except for Natural Disasters (mainly floods & inundation) where there is clear skew for a particular month, rest of the cause of losses is more or less evenly distributed across other months.
- Lowest rate of OD claim reported in the month of March at 6.43%.

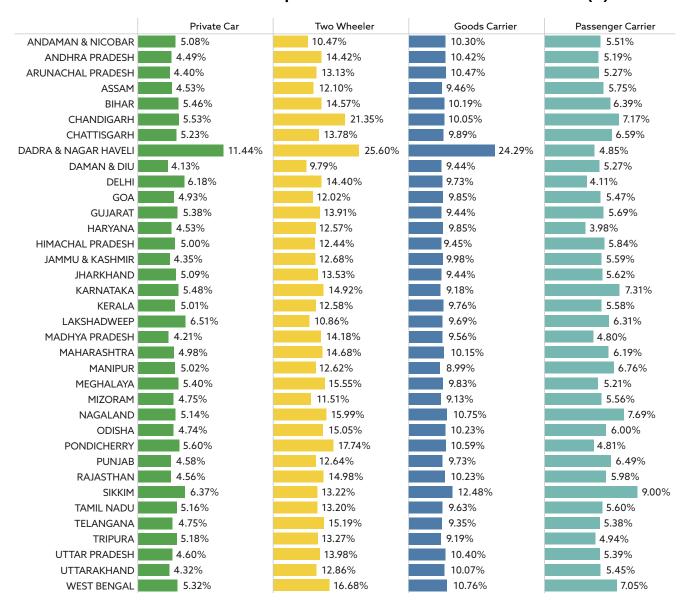
# Distribution of claims paid as % of IDV for settled claims (I)



The above chart depicts the paid to IDV ratio based on the IDV of the total number of policies issued.

- Two Wheelers, Manipur has highest paid to IDV at 1.63%, followed by Delhi and Punjab at 0.91% and 0.47% respectively
- In Private Car, Lakshadweep has Highest paid to IDV at 1.39% followed by Dadra and Nagar Haveli and Haryana at 0.66% and 0.65%.
- In Goods Carrier, Haryana has Highest paid to IDV at 0.14% followed by Uttarakhand at 0.13%
- In Passenger Carrier, Goa has Highest paid to IDV at 0.61% followed by Sikkim at 0.56%

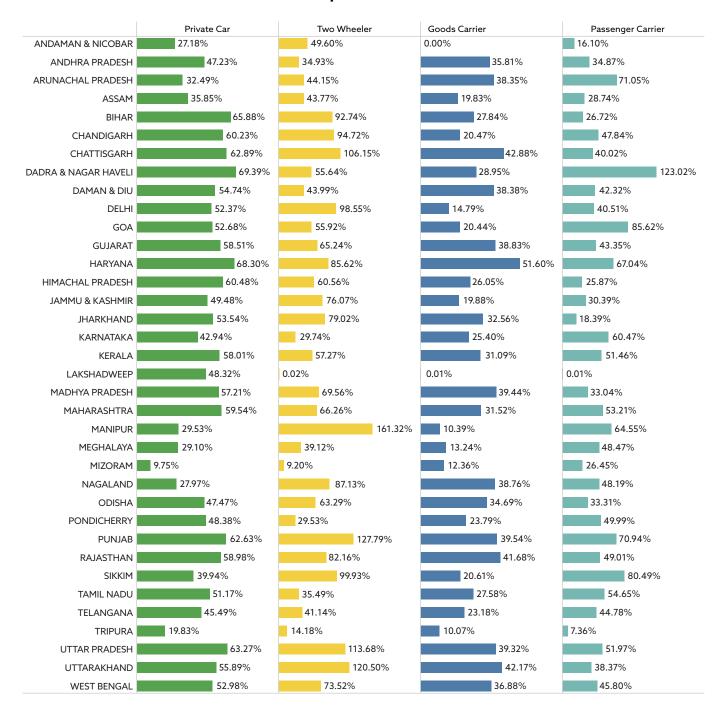
#### Distribution of claims paid as % of IDV for settled claims (II)



The above chart depicts the paid to IDV ratio based on the IDV of the policies on which there are claims.

- In Two Wheelers, Dadra & Nagar Haveli has highest paid to IDV at 25.6%, followed by Chandigarh and Pondicherry at 21.35% and 17.74% respectively
- In Private Car, Dadra & Nagar Haveli has Highest paid to IDV at 11.44% followed by Lakshadweep and Sikkim at 6.51% and 6.37%.
- In Goods Carrier, Dadra & Nagar Haveli has Highest paid to IDV at 24.29% followed by Sikkim at 12.48%
- In Passenger Carrier, Sikkim has Highest paid to IDV at 9% followed by Nagaland at 7.69%.

#### Distribution of Claims paid as % of Earned Premium



- The above chart represents ratio of OD Claims paid to Earned Premium for different states for the FY 2019-20.
- In Private Car category, Dadra & Nagar Haveli highest ratio at 69.39%, followed by Haryana at 68.3%.
- In Two Wheeler category, Manipur highest ratio at 161.32%, followed by Punjab at 127.79%.
- In Goods Carrier category, Haryana highest ratio at 51.6%, followed by Chhattisgarh at 42.88%.
- In Passenger Carrier category, Dadra & Nagar Haveli highest ratio at 123.02%, followed by Goa at 85.62%

## District wise Claim Frequency-Severity Analysis

A geographic analysis of Frequency & Severity has been presented in this section. Following Actuarial formula was used to calculate Frequency & Severity.

Earned Exposure for FY 2019-20 was calculated only for policy underwritten in 2019-20. In order to match exposure, number of claims reported in FY 2019-20 was only taken from policy underwritten in FY 2019-20.

Severity = 
$$\frac{\textit{Claims Paid for policy UY 2019-20}}{\textit{Number of Claims Settled from UY 2019-20}}$$

Both the parameters i.e. Claims Reported and Claims Paid in FY 2019-20 are taken for only those Policies that are underwritten in FY 2019-20.

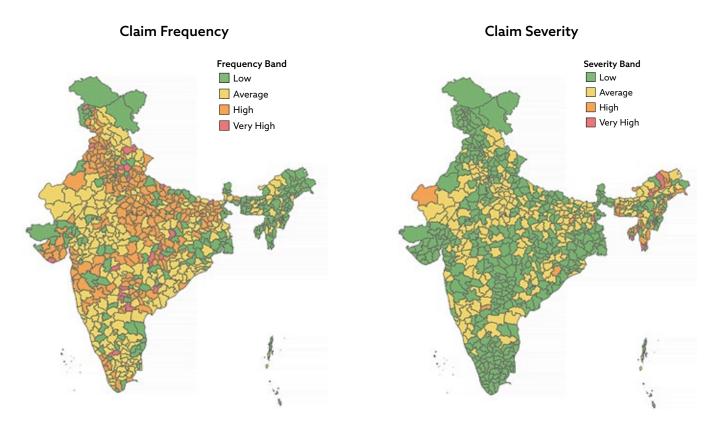
# Frequency Categorization of each District:

| Range for each Category |             |             |               |                     |  |
|-------------------------|-------------|-------------|---------------|---------------------|--|
| Category                | Private Car | Two Wheeler | Goods Carrier | Passengers Carriers |  |
| Low                     | <= 10%      | <= 3%       | <=3%          | <=7%                |  |
| Average                 | 10%-20%     | 3%-6%       | 3%-6%         | 7%-10%              |  |
| High                    | 20%-30%     | 6%-8.91%    | 6%-7%         | 10%-18.5%           |  |
| Very High               | >30%        | > 8.91%     | > 7%          | > 18.5%             |  |
| India                   | 19%         | 4%          | 4%            | 8%                  |  |

# Severity Categorization of each District:

| Range for each Category |             |             |                 |                     |  |
|-------------------------|-------------|-------------|-----------------|---------------------|--|
| Category                | Private Car | Two Wheeler | Goods Carrier   | Passengers Carriers |  |
| Low                     | <= 30000    | <= 9000     | <= 90000        | <= 30000            |  |
| Average                 | 30000-45000 | 9000-12000  | 90000-143000    | 30000-48000         |  |
| High                    | 45000-75000 | 12000-15000 | 143000-1,03,000 | 48000-69000         |  |
| Very High               | >75000      | >15000      | > 196000        | >69000              |  |
| India                   | 29,789      | 8,192       | 98,379          | 38,043              |  |

# District wise Claim Frequency & Severity - Private Cars Private Car

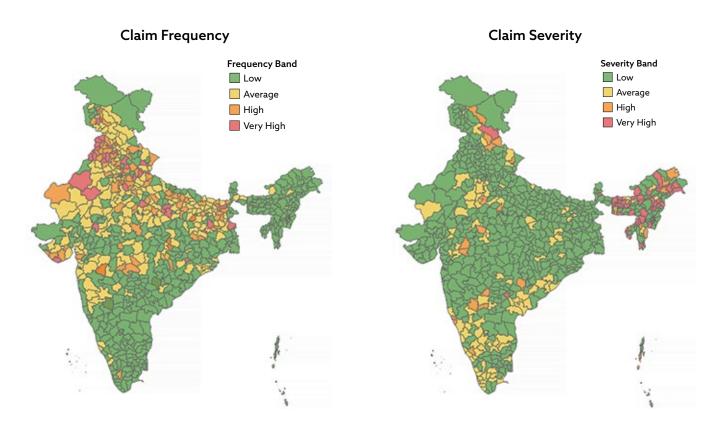


| Top 10 Districts for Private Car |                                |                  |  |
|----------------------------------|--------------------------------|------------------|--|
| Claim Frequency                  | Claim Frequency Claim Severity |                  |  |
| PUNE                             | TIRAP                          | SURAJPUR         |  |
| CHENNAI                          | ANJAW                          | UTTARKASHI       |  |
| AHMEDABAD                        | LAWNGTLAI                      | NORTH EAST DELHI |  |
| MUMBAI                           | NORTH TRIPURA                  | CHARKHI DADRI    |  |
| GURGAON                          | SAHIBGANJ                      | SIRMOUR          |  |
| SURAT                            | WEST SIANG                     | JAGDALPUR        |  |
| THANE                            | SOUTH TRIPURA                  | BIJNOR           |  |
| NORTH DELHI                      | PAPUM PARE                     | MORENA           |  |
| SOUTH WEST DELHI                 | EAST SIANG                     | SHRAWASTI        |  |
| JAIPUR                           | CHANGLANG                      | SAHEBGANJ        |  |

- There was unevenness in claim incidence across the districts in the country with no clear patterns for any state
  in particular. Even though in Private Cars, there was an average or low claim incidence rate in southern part of the
  country, in the northern side of the country there was more of very high, high or average incidence. North eastern
  states clearly show low or average claim incidence rate.
- While most district follow low severity, some of the developed districts of the western & southern India had average claim incidence rate with low severity

#### District wise Claim Frequency & Severity- Two Wheelers

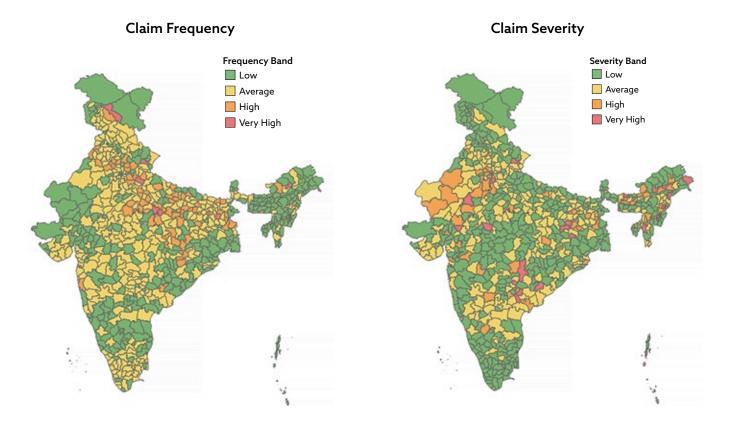
#### Two Wheeler



| Top 10 Districts for Two Wheeler |                |                            |  |
|----------------------------------|----------------|----------------------------|--|
| Claim Frequency                  | Claim Severity | Claim Frequency * Severity |  |
| NORTH EAST DELHI                 | CHURACHANDPUR  | AMBALA                     |  |
| AHMEDABAD                        | RI BHOI        | PANIPAT                    |  |
| NORTH DELHI                      | TUENSANG       | BILASPUR                   |  |
| SURAT                            | WOKHA          | CHANDIGARH                 |  |
| PUNE                             | ZUNHEBOTO      | DURG                       |  |
| JAIPUR                           | MOKOKCHUNG     | RAIPUR                     |  |
| CHENNAI                          | JANGAON        | BALRAMPUR                  |  |
| LUCKNOW                          | PAPUM PARE     | BIJAPUR - CHATTISGARH      |  |
| PATNA                            | WEST SIANG     | PALWAL                     |  |
| ALLAHABAD                        | LAWNGTLAI      | NORTH EAST DELHI           |  |

- In Two Wheelers, there was Low claim incidence rate in southern part of the country whereas in the northern part of the country it was mostly Average, High or Very High incidence rate.
- · North eastern states clearly show low claim incidence rate.
- For Two-wheelers South India & East India zone seems to be safest in terms of claim incidence rate compared to
  rest of India. Majority of the districts in South & East zone shows a clear trend of low claim incidence rate compared to districts in rest of India which seems to be dominated by average to high claim frequency rate.

# District wise Claim Frequency & Severity- Goods Carriers Goods Carring Vehicles

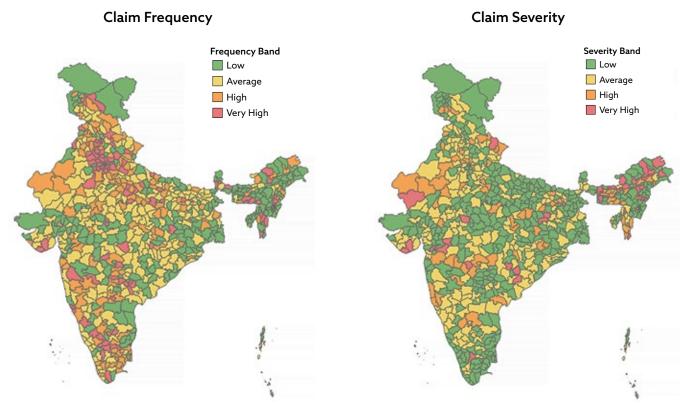


| Top 10 Districts for Goods Carrier |                                |                  |  |  |
|------------------------------------|--------------------------------|------------------|--|--|
| Claim Frequency                    | Claim Frequency Claim Severity |                  |  |  |
| NORTH DELHI                        | KANGPOKPI                      | SAHEBGANJ        |  |  |
| THANE                              | NUH                            | SOUTH WEST DELHI |  |  |
| PUNE                               | AMBIKAPUR                      | ALMORA           |  |  |
| CHENNAI                            | SOUTH ANDAMAN                  | NORTH EAST DELHI |  |  |
| JAIPUR                             | RAJGARH                        | NUH              |  |  |
| KOHIMA                             | LATEHAR                        | CHATRA           |  |  |
| GURGAON                            | MON                            | CHITRAKOOT       |  |  |
| RAIPUR                             | KHUNTI                         | BISHNUPUR        |  |  |
| КИТСН                              | CHIRANG                        | AMBIKAPUR        |  |  |
| INDORE                             | BISHNUPUR                      | LONG DING        |  |  |

- In Goods Carriers there was either Low or Average claim incidence rate all over the country.
- In northern parts of the country there was Low, Average or High claim incidence rate in most of the cases.
- Similar trend was observed in Severity where most of the districts registers Low Severity whereas only in western part of India some districts experienced Low Frequency with Average or High Severity indicating it to be a risky zone for Goods carrier business.

#### District wise Claim Frequency & Severity- Passenger Carriers

#### **Passenger Carrier Vehicles**



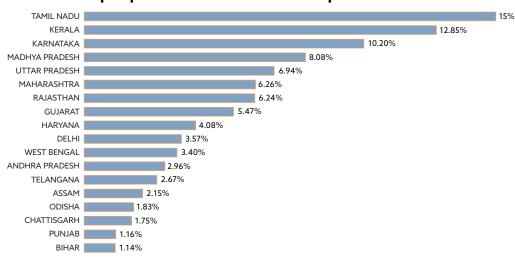
| Top 10 Districts for Passenger Carrier |                |                            |  |
|--|----------------|----------------------------|--|
| Claim Frequency                        | Claim Severity | Claim Frequency * Severity |  |
| GURGAON                                | WEST SIANG     | NORTH EAST DELHI           |  |
| NORTH DELHI                            | DIBANG VALLEY  | DIBANG VALLEY              |  |
| CHENNAI                                | NARAYANPUR     | KOLAR                      |  |
| MUMBAI                                 | BAKSA          | PHEK                       |  |
| PUNE                                   | PHEK           | SAHIBZADA AJIT SINGH NAGAR |  |
| THANE                                  | KANINA         | PAPUM PARE                 |  |
| BANGALORE                              | LOHIT          | SOUTH WEST KHASI HILLS     |  |
| AHMEDABAD                              | EAST SIANG     | PUDUCHERRY                 |  |
| CHANDIGARH                             | SAIHA          | EAST SIANG                 |  |
| JAIPUR                                 | CHATRA         | SHRAWASTI                  |  |

- · In Passenger Carriers, claim incidence rate was unevenly distributed from Low to Very High across India.
- There are total 126 districts which experienced High to Very High claim incidence rate which were majorly in North India.
- From the above two graphs, it can be clearly seen that passenger carriers tend to exhibit high frequency & low severity claim experience. As majority of the districts fall in either average or high severity band, the average claim cost for the districts falling in high band is 45% higher than the national average claim cost. There are 45 districts which fall in 'Very High' severity band with an average claim cost of nearly Rs. 1,44,863 which is 162% higher than the districts in 'High' severity band.

# TP CLAIM ANALYSIS

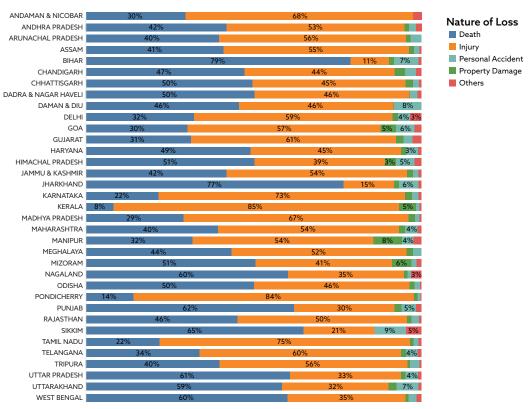
All the claims reported & settled during the FY 2019-20 have been considered for this part of the report. This includes the settled claims from current as well as previous accident years which are settled in the FY 2019-20. For the FY 2019-20, 3.58 Lakhs TP claim were reported and nearly 2.73 Lakhs TP claims were fully settled. The incurred amount for the reported claims was Rs. 14,982 Crores and the paid amount was Rs. 13,486 Crores.

#### State wise proportion of TP claims reported for FY 2019-20



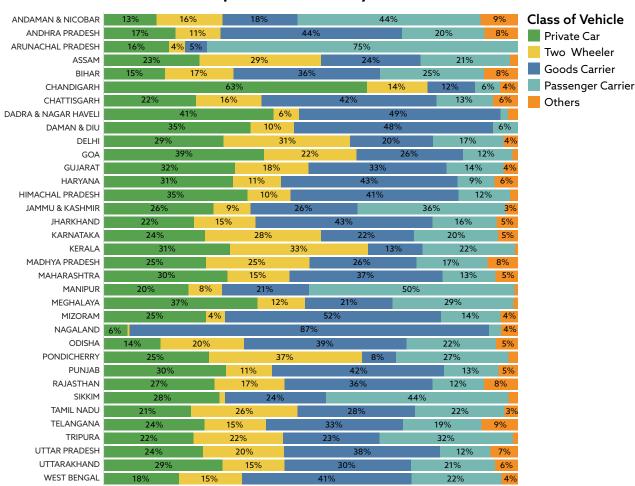
- 94% of the Claims have been registered in above shown 17 states in the country and 75% of the claims were contributed by the top 9 states.
- Overall Tamil Nadu, Kerala, Karnataka, Madhya Pradesh, Uttar Pradesh together have registered more than half of the Total TP claims registered in the country.
- These numbers for FY 2019-20 are absolutely similar to the previous FY.

#### Distribution of Reported Claims State wise by Nature of Loss



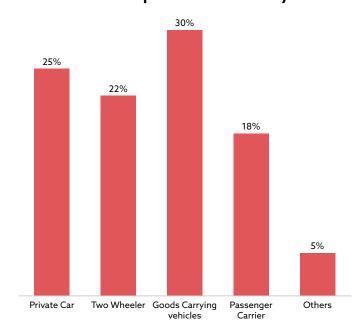
- Kerala has nearly 85% of the total claims reported in the form of injury while death constitutes a very low percentage whereas it is opposite for Bihar & Jharkhand as 79% & 77% of claims reported are due to Death while Injury constitutes a very low percentage.
- Tamil Nadu& Kerala with the highest number of reported claims have the lowest proportion of death claims. This is largely true for all the southern states & UTs except Andhra Pradesh.
- Apart from the above states, Death accounted for more than 60% of reported claims in Sikkim (65%), Punjab (62%), Uttar Pradesh (61%), Nagaland (60%) & West Bengal (60%).





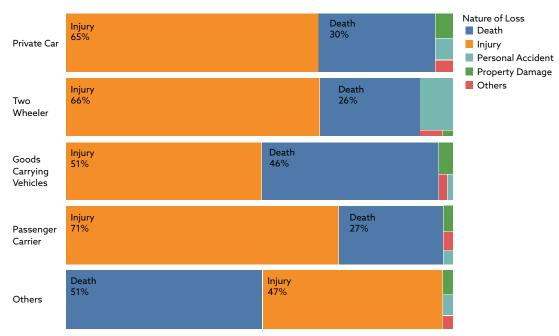
- In Bihar nearly 61% of the claims come from Commercial Vehicles whereas in Kerala it is 35.5% and this is reflected in the proportion of Deaths & Injury in these states.
- In Nagaland 87% of the claims are due to Goods Carrying Vehicles whereas 6% of the claims are due to Private car.
- In Andhra Pradesh, Chhattisgarh, Haryana, Punjab, Jharkhand, Himachal Pradesh, Mizoram and West Bengal above 40% of the claims are from Goods Carrying Vehicles.
- Chandigarh has 63% of the total reported TP claims from Private Cars followed by Goa at 39%.
- Maharashtra registers 37% of TP Claims from Goods Carrying Vehicles & 30% of Claims from Private Cars.
- Arunachal Pradesh registers 75% of TP Claims from Passenger Carriers & 5% of Claims from Goods Carrying Vehicles.

#### Distribution of TP Reported Claims by Class of Vehicle



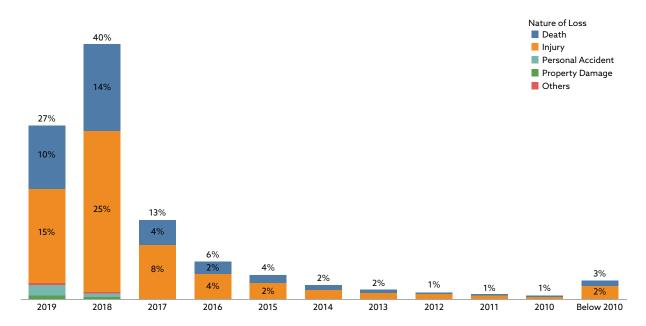
It is observed that TP reported claims for Goods Carrying Vehicles are Highest at 30% among all classes.

#### Distribution of TP Reported Claims by Nature of Loss & Class of Vehicles



- 61% of total claims reported were due to Injury followed by death at 34%, 2.4% on account of Personal Accident claims and 1.4% on account of Property damage.
- Passenger Vehicles contribute maximum number of TP claims reported due to injury, followed by Two-Wheeler, Private Cars and lastly Goods Carriers.
- Personal Accident is higher in Two-Wheeler at around 7.58%, followed by private cars at 1.7% and Passenger Carriers & Goods Carriers combined contribute at 1.2%.
- Goods Carriers registered the greatest number of claims in Death Category among all class of vehicle at around 46%, which was followed by Private Cars, Passenger Carrier & Two-wheeler.
- Highest property damage claims were registered in Goods Carriers followed by Private Car, Passenger Carriers and Two wheelers and was similar to FY 2018-19.

#### Proportion of TP Reported Claims by Accident Year

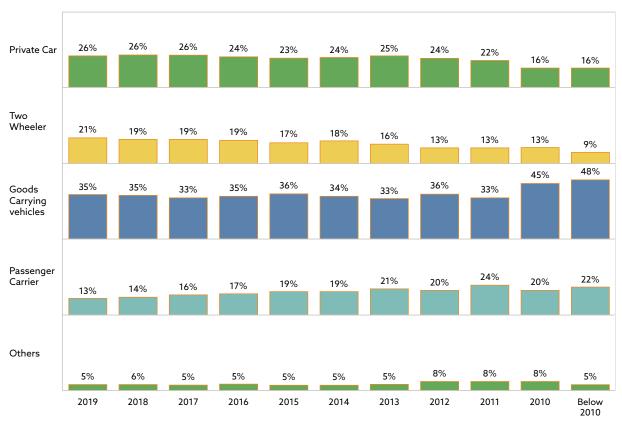


- 27% of the claims reported in 2019-20 correspond to the current Financial Year.
- 90% of claims reported in 2019-20 correspond to accidents that have occurred in last 5 years.

#### Claims Incurred amount of TP Reported claims by Nature of Loss



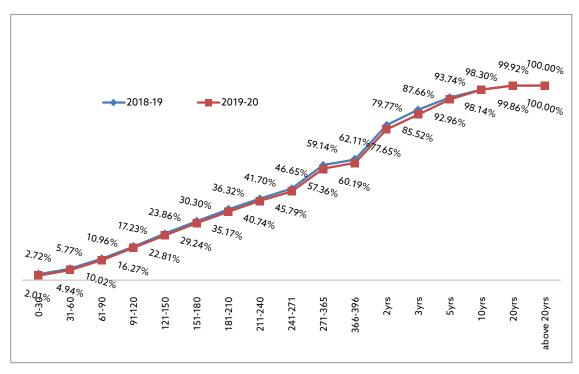
#### Claims Incurred amount of TP Reported claims by Class of Vehicle



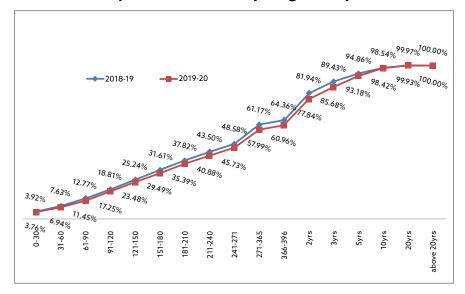
The above graph represents the distribution of Incurred Claim Amount by Class of Vehicle for different Accident years in FY 2019-20.

Due to long-tailed nature of TP liability, claims from accident year 2010 and earlier are still being reported and major liability outstanding is in the Goods Carrier segment.

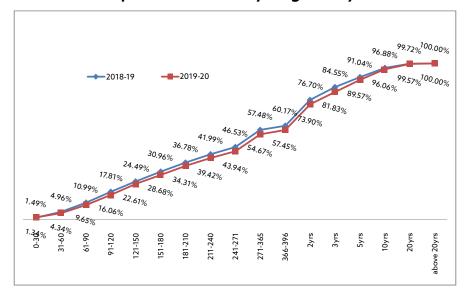
## Proportion of TP Reported claims by Lag in days for Private car



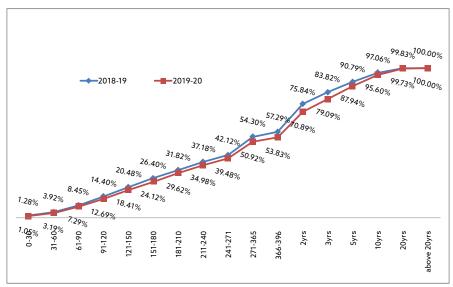
## Proportion of TP Reported claims by Lag in days for Two Wheelers



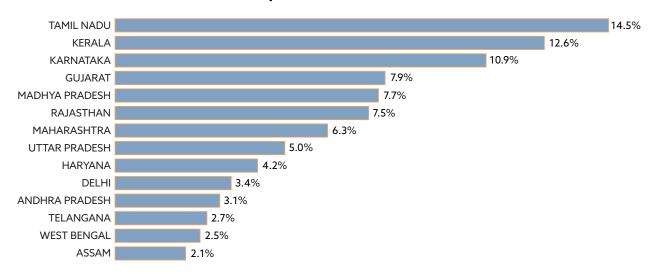
#### Proportion of TP Reported claims by Lag in days for Goods Carrier



# Proportion of TP Reported claims by Lag in days for Passenger Carrier

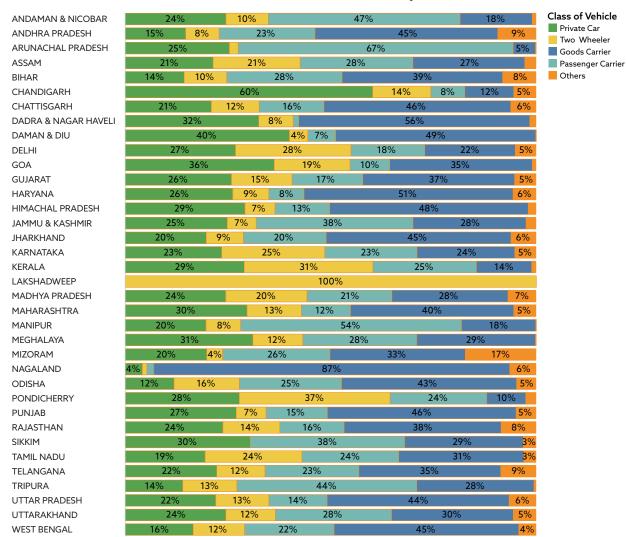


#### State wise Proportion of TP Claims Settled



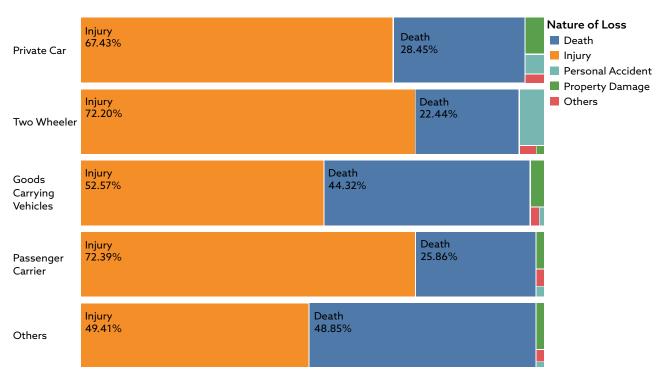
Overall Tamil Nadu, Kerala, Karnataka, Gujarat, Madhya Pradesh constitute more than half of the settled claims and in-line with the number of claims reported in these states as they report the maximum number of claims.

#### Distribution of TP Settled Claims by State



- Chandigarh has 60% of the settled TP claims from Private Cars, followed by Two Wheelers which is at 14%.
- Nagaland has 87% of the TP Settled claims in Goods carriers, followed by private Cars at 4%.
- Arunachal Pradesh has 67% of TP settled claims in Passenger Carrier, followed by private car 25%.

#### Distribution of Number of TP Claims Settled for Nature of Loss



- 67% the claims settled for Private Cars during the year were Injury claims whereas for Two-wheeler & passenger carrier it was 72% followed by Goods Carrier at 52%.
- Among all the class of vehicles, maximum death cases were settled from Goods Carriers at 44% whereas Private Cars contributed 28.4% of the total deaths.

#### Distribution of Total Claims Paid across state and Nature of Loss

| NOL               | Number of<br>Claims | Total Paid      | Average<br>Claim Paid |
|-------------------|---------------------|-----------------|-----------------------|
| Death             | 93,408              | 85,39,18,12,026 | 9,14,181              |
| Injury            | 1,78,564            | 47,34,00,49,741 | 2,65,115              |
| Personal Accident | 3,853               | 1,26,93,19,579  | 3,29,437              |
| Property Damage   | 5,860               | 89,20,60,153    | 1,52,229              |

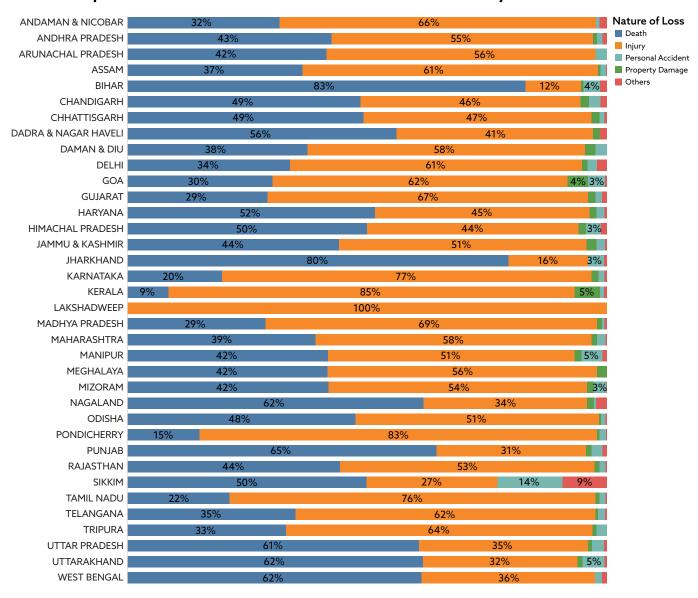
The average claim paid amount for Death is nearly Rs. 9.14 Lakhs and Injury is Rs. 2.65 Lakhs. The Total paid has been arrived at by cumulating all the earlier payments done for the claims settled in the current year for arriving at the average settlement amounts.

#### Distribution of Average Claims Paid by State & Nature of Loss

| States                    | Death     | Injury   | Personal Accident | Property Damage |
|---------------------------|-----------|----------|-------------------|-----------------|
| ANDAMAN & NICOBAR ISLANDS | 9,46,407  | 1,80,295 | 4,000             | 1,11,275        |
| ANDHRA PRADESH            | 8,53,615  | 2,91,276 | 3,79,304          | 2,36,061        |
| ARUNACHAL PRADESH         | 9,23,007  | 1,53,640 | 1,06,275          | 2,00,000        |
| ASSAM                     | 9,24,013  | 1,94,692 | 2,62,455          | 2,45,279        |
| BIHAR                     | 6,76,715  | 3,27,863 | 4,28,482          | 3,44,155        |
| CHANDIGARH                | 9,02,552  | 3,18,066 | 3,27,683          | 9,85,675        |
| CHATTISGARH               | 8,53,254  | 2,14,879 | 2,87,844          | 1,37,530        |
| DADRA & NAGAR HAVELI      | 10,18,147 | 2,33,088 | 7,52,210          | 3,90,820        |
| DAMAN & DIU               | 8,04,132  | 3,12,906 | 15,04,245         | 18,250          |
| DELHI                     | 8,87,824  | 2,64,436 | 1,97,946          | 1,96,460        |
| GOA                       | 11,70,078 | 2,53,498 | 2,60,225          | 3,35,093        |
| GUJARAT                   | 8,54,110  | 2,24,692 | 4,26,208          | 1,59,751        |
| HARYANA                   | 10,42,283 | 3,34,917 | 3,22,976          | 3,05,521        |
| HIMACHAL PRADESH          | 10,07,031 | 3,21,967 | 3,60,222          | 6,06,077        |
| JAMMU & KASHMIR           | 9,01,285  | 3,51,768 | 3,13,287          | 3,23,722        |
| JHARKHAND                 | 7,72,298  | 4,05,406 | 3,56,312          | 3,30,244        |
| KARNATAKA                 | 9,72,279  | 2,61,279 | 4,56,267          | 1,45,965        |
| KERALA                    | 12,31,122 | 2,86,211 | 1,18,641          | 30,961          |
| LAKSHADWEEP               | -         | 1,75,278 | -                 | -               |
| MADHYA PRADESH            | 7,77,106  | 1,67,474 | 4,05,485          | 1,16,464        |
| MAHARASHTRA               | 10,48,753 | 3,16,290 | 4,15,096          | 2,10,402        |
| MANIPUR                   | 8,47,098  | 4,48,222 | 70,919            | 11,050          |
| MEGHALAYA                 | 7,77,065  | 2,03,704 | -                 | 1,05,192        |
| MIZORAM                   | 9,30,311  | 1,99,746 | 7,52,351          | 2,50,581        |
| NAGALAND                  | 8,90,053  | 3,06,021 | 6,36,446          | 2,03,768        |
| ODISHA                    | 7,55,655  | 2,20,186 | 2,64,039          | 4,51,286        |
| PONDICHERRY               | 14,22,928 | 2,55,363 | 2,77,611          | 2,61,251        |
| PUNJAB                    | 10,30,572 | 3,91,921 | 2,79,612          | 5,09,801        |
| RAJASTHAN                 | 9,20,778  | 2,43,170 | 3,64,168          | 2,07,761        |
| SIKKIM                    | 11,93,302 | 8,20,742 | 5,56,604          | 10,69,279       |
| TAMIL NADU                | 11,60,696 | 2,92,564 | 2,29,454          | 1,76,143        |
| TELANGANA                 | 8,61,340  | 2,76,876 | 5,61,883          | 2,91,939        |
| TRIPURA                   | 9,73,901  | 2,35,012 | 1,21,639          | 24,694          |
| UTTAR PRADESH             | 7,14,402  | 2,81,613 | 3,37,471          | 2,89,217        |
| UTTARAKHAND               | 8,46,959  | 2,82,766 | 2,24,293          | 6,39,080        |
| WEST BENGAL               | 6,28,683  | 2,56,718 | 3,65,344          | 3,04,597        |
| Grand Total               | 9,14,181  | 2,65,115 | 3,29,437          | 1,52,229        |

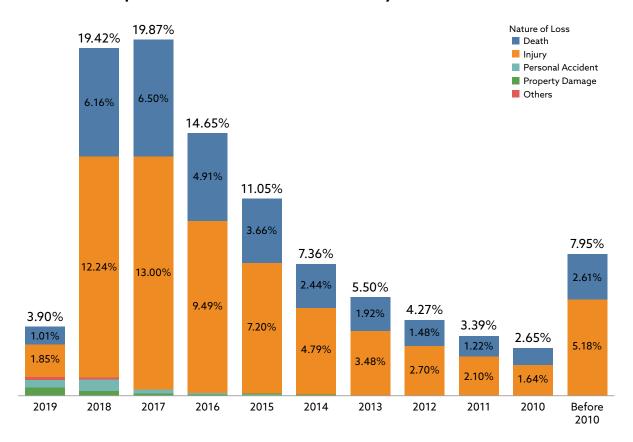
The average claim paid for Death claims that are settled in FY 2019-20 was Rs. 9.14 Lakhs and for injury claims it was Rs. 2.65 Lakhs. The highest average for Death claims was in Kerala, at Rs. 12.31 Lakhs and lowest in West Bengal at Rs. 6.28 Lakhs. In the Southern States and Union Territories the average settlement amount was higher as compared to other states. The average settlement amount for Injury claims are around 2.65 Lakhs but in the North Eastern states the average amount is generally higher.

#### Proportion of TP Settled Claims across all states by Nature of Loss



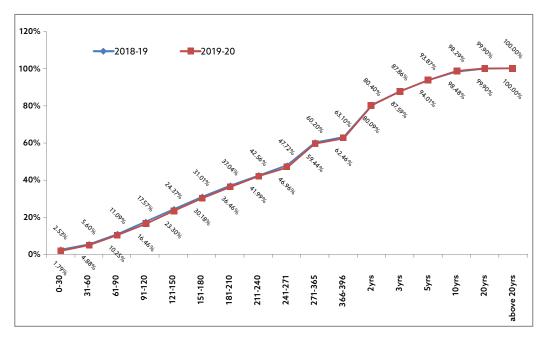
- In Jharkhand 80% of the claims settled were Death claims as the numbers of Death claims reported are also higher at 77%.
- Tamil Nadu, Karnataka and Kerala are the 3 states where injury claims are more than 75% percent of the total settled claims.
- Apart from the above states, Death accounted for more than 65% of settled claims in Bihar (83%), Punjab (65%), and Jharkhand (80%).

#### Proportion of TP settled Claims by Accident Year

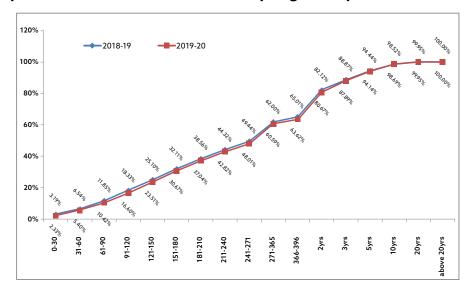


 Almost 3.9% of the claims settled in 2019-20 correspond to the accident that have occurred during 2019-20 whereas nearly 72% of the claims settled in 2019-20 correspond to the accident that have occurred in the previous 5 years.

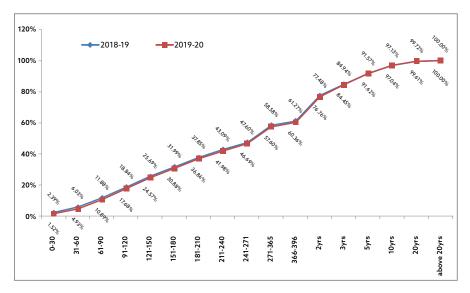
# Proportion of TP Settled claim by lag in days for Private Car



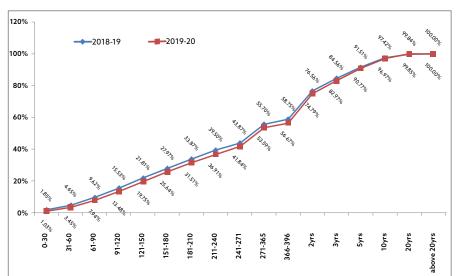
## Proportion of TP Settled claim by lag in days for Two Wheeler



## Proportion of TP Settled claim by lag in days for Goods Carrier



# Proportion of TP Settled claim by lag in days for Passenger Carrier



# THIRD PARTY CLAIMS - STATISTICAL ANALYSIS

In the current section, the claim analysis has been done on Reported Claim amount i.e., sum of Claim Paid amount and O/S as on 31.03.2020. This is to study the distribution of Third-Party Claim Amount across various dimensions as given below::

#### 1. Class of Vehicle

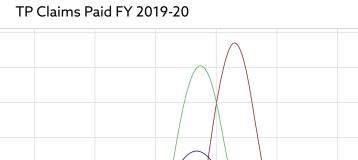
- a. Private Car
- b. Two-Wheeler
- c. Goods Carrying Vehicle
- d. Passenger Carrying Vehicle

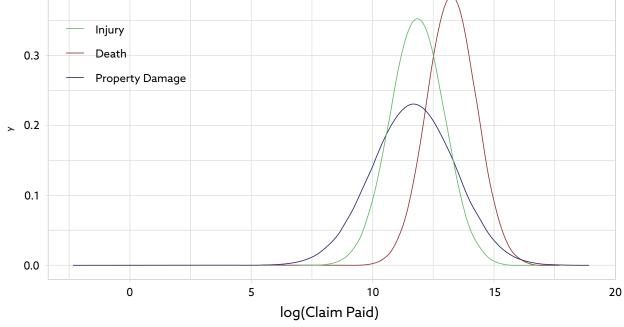
#### 2. Nature of Loss

- a. Death
- b. Injury
- c. Property Damage

Across dimensions, it was observed that the Reported Claim amount carries Positive Skewness. On the basis of the same the Log-Normal Distribution was fitted to analyze the actual Claim Patterns as transformation of actual reported claim amount in Log scale will reduce the skewness and create symmetry around mean. The fitted Log-normal Distribution gives two parameters,  $\mu$  ("mu") and  $\sigma$  ("Sigma").  $\mu$  represents the average log of reported claim amount and  $\sigma$  represents the variation in log of reported claim amount. Below observations can be drawn from this analysis –

- Across all class of vehicles, the parameter μ for Death was higher than Injury and Property Damage was
  the lowest, as expected, for Death Private Car Average reported claim amount stands at approx. 9,79,596.
  It is highest among Two-Wheelers and Commercial Vehicle. Two-Wheelers reported claim amount was
  lowest at 7,89,849. For Commercial Vehicles the average reported claim amount was approx. same at
  8,71,864.
- For Injury, the average reported claim amount for Private Car & goods carrying vehicle stood at approx. 2,61,630 i.e., 8.44% higher than average reported claim amount. For Two-Wheelers & Passenger Carrying Vehicle it stands at approx. 2,16,611 i.e., 11.4% lower than average reported claim amount.
- For Property Damage, Private Car, Two-Wheeler & Goods Carrying vehicle the average reported claim stands approx. at 3,18,389 while Passenger Vehicle registered lowest reported claim amount at approx. 2,27,681.
- Interestingly, across all class of vehicles, the parameter "sigma" is lowest for Death and highest for Property Damage. It signifies that variation of reported claim amount was lowest among Injury & Property Damage claims.
- It is observed that, at the top 10% of the Reported Claim Amount, Goods Carriers carry the highest risk for death while Passenger Carriers are least risky. For injury, at the top 10% of the Reported Claim Amount, Two wheelers carry the highest risk followed by Private Cars.





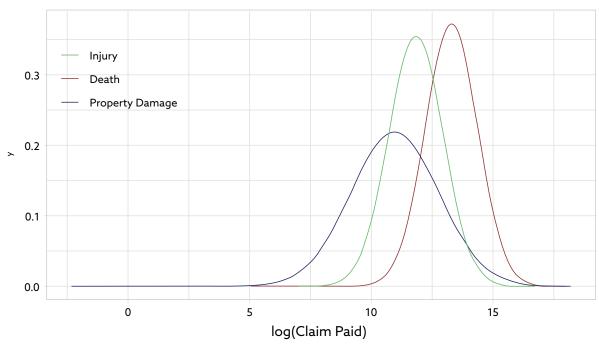
| Percentile | Injury   | Death     | Property Damage |
|------------|----------|-----------|-----------------|
| 10%        | 40,000   | 2,22,647  | 10,221          |
| 20%        | 82,500   | 4,27,930  | 17,000          |
| 30%        | 1,12,700 | 5,30,062  | 28,041          |
| 40%        | 1,58,288 | 6,13,042  | 62,000          |
| 50%        | 1,85,000 | 7,50,403  | 1,07,452        |
| 60%        | 2,12,000 | 8,63,140  | 2,32,722        |
| 70%        | 2,56,000 | 10,10,000 | 4,09,569        |
| 80%        | 3,26,293 | 11,82,871 | 6,43,554        |
| 90%        | 5,05,757 | 16,65,000 | 13,00,000       |

0.4

#### **Private Car:**

| Parameter | Injury  | Death   | Property Damage |
|-----------|---------|---------|-----------------|
| μ         | 11.8508 | 13.3004 | 10.9715         |
| σ         | 1.1229  | 1.0709  | 1.8270          |



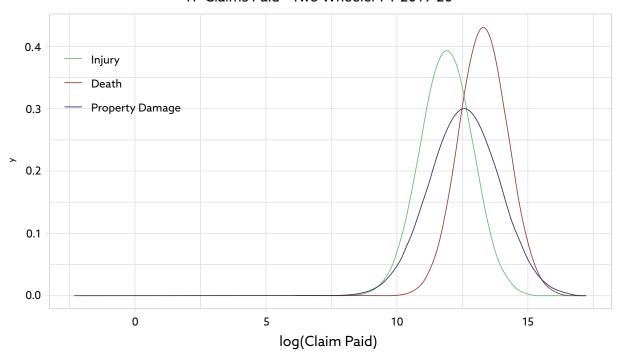


| Percentile | Injury   | Death     | Property Damage |
|------------|----------|-----------|-----------------|
| 10%        | 43,555   | 2,13,833  | 9,000           |
| 20%        | 84,000   | 4,44,769  | 13,144          |
| 30%        | 1,15,512 | 5,30,291  | 16,373          |
| 40%        | 1,61,403 | 6,16,693  | 24,999          |
| 50%        | 1,87,000 | 7,76,839  | 29,125          |
| 60%        | 2,13,596 | 9,12,316  | 56,909          |
| 70%        | 2,62,000 | 10,24,640 | 91,553          |
| 80%        | 3,28,848 | 12,56,151 | 2,04,728        |
| 90%        | 5,03,407 | 18,74,650 | 6,00,000        |

#### Two-Wheeler:

| Parameter | Injury  | Death   | Property Damage |
|-----------|---------|---------|-----------------|
| μ         | 11.8978 | 13.2885 | 12.5687         |
| σ         | 1.0156  | 0.9259  | 1.3320          |

TP Claims Paid - Two Wheeler FY 2019-20

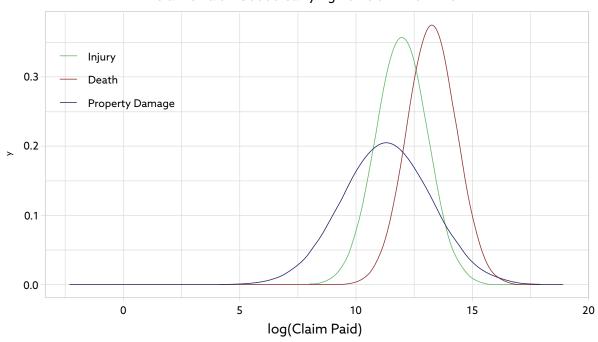


| Percentile | Injury   | Death     | Property Damage |
|------------|----------|-----------|-----------------|
| 10%        | 53,442   | 1,56,514  | 5,019           |
| 20%        | 89,952   | 3,36,410  | 12,909          |
| 30%        | 1,21,905 | 5,12,000  | 28,586          |
| 40%        | 1,62,000 | 5,67,150  | 66,549          |
| 50%        | 1,85,000 | 7,21,026  | 1,17,384        |
| 60%        | 2,13,500 | 8,26,400  | 3,18,762        |
| 70%        | 2,54,050 | 9,83,361  | 7,50,000        |
| 80%        | 3,18,867 | 11,63,900 | 13,16,000       |
| 90%        | 4,48,405 | 16,06,578 | 15,90,925       |

# Goods Carrying Vehicle:

| Parameter | Injury  | Death   | Property Damage |
|-----------|---------|---------|-----------------|
| μ         | 11.9729 | 13.2794 | 11.3247         |
| σ         | 1.1125  | 1.0592  | 1.9466          |

TP Claims Paid - Goods Carrying Vehicle FY 2019-20

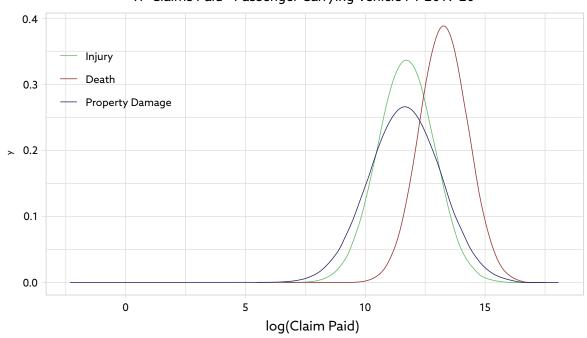


| Percentile | Injury   | Death     | Property Damage |
|------------|----------|-----------|-----------------|
| 10%        | 47,000   | 2,70,000  | 9,610           |
| 20%        | 88,402   | 4,85,970  | 15,337          |
| 30%        | 1,25,000 | 5,31,000  | 25,086          |
| 40%        | 1,62,000 | 6,36,308  | 51,415          |
| 50%        | 1,95,000 | 7,70,000  | 77,356          |
| 60%        | 2,18,147 | 8,79,556  | 1,12,595        |
| 70%        | 2,76,236 | 10,15,500 | 2,22,029        |
| 80%        | 3,63,141 | 12,06,640 | 4,93,053        |
| 90%        | 5,72,939 | 16,98,349 | 11,70,232       |

# Passenger Carrying Vehicle:

| Parameter | Injury  | Death   | Property Damage |
|-----------|---------|---------|-----------------|
| μ         | 11.6967 | 13.2626 | 11.6572         |
| σ         | 1.1857  | 1.0243  | 1.4989          |





| Percentile | Injury   | Death     | Property Damage |
|------------|----------|-----------|-----------------|
| 10%        | 29,000   | 1,53,902  | 10,800          |
| 20%        | 60,000   | 3,79,131  | 16,151          |
| 30%        | 99,094   | 5,23,273  | 25,000          |
| 40%        | 1,30,923 | 5,98,603  | 43,509          |
| 50%        | 1,64,783 | 7,35,332  | 70,000          |
| 60%        | 2,02,500 | 8,57,224  | 1,10,000        |
| 70%        | 2,37,000 | 10,06,631 | 2,04,522        |
| 80%        | 3,15,244 | 12,02,130 | 4,00,000        |
| 90%        | 4,79,642 | 17,05,340 | 7,98,067        |

# **CAVEATS & DISCLAIMER**

#### **Caveats**

- · The report is indicative and contextual for the use of all the stake holders.
- The information contained in the report cannot be the subject matter of any litigation affecting the IRDAI/IIB/Insurance Companies.
- There could be errors and omissions due to submission gaps and data quality limitations.
- The report is based on the transactional data received by IIB from the Non-Life insurance companies for the FY 2019-20.
- · Maps wherever used are not to scale.

#### **Disclaimer**

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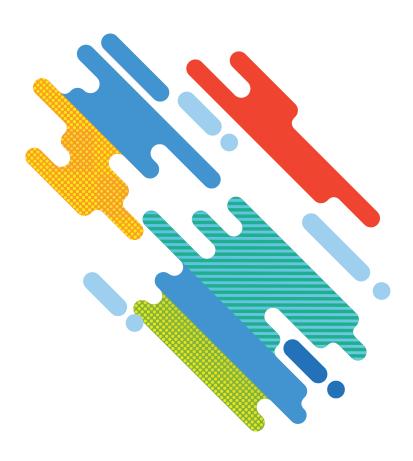
#### **About IIB**

Insurance Information Bureau (IIB) was established by the Insurance Regulatory & Development Authority of India (IRDAI) as a single platform to meet the data needs of the Insurance industry, in 2009.

IIB fills the need for a sector-level data repository and analytics body which would empower stakeholders through provision of accurate, timely, reliable insurance data and analysis. The Bureau is also mandated with the responsibility of throwing insights on issues of strategic importance by generating reports through deployment of advanced analytics.

IIB will provide information support on a complete, consistent, and concise manner to all stakeholders associated either directly or indirectly with the Insurance sector, including insurers, regulator and government agencies.

The Bureau was formally registered as a Society with Registrar of Societies, Government of Andhra Pradesh, in November 2012. The society is governed by a Governing Council with 20 members consisting of experts from the insurance sector, technology and management experts and eminent academicians. The council also consists of ex-officio members from the Life and General Insurance Councils, and members of the board of IRDAI.





#### **INSURANCE INFORMATION BUREAU OF INDIA**

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