

Motor Third Party Claims  
Analysis of Claim Severity

by

Time lag bands and Nature of loss

---

## CONTENT

	<u>Page No.</u>
1. Explanatory Notes	3
2. Private car	5
3. Two wheeler	7
4. Good carrying vehicles (other than three wheelers- Public)	9
5. Good carrying vehicles (other than three wheelers -Private)	11
6. Passengers carrying four wheeled vehicles	13
8. All commercial vehicles	15
9. All other than commercial vehicles	17
10. All vehicles	19

## Motor Third Party Claims Analysis of claim severity by time lag bands and nature of Loss

### Explanatory Notes

1. The Insurance Regulatory and Development Authority (IRDA) is collecting transactional level data on motor insurance business from all the non-life insurance companies in India. The motor insurance data is collected in three major data sets – Policy data, Own Damage claims data, and Third Party (TP) claims data. The data collected has been classified based on vehicle type and the following tables are generated for average claim amount at different stages of time over a 8 year development period.

The patterns are separately traced for the following:

- a. Death
  - b. Third Party Property Damage (TPPD) and
  - c. Others.
2. **Data source**

Transaction level data of claim paid available with the IIB for the years 2004-05 to 2009-10 has been taken for the study. Motor data is collected in three formats viz. Policy, 'Own Damage' Claims and 'Third Party' Claims. The 'Third Party' Claims data of all vehicles which are identified by the Vehicle Class codes 11 to 28 as per coding manual are taken for the study.

The data contained a number of records where the validation of the date fields was not possible, such as for the reason, date of claim intimation falling before date of loss, date of intimation far too beyond a reasonable period after loss or one of the dates falling in absurd values. However, since the proportion of such error records was less than 4%, it was decided to use all records, where the time lag between date of loss to date of intimation is 0 to 96 months.

3. **Process**

At each stage of the claim development measured in months, number of claims and claim amount is tracked to derive an average claim amount at that stage. This process is carried out for each vehicle class and in this each vehicle class by type of loss.

**Description of table:**

Each table consists of distribution of claim records, claim amount and average claim amount in the time bands of 0- 11months, 11-23 months and 24 and more months for the date of loss to date to payment time lag and shown separately for death, TPPD, other causes and all causes.

4. **Illustration of table:**

Let us consider the table 1 which is for Private car. In this table the first column represent the time lag in specified bands and the next three columns represent number of claims, Claim amount and average claim amount respectively for Death claims. Similarly the next three columns contain the details of Third Party Property Damage, next three columns for other causes and the last three columns for all causes for private car.

The total number of tables for the all vehicle classes is 8 representing one for each vehicle class

## 5. Charts:

The charts annexed, however, trace the average claim amount, using a 3months period moving average, at the end of each month. Each chart shows the trend line of average claim amount for the 3 types of loss.

## 6. Comments on use of results from analysis:

- Estimate development of ultimate loss for portfolios of business at different development stages at the end of any review point
- Compare individual company's own experience with industry data
- Appreciate the progression of average claim amounts by the type of loss and length of delay in settlement.

## 7. Findings

- a. In case of **death** claims the average claim amount is increasing rapidly in the **first three years** there after it is somewhat constant.
- b. In case of **TPPD** the average claim amount is fluctuating in the **first year**; after that it is almost constant over the entire time period.
- c. In case of **other causes** the average claim amount is increasing in the **first two years** time period and after that it is constant over the entire time period.

## Motor Third Party Claims

Analysis of average Claim amounts by time lag bands and nature of loss

Table 1

Class code : 11 (Private Car)

Date of Loss to Date of Payment Time lag in months	Deaths			TPPD			Others			All causes		
	Number of claims (2)	Claim Amount (3)	Average claim amount (4)= (3)/(2)	Number of claims (5)	Claim Amount (6)	Average claim amount (7) = (6)/(5)	Number of claims (8)	Claim Amount (9)	Average claim amount (10)= (9)/(8)	Number of claims (11)	Claim Amount (12)	Average claim amount (13)= (12)/(11)
0 to 11	8,073	942,301,527	116,723	1,320	111,910,277	84,781	22,201	1,139,495,951	51,326	31,594	2,193,707,755	69,434
12 to 23	15,988	2,529,602,129	158,219	1,388	155,386,229	111,950	49,287	2,974,322,353	60,347	66,663	5,659,310,711	84,894
24 +	31,282	6,659,616,999	212,890	3,131	281,599,570	89,939	117,986	9,230,626,901	78,235	152,399	16,171,843,470	106,115

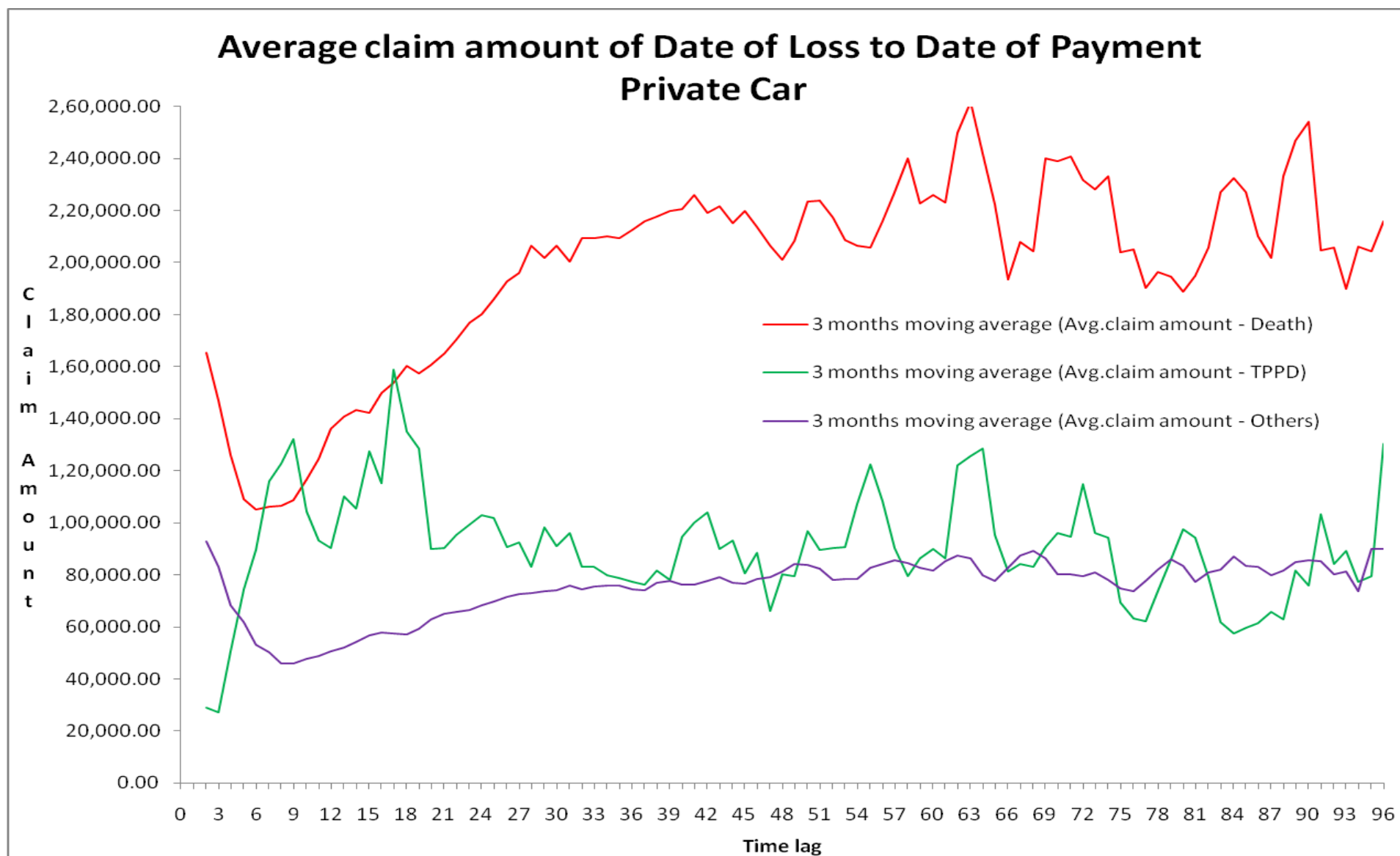


Figure 1

**Table 2**

Class code : 14 (Two wheelers)

Date of Loss to Date of Payment Time lag in months	Deaths			TPPD			Others			All causes		
	Number of claims (2)	Claim Amount (3)	Average claim amount (4)= (3)/(2)	Number of claims (5)	Claim Amount (6)	Average claim amount (7) = (6)/(5)	Number of claims (8)	Claim Amount (9)	Average claim amount (10)= (9)/(8)	Number of claims (11)	Claim Amount (12)	Average claim amount (13)= (12)/(11)
0 to 11	10,406	930,403,809	89,410	1,181	150,261,799	127,233	27,313	871,449,073	31,906	38,900	1,952,114,681	50,183
12 to 23	12,010	1,417,337,520	118,013	1,504	162,675,411	108,162	53,881	2,301,482,104	42,714	67,395	3,881,495,035	57,593
24 +	19,399	3,131,490,159	161,425	2,854	302,257,368	105,907	115,533	6,718,558,681	58,153	137,786	10,152,306,208	73,682

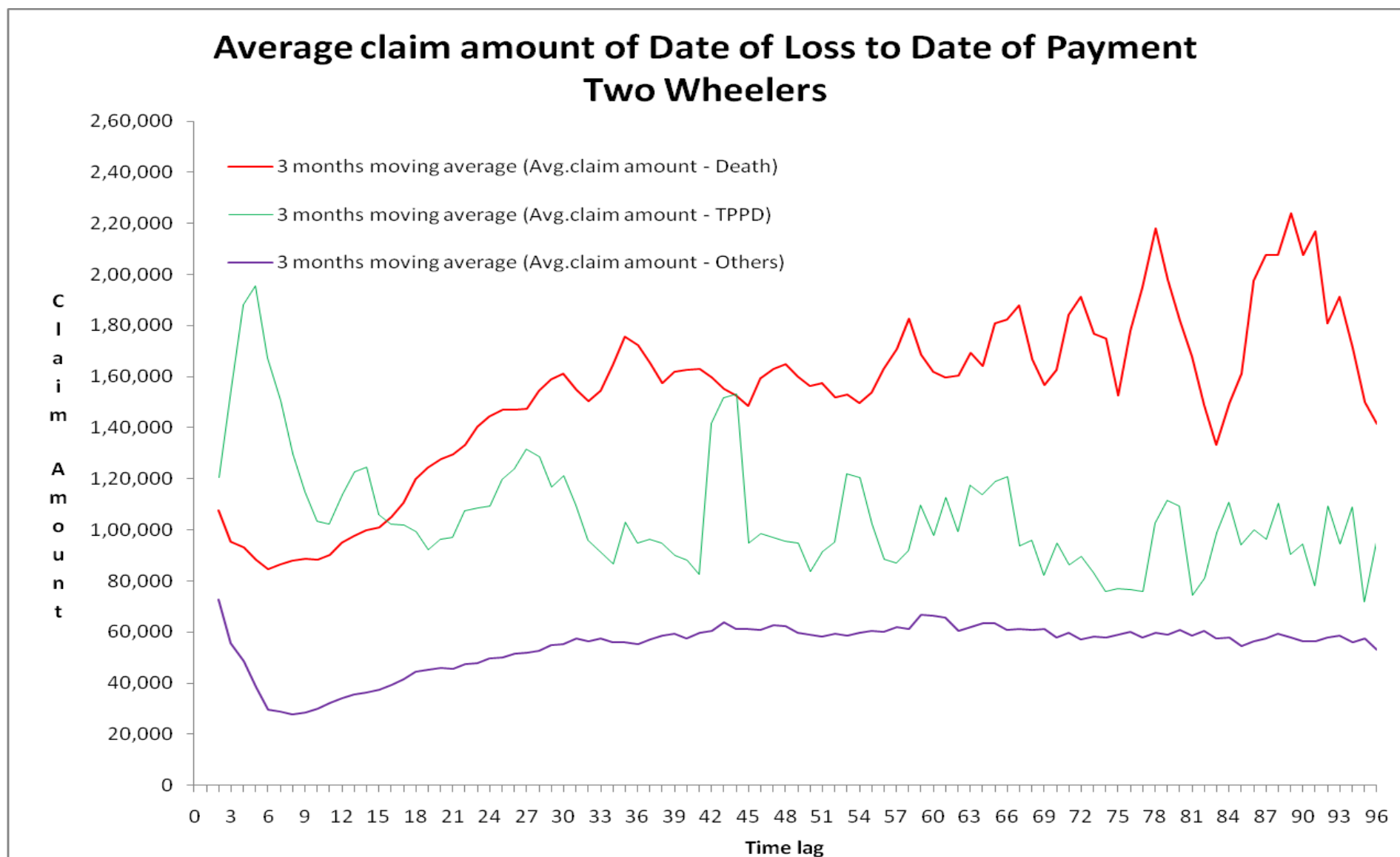


Figure 2

**Table 3****Class code : 17 (Goods Carrying vehicles other than three wheelers - Public)**

Date of Loss to Date of Payment Time lag in months	Deaths			TPPD			Others			All causes		
	Number of claims (2)	Claim Amount (3)	Average claim amount (4)= (3)/(2)	Number of claims (5)	Claim Amount (6)	Average claim amount (7) = (6)/(5)	Number of claims (8)	Claim Amount (9)	Average claim amount (10)= (9)/(8)	Number of claims (11)	Claim Amount (12)	Average claim amount (13)= (12)/(11)
0 to 11	22,188	2,075,687,350	93,550	2,265	119,924,458	52,947	28,525	1,479,194,993	51,856	52,978	3,674,806,801	69,365
12 to 23	50,804	8,385,568,622	165,057	1,912	125,758,640	65,773	78,495	6,426,204,554	81,868	131,211	14,937,531,816	113,844
24 +	108,055	24,630,738,001	227,946	5,276	278,837,109	52,850	222,760	21,977,394,672	98,660	336,091	46,886,969,782	139,507

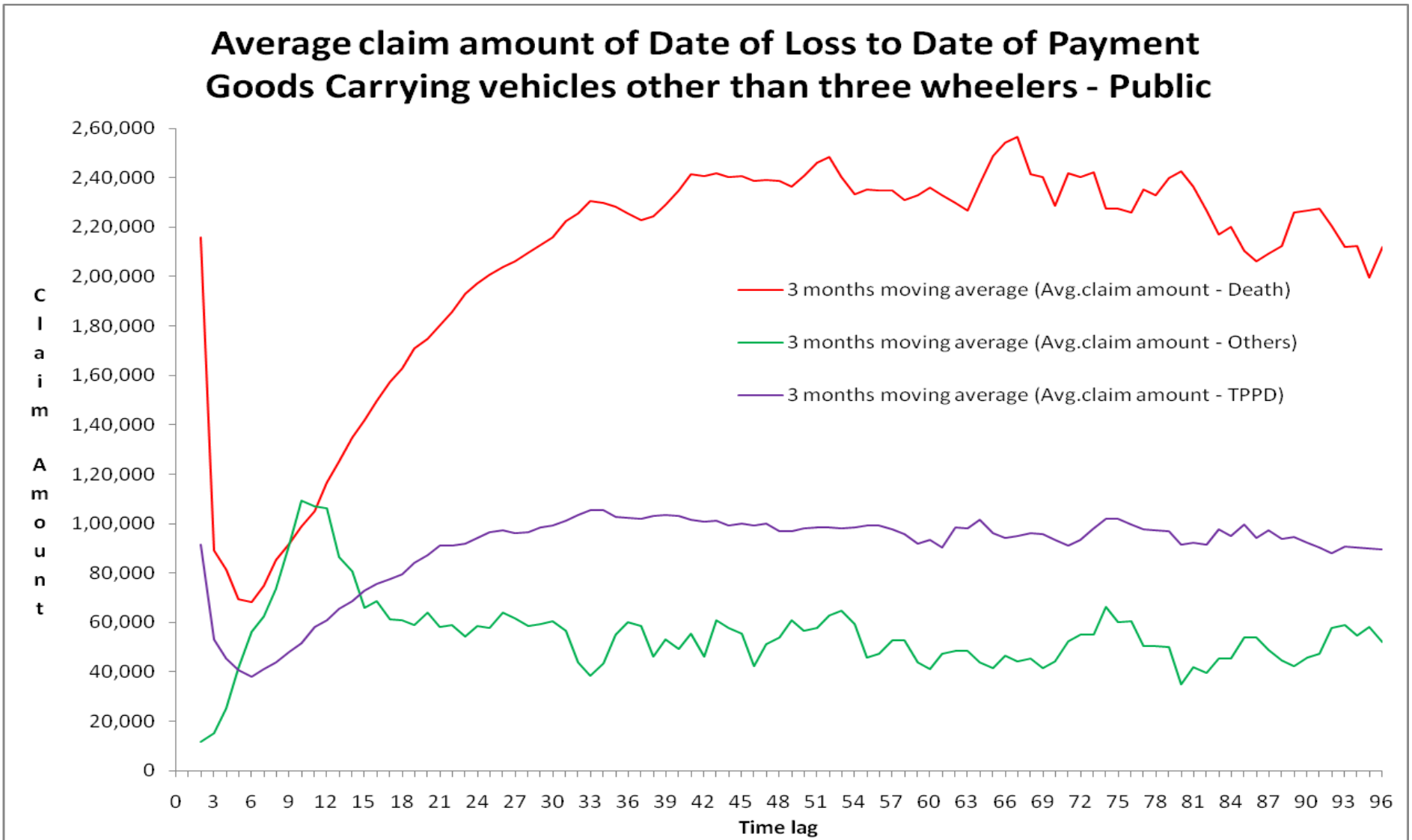


Figure 3

**Table 4****Class code : 18 (Goods Carrying vehicles others than three wheelers - Private)**

Date of Loss to Date of Payment Time lag in months	Deaths			TPPD			Others			All causes		
	Number of claims (2)	Claim Amount (3)	Average claim amount (4)= (3)/(2)	Number of claims (5)	Claim Amount (6)	Average claim amount (7) = (6)/(5)	Number of claims (8)	Claim Amount (9)	Average claim amount (10)= (9)/(8)	Number of claims (11)	Claim Amount (12)	Average claim amount (13)= (12)/(11)
0 to 11	775	129,129,675	166,619	348	64,468,759	185,255	1,274	108,968,117	85,532	2,397	302,566,551	126,227
12 to 23	1,300	244,275,444	187,904	550	82,318,256	149,670	2,366	179,029,858	75,668	4,216	505,623,558	119,930
24 +	2,844	681,314,943	239,562	2,610	367,910,602	140,962	6,203	568,780,852	91,694	11,657	1,618,006,397	138,801

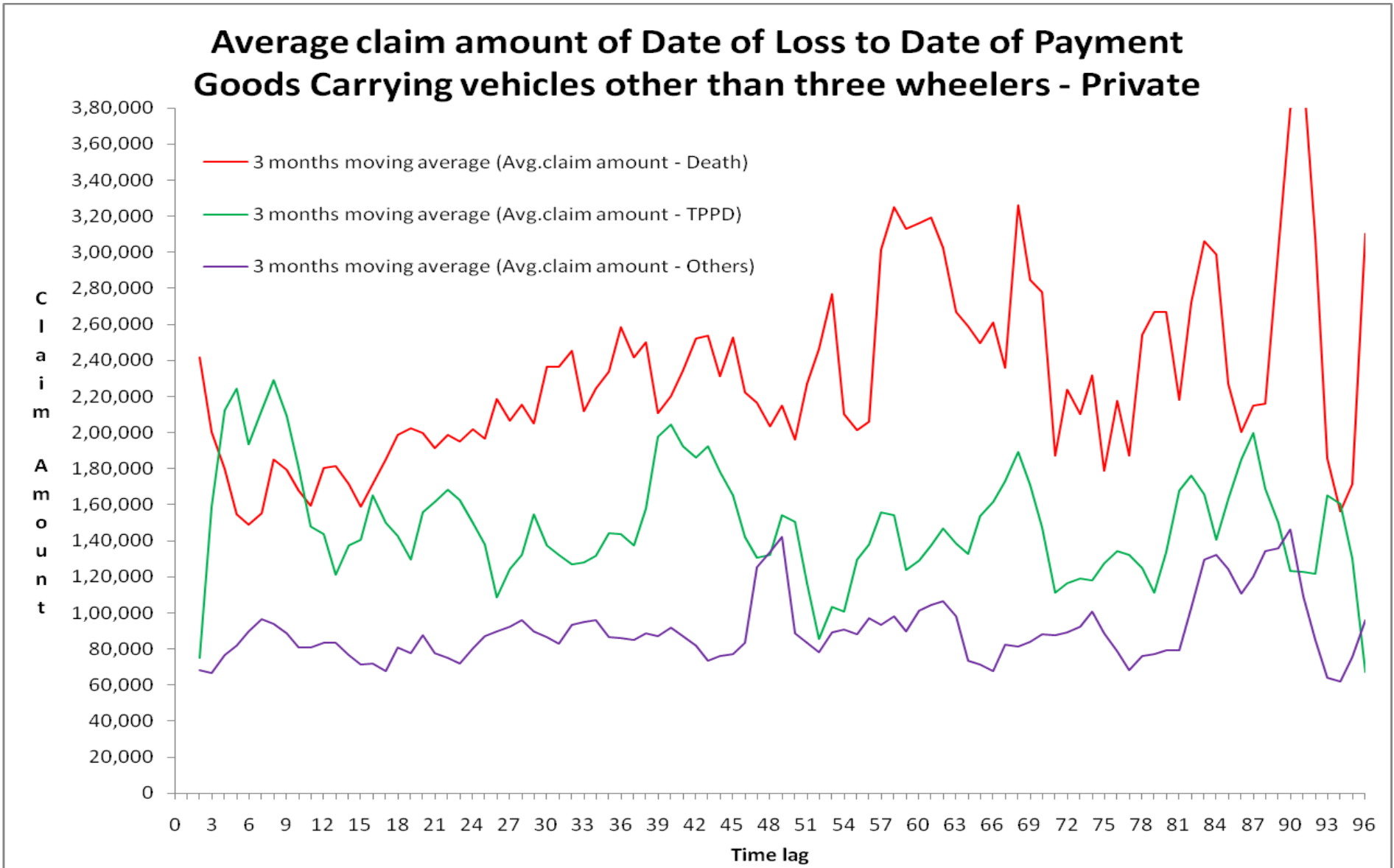


Figure 4

**Table 5****Class code : 21 (Passengers Carrying four wheeled vehicles)**

Date of Loss to Date of Payment Time lag in months	Deaths			TPPD			Others			All causes		
	Number of claims (2)	Claim Amount (3)	Average claim amount (4)= (3)/(2)	Number of claims (5)	Claim Amount (6)	Average claim amount (7) = (6)/(5)	Number of claims (8)	Claim Amount (9)	Average claim amount (10)= (9)/(8)	Number of claims (11)	Claim Amount (12)	Average claim amount (13)= (12)/(11)
0 to 11	11,291	969,973,965	85,907	1,448	98,531,103	68,046	24,539	839,058,129	34,193	37,278	1,907,563,197	51,171
12 to 23	22,919	3,469,056,906	151,362	1,511	109,992,474	72,794	66,273	3,192,078,942	48,166	90,703	6,771,128,322	74,652
24 +	48,740	9,968,018,626	204,514	4,729	345,946,920	73,154	188,189	12,191,922,278	64,786	241,658	22,505,887,824	93,131

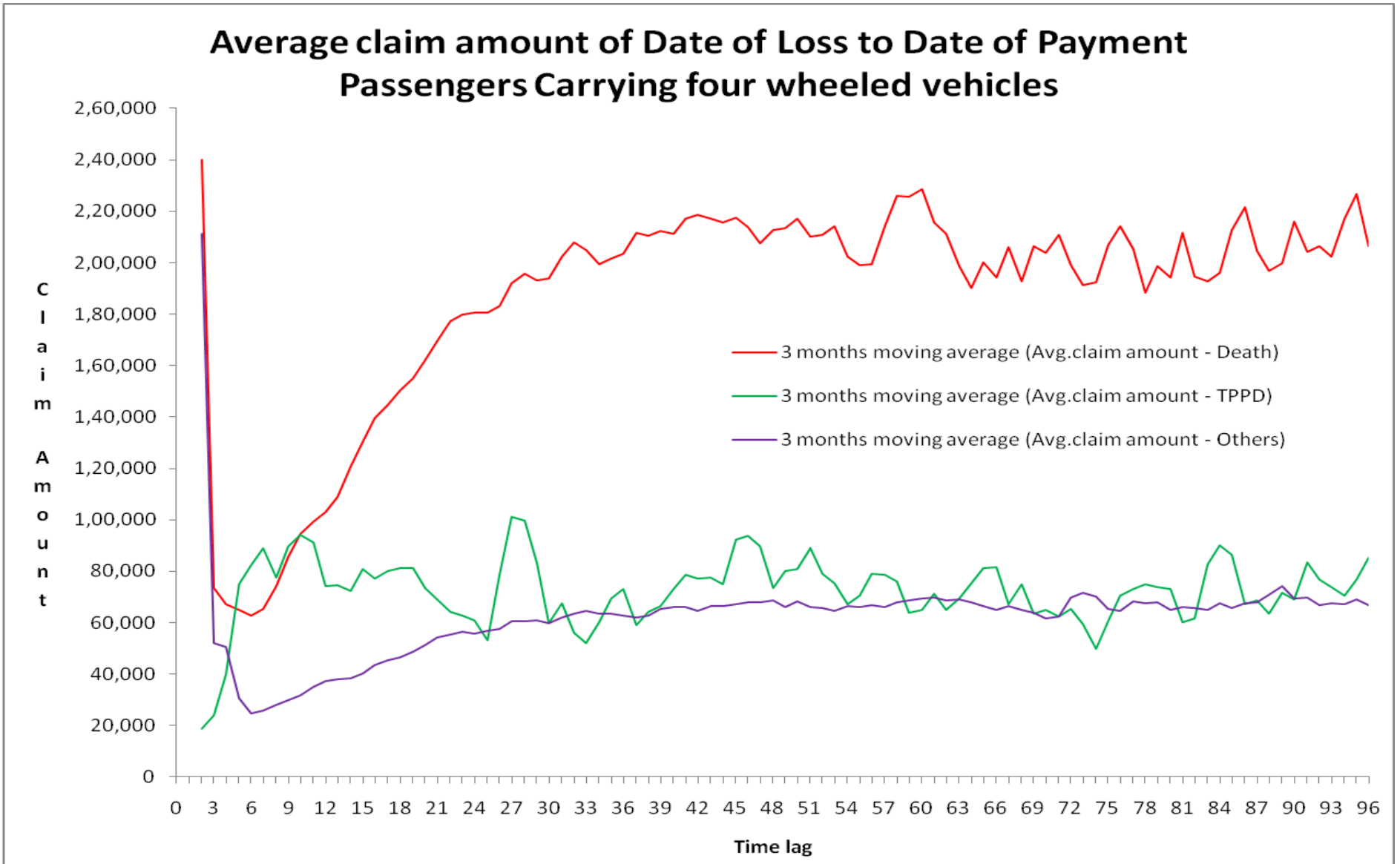


Figure 5

**Table 6**

Class code : 17 to 23 (All commercial vehicles)

Date of Loss to Date of Payment Time lag in months	Deaths			TPPD			Others			All causes		
	Number of claims (2)	Claim Amount (3)	Average claim amount (4)= (3)/(2)	Number of claims (5)	Claim Amount (6)	Average claim amount (7) = (6)/(5)	Number of claims (8)	Claim Amount (9)	Average claim amount (10)= (9)/(8)	Number of claims (11)	Claim Amount (12)	Average claim amount (13)= (12)/(11)
0 to 11	40,847	3,789,864,745	92,782	4,629	323,546,227	69,895	74,542	3,008,841,307	40,364	120,018	7,122,252,279	59,343
12 to 23	88,005	13,954,714,611	158,567	4,633	369,743,712	79,807	190,284	11,790,864,958	61,965	282,922	26,115,323,281	92,306
24 +	185,863	40,002,077,318	215,223	14,302	1,138,481,346	79,603	519,886	40,782,316,975	78,445	720,051	81,922,875,639	113,774

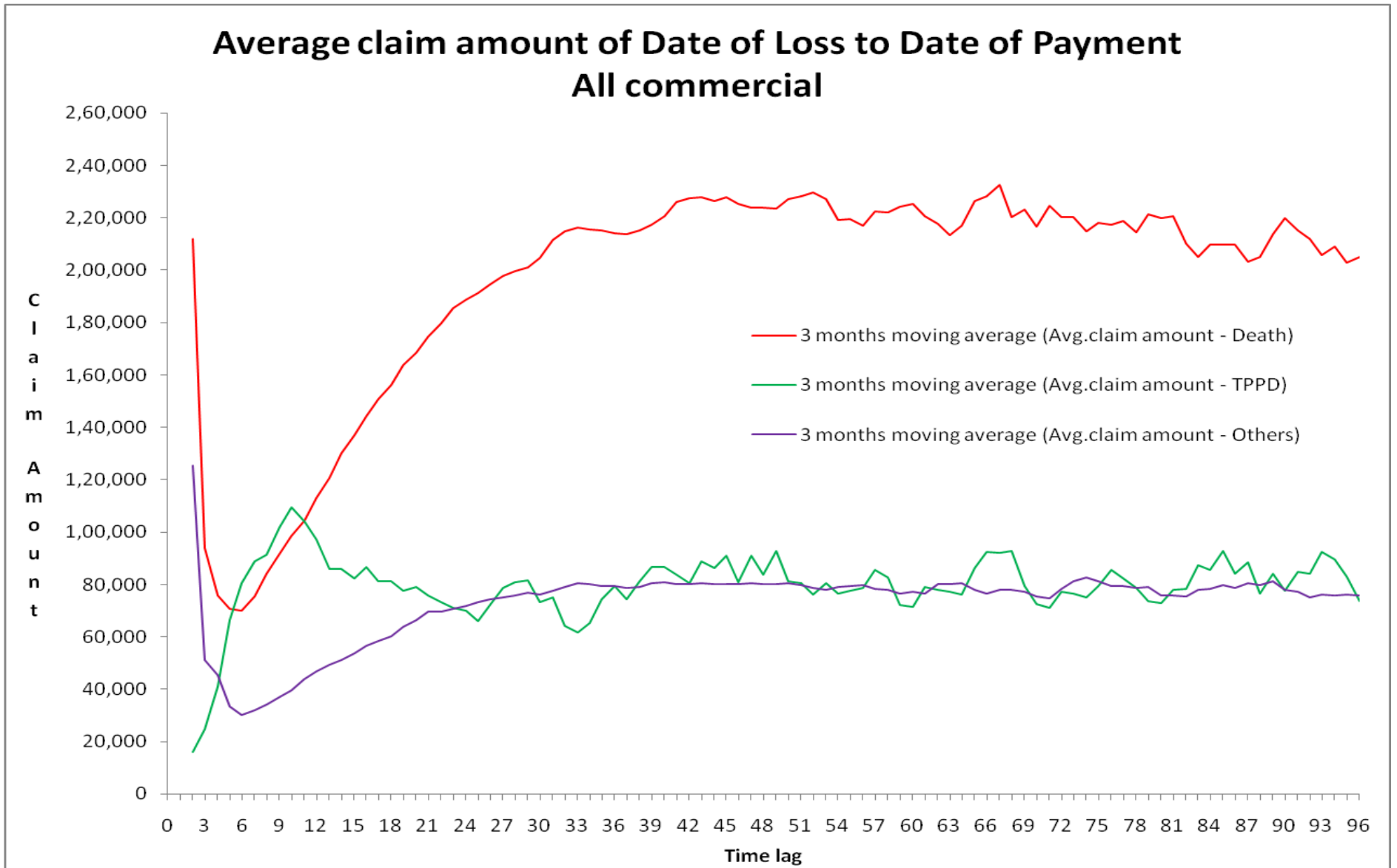


Figure 6

**Table 7****Class code : 11 to 16 (All other than commercial vehicles)**

Date of Loss to Date of Payment Time lag in months	Deaths			TPPD			Others			All causes		
	Number of claims (2)	Claim Amount (3)	Average claim amount (4)= (3)/(2)	Number of claims (5)	Claim Amount (6)	Average claim amount (7) = (6)/(5)	Number of claims (8)	Claim Amount (9)	Average claim amount (10)= (9)/(8)	Number of claims (11)	Claim Amount (12)	Average claim amount (13)= (12)/(11)
0 to 11	18,507	1,874,574,709	101,290	2,508	262,482,076	104,658	49,608	2,012,874,038	40,576	70,623	4,149,930,823	58,762
12 to 23	28,045	3,951,361,693	140,894	2,893	318,111,640	109,959	103,407	5,284,026,906	51,099	134,345	9,553,500,239	71,112
24 +	50,798	9,813,923,968	193,195	5,995	584,058,043	97,424	234,014	15,971,568,245	68,250	290,807	26,369,550,256	90,677

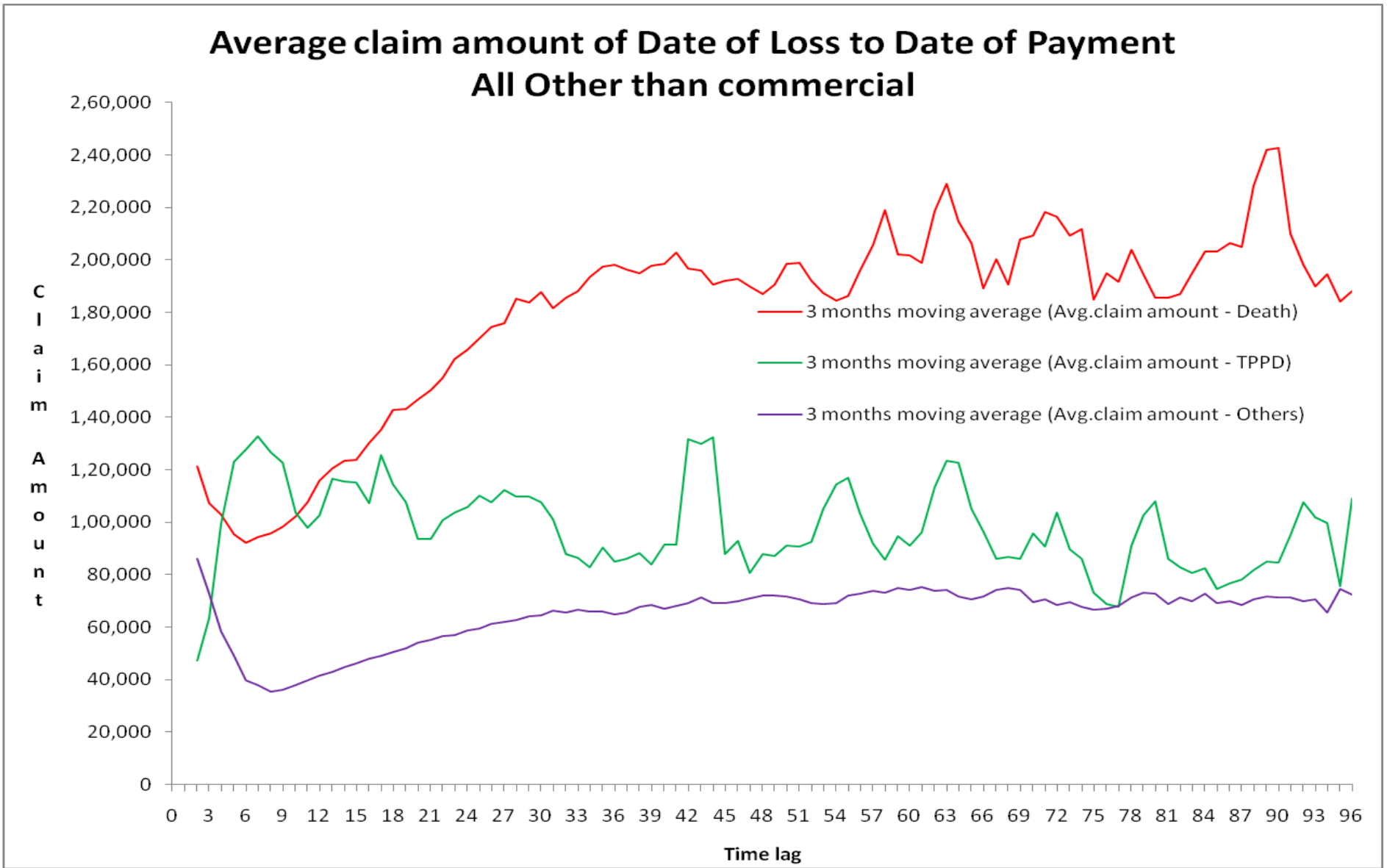


Figure 7

**Table 8**

Class code : 11 to 28 (All vehicles)

Date of Loss to Date of Payment Time lag in months	Deaths			TPPD			Others			All causes		
	Number of claims (2)	Claim Amount (3)	Average claim amount (4)= (3)/(2)	Number of claims (5)	Claim Amount (6)	Average claim amount (7) = (6)/(5)	Number of claims (8)	Claim Amount (9)	Average claim amount (10)= (9)/(8)	Number of claims (11)	Claim Amount (12)	Average claim amount (13)= (12)/(11)
0 to 11	59,465	5,688,421,651	95,660	7,164	588,494,869	82,146	124,330	5,032,662,171	40,478	190,959	11,309,578,691	59,225
12 to 23	116,473	18,017,594,305	154,693	7,570	692,146,227	91,433	294,425	17,124,948,519	58,164	418,468	35,834,689,051	85,633
24 +	237,250	49,950,342,882	210,539	20,357	1,729,693,725	84,968	755,253	56,859,456,015	75,285	1,012,860	108,539,492,622	107,161

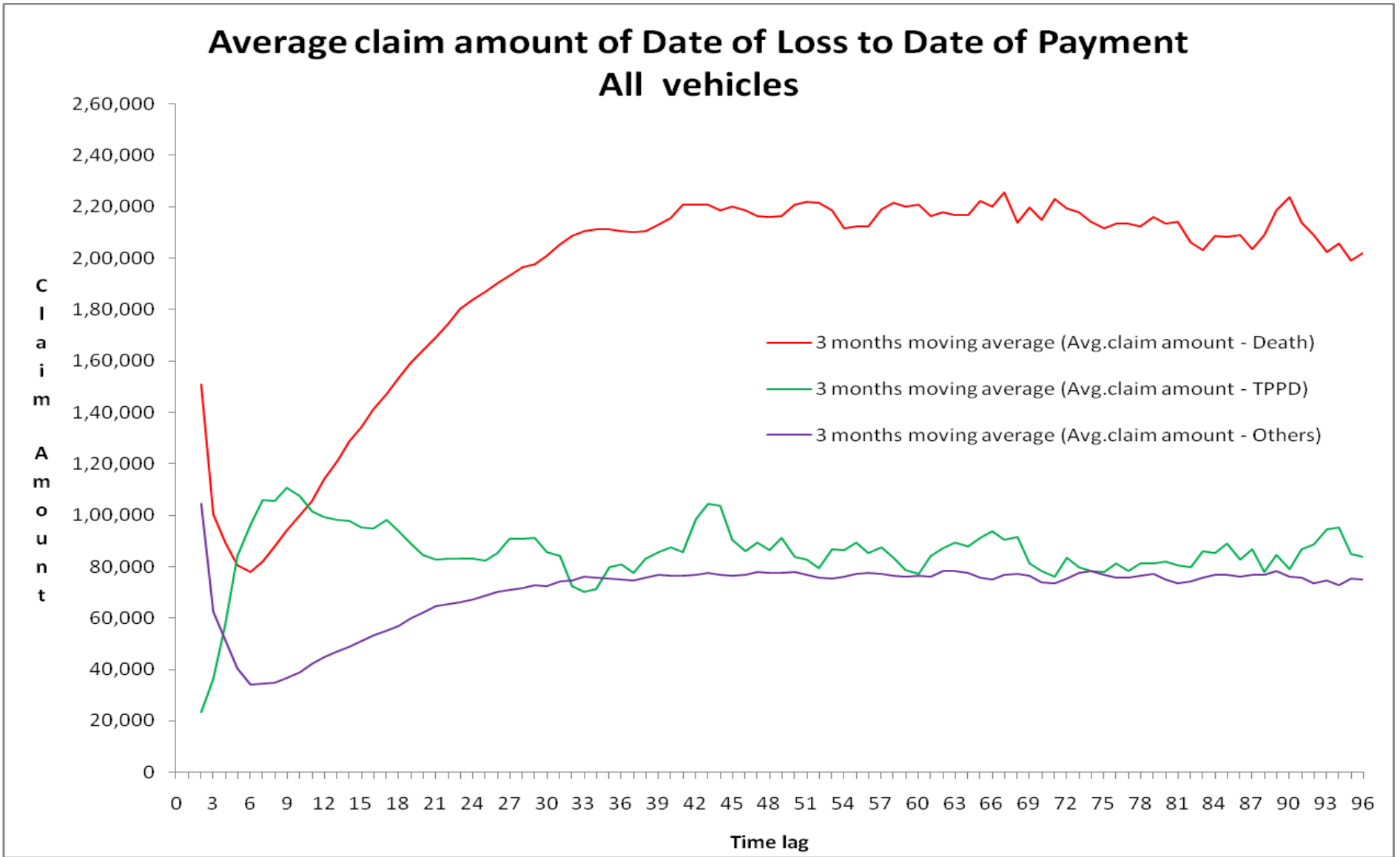


Figure 8

**Caveats:**

1. Tabulations in the report are generated from the data submitted by non-life insurers for the years 2004-05 to 2009-10.
2. Aggregate data published in this are from the transaction level data supplied by insurers. These may not match with individual insurer's company level aggregate data.
3. Claims figures reflect pure claims cost/ burning cost. Expenses/ interest not included.
4. The Tables are indicative and contextual.
5. Findings are not complete/ conclusive and anyone making use of the same are advised to make their independent assessment of the accuracy.
6. The information contained the tables cannot be the subject matter for any litigation affecting IRDA/ Insurance Companies/ Insurance Intermediaries.
7. There could be errors and omissions.