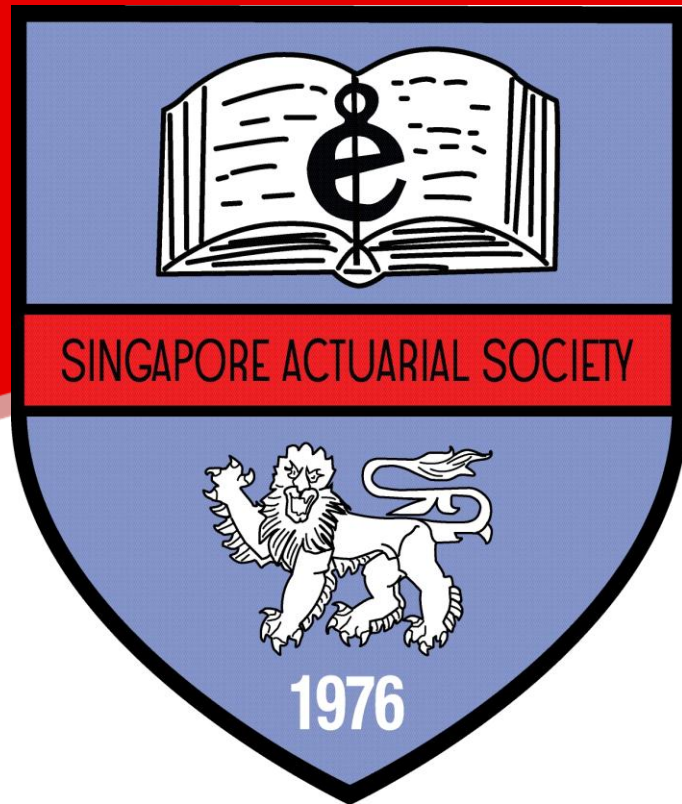


Singapore Actuarial Society General Insurance Conference

31st May / 1st June 2012

Resorts World Sentosa, Singapore



SAS Working Party

Singapore Motor Claims Experience

Frederic Weber, WP Chair (AXA)

Bernice Zhang (AON)

Goh Jio-Young (Chartis)

Jim Qin (Towers Watson)

John Lian (AON)

Matthew Maguire (NMG)

Pua Yeong Heng (MSIG)

Agenda

- 1. Singapore Motor Insurance Market Outlook
- 2. Purpose of the Working Party
- 3. Data Collection
- 4. Expected Outcomes
- 5. Next Steps

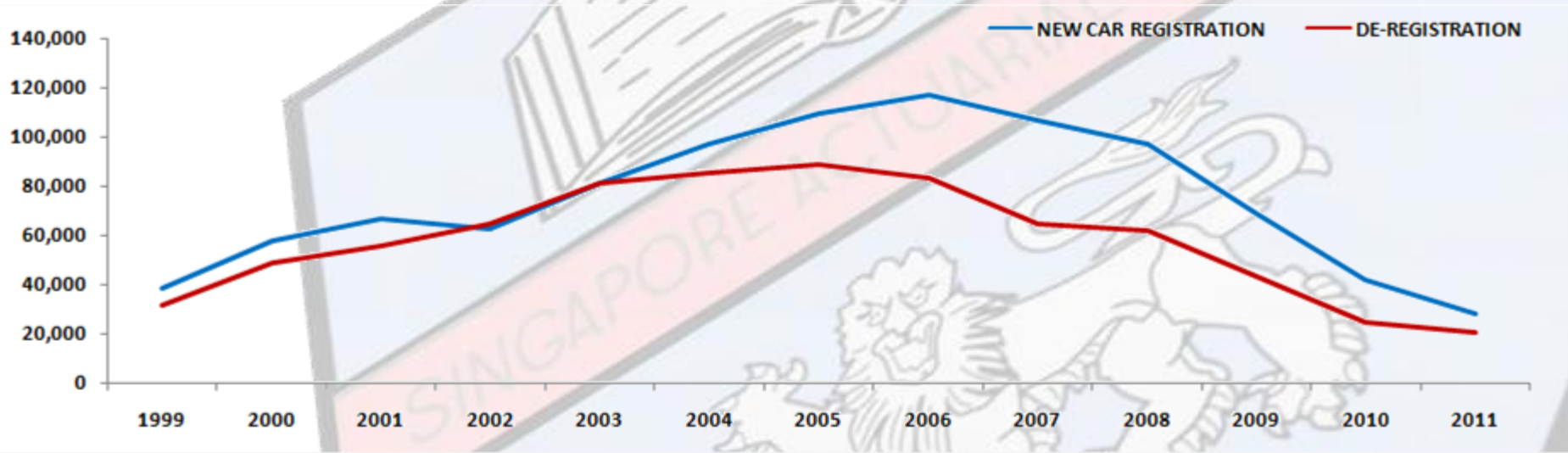
1. Singapore Motor Insurance Market Outlook

■ Key figures

- 945,829 vehicles (2010)
 - 511,125 private cars
 - 148,160 motorcycles
 - 157,541 goods and other vehicles
 - 129,002 other
- Number of cars / 100 persons: 9
- 28 Motor Insurers
- \$1.2bn premium in 2011
- \$21.4m UW result 2011

1. Singapore Motor Insurance Market Outlook

- Evolution of cars registrations and de-registrations in Singapore



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
NEW CAR REGISTRATION	38,482	58,098	67,158	62,960	81,259	96,861	109,376	117,062	106,710	97,348	68,862	42,002	28,270
DE-REGISTRATION	31,869	49,085	55,738	64,879	81,064	85,609	88,896	83,332	64,785	62,278	43,086	24,363	20,511
% OF DE-REGISTRATION	83%	84%	83%	103%	100%	88%	81%	71%	61%	64%	63%	58%	73%

1. Singapore Motor Insurance Market Outlook

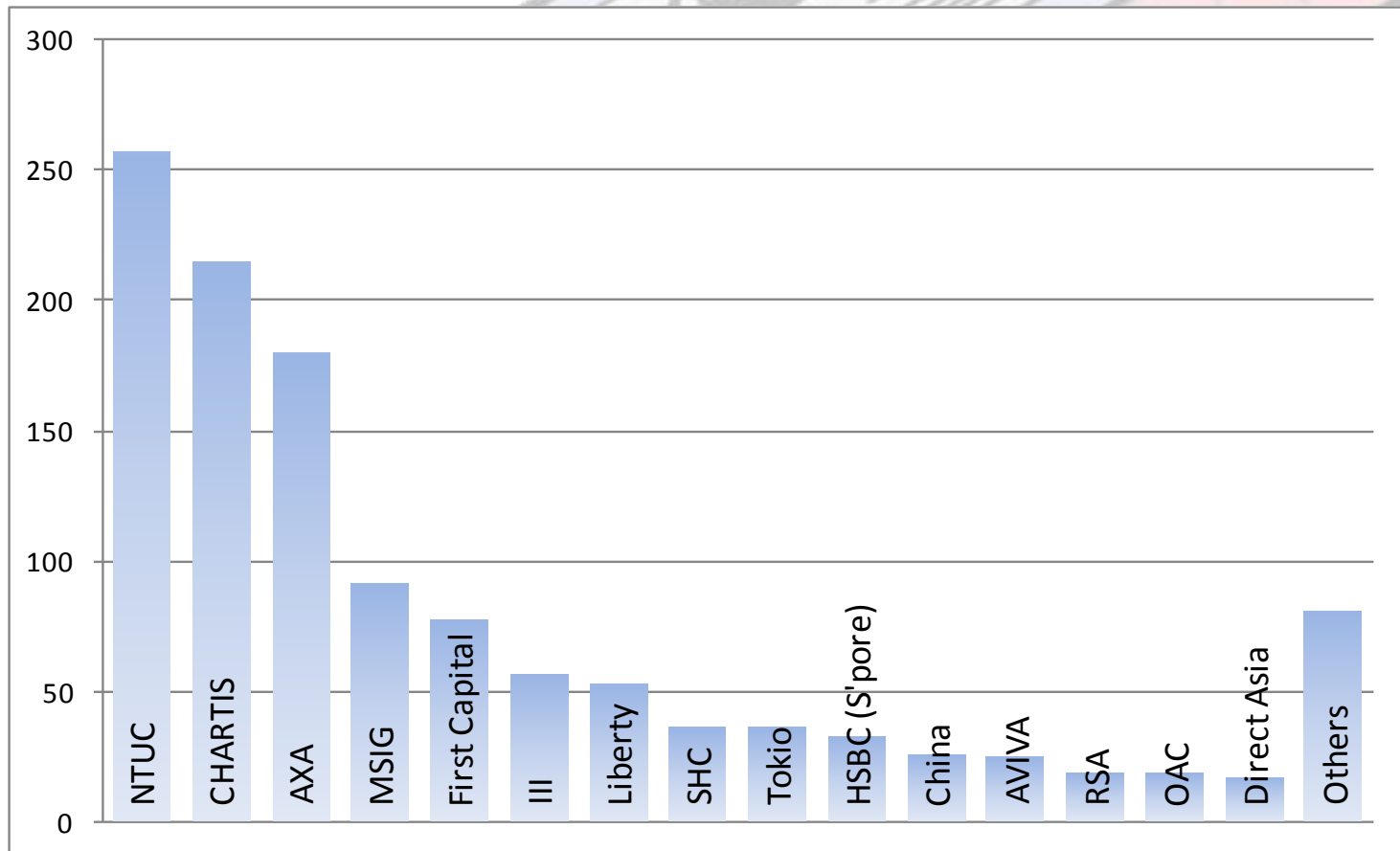
The 28 Motor Insurers by Premium Income 2011

		GWP (in \$m)	market share	
			share	cumulated
1	NTUC	257	21%	21%
2	CHARTIS	215	18%	39%
3	AXA	180	15%	53%
4	MSIG	91	7%	61%
5	First Capital	77	6%	67%
6	III	56	5%	72%
7	Liberty	53	4%	76%
8	SHC	36	3%	79%
9	Tokio	36	3%	82%
10	HSBC (S'pore)	33	3%	85%
11	China	25	2%	87%
12	AVIVA	25	2%	89%
13	RSA	19	2%	90%
14	OAC	18	1%	92%
15	Direct Asia	17	1%	93%
Total Top 15		1,138	93%	93%
16 to 28		81	7%	100%
TOTAL		1,219	100%	100%

Source: GIA

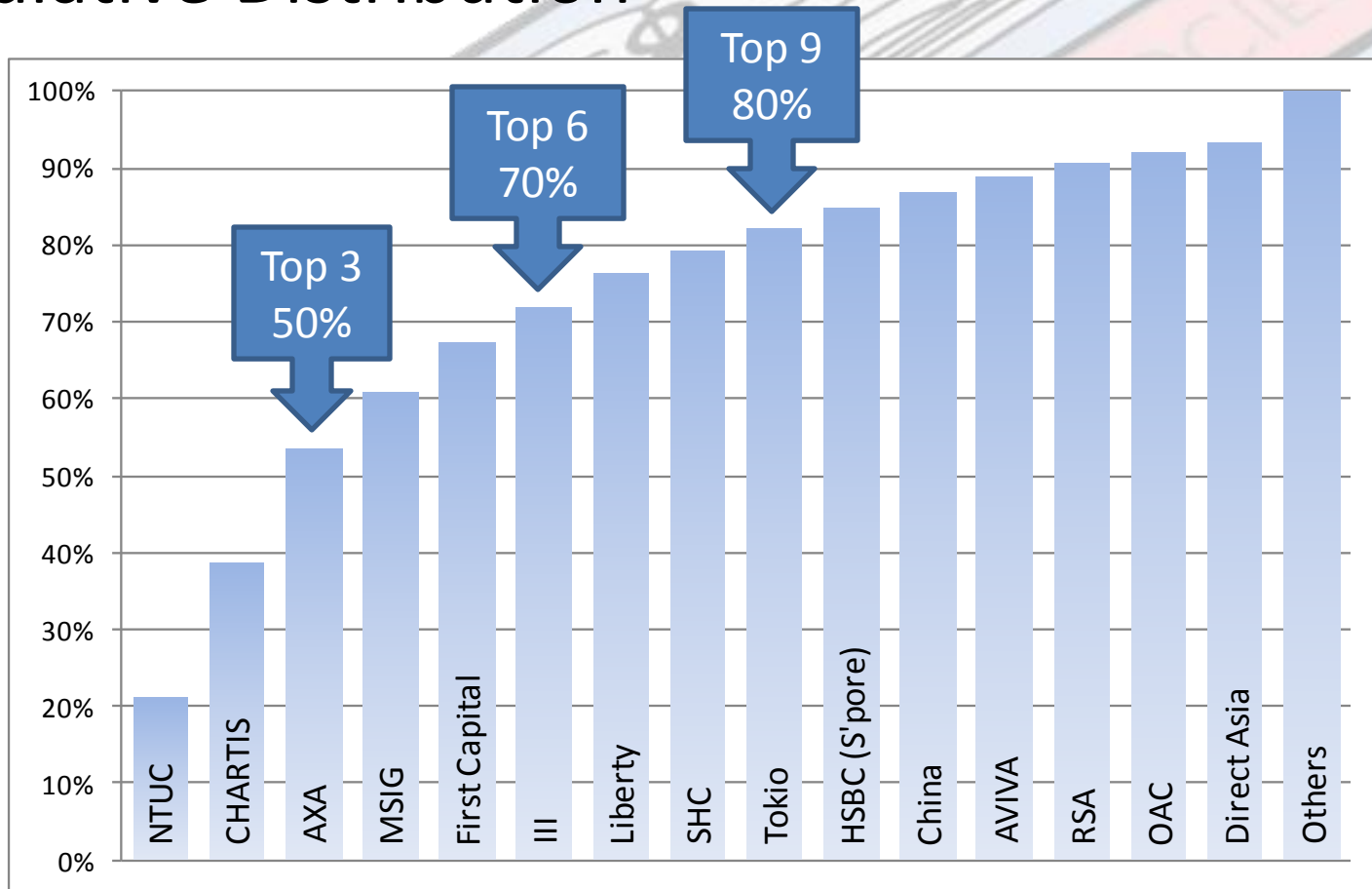
1. Singapore Motor Insurance Market Outlook

Singapore Market distribution



1. Singapore Motor Insurance Market Outlook

Cumulative Distribution



1. Singapore Motor Insurance Market Outlook

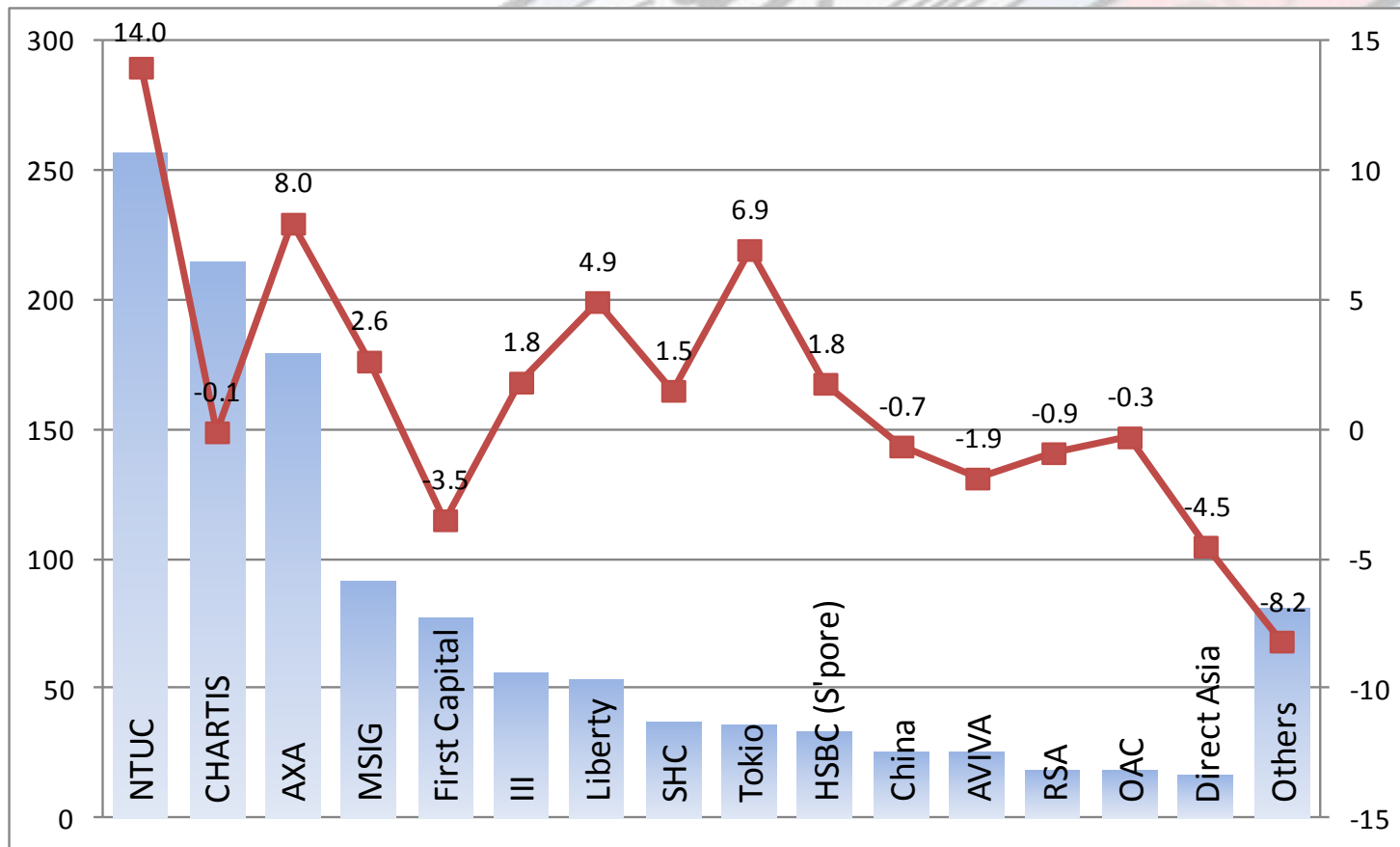
■ Underwriting result 2011

		GWP (in \$m)	UW result (in \$m)	1 - UW result / GWP
1	NTUC	257	14.0	94.6%
2	CHARTIS	215	-0.1	100.0%
3	AXA	180	8.0	95.6%
4	MSIG	91	2.6	97.1%
5	First Capital	77	-3.5	104.6%
6	III	56	1.8	96.8%
7	Liberty	53	4.9	90.7%
8	SHC	36	1.5	95.9%
9	Tokio	36	6.9	80.7%
10	HSBC (S'pore)	33	1.8	94.6%
11	China	25	-0.7	102.6%
12	AVIVA	25	-1.9	107.6%
13	RSA	19	-0.9	104.9%
14	OAC	18	-0.3	101.7%
15	Direct Asia	17	-4.5	127.2%
Total Top 15		1,138	29.6	97.4%
16 to 28		81	-8.2	110.1%
TOTAL		1,219	21.4	98.2%

Source: GIA

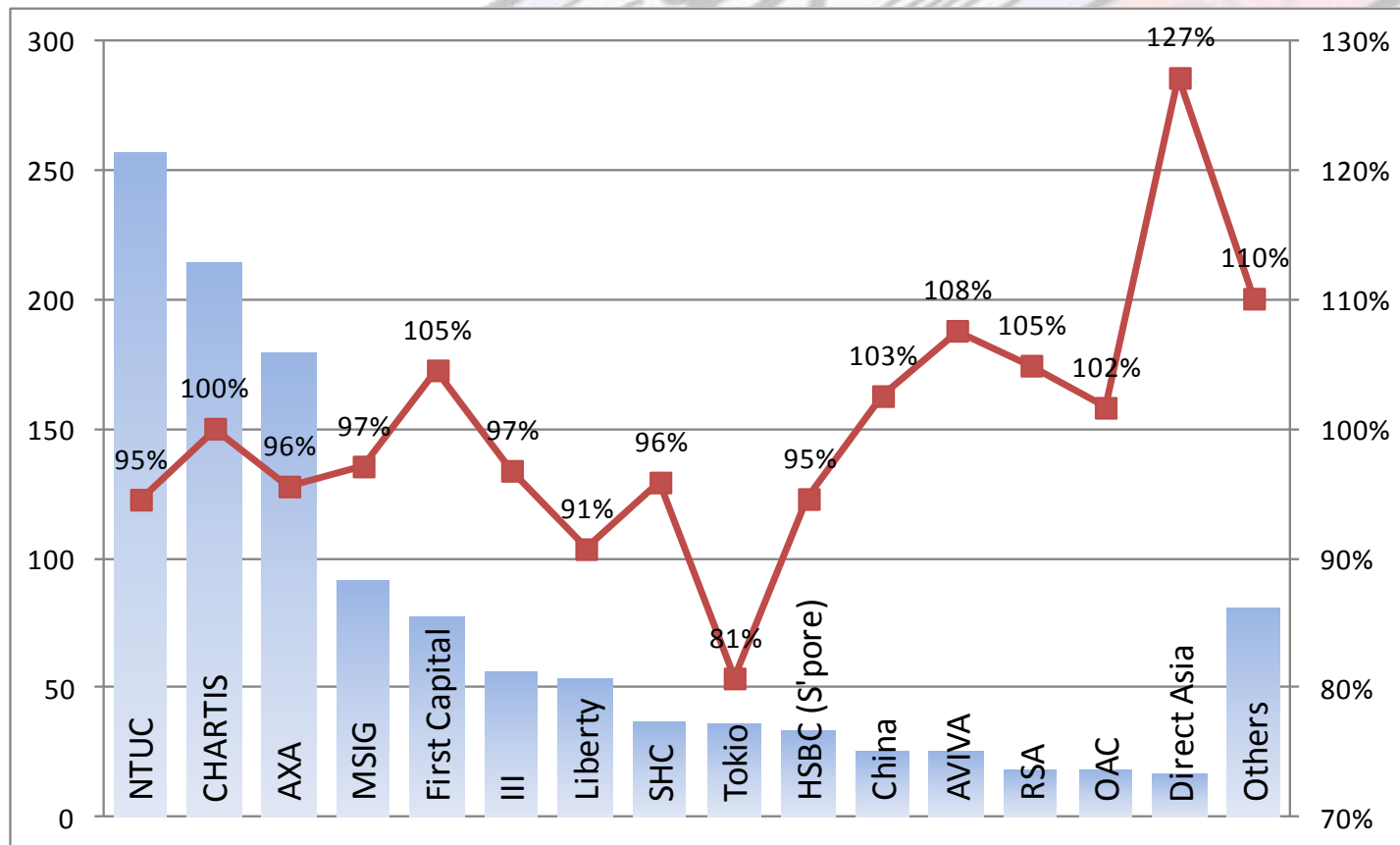
1. Singapore Motor Insurance Market Outlook

- Underwriting result vs. size



1. Singapore Motor Insurance Market Outlook

■ Profitability vs. size



2. Purpose of the Working Party

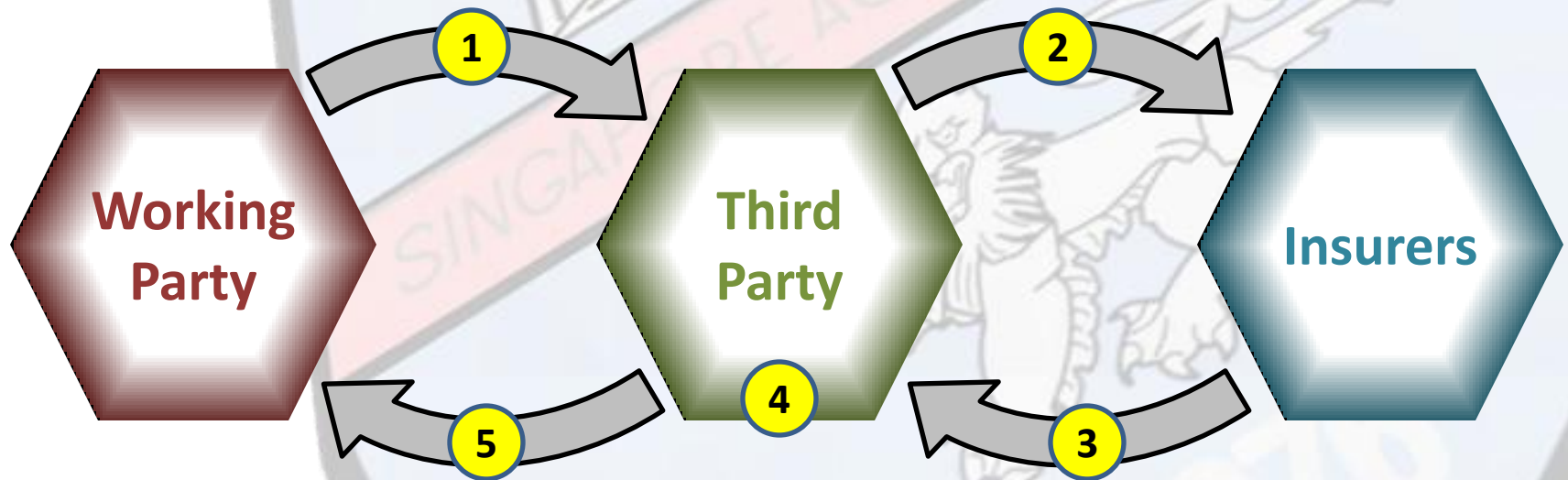
- Understand how the Singapore Motor insurance industry is evolving
- Study the Motor Claims inflation in Singapore for:
 - Bodily Injury (more court cases?, higher awards?)
 - Cars spare parts
 - This inflation would explain/justify the industry's recent rate increases
- Other analyses:
 - Market outlook (LTA, Traffic Police, MAS, etc.)
 - Reinsurance
 - Product comparison with other countries
- Scope
 - Singapore market
 - Private cars (i.e. excluding motorcycles, buses and commercial vehicles)
 - Comprehensive, TPFT and TPO covers

3. Data Collection

- Collecting individual insurance companies data is necessary
- Data confidentiality
 - Motor data is sensitive due to intense technical rating competition
 - Confidentiality is crucial for insurance companies
 - need of an independent 3rd party
- Neutral collecting party
 - A Third Party (TP) will act as collecting point
 - This TP must be considered as a reliable and neutral party by the insurers

3. Data Collection

- A 5-step process involving 3 parties (**WP**, **TP**, **Insurers**)
 1. **WP** to elaborate data template and communicate to **TP**
 2. **TP** to send data templates to **Insurers**
 3. **Insurers** to fill the templates and send back to **TP**
 4. **TP** to consolidate the data (**WP** to build Excel macros to automate actions)
 5. **TP** to send the consolidated data to the **WP** for analysis



3. Data Collection

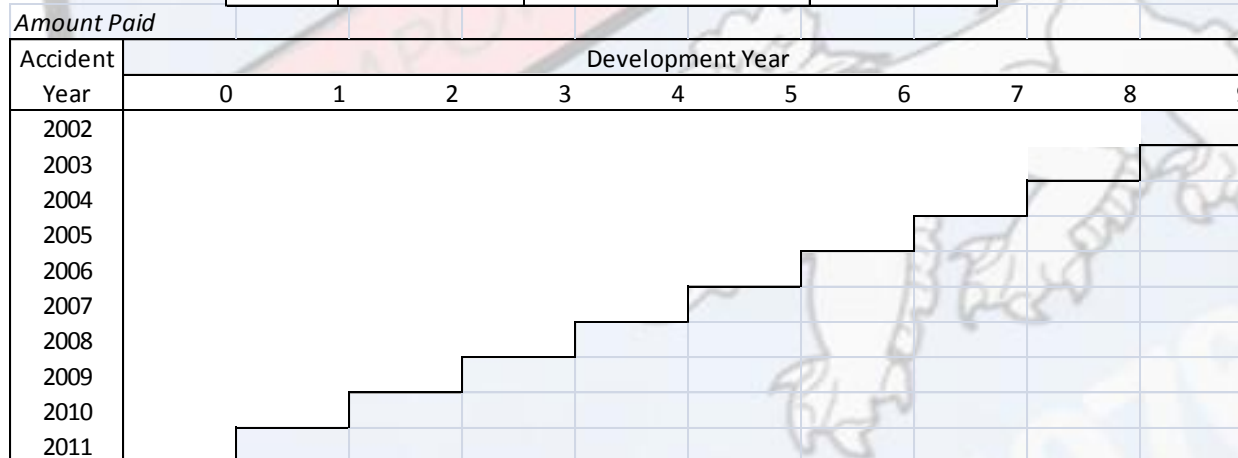
■ Data Required

- Earned years exposure segmented by cover type (Comprehensive, TP Fire and Theft, TP only) for last 10 years
- Triangles of number of claims (open and closed) and amounts (payments and outstanding reserves in SGD) for 10 accident years and 10 development years, segmented by loss types
 - Own Damage (Windscreen)
 - Own Damage (non-Windscreen)
 - TP Property Damage
 - TP Bodily Injury
 - Total
- Claims above SGD250,000 (incurred as of end of 2011) with 10 years of development

3. Data Collection

- Sample Templates

	Comprehensive	Third Party (Fire & Theft)	Third Party Only
	Earned Years	Earned Years	Earned Years
2002			
2003			
2004			
2005			
2006			
2007			
2008			
2009			
2010			
2011			



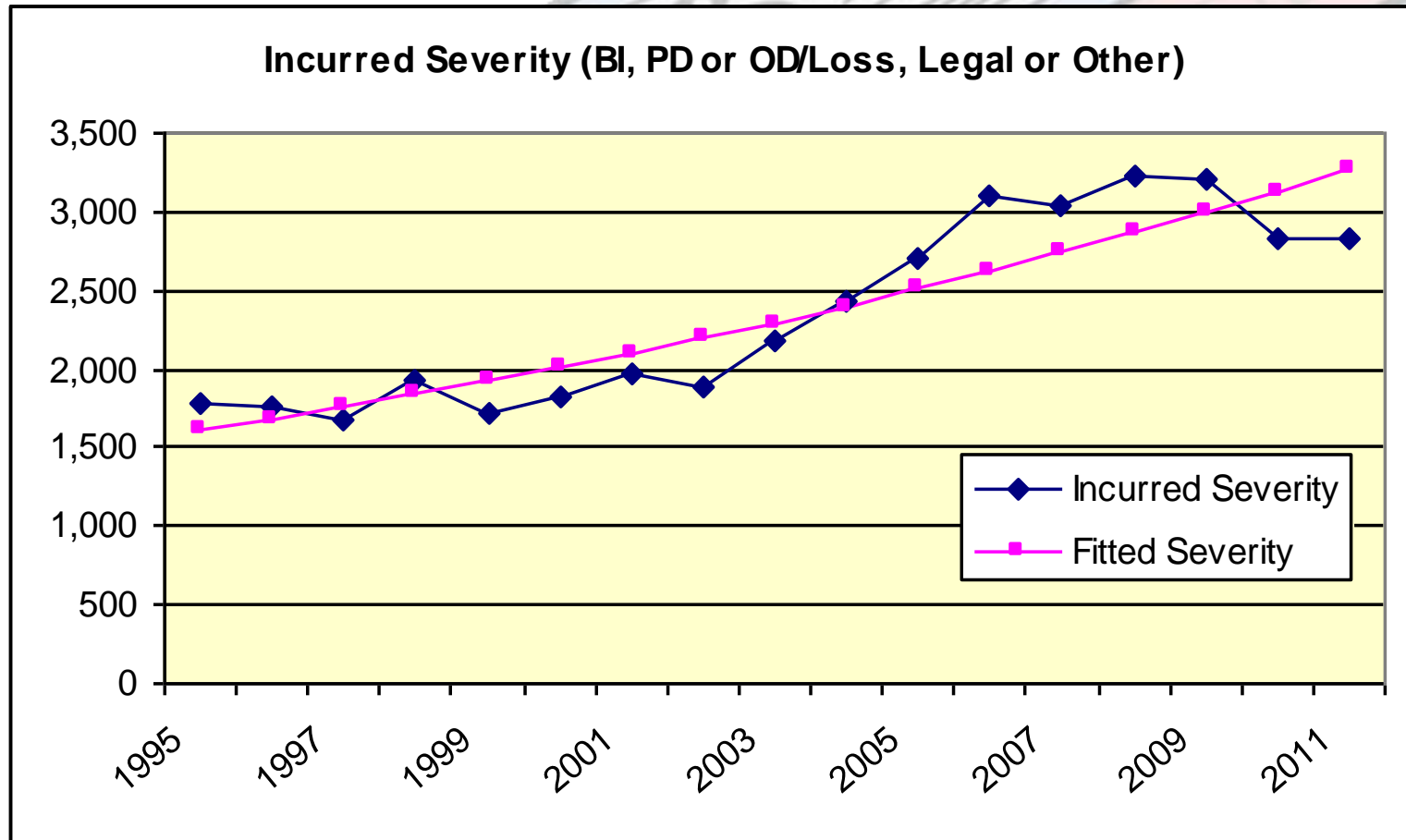
3. Data Collection

- Sample Templates
 - Large claims progression for one underwriting year 2002. Required for 10 underwriting years till 2011.

Losses > SGD 250,000															
LOSS PROGRESSION															
U/W Year	DATE OF LOSS	CLASS	Nature of Loss	Status		AS AT 2002	AS AT 2003	AS AT 2004	AS AT 2005	AS AT 2006	AS AT 2007	AS AT 2008	AS AT 2009	AS AT 2010	AS AT 2011
2002	11-Feb-02	Motor	OD	Open	PAID		200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
					O/S		50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
					TOTAL		250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000
	04-Aug-02	Motor	TPBI	Closed	PAID	300,000	301,000	301,000	301,000	301,000	301,000	301,000	301,000	301,000	301,000
					O/S		9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000
					TOTAL	300,000	310,000	310,000	310,000	310,000	310,000	310,000	310,000	310,000	310,000

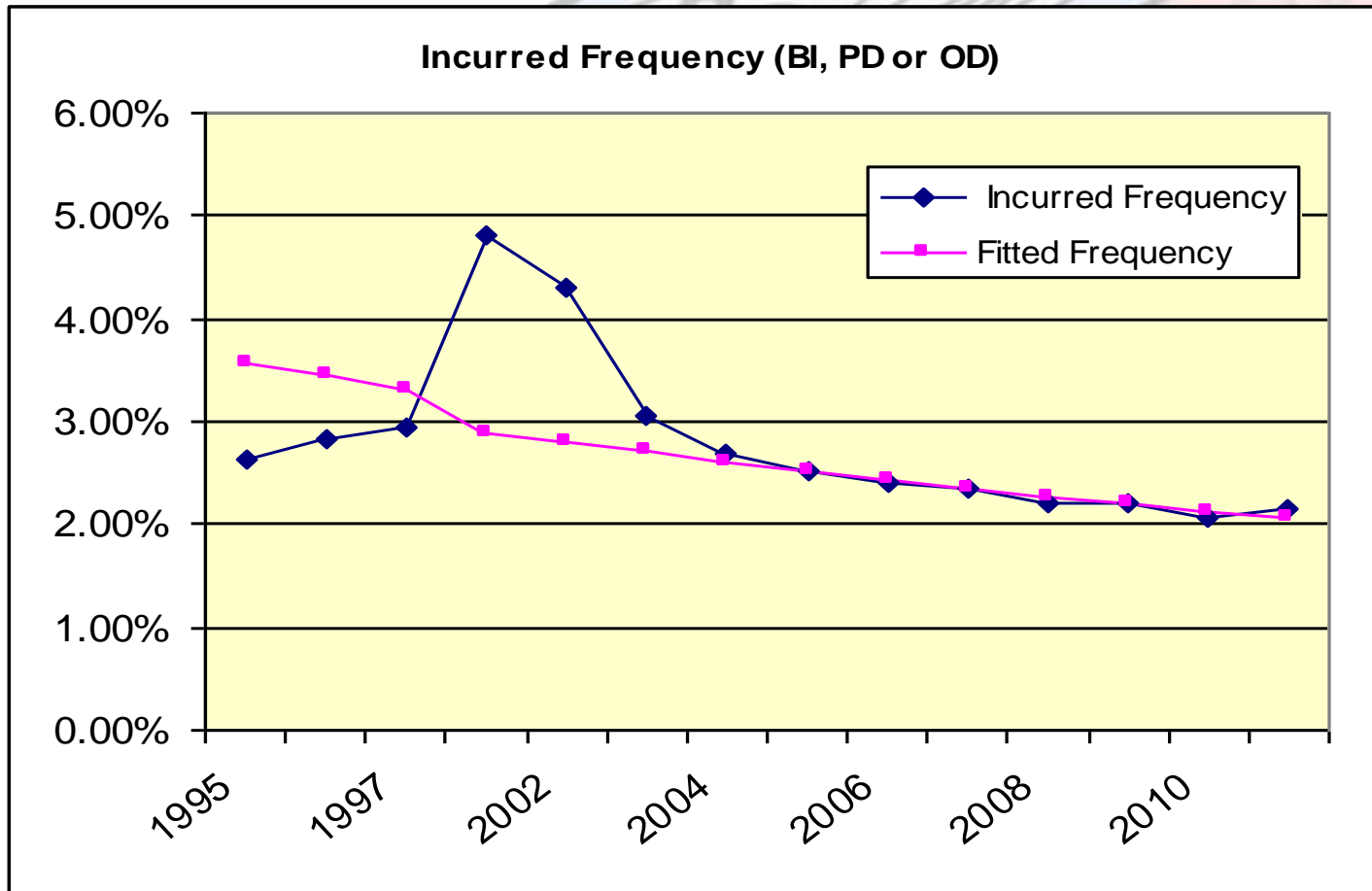
4. Expected Outcome

- Severity trend



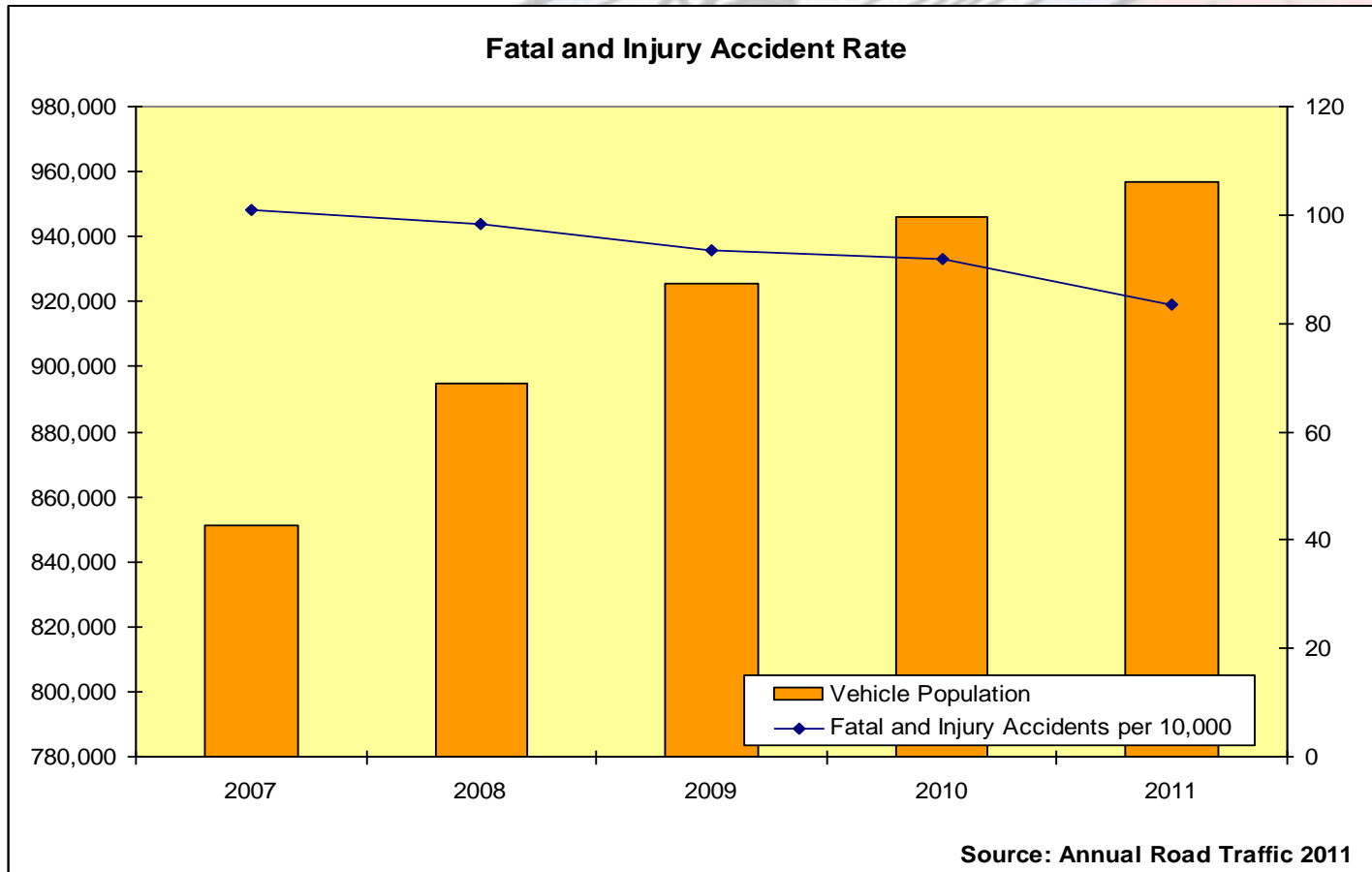
4. Expected Outcome

- Frequency trend



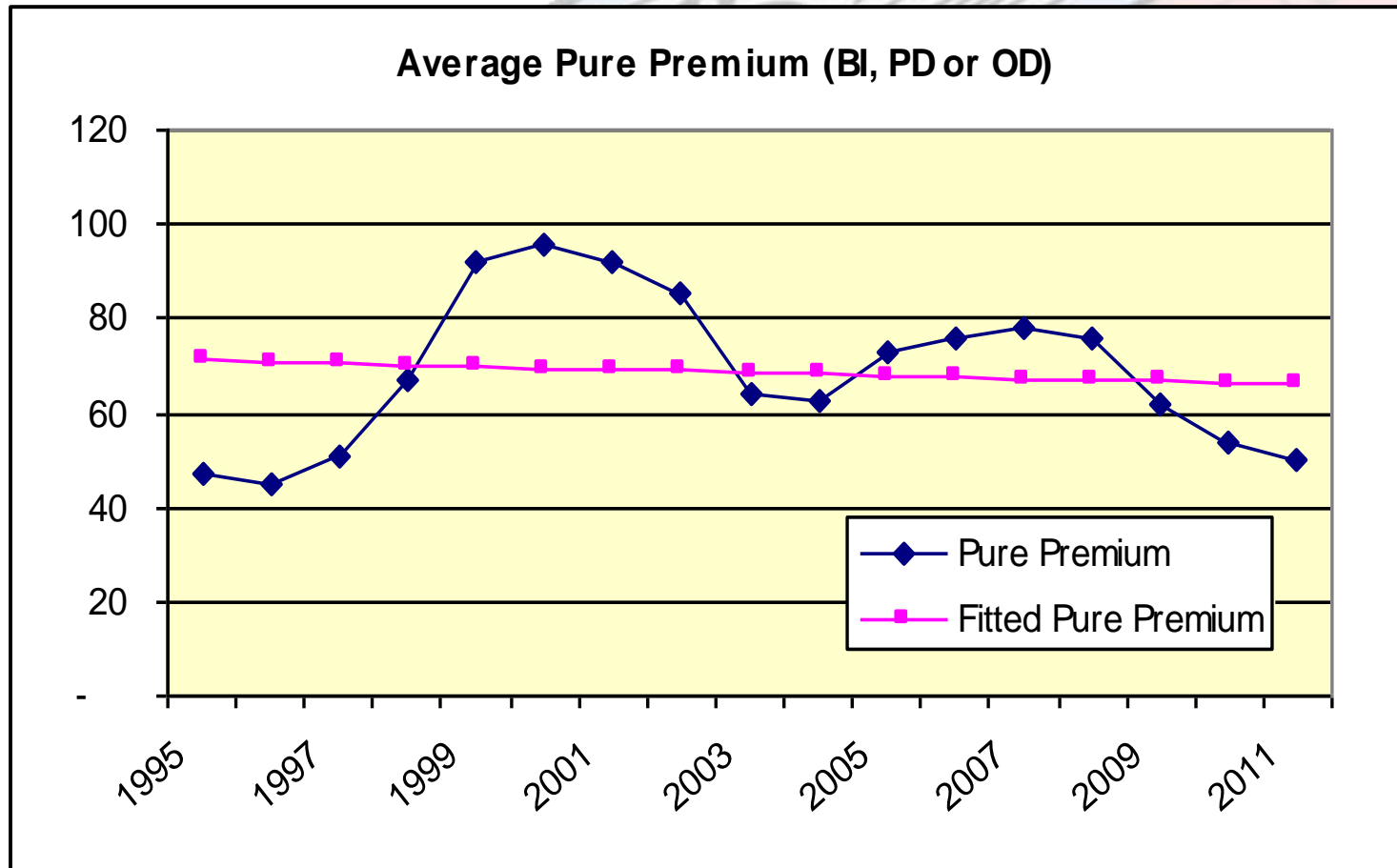
4. Expected Outcome

- Is Claim frequency in line with reduction in Accident Rates?



4. Expected Outcome

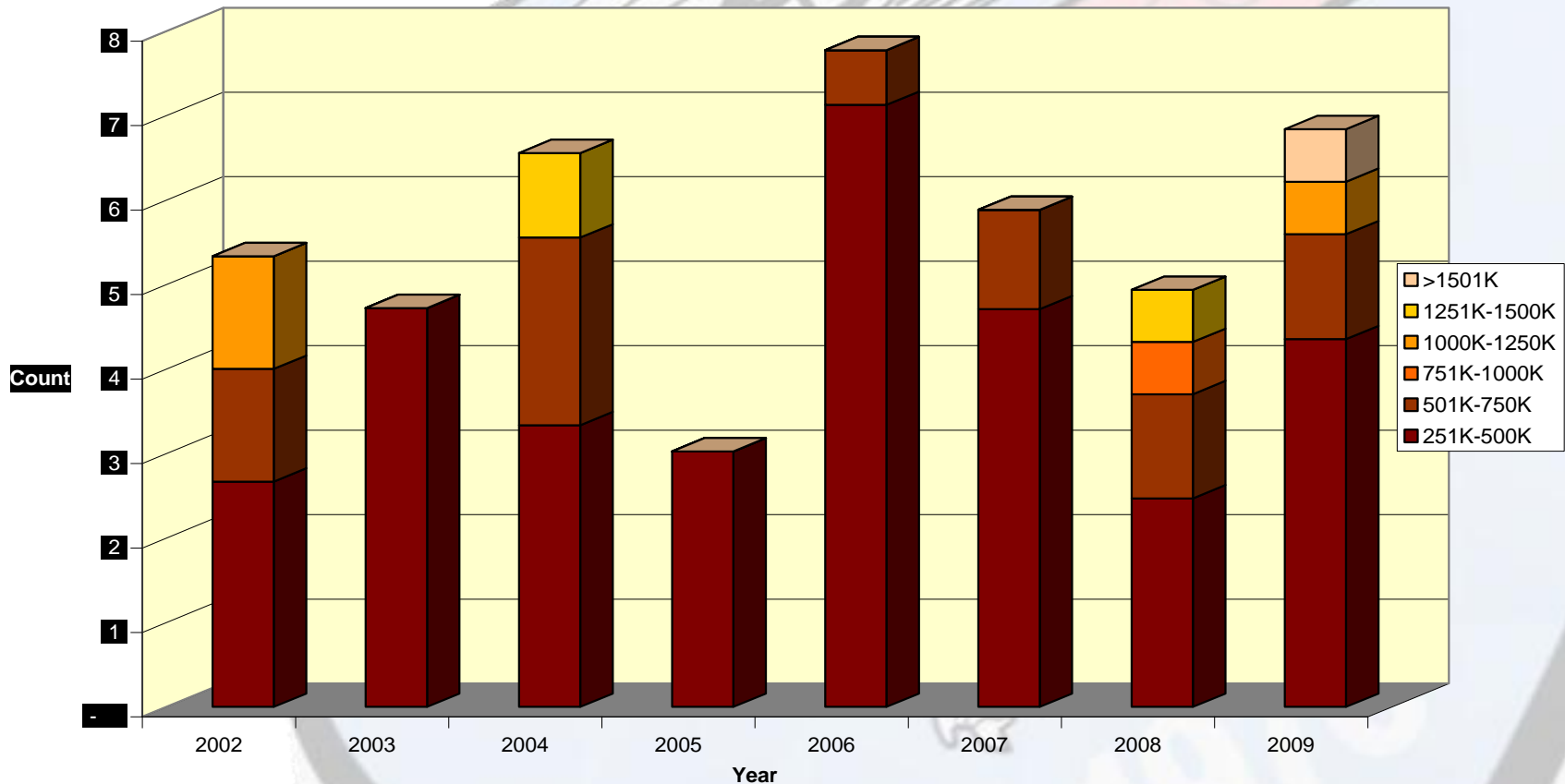
- Pure Premium trend



4. Expected Outcome

- Large losses by loss year

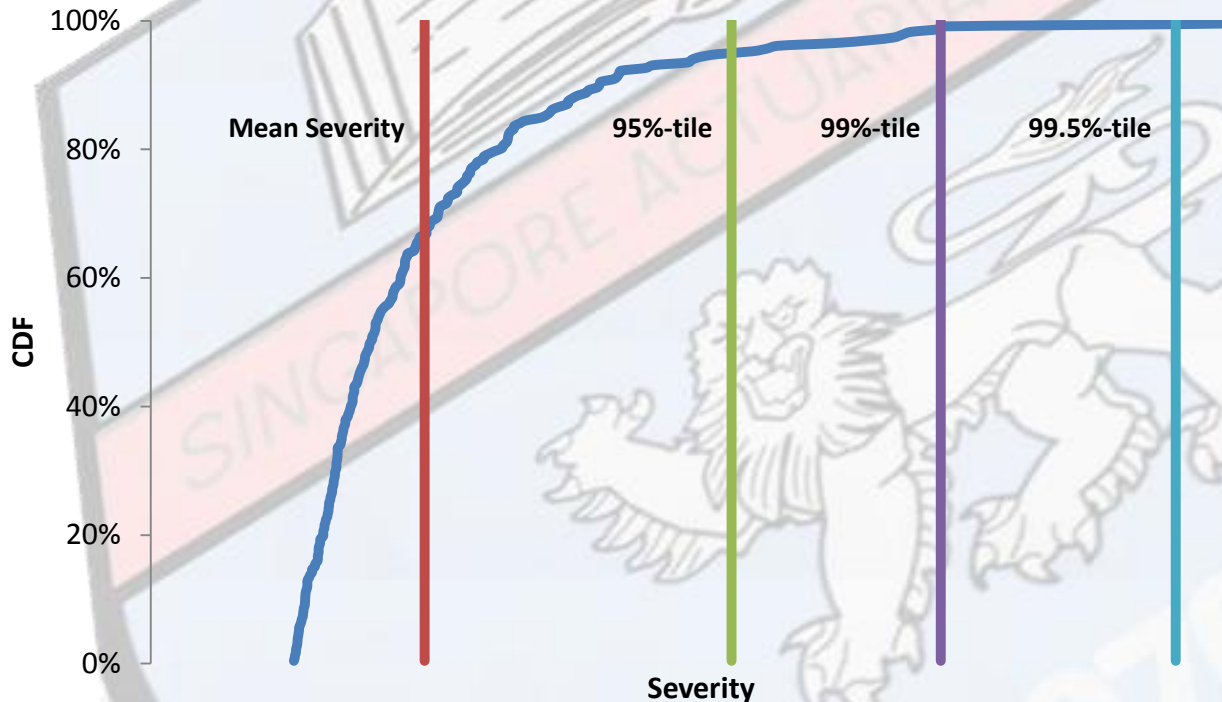
Number of Large Losses per 100,000 exposure (Singapore)



4. Expected Outcome

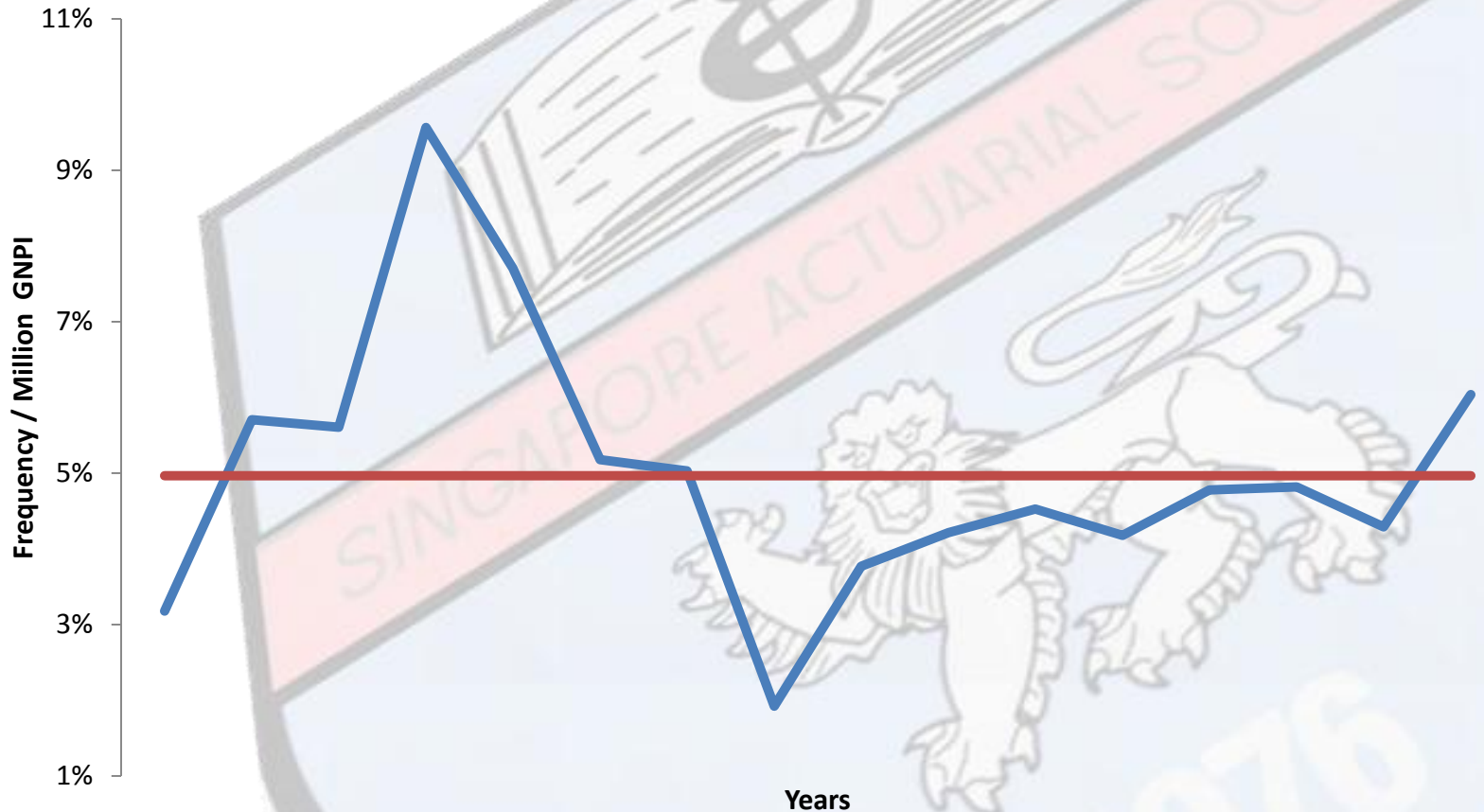
▪ Mean payment duration

- Large loss > S\$250,000
- Losses will be inflated using Singapore wage inflation



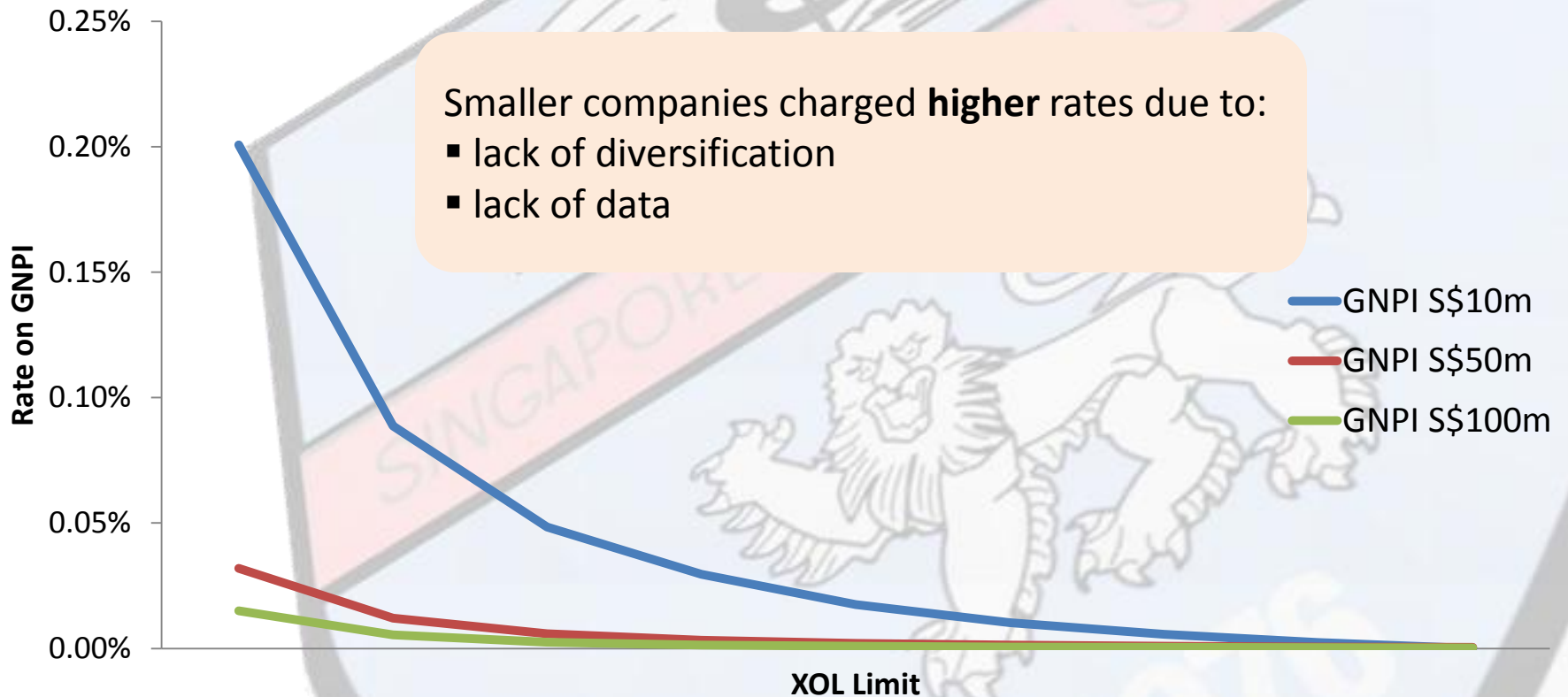
4. Expected Outcome

Large loss frequency development



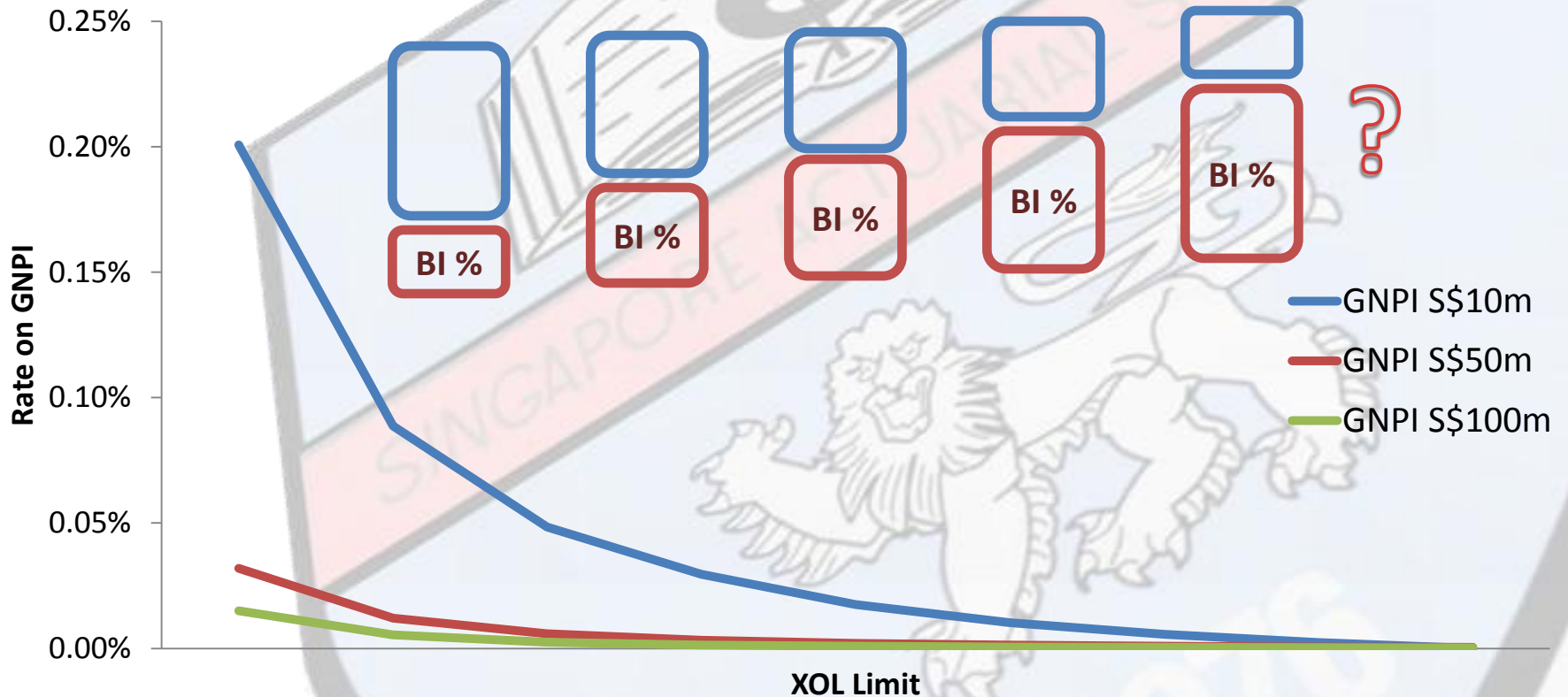
4. Expected Outcome

■ Technical reinsurance rates



4. Expected Outcome

Analysis of losses across reinsurance layers



5. Next Steps

Target: complete the study by next SAS GI Conference

Please encourage your company to participate in the study!

Contact us by 31st August if you are interested:

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- Matthew Maguire - Matthew.Maguire@NMG-Group.com
- Pua Yeong Heng - YeongHeng_Pua@sg.msig-asia.com

The End