CAS Ratemaking & Product Management Seminar

A Look at Asia Personal Lines

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Panelists: Ronald Kozlowski, Yao Wang

March 13, 2013

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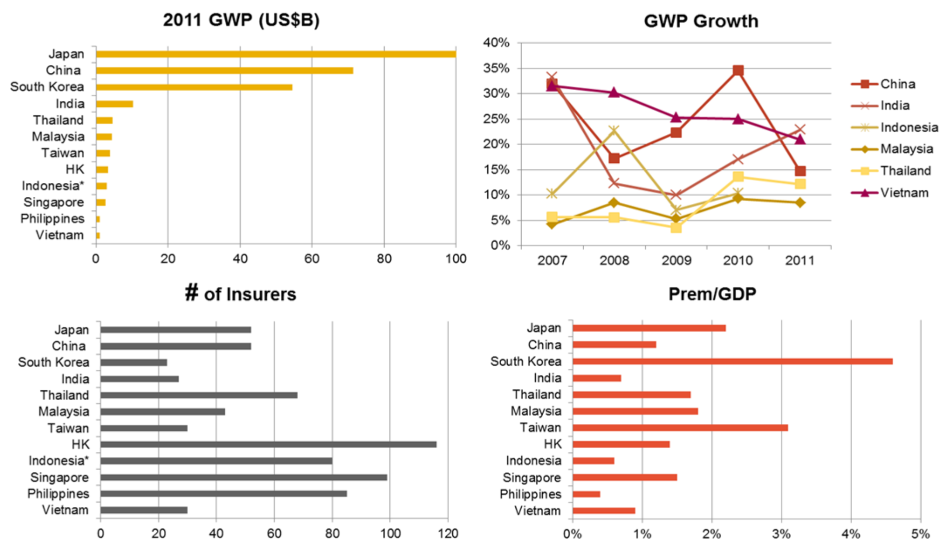
Agenda

- An introduction to Asia
- China
- India
- Malaysia
- Opportunities

Understanding the Asian Non-life insurance markets



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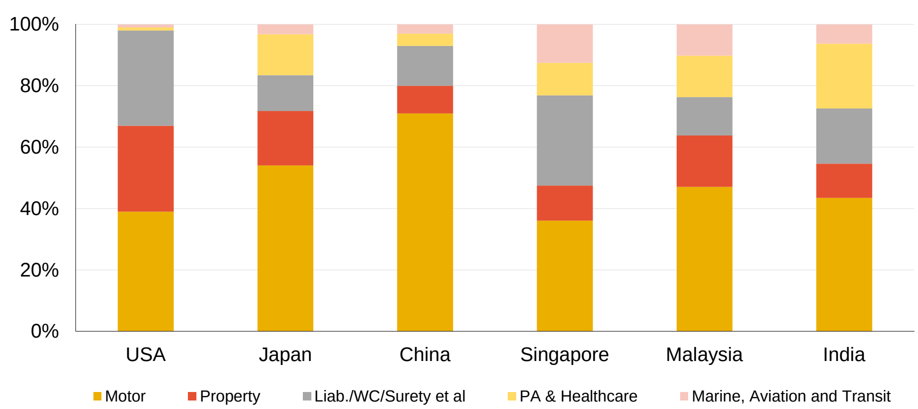
Asia's mix of business is more Motor, Marine, and Health



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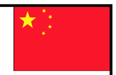
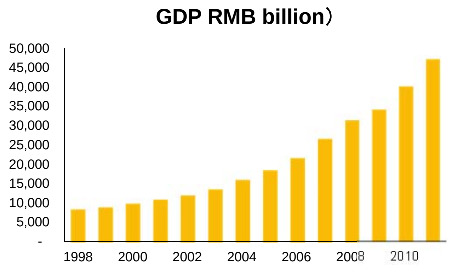
How are Asia non-life insurance markets different?

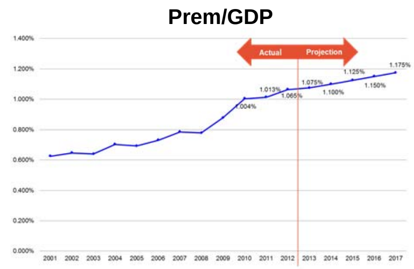
- Asian markets themselves are dissimilar
- High growth potential in specific markets
  - Low penetration
  - Growing economies
- Balance of focus on growth vs. profitability
- Small number of insurers in relation to U.S.
- Line of business mix
- Tort systems vary, but generally are significantly less litigious than U.S.
- Liabilities are much shorter-tailed/settle quicker
- Takaful opportunities in Muslim countries
- Rates are based on simpler rating plans or tariffs
- Lack of data restricts sophisticated analysis
- Risk-based capital just being implemented in some markets while others moving toward Solvency II-type regulations

The China Non-Life Insurance Market and Motor Pricing

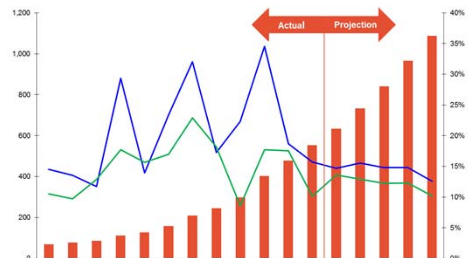


Growth in GDP and GWP





- Close relationship between GDP and GWP
- Growth in the next five years will slow down



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
P&C GWP (RMB bil)	69	78	87	112	128	158	209	245	299	403	478	553	634	733	841	965	1,087
GWP growth rate	15%	14%	12%	29%	14%	23%	32%	17%	22%	35%	19%	16%	15%	16%	15%	15%	13%
GDP growth rate	11%	10%	13%	18%	16%	17%	23%	18%	9%	18%	18%	10%	14%	13%	12%	12%	10%

Data Resource: National Bureau of Statistics of China (NBSC), CIRC, Towers Watson.

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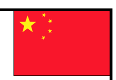
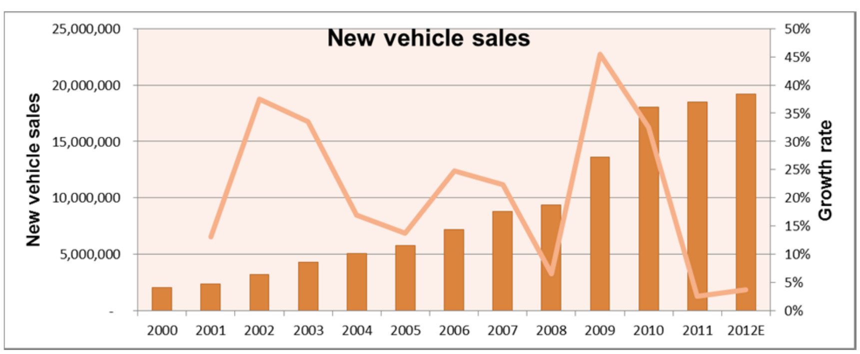


Premium growth in relation to new car sales

- New car sales have been volatile: 2009 increases due to economy stimulation. Some cities (Beijing, Shanghai and Guangzhou) introduced policies to limit sales
- 2011 – 2012 economy cools down and new car sale drops



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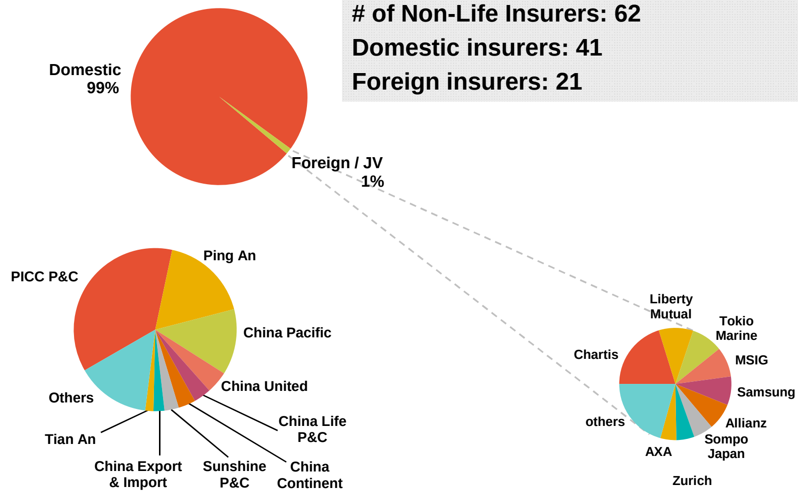
Market share

Total 2012 P&C Premium: US$89 billion
# of Non-Life Insurers: 62
Domestic insurers: 41
Foreign insurers: 21



Evolution of motor insurance market in China

	To 2002	2003 – 20061H	20062H – 2008	2009 – 2011	2012+
Rate regulation	Tariff	File and use	CTPL, tariff	CTPL, tariff, strengthened implementation	Deregulation
Pricing technology		Basic risk segmentation		Some adopt GLM	GLM and more advanced skills a must to play
Distribution	Traditional direct	Traditional direct, agency	Traditional direct, agency	Traditional direct, agency, call center, cross sell	Traditional direct, agency, call center, cross sell, online?

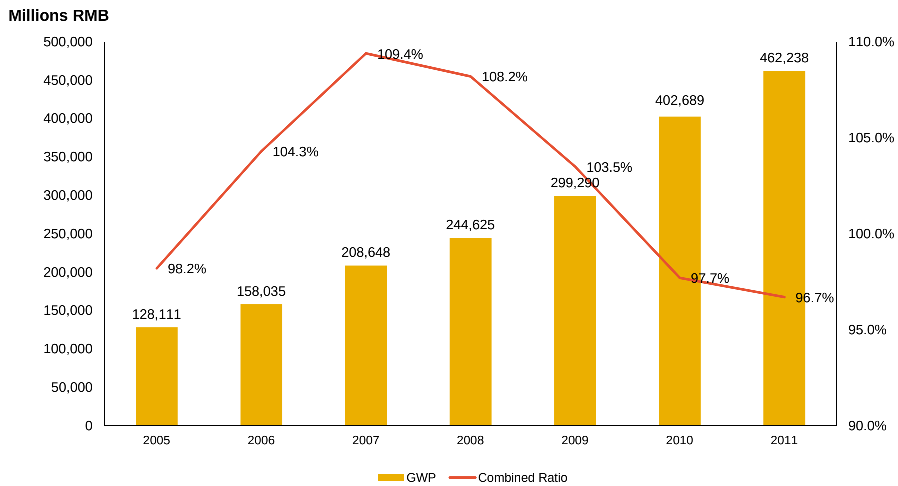
- History is short
- Market changes dramatically and rapidly

Rapid development in call centers

PICC 中国人民财产保险股份有限公司
中国平安 PING AN
中国太平 CHINA TAIPING
华泰保险 Huatai Insurance
中华联合财产保险股份有限公司 CHINA UNITED PROPERTY INSURANCE COMPANY LIMITED 情系中华 诚信为民
太平洋保险 CPIC
天平保险 TIANPING INSURANCE
AB 安邦保险 ANBANG INSURANCE
阳光保险集团股份有限公司 Sunshine Insurance Group Corporation Limited
民安财产保险有限公司 Minan Property And Casualty Insurance Company Limited
渤海财产保险股份有限公司 Bohai Property Insurance Co.,Ltd.
CHINA RE 中国大地财产保险股份有限公司 CHINA CONTINENT PROPERTY & CASUALTY INSURANCE COMPANY LTD.
长安责任保险股份有限公司 CHANG AN PROPERTY AND LIABILITY INSURANCE LTD.
中国人寿财产保险股份有限公司 China Life Property & Casualty Insurance Company Limited
中银保险 BOC INSURANCE
永诚保险 ALLTRUST INSURANCE
英大泰和财产保险股份有限公司 YINGDA TAIHE PROPERTY INSURANCE CO., LTD.
永安保险 YONG AN INSURANCE
大众保险 DAZHONG INSURANCE
华安保险 SINOSAFE INSURANCE

Online sales is emerging

Combined ratio improved post 2008



Data Resource: CIRC, China Insurance Year Book, Annual Statements for P&C insurers, Towers Watson.
Data are for all domestic P&C insurers combined.

Compulsory Third Party Liability (CTPL) tariff rating plan

CTPL tariff rate

RMB

Type	Index	Type details	Premium
Private	1	less than 6 seats	950
	2	more than 6 seats	1,100
non-business use	3	Enterprise: less than 6 seats	1,000
	4	Enterprise: 6-10 seaters	1,130
	5	Enterprise: 10-20 seats	1,220
	6	Enterprise: more than 20 seats	1,270
	7	Government: less than 6 seats	950
	8	Government: 6-10 seaters	1,070
	9	Government: 10-20 seats	1,140
	10	Government: more than 20 seats	1,320
Business use	11	rental: less than 6 seats	1,800
	12	rental: 6-10 seats	2,360
	13	rental: 10-20 seats	2,400
	14	rental: 20-36 seats	2,560
	15	rental: more than 36 seats	3,530
	16	city bus: 6-10 seats	2,250
	17	city bus: 10-20 seats	2,520
	18	city bus: 20-36 seats	3,020
	19	city bus: more than 36 seats	3,140
	20	Coach: 6-10 seats	2,350
	21	Coach: 10-20 seats	2,620
	22	Coach: 20-36 seats	3,420
	23	Coach: more than 36 seats	4,690
Non-Business use truck	24	less than 2 ton	1,200
	25	2-5 ton	1,470
	26	5-10 ton	1,650
	27	more than 10 ton	2,220
Business use truck	28	less than 2 ton	1,850
	29	2-5 ton	3,070
	30	5-10 ton	3,450
	31	more than 10 ton	4,480
Special car	32	Special Type 1	3,710
	33	Special Type 2	2,430
	34	Special Type 3	1,080
	35	Special Type 4	3,980

- CTPL rating plan: only one factor “vehicle usage” is considered in the rate plan
- No geography rating factor, and the same rate applies to the whole country

Volunteering auto tariff rating plan

- Rating factors
  - No Claims Discount (NCD)
  - Multi-coverages
  - Loyalty
  - Annual driving mileage
  - Safely driving record (上一保险年度无交通违法记录)
  - Driving district
  - Multi-car discount
  - Designated driver discount
  - Gender
  - Driving experience
  - Age
  - Loss ratio experience
  - Management
  - Vehicle type for Own Damage

China P&C market — motor insurance deregulation

Key changes:

1. One set of base rates calculated on industry experience (by China Insurance Association)

2. Maximum expense loading 35%

3. Companies meeting criteria can partially set own prices

a. Good corporate governance, have operated auto insurance for at least three years

b. Combined ratio below 100% for at least two consecutive years

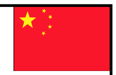
c. Solvency ratio above 150% for at least two consecutive years

d. At least 300,000 cars insured in the last year

e. Have specialized auto insurance product development team

4. Floating factors include type of car, use of car and different repair cost in different region (other factors not mentioned)

5. Stop own pricing if solvency ratio falls below 150% or combined ratio above 100% for two consecutive years



China P&C market — motor insurance deregulation

Implications for insurers:

- **Some companies will be allowed to set own prices on lower criteria**
- **Not all insurers may be ready systemwise**
- **Rates based on industry allow rates to go up if experience deteriorates** (but also may remove "super profit")
- **Safeguards introduced — so if insurers do not make profits in two consecutive years, will no longer be allowed to set own prices**
- **Sum insured now current value, not new car value** (may have price implications as based on rate-on-line)

History of Non-Life insurance in India

Evolution

Late 1940s	Indian Government starts nationalizing a number of industries
1968	Tariff Advisory Committee (TAC) set up to provide rates to industry
1972	Nationalization of general insurance industry (107 cos. into 5 cos.)
1993	Committee on Reforms in the Insurance Sector (Malhotra Comm.)
2000	Insurance Regulatory and Development Authority Act was passed
2000+	New entrants

Other than mandatory Motor Third Party Liability (MTPL) insurance, all classes of business have been detariffed:

1994	Aviation, Personal Accident, Health and Marine Cargo
2005	Marine Hull
2007	Fire, Engineering, Motor (Own Damage), and Workers Compensation

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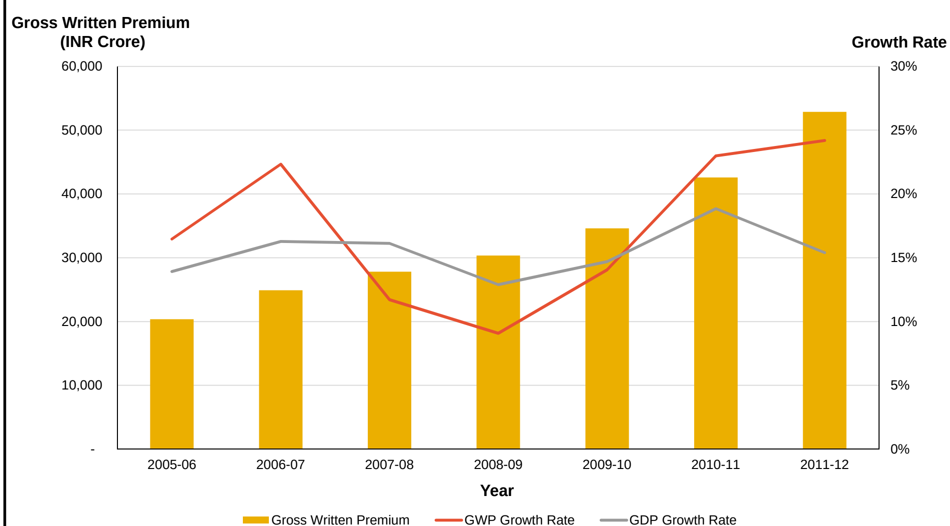
Gross Written Premium of India P&C insurance industry



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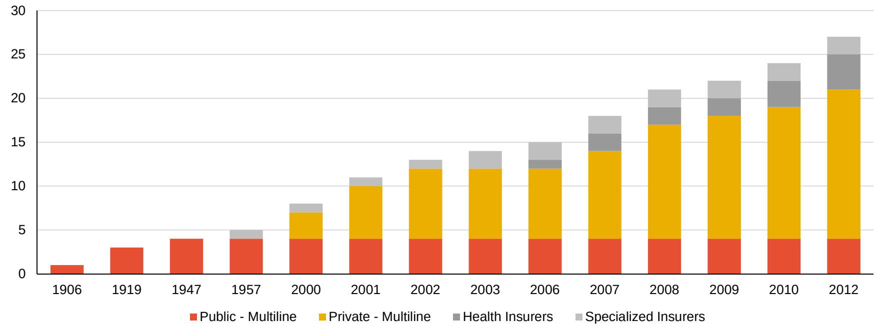
Number of P&C insurance companies



- Significant growth in number of players since opening up of insurance sector to private sector competition in 2001
- Earlier, there was one holding company, General Insurance Corp. (GIC) of India, with 4 fully owned subsidiaries that constituted the industry during the nationalized era. GIC is now the only reinsurer (renamed GIC Re); the 4 public sector insurers are now independent
- Currently, there are 27 licensed Non-Life insurance companies: 2 specialized insurers, 21 multi-line insurers and 4 stand-alone health insurers

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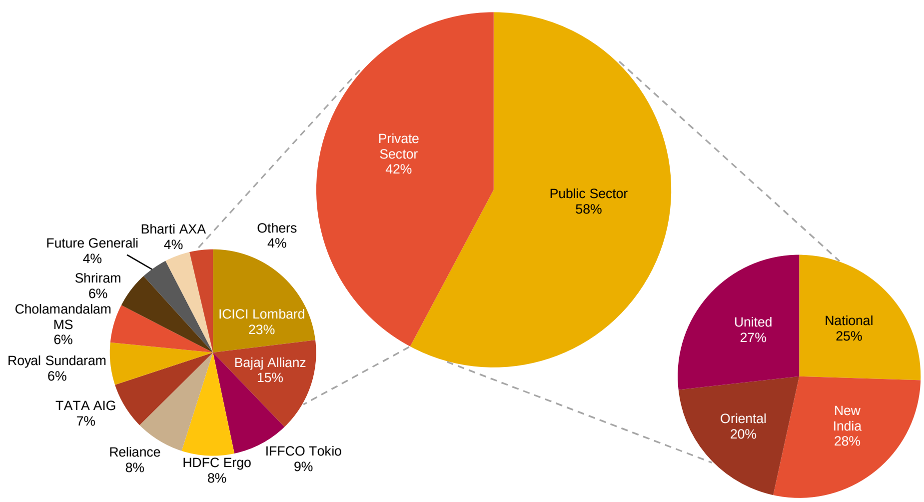
Market shares for FY 2011 — 12



Total Gross Written P&C Premium: Rs. 52,875 Crores

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India detariffication — Background

Motor, Fire, Engineering and Workers' Compensation classes of India's General Insurance sector used to be governed by various respective tariffs. All tariffs were removed, except mandatory Motor Third Party Liability, effective April 1, 2007.

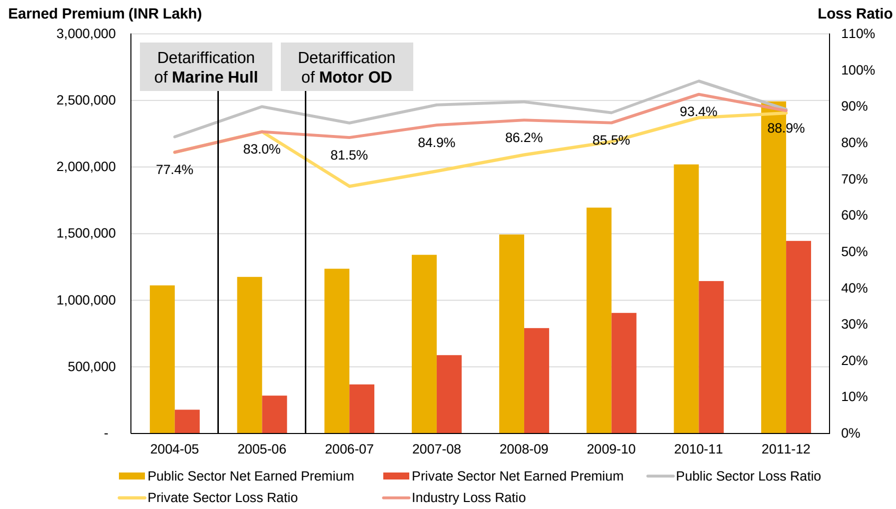
Further comments:

- Detariffication implemented by the Regulator in a phased manner
- **Phase I:** Variation in prices within +/- 20% of tariff rates allowed, subject to prior regulatory filing and approval of proposed rates under File & Use process
  - No flexibility in altering the tariff defined product
  - New parameters allowed for rating
- **Phase II:** Removal of restriction of +/- 20% variation; subject to prior regulatory filing and approval
- **Phase III:** Removal of restriction in product alteration, subject to regulatory File and Use process
  - Meant freedom for insurers in product design
- However, Motor Third Party (TP) risk continues to be governed. Regulators decided to set up **India Motor (TP) Pool for Commercial Vehicles (CVs)** in which all licensed GI companies were required to participate, subscribing to the extent of their respective market shares

India detariffication — Results

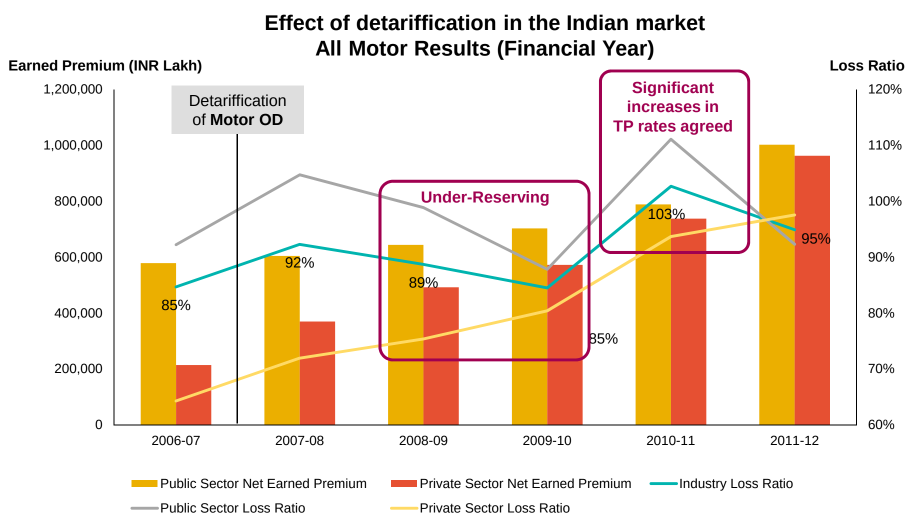
- Intense price competition in almost all classes of business previously governed by tariff leads to near free fall in premium rates. Loss ratios progressively worsen
  - Fire/Engineering risks had the largest fall in pricing, up to 90% discount on pre-tariffs
  - In Motor, insurers decreased rates for Own Damage (OD) for cars by 20% – 60%, depending on risk segment
- Car prices kept artificially low, causing low insurance premiums to be collected
  - Manufacturers under severe competition kept car prices artificially low but charged more for parts/labor. This twin effect led to sharp increase in loss ratios
- With the setting up of Motor TP Pool, nearly all insurers started competing for commercial vehicle business
  - Commercial vehicles historically had been shunned by private sector insurers due to very high loss ratio for Third Party (TP) risk, even though the OD experience was acceptable
  - OD premium fell by close to 30%

India — All lines



- Private sector companies still outperform public sector companies

Detariffication — the India experience



- Significant under-reserving in 2008 – 2009 and 2009 – 2010 masked deteriorating results

Private car motor rating structure

Factor	Prior to Detariffication	Post Detariffication
General rules and regulations	As per provisions of All India Motor Tariff	Several key provisions — e.g., No Claim Bonus, Insured Declared Value, Short Period rates, depreciation, etc. still followed
Underwriting information, Proposal forms	As provided in the tariff	Most insurers now seeking additional information; additional underwriting data now being gathered and used for risk assessment and rating, but long way to go
Policy forms	As provided in the tariff	Several "add-on" covers, e.g., nil depreciation, loaner cars, roadside assistance now being offered but the original policy form still being used
Own Damage pricing: premium rate as % applied on Insured Declared Value	3 factors as provided in the tariff • Age of car — 3 groups • Cubic capacity of car — 3 groups • Location where used — 2 zones	Insurers are refining the earlier pricing in different ways: • Cubic capacities have given way to make/model of car • Location groupings have increased to 4 or more • Additional factors like gender, age and occupation of insured, no claim bonus level, etc. considered by some insurers • The weighted average rates initially went down by 20% and are now around 35% or more
Underwriting information	Limited to the 3 factors above	Additional parameters being sought over and above pricing factors differently by different insurers, e.g. • Type of parking • Average running
Third Party Liability pricing	Based on cubic capacity of car as per tariff: Below 1000 cc: INR 500 1000-1500 cc: INR 600 Above 1500 cc: INR 700	• All India Third Party Pool for Commercial Vehicles formed, later disbanded in 2012 to make way for Declined Risk Pool • Premium rates increased twice for respective engine sizes

Private car motor insurance distribution

Auto Manufacturers (e.g., Tata Motors, Maruti Suzuki) Maruti Suzuki)

- Dominates insurance of new cars sales, more than 50% penetration
- Through dealers, usually on mandatory basis, with whom commission earnings are shared
- Allied with multiple select insurers
- Renewal penetration recedes over time
- Cost of acquisition highest among different channels
- Ability to sell at higher premium compared to all other channels
- Fast business build-up but generally unprofitable

Auto Dealers without direct role of Manufacturers

- Direct relationships with select insurers
- Penetration is high for insurance of new cars, say around 25%
- Some have developed ability for renewal penetration
- Fragmented volumes, hence lower cost of acquisition
- Ability to charge higher premium than other conventional channels but not on par with Auto Manufacturers

Others: Career Insurance Agents, Banks, Direct (Telemarketing, Internet etc.)

- Relationships with fewer insurers
- Modest penetration for insurance of new cars, say 15%, but higher for renewals
- Ability to sell linked with price competitiveness
- Lower cost of acquisition

Retail Insurance Brokers

- Sell on behalf of multiple insurers, mostly those excluded by Manufacturers and Dealers
- Negligible penetration for insurance of new cars but much better for older cars and renewals. Also better at cross- selling non motor insurance
- Ability to sell linked with price competitiveness
- Lowest cost of acquisition

India P&C Market — Regulatory update

Some of the changes that are expected in near future:

- Amendments in the Insurance Act that inter alia raise cap on foreign equity (FDI) from 26% to 49%; awaited for a long time but held up due to political issues
- Regulators have set up Insurance Information Bureau (IIB) as the official source of all information at transaction level on industry-wide basis. IIB will seek, analyze and disseminate relevant information to stakeholders
- Regulator intends setting up a fraud management system at industry level in collaboration between IIB and a vendor to be selected
- Product filing and approval process expected to be eased, some fast tracked
- Revised guidelines expected for bancassurance
- Consolidation of players in the market expected. The owner of four public sector insurers, viz. Min. of Finance, Govt. of India, intends to disinvest. Some partners in new private sector companies have exited, some more expected to follow
- RBC/Solvency committee set up to ensure enhanced risk and capital management in line with developed markets

Motor residual market story

- In 2007, the motor insurance business was detariffed except motor third party liability
- India Motor Third Party Insurance Pool (IMTPIP) was set up for commercial vehicles' TP risk
  - All insurers subscribe to the same extent as their overall market share for total business
  - The pool was to be managed by GIC Re. While TP premium on commercial vehicles had to be ceded to the pool, claims administration/settlement was left to the underwriting insurer. Little incentive to keep costs down.
  - Private insurers against while PSU insurers were unable to deny the coverage because of its mandatory nature.
- The "own damage" premium rates for commercial vehicles started dropping and went down by nearly 35% for some categories
- In 2011, an independent actuarial study of the IMTPIP on behalf of IRDA estimated the ultimate loss ratios for 2007-08 through 2009-10 to be 172%, 181% and 194%, respectively, compared to the pool's estimate of 126%
- Accordingly, IRDA issued instructions to all non-life companies to maintain a solvency ratio of not less than 130% as at 31 March 2011, while valuing the ultimate loss ratio of IMTPIP at not less than 153% for all years in which the pool was accepting business
- If funded immediately at the required levels, some insurers would have failed their solvency test
- IRDA raises motor third party rates by 10% for private and 68.5% for commercial vehicles
- IRDA dismantles motor insurance pool with effect from March 31, 2012, and in turn creates declined motor pool; industry gets hit with massive reserve calls
- Reserve calls allowed to be funded over three years so as not to deplete private insurers' capital
- Latest news in the media is imminent increases in TP rates by more than 30% with effect from April 1, 2013

India's Non-Life insurance market today

- Biggest challenge remains lack of profitability resulting from underpricing
  - Market sustaining underwriting losses; IRDA has not taken any concrete action
  - For past five years the combined ratios have been around 120%. When investment income was high, at least the public companies were making money because they had more investments. Since financial crisis all companies are sustaining operating losses
- The market is skewed towards Personal Lines business led by Auto & Health
- Low insurance penetration levels, improving standard of living — means great opportunities for growth, particularly locations outside the largest cities
- Distribution is a critical success factor. Bancassurance channel has emerged strongly for Personal Lines
- Limited instances of new product/process development
- Future focus — claims handling optimization, customer retention, and cross selling. Few mature private companies are taking limited initial lead in risk-based pricing, even if that means losing business
- The Indian market continues to receive reinsurance support on good terms, partly due to absence of any catastrophic event in recent years

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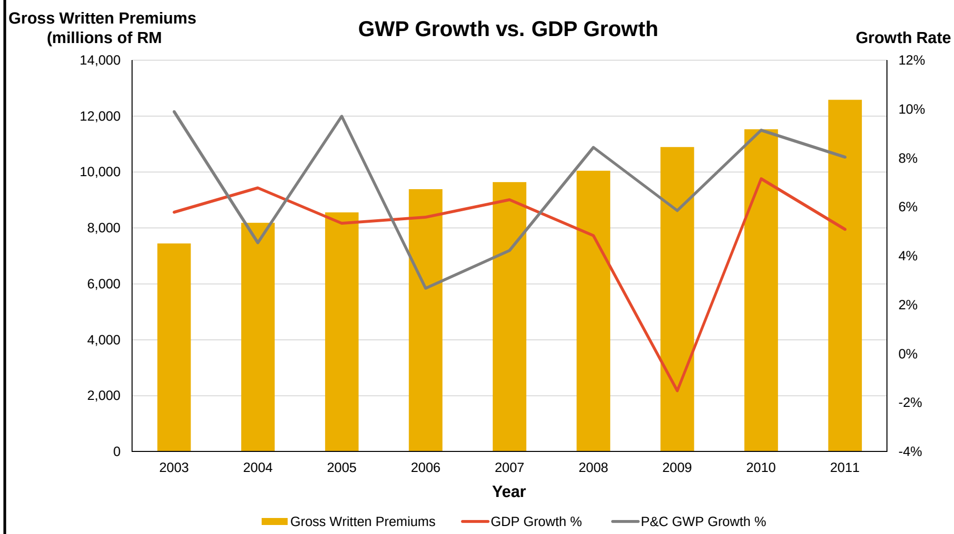
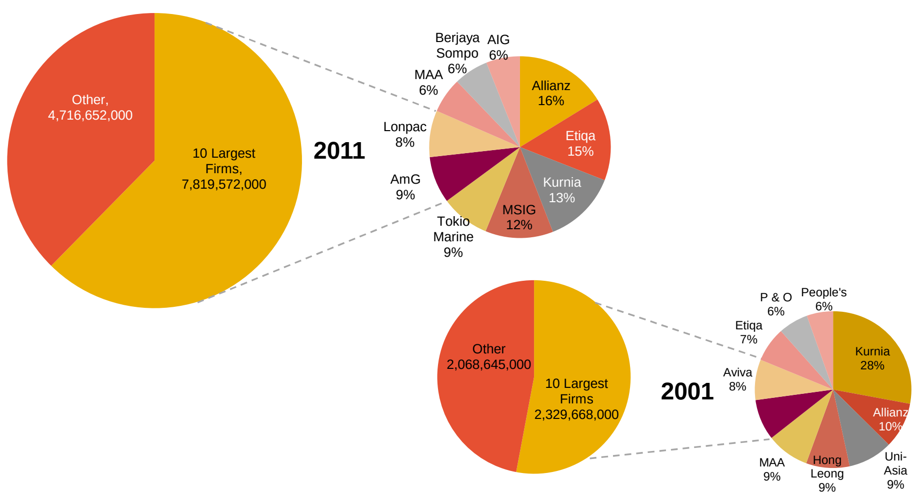
Non-life premium growth



Market share



	2001	2011
Number of P&C Companies	48	30
Market Share of Top 10	53%	62.4%

Agency channels remain strong…but regulatory constraints playing a part here as well

- Majority of Motor business is sold through agents, including motor dealerships
- Commissions are restricted by the regulator to be no more than 10%
- Regulations mandate that direct sales will reduce the premium charged to the policyholder by the amount of the commission
  - Makes an interesting problem for business sold through dealerships — should they get commissions on renewal?
  - Companies finding innovative solutions to compensate dealerships
- Direct distribution is currently mostly limited to branch networks, but online sales are set to grow with companies investing in this area
  - Recent entry into general insurance by Tune Group is expected to catalyze the process

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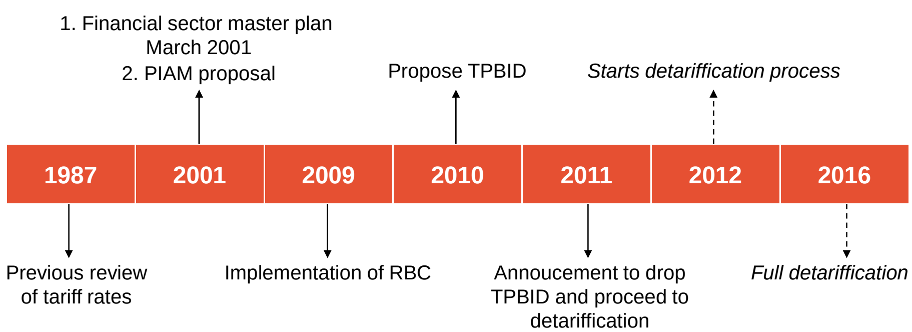
Sequence of events



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Quote from an article from the Malaysian National News Agency…

"General Insurance Association of Malaysia says the proposed review of the motor insurance tariff is to ensure a fairer and more equitable rating structure"

"a statement in response to an article, 'Say No to Motor Insurance Hike'"

"not an arbitrary exercise but one fully supported by actuarial studies involving at least five years of motor statistics"

"The motor tariff…was last reviewed almost 23 years ago"

The article was published on July 23rd *2001*…
… last major tariff update in 1978!

After intense lobbying, regulator allowed increases in 2012, ranging from US$0.5 per policy for small motorcycles; US$2 – 7 for personal cars; and up to a maximum of US$55 for buses. Similar increases expected in 2013.

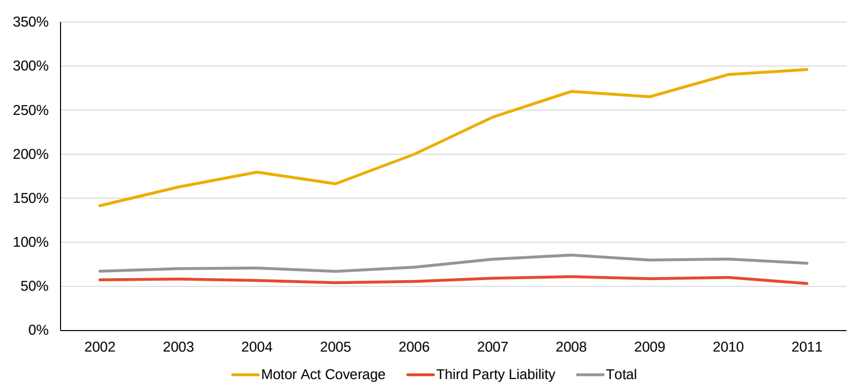
2010: Third Party Bodily Injury & Death (TPBID) scheme

- A new entity (TPBID NEWCO) will be established and this will be jointly owned by the government and the industry
- This is a non-profit organization
- Ensure that every motorist in Malaysia has access to basic motor cover at a reasonable premium
- Insurers/takaful operators will act as "agents" and will be responsible to collect premium and pay claims
- Other salient features include:
  - Cap limit of liability to RM2 million
  - Timeframe for claim settlement targeted to be 2 to 4 weeks
  - The scheme would have a fixed scale and limit on heads of damages and also limit legal recourse
- This scheme was initially expected to be launched in 2011 but was delayed because of negative feedback from several stakeholders (e.g., Bar council) and eventually discarded (see next slide)

2011: Announcement for new motor cover framework

- BNM will begin gradual increments to Motor premiums beginning 2012, with full detariffication expected by 2016
- Premium adjustments only apply to bodily injury portion of the motor coverage
- Proposed TPBID scheme will be discarded. Still no cap on compensation
- New scheme will introduce measures to reduce claims settlement time from 6 to 18 months
- Setting up a Joint Working Committee with members consisting of various stakeholders to oversee implementation
- 24-hour call center to provide assistance to road accident victims
- Review of Malaysian Motor Insurance Pool premium to ensure that premium is commensurate with the underlying risk

Industry motor claims ratios



- In general, total motor business is close to breakeven and in some cases loss making
- This results from the rising cost of claims for Motor Act business
- Reserves have also been strengthened in anticipation of RBC

Current rating structure

- Currently, policy terms as well as rates are fixed
- Tariff premiums are determined based primarily on four variables:
  - Type of vehicle — motorcycle, private car, goods vehicles, buses, etc.
  - Size of the engine (for personal vehicles) — from 0.5L for small motorcycles to 4.4L or larger
  - Weight carrying capacity (for good vehicles)
  - Persons carrying capacity (for buses)
- Loading is allowed based on location, age of car and no claim discount
- Market is currently charging the maximum allowed loadings and, particularly starting in 2009 when industry losses were worst in history, declining more and more risks, which then end up in the Malaysia Motor Insurance Pool ("MMIP")
- Business units have returned to profit…but still have to contribute to MMIP

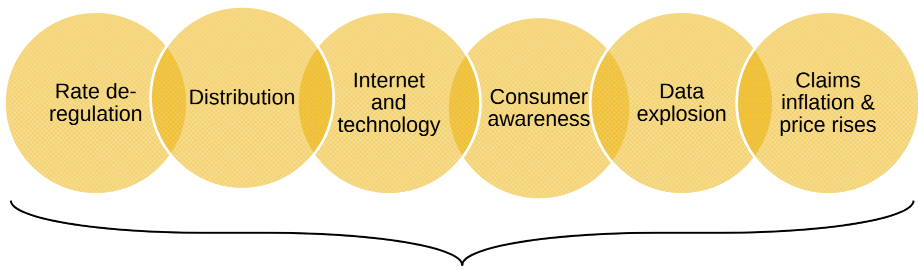
Residual market

- Malaysia Market Insurance Pool established in 1992
- Limited participation till 2008
- In 2008, the cost to the insurance industry of writing Act cover was estimated to be close to RM1 billion
- 2009 saw number of vehicles under MMIP grow by 9 times
- MMIP premium grew 69% in 2010 and 34% in 2011
  - 2011 premium of RM211 million (2010: RM158 million)
  - 2011 loss ratio 196% (2010: 284%)
- All insurers in the market participate in the losses of the pool, but the premiums charged by the pool are significantly higher so it is deemed a better alternative to writing directly

Opportunities

- Despite problems with the tariff system in place, insurers with scale and improved segmentation are making money on Motor
- Given the low Motor tariff is subsidized by high Fire tariff, insurers with strong underwriting capability on Property risks are allowed significant profits
- The best companies are targeting overall combined ratios close to 90% in some cases
- With Motor and Fire detariffication, depending on the extent of liberalization, significant opportunities could arise for those with scale and capability to target the right customers
- However, there is a chance that with liberalization margins will be squeezed for some, given that Fire rates will likely take a sharp decline

Markets are changing…



Global trend is increasing competition and more demanding customers

Data-driven strategy

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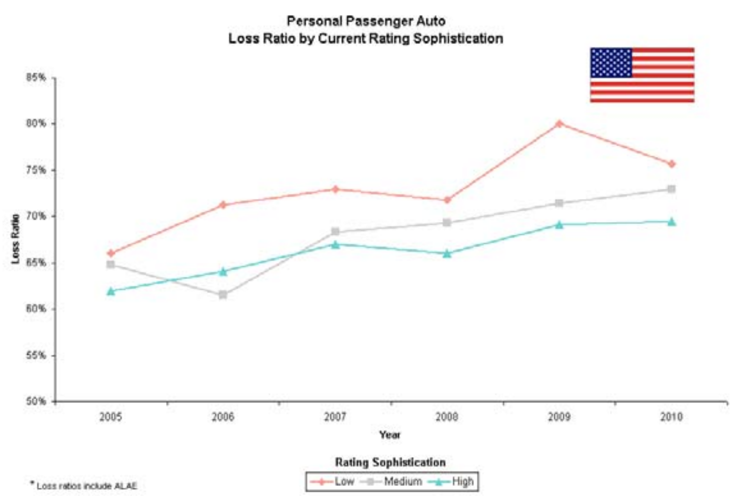
Analytics works in P&C insurance



Source: Towers Predictive Modelling Survey 2011.

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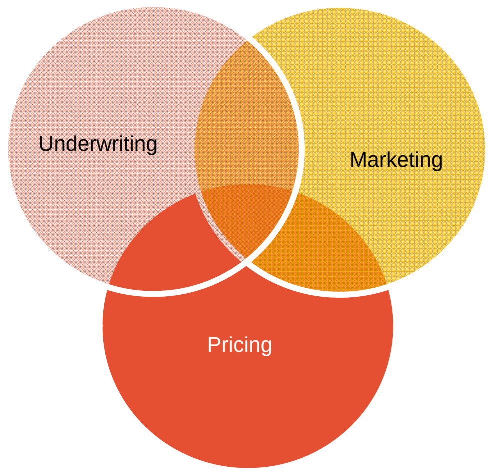
Many Asian countries have tariffs for Motor or Fire. Does that restrict our ability to price and underwrite?

- Tariff application
  - Rates
  - Coverage
- Rating flexibility
  - Rates
  - Commissions/expenses
- Underwriting
  - Accept/reject
  - Scoring
- Marketing/Distribution



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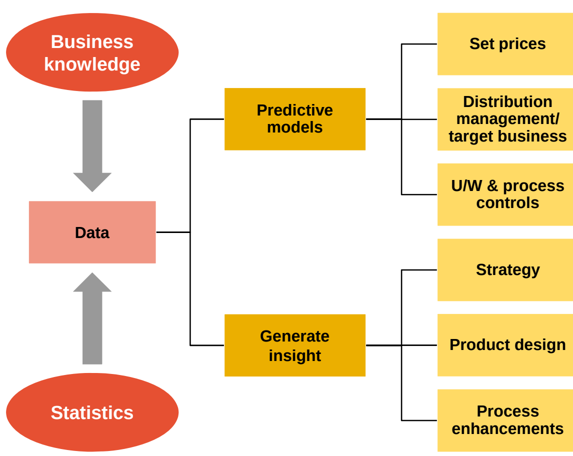
Its about using your data to improve business performance



Execution is critical to the timescales and size of performance uplift

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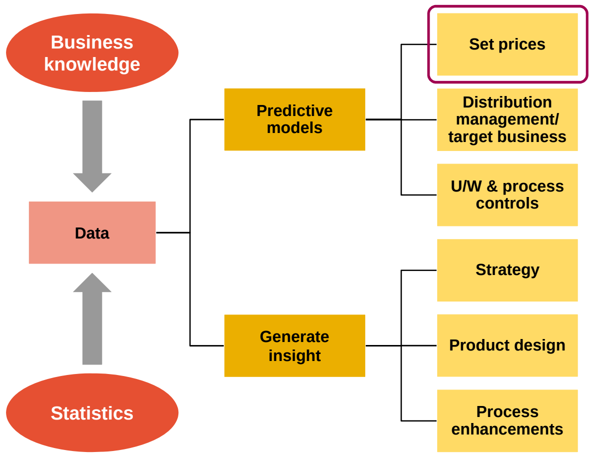
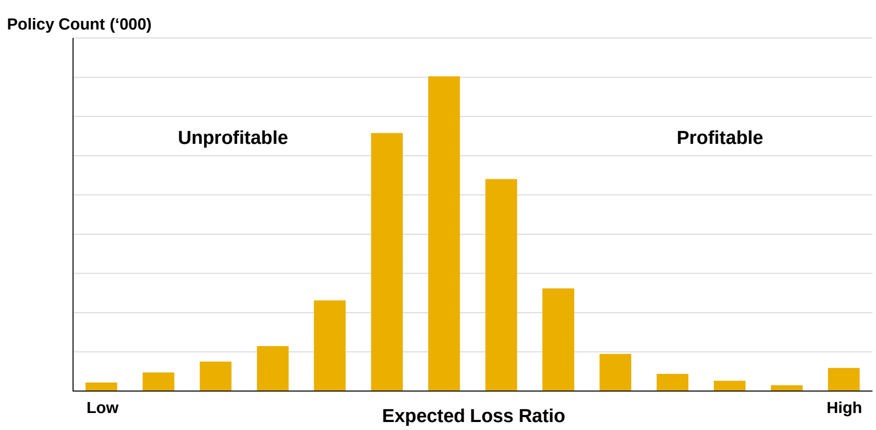
Its about using your data to improve business performance

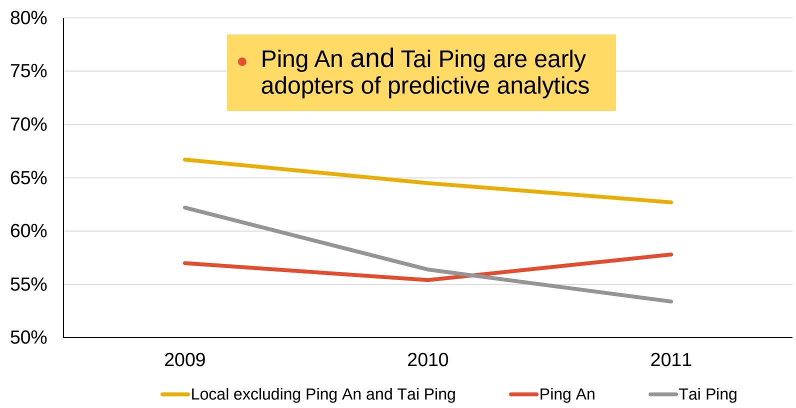


Model allows cross-subsidy to be assessed

Expected loss ratios on current prices can be calculated policy by policy on in-force portfolio or recent new business

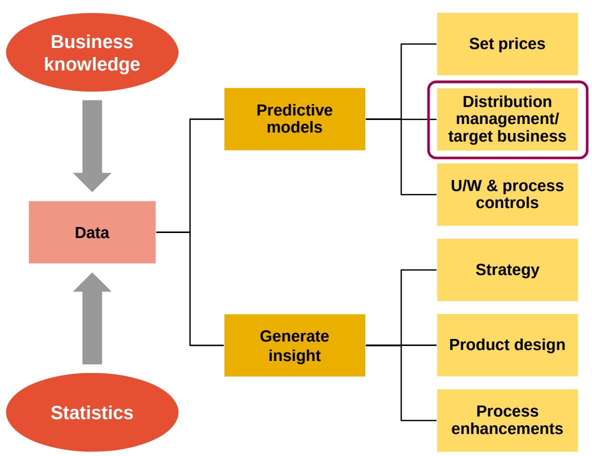


Predictive modeling adds value in the China tariffed market

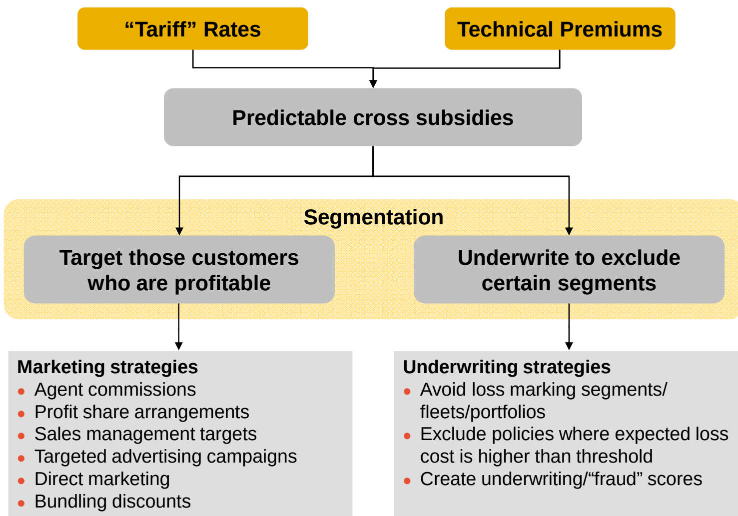


*Loss ratios are all classes but is 75% – 80% Motor and includes only domestic insurers.
Data Resource: Annual Statement for local companies, Insurance Year Book.

Its about using your data to improve business performance



Motor "pricing" in a rate-regulated market

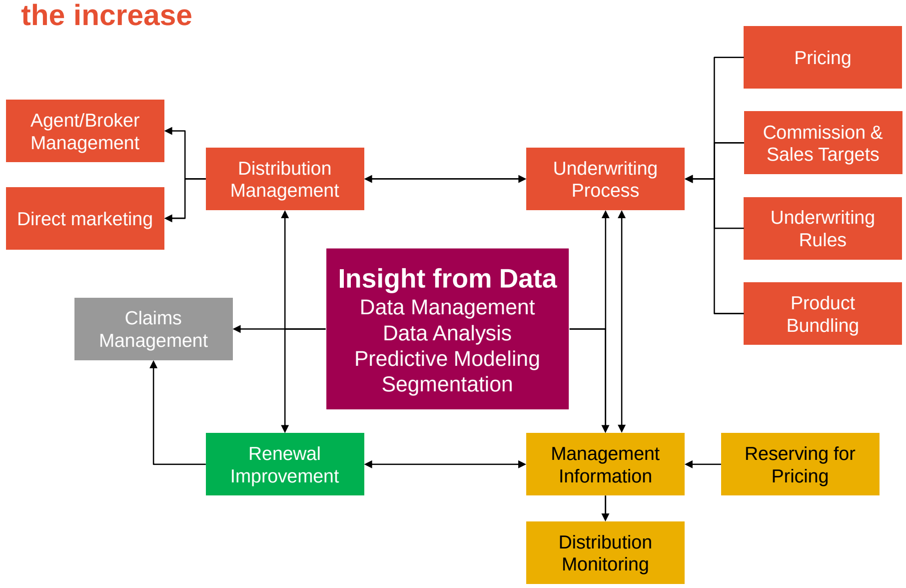


Price restrictions mean significant cross-subsidies remain — segmentation by profitability can be created for targeting

Vehicle Performance	Other Factor Segmentation	
Low (77%)	**New Vehicles (66%)**	
	Older vehicles (79%)	
Medium (88%)	Premium brand makes (83%)	Youth-adult drivers (85%)
		Mature Drivers (70%)
	Mass-market brand makes (90%)	
Medium – High (58%)	Low NCD (76%)	
	High NCD (55%)	

- Expected loss ratios for each segment shown in brackets — portfolio average of 75%

Analytics are used in Asia now, and application is on the increase



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Preparing for detariffication

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Special thanks to our Asian colleagues in China, India, and Malaysia!

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