



Pricing and Product Issues in Latin American

Personal Lines Insurance

Casualty Actuarial Society's Ratemaking and Product Management Seminar

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Introduction

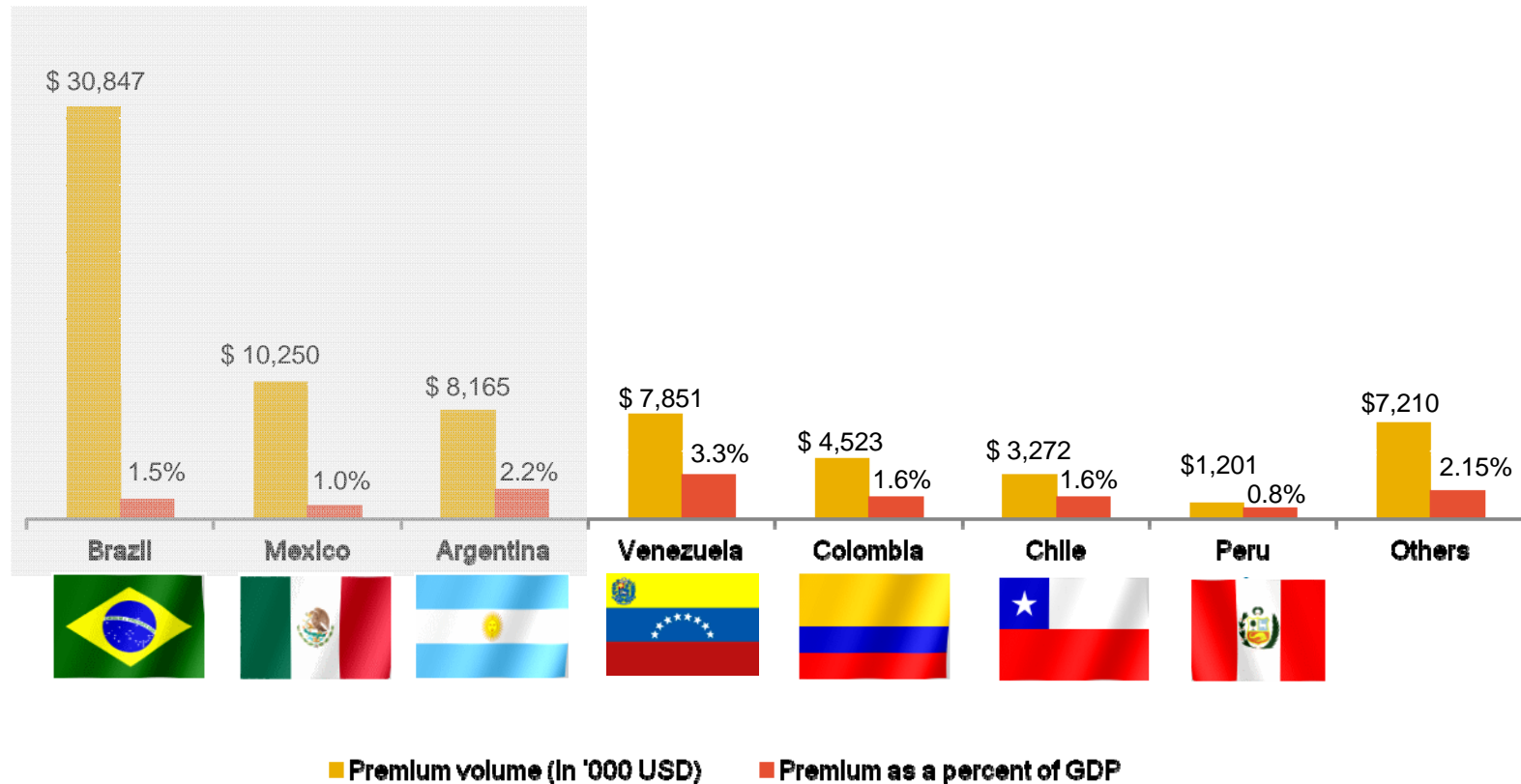
- A general overview of Latin America insurance market
 - Mexico
 - Argentina
 - Brazil
- Discussion of hot issues with respect to each market
 - Regulatory Environment
 - Inflation
 - Product Differentiation
 - Predictive Modeling
 - What separates the winners and losers in this market and why?

Latin America Overview

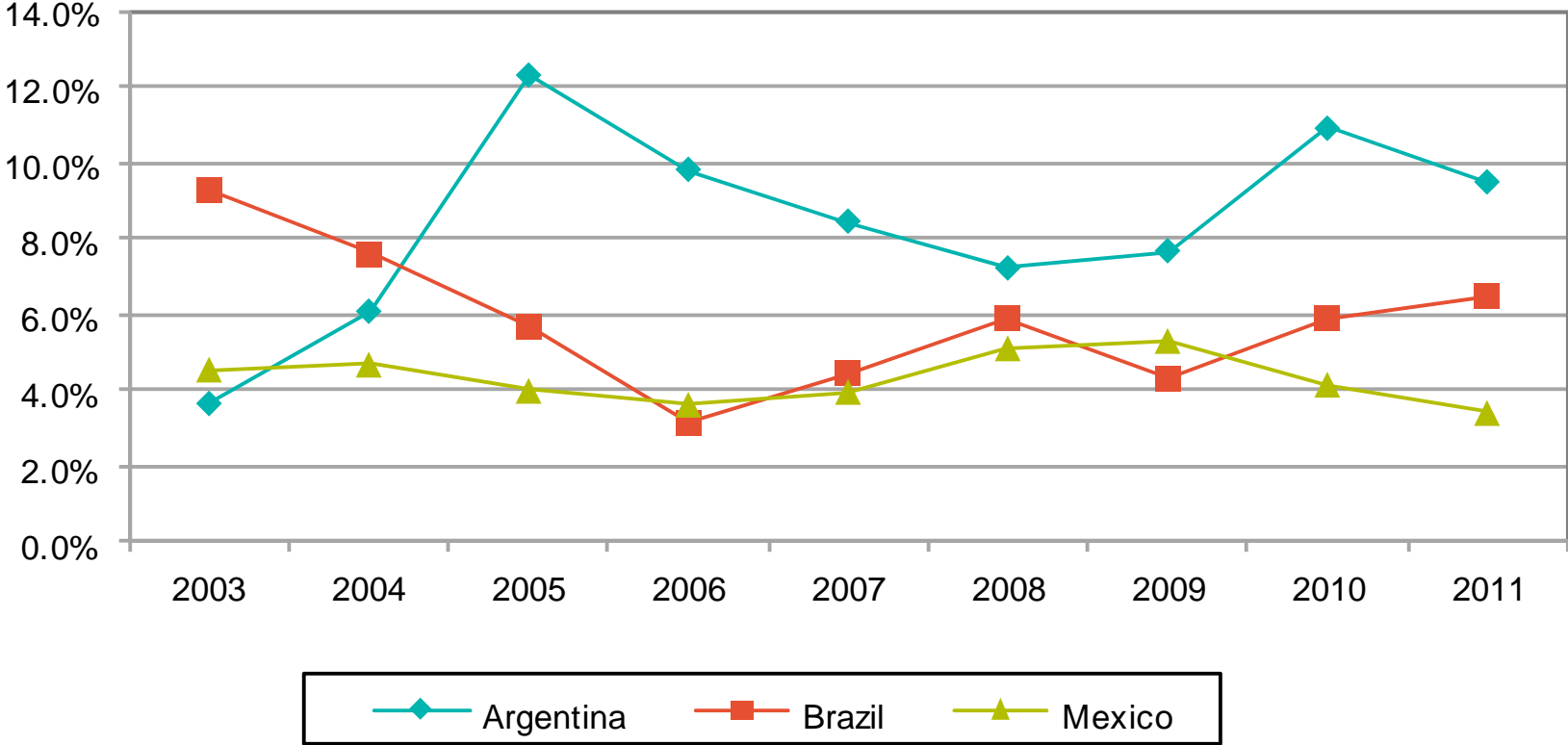
- Private insurance in Latin America is growing rapidly
- Compulsory covers support premium volume growth, but not all countries have it in place
- Domestic insurers are also able to compete and, in some cases, are the market leaders



Brazil is the largest non-life market in Latin America, representing 42% of the total 2010 Gross Written Premium



Inflation is driving costs upwards in these markets*

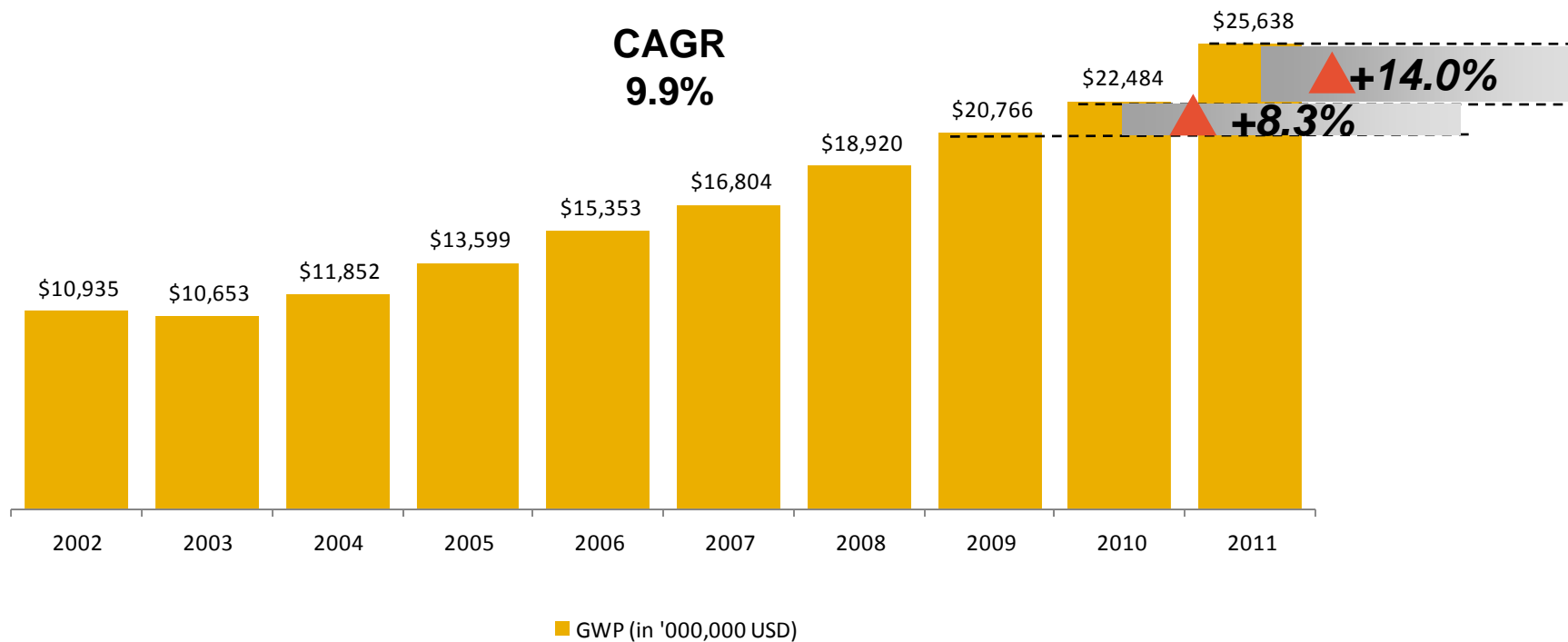


* Official Inflation



Market Overview

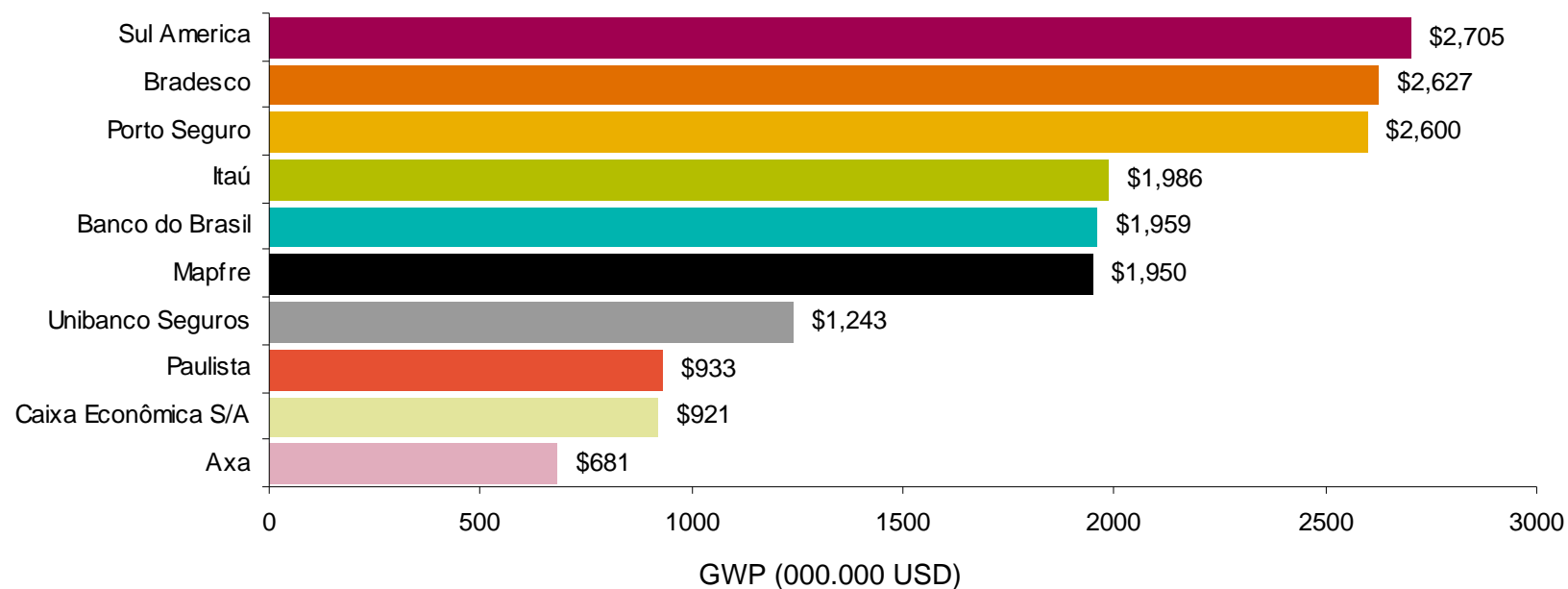
- Brazil is the largest non-life market in Latin America, and has grown rapidly over the past decade





Market share

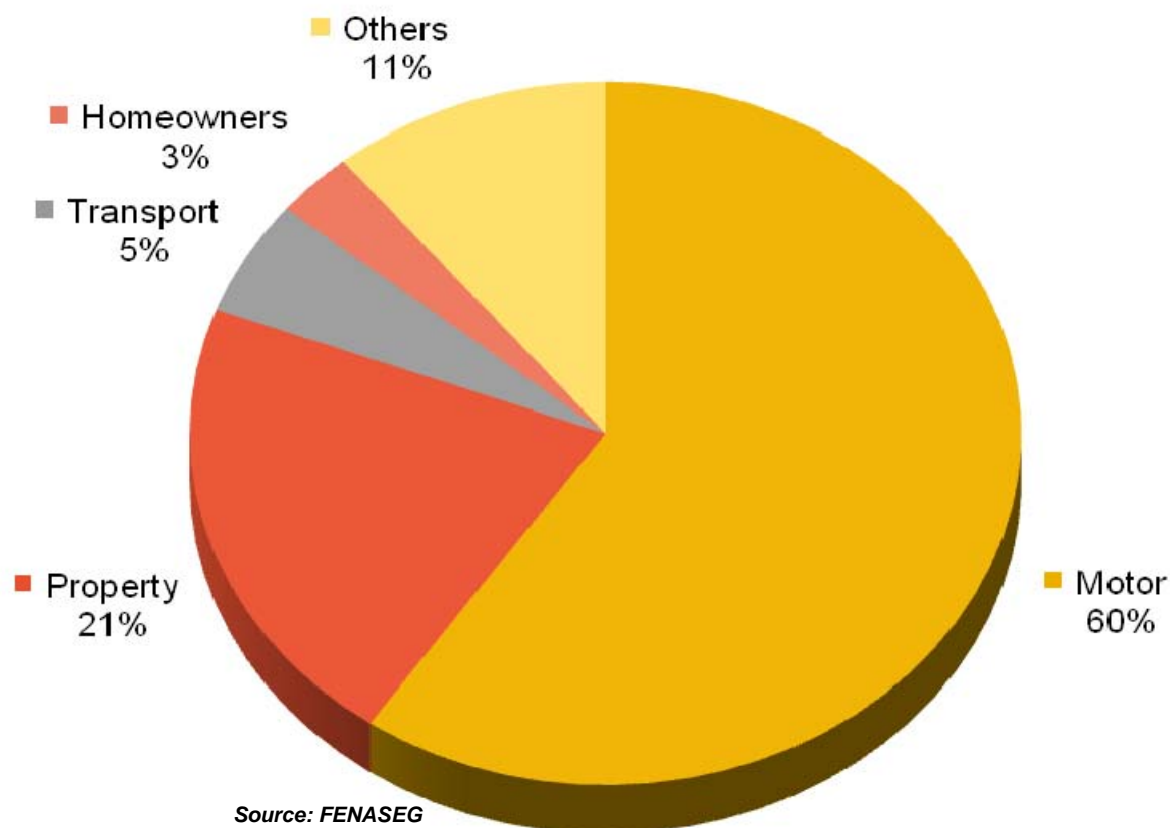
- The top 5 players have a 46% share of Non-Life business as of June 2011
- Porto Seguro, Bradesco and Itaú are the large Non-Life insurance players locally owned without foreign participation.
- Porto Seguro has a joint venture with Itaú for Auto & Homeowners.





Premium distribution

- Auto is the main Non Life segment and was not significantly impacted by the economic crisis due to government tax incentives
- Auto share has been decreasing with the growth of other non traditional lines.





Regulatory Environment

- The National Council for Private Insurance (Conselho Nacional de Seguros Privados – **CNSP**) and the Superintendency of Private Insurance (Superintendencia de Seguros Privados – **SUSEP**) regulate and supervise the Brazilian insurance sector
- For most products, a “**File and use**” product approval process is followed
- **SUSEP performs only limited checks** and the insurer can go ahead and launch the product unless SUSEP raise an objection
- **Rates do not have to be filed**, but they should be actuarially justified



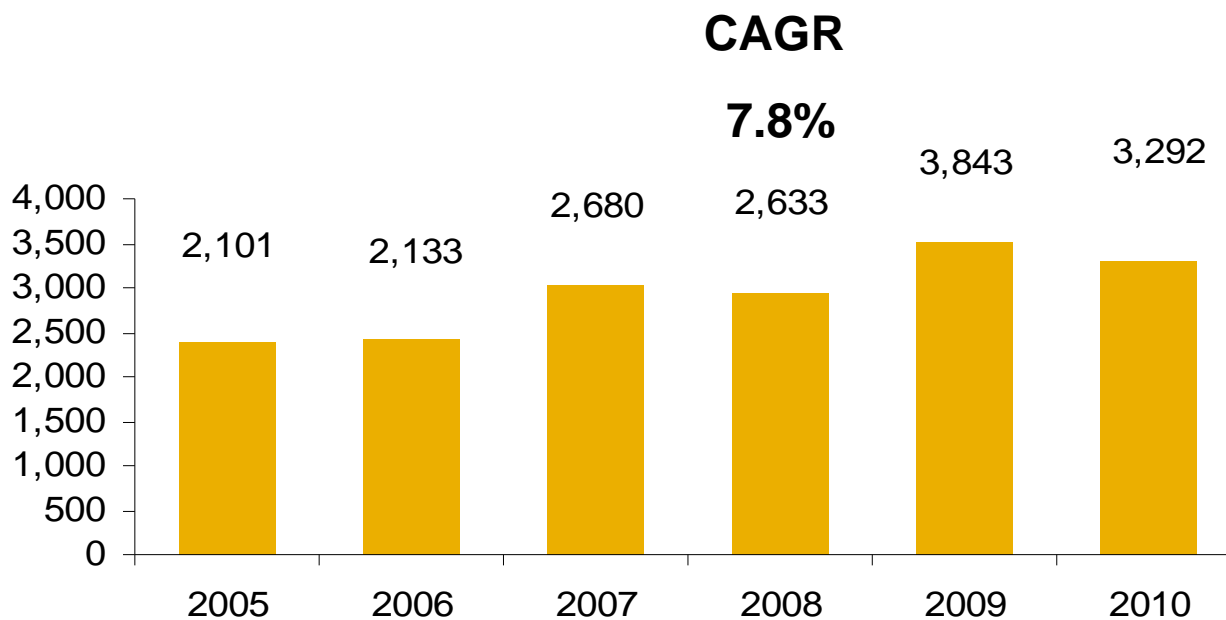
Distribution Channels

- Non-life insurance distribution is concentrated via **intermediary-based** markets, with smaller independent brokers serving the personal motor and small/medium market commercial customer segments.
- The exceptionally **high number of brokers** and **quasi-mandatory use of intermediaries** constitutes a strong collective political influence **against direct marketing initiatives**, and administration cost remain high.
- **Affinity marketing shows strong growth**, however, and microinsurance is expected to have a significant impact once the necessary legislation has been approved and the market has determined how best to serve the low-income sectors
- Certain agents have favorable **relationships** with specific companies which can be difficult to break



Mexico Market Overview

Significant premium growth (in '000,000 USD)



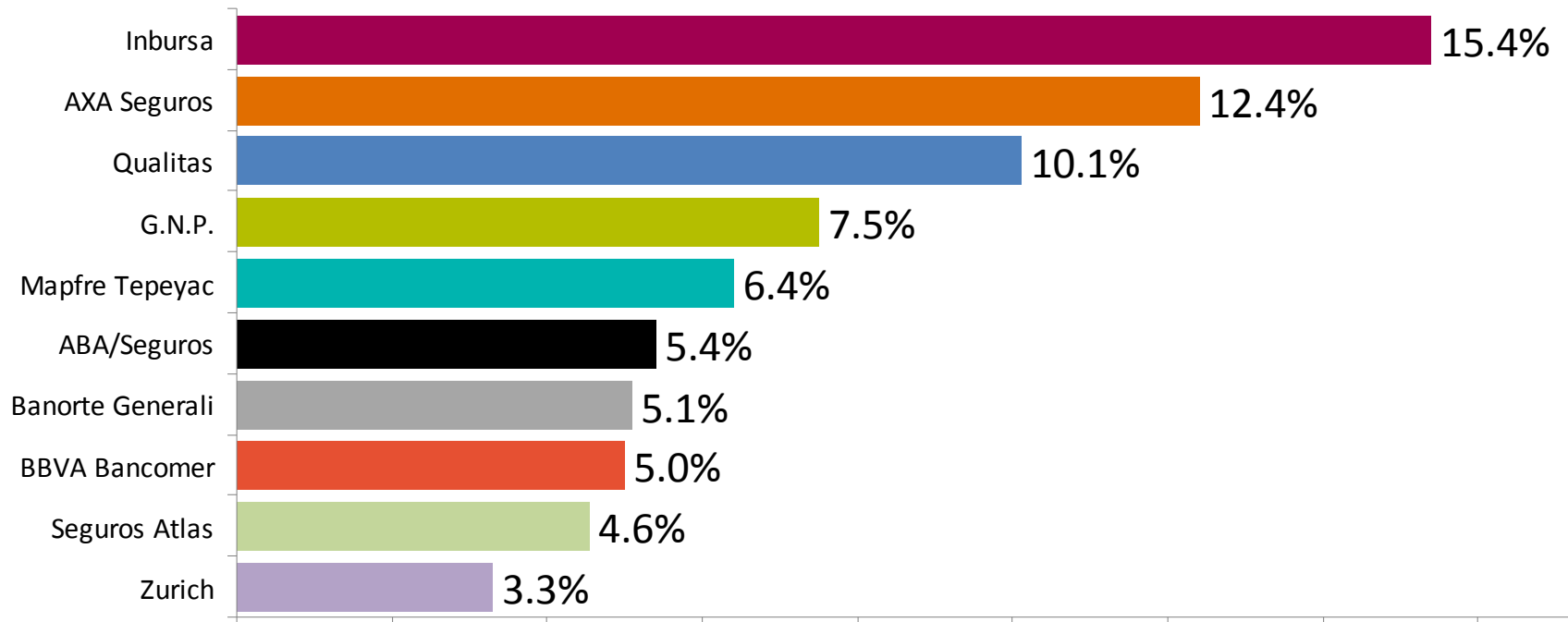
Source: AMIS

Exchange Rate \$12.372 / US\$ 1



Market Concentration

- 5 players of the Top Ten are Locally Insurance and have a 43% share of Non-Life Business



As of September 2011

Exchange Rate \$13.7994 / US\$ 1

Source: **AMIS**



Regulatory Environment

- Treasury (Secretaría de Hacienda y Crédito Público- SHCP) is the institution who promulgates the rules and can interpretate, apply and resolve all issues related to the insurance and surety law and regulation
- National Commission of Insurance and Surety (Comisión Nacional de Seguros y Fianzas -CNSF) is the institution that supervises and reviews the insurance and surety companies
- Product Registration
 - Product registration must be done with the CNSF, who can suspend the product if it fails to comply with the regulatory, actuarial/technical or legal aspects according to their interpretation
 - CNSF has 30 working days to provides comments on the actuarial and legal details, in case there are not comments the product is registered





Regulatory Environment

- Documents
 - Technical Note:
 - It must contain the description of the product, how it will be sell (individual or group), the coverage and exclusions
 - Special characteristics, when the company sells similar products.
 - In force time of the insurance
 - Technical and Financial Assumptions, in order to estimate the risk premium and the unearned premium reserve
 - Statistic Information
 - Precise description of the methodology and the foundations to estimate the risk premium. Including deductibles, co insurance, discounts or charges to the premium
 - Precise description of the methodology and the foundations to estimate the commercial premium. Including acquisition cost, administration cost, profit of the product and discounts or charges to the premium
 - Description of the methodology and the foundations to estimate the Unearned Premium Reserve
 - Description of the methodology to estimate the Dividend Reserve, if applicable for the coverage under consideration



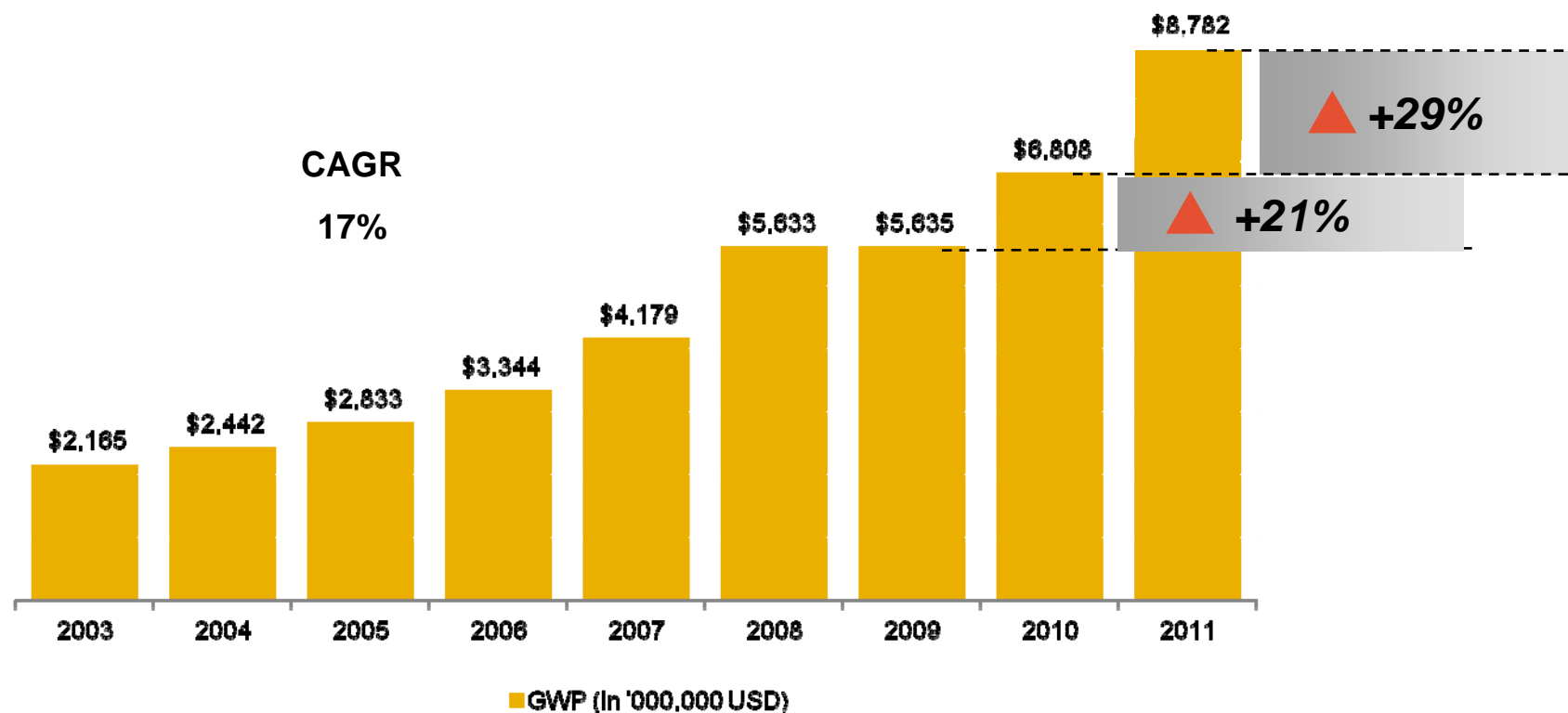
Regulatory Environment

- The Technical Note must be signed by a certified actuary of the National Association of Actuaries (Colegio Nacional de Actuarios) or an accredited actuary of the CNSF for the operation in which the product will be registered
- Documents that need to be presented to the CNSF
 - Technical Note
 - Must be signed by a certified actuary.
 - General Conditions
 - Characteristics and detailed description of the product.
 - Must be signed by a lawyer registered at the CNSF to sign Products
 - Congruence Analysis
 - Validate the consistency between the technical note and general conditions
 - Must be signed by a lawyer registered at the CNSF to sign Products and a certified actuary
 - Legal Opinion
 - Must be signed by a lawyer registered at the CNSF to sign Products



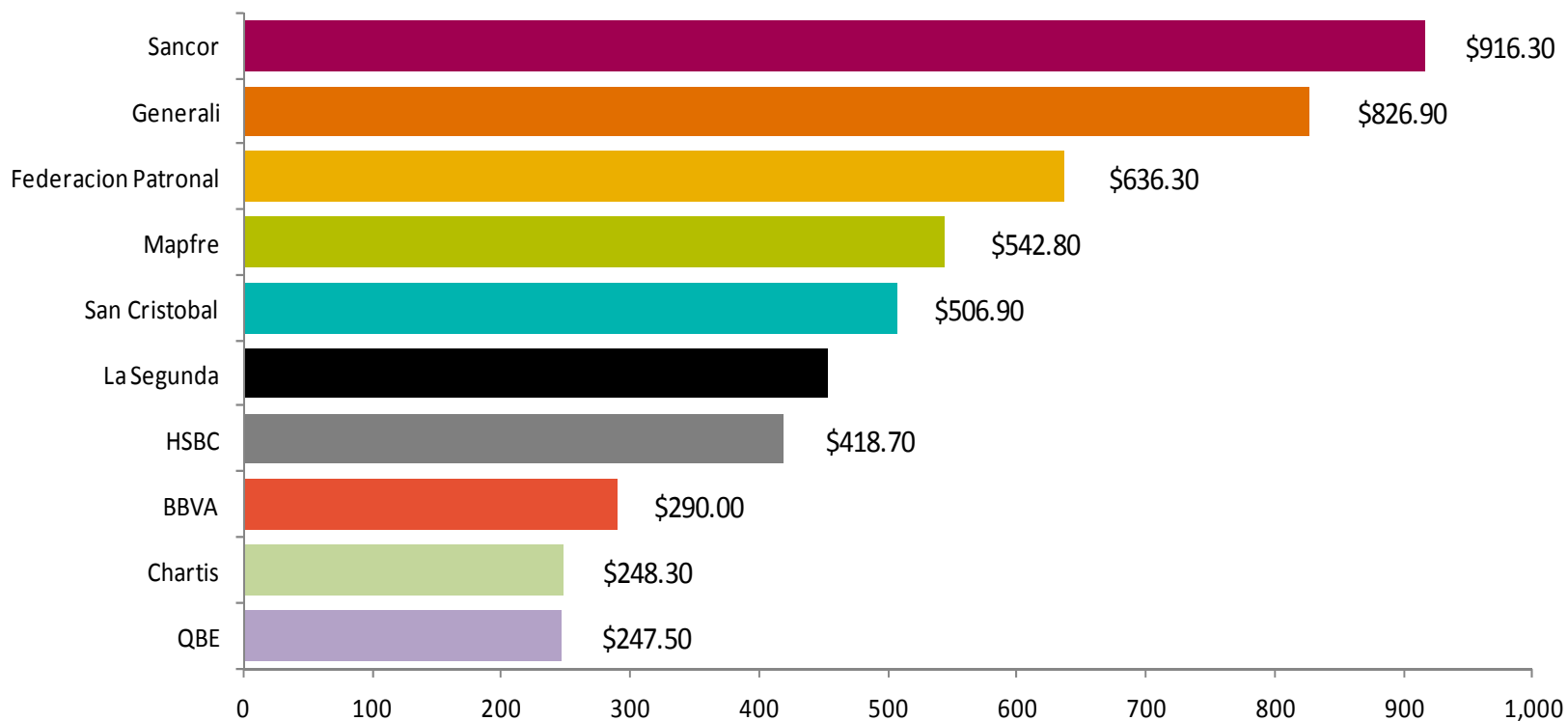
Argentina Overview

- Significant premium growth (in '000,000 USD)





Market Concentration



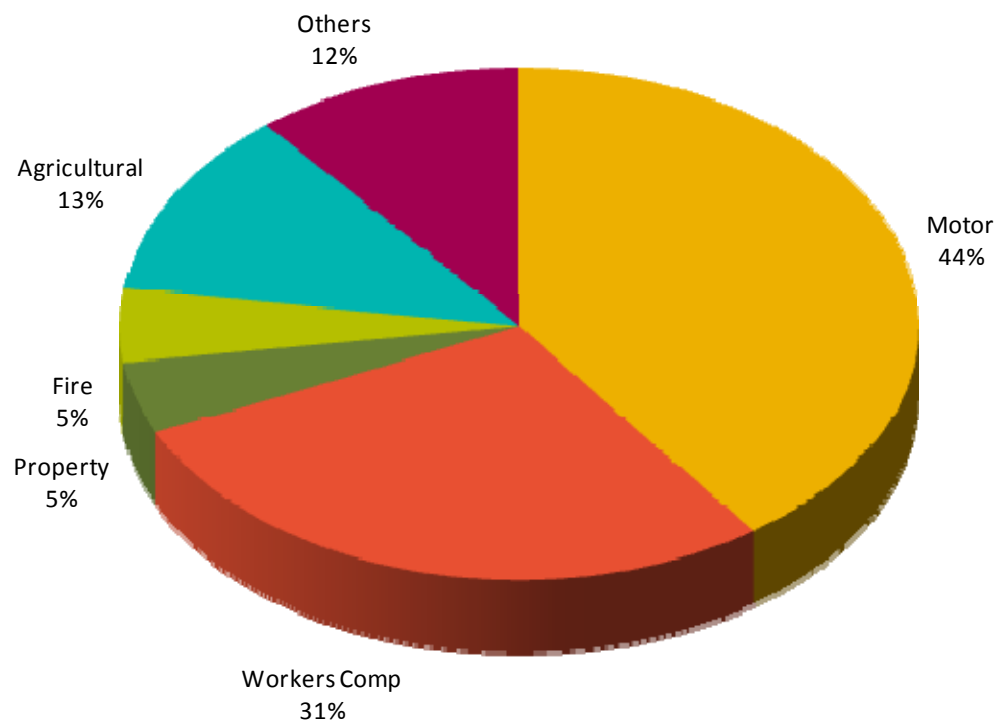
Within Latin America, Argentina continues to be the country with the lowest insurance market concentration



Premium Distribution

- Motor insurance is the main class in the non-life insurance, together with Workers Comp.
- For changes or new ratings the company is required to have a certificate of sufficiency of the premium signed off by an actuary

Non-Life Premium Distribution @ June 2011 in '000 USD





Regulatory Environment

- The **Superintendency of Insurance** –Superintendencia de Seguros de la Nación (SSN) – is responsible for supervising all Argentinean insurance companies
- The SSN **authorize** the **operation** of new companies **and** their business plans, issue regulations and check for their compliance
- **Insurance plans** as well as technical and contractual elements must be approved by the supervisory authority before implementation, except for motor.
- For changes or new ratings the company is required to have a certificate of sufficiency of the premium signed off by an actuary



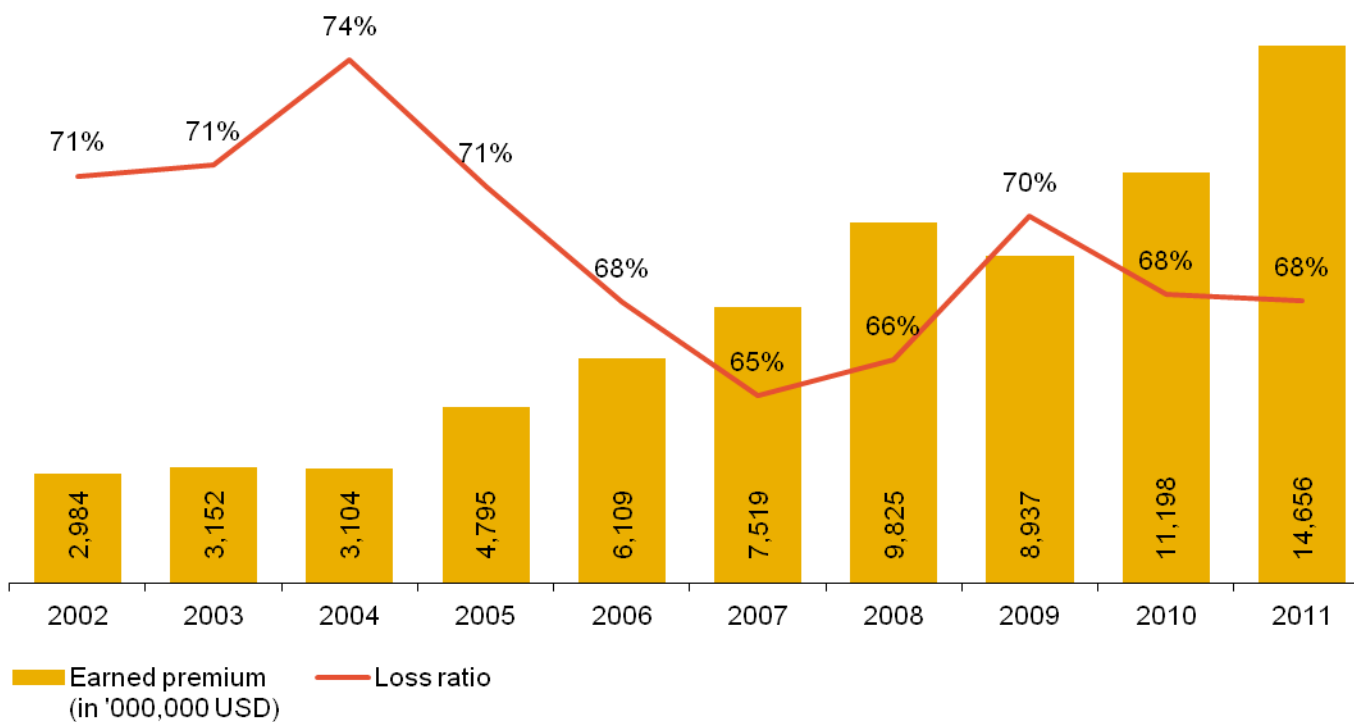
MOTOR





Performance – Voluntary Motor

- Negative results persist





Market concentration – Voluntary Motor

- Top 4 insurance groups hold around 55% of the market
- Competition continues to be intense, with insurers all looking for ways to grow and maintain market share, for example by offering discounts on technical inspections or vehicle servicing

Insurers	GWP ('000 USD)	Market Share
Sul America	2,267	17.7%
Porto Seguro	1,937	15.1%
Bradesco	1,799	14.0%
Vera Cruz	1,051	8.2%
Unibanco Seguros	916	7.1%
Paulista	775	6.1%
Brasil	710	5.5%
Axa	630	4.9%
Real	319	2.5%
Liberty	216	1.7%



Products

- The following coverage options are available:
 - Compulsary third party bodily injury motor coverage (DPVAT, in portuguese)
 - Voluntary coverage, covering:
 - Third Party Liability
 - Physical Damage Cover (Both Collision and Theft)
 - Full Package including both third party and physical damage
 - Some companies offer a theft & fire only product
- Additional add-ons, like Personal accident insurance, 24-hour breakdown assistance, courtesy vehicle replacement, free extension to other Mercosur countries, discounted vehicle parts, etc.



Regional Distribution

- The more developed south and south east of Brazil have the largest market share
- The state of São Paulo alone has about 42% of the market

Rank	State	Market Share
1	São Paulo	42.1%
2	Rio de Janeiro	8.0%
3	Minas Gerais	8.0%
4	Paraná	7.8%
5	Rio Grande do Sul	6.2%
6	Santa Catarina	4.8%



- Information from SUSEP



Pricing of Auto Products in Brazil

- In Brazil the insurance is acquired for a particular car, and not for a person - anyone is able to drive the insured vehicle
 - It is common for companies to load premiums or restrict quotations for policies where a young driver (18 to 25) will be driving
- Physical Damage Cover is generally priced as a rate per sum insured by most companies
 - Some companies use component based pricing in their rating systems to calculate separate rates for partial collision, total collision and theft
- Third Party Liability is priced as a premium with separate values for bodily injury and property damage



Pricing Challenges

- Underwriters are usually in charge of the rating tariffs and very few companies employ pricing actuaries
- High theft rates (in some regions of Brazil 50% of the risk cost comes from theft) with substantial variation over time, turning low theft regions into high theft regions and vice versa
- Bodily Injury claims make up only around US\$2 of the risk cost due to very few claims and a different legal culture. This number is likely to start increasing significantly in the near future





Rates & Deductibles

- The DPVAT premium for a private car is a flat figure. The rates are fixed by SUSEP and are reviewed on an annual basis
- There is a wide variation between voluntary premiums
- Insurers typically will not offer comprehensive coverage for vehicles more than 10 years old and will restrict coverage for those over five years old
- Deductibles are usually compulsory
- Companies apply a bonus system offering up to 30% discount after five years without claim
- CNSeg has established a database which enables companies to verify the level of no claims discount when business is transferred from one insurer to another



Standard Rating Variables used in Brazil

Profil Variables	Vehicle Variables	Other Variables
Policyholder Age	Vehicle Make/Model	Region (ZipCode)
Policyholder Gender	Vehicle Age	Deductible
Policyholder Marital Status	Vehicle Value	Renewal/New Business Indicator
Bonus Class	New Vehicle Indicator	Credit Score
Garage Information	Vehicle Category	Young Driver Coverage
Claims History		Mileage



Predictive Modeling in Brazil

- Most of the top companies in the market are regularly performing predictive modeling developing generalized linear models by peril on a frequency and severity basis
- Data quality is still a large problem for a number of operators, particularly where profile information is not being collected
- List of variables being collected at POS is still relatively small in comparison with the US market
- Cost and quality of external variable information has resulted in low usage so far
- A few companies have started work on elasticity modeling developing models for renewals and new business



Pricing of Auto Products in Mexico

- In Mexico the insurance is acquired for a particular car, and not for a person - anyone is able to drive the insured vehicle
 - Some companies distinguish pricing for age and gender
- Physical Damage and Theft are generally priced as a rate per sum insured by most companies
 - All companies use component based pricing in their rating systems to calculate separate rates for partial collision, total collision and theft.
- Third Party Liability is priced as a premium with same values for bodily injury and property damage
- Medical expenses are related to the number of passengers in the vehicle.





Pricing Challenges

- The medium and large insurance companies have a team of actuaries, small companies depend on external vendors and underwriters set daily rate
- In urban areas a high percentage of the cost comes from a high frequency in collision
- Theft is an important component of the price - in recent years it has declined in Mexico City and has increased in the north
- Agents with large portfolios often have agreements to receive higher commissions than smaller competitors with no difference in the price, or even lower prices in some cases





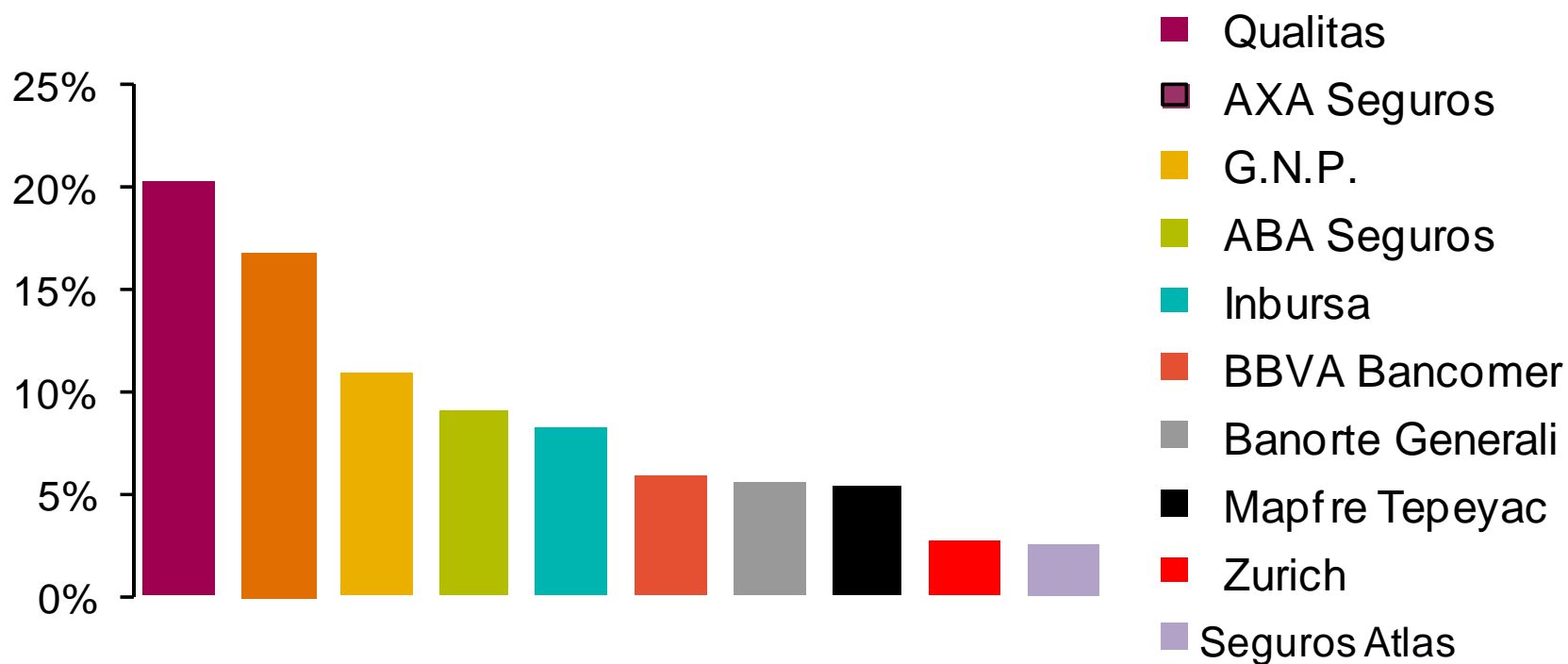
Product Differentiation

- The Differentiation between the products:
 - Price
 - Infrastructure of the Insurance Company
 - Specialization in the LOB or product
 - Quality of service
 - Attention in the claims service
 - The coverage offered in the market are similar for the products of Automobile and Homeowners





Market Share Auto 2011



* As of September 2011

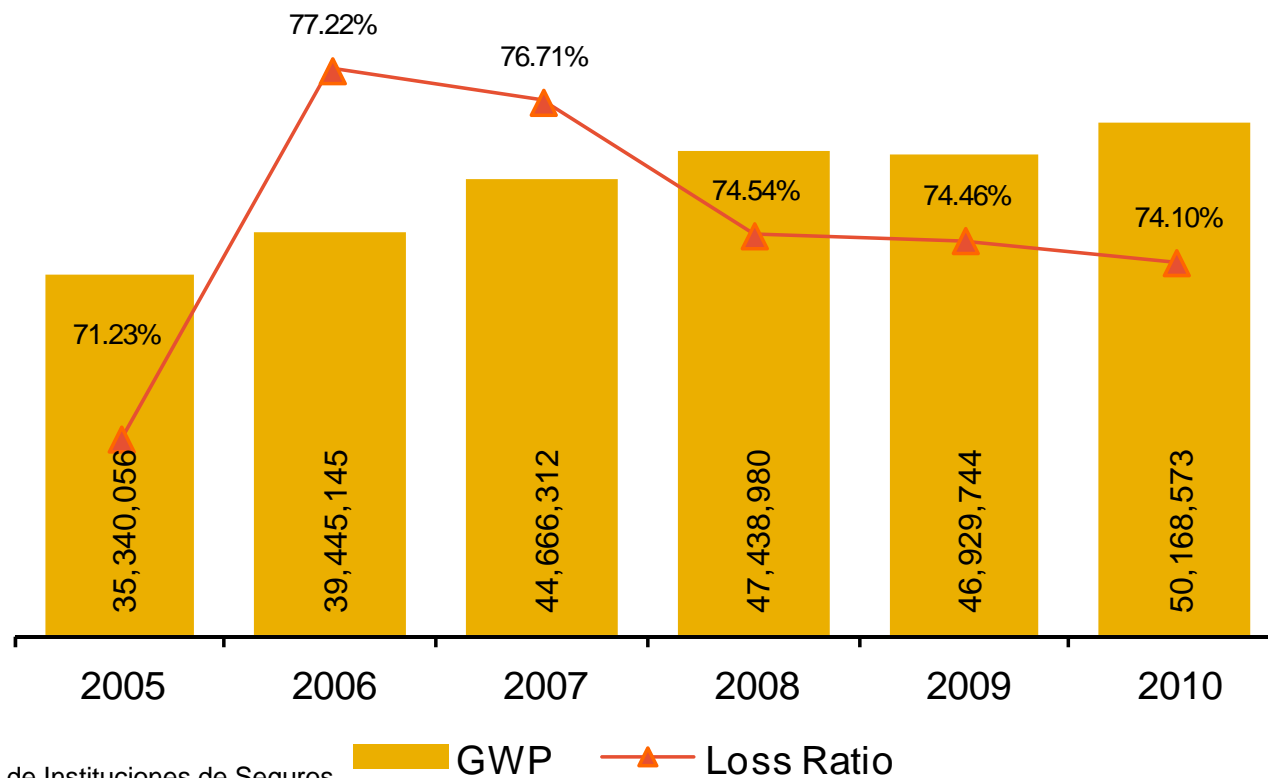
Source: Asociación Mexicana de Instituciones de Seguros

Exchange Rate \$13.7994 / US\$ 1

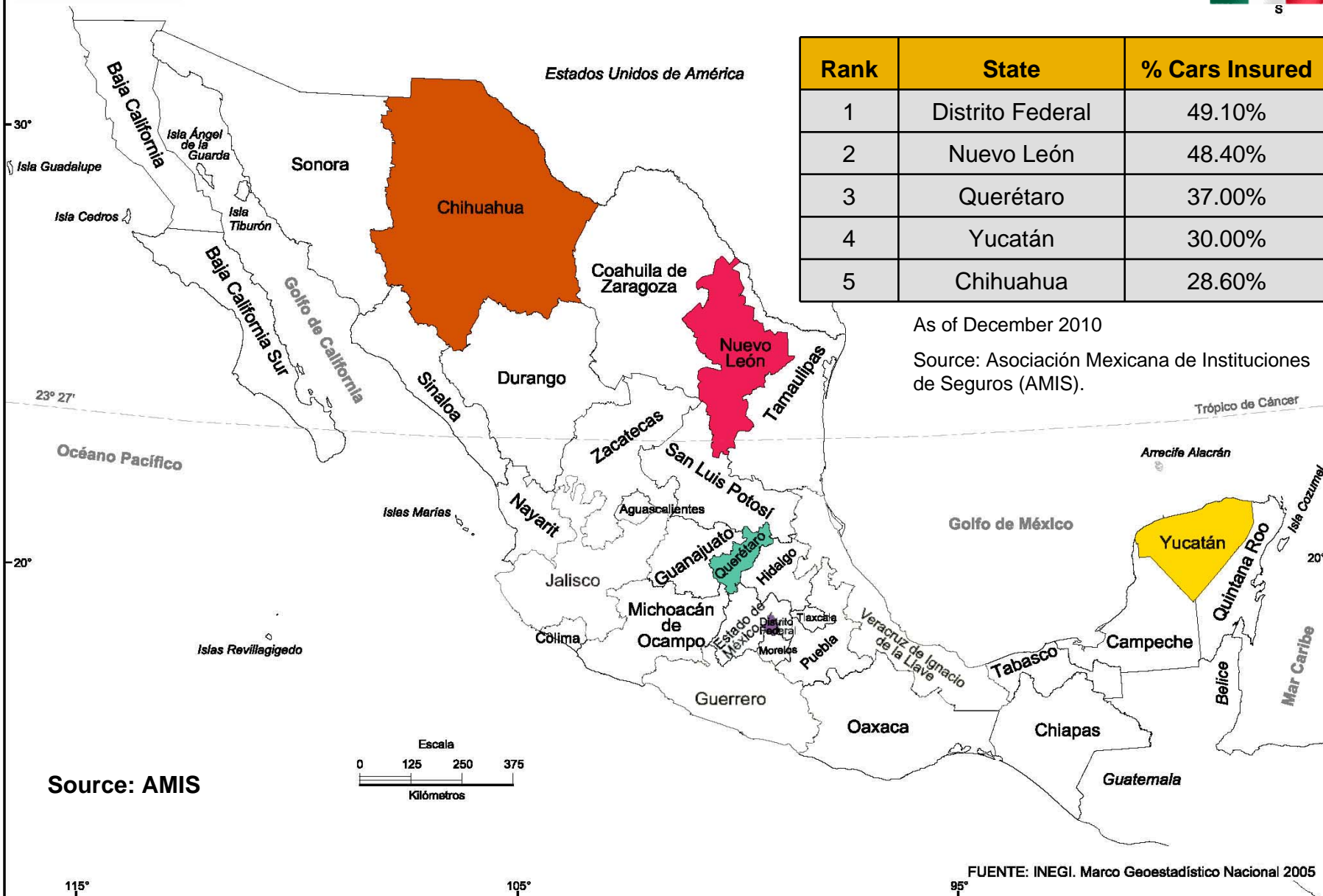


Growth of the Auto Market

- Motor insurance protects roughly 26.5% of Automobiles
- Recently, the loss ratio has been 75% and increased auto theft, that reflects a high loss ratio.



Estados Unidos Mexicanos

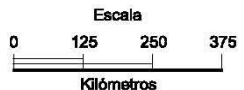


Rank	State	% Cars Insured
1	Distrito Federal	49.10%
2	Nuevo León	48.40%
3	Querétaro	37.00%
4	Yucatán	30.00%
5	Chihuahua	28.60%

As of December 2010

Source: Asociación Mexicana de Instituciones de Seguros (AMIS).

Source: AMIS



FUENTE: INEGI. Marco Geoestadístico Nacional 2005



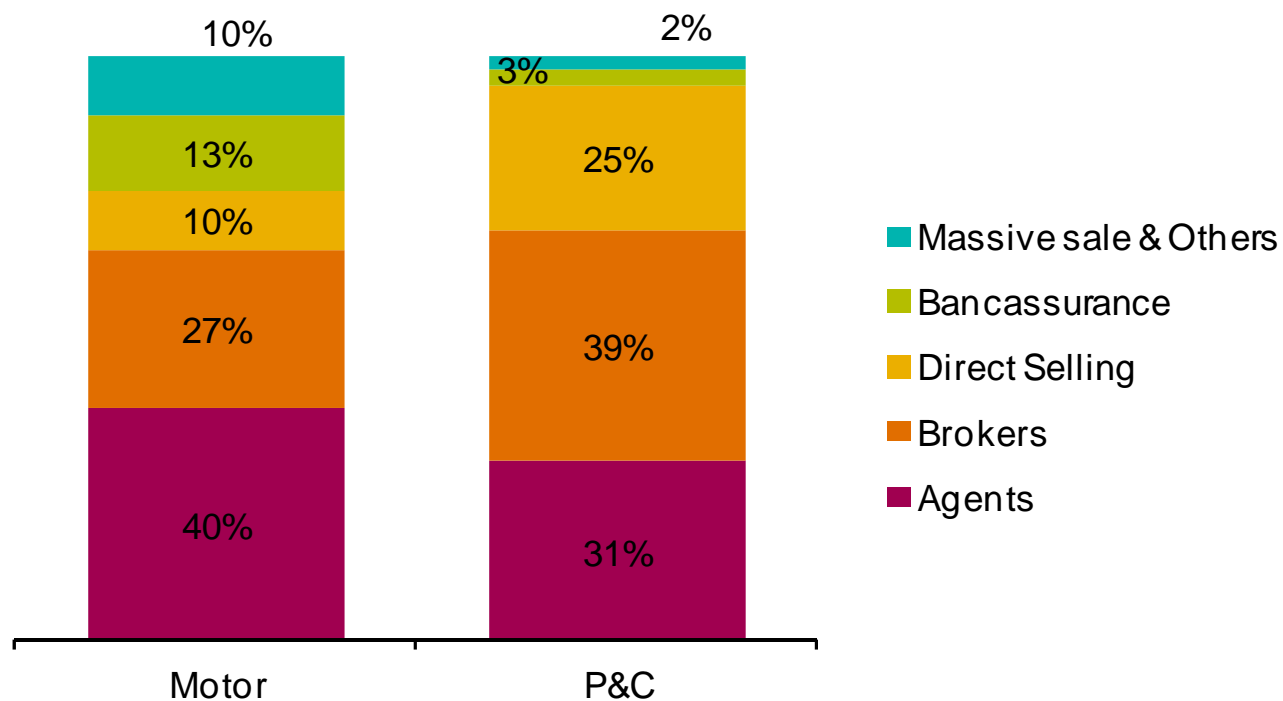
Rating Variables used in Mexico

Profile Variables	Vehicle Variables	Other Variables
Policyholder Age *	Vehicle Make	Region (State)
Policyholder Gender *	Vehicle Model/Age	Deductible
Claims History *	Vehicle Value	Renewal/New Business Indicator *
	Vehicle Category	

* Non-Standard Variable



Distributions Channels



Source: Asociación Mexicana de Instituciones de Seguros (AMIS)

towerswatson.com



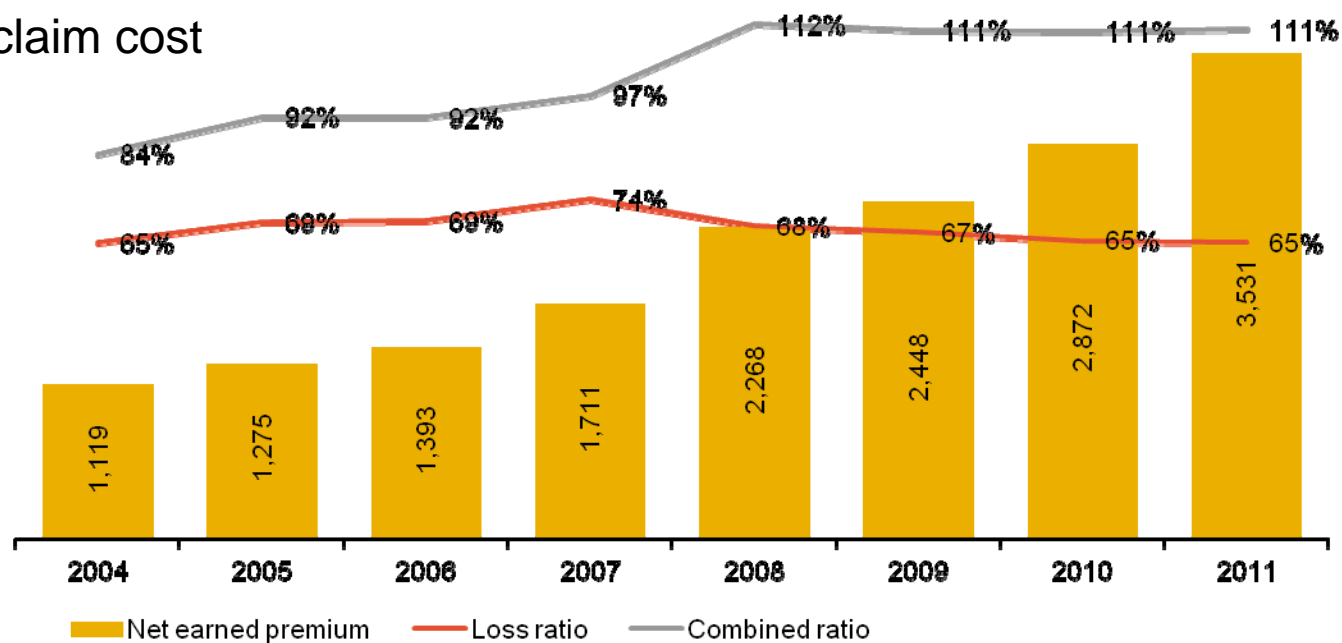
Predictive Modeling

- Currently there are few companies that have implemented predictive models, which are typically generalized linear models (GLM)
 - GLM model implementation has been done only in the motor business
 - This is an issue for the Mexican insurance market, with a tendency for companies to implement these models for pricing
 - The base products today are made using deterministic univariate statistics to estimate frequency and severity, with groups defined by criteria of the Actuary, influenced by commercial aspects
- Data quality is a large problem for a number of companies
- List of reliable variables is still relatively small in comparison with the US market



Performance

- Negative technical results persist
- Profitability dependant on investment income
- Increasing inflation environment
- No credible official inflation index
- Increasing claim cost



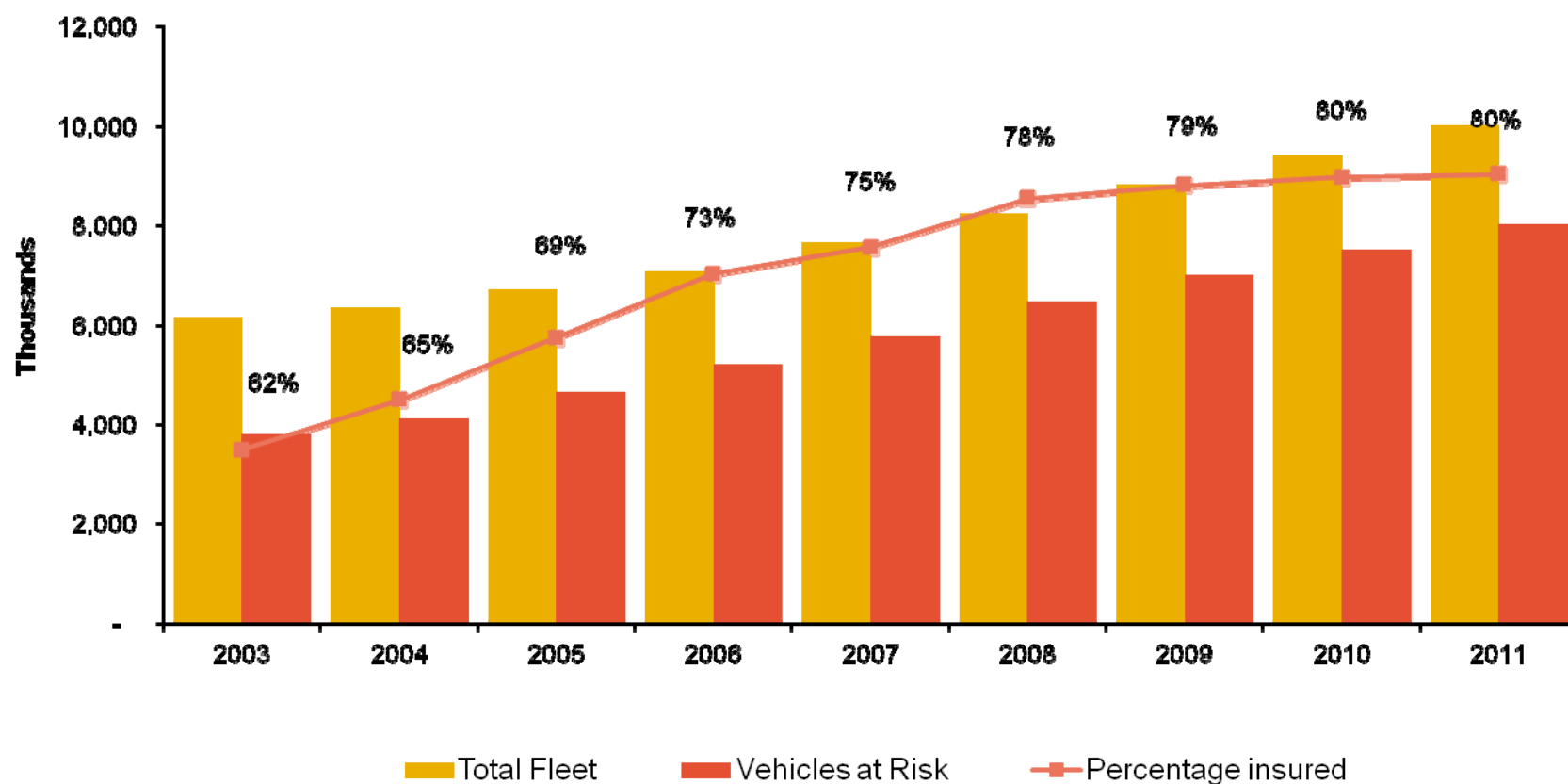
in million dolars

Source: Insurance supervisor (Superintendencia de Seguros de la Nación - SSN)



Market Penetration

- Approximately 80% of the vehicles have some type of insurance





Market Share

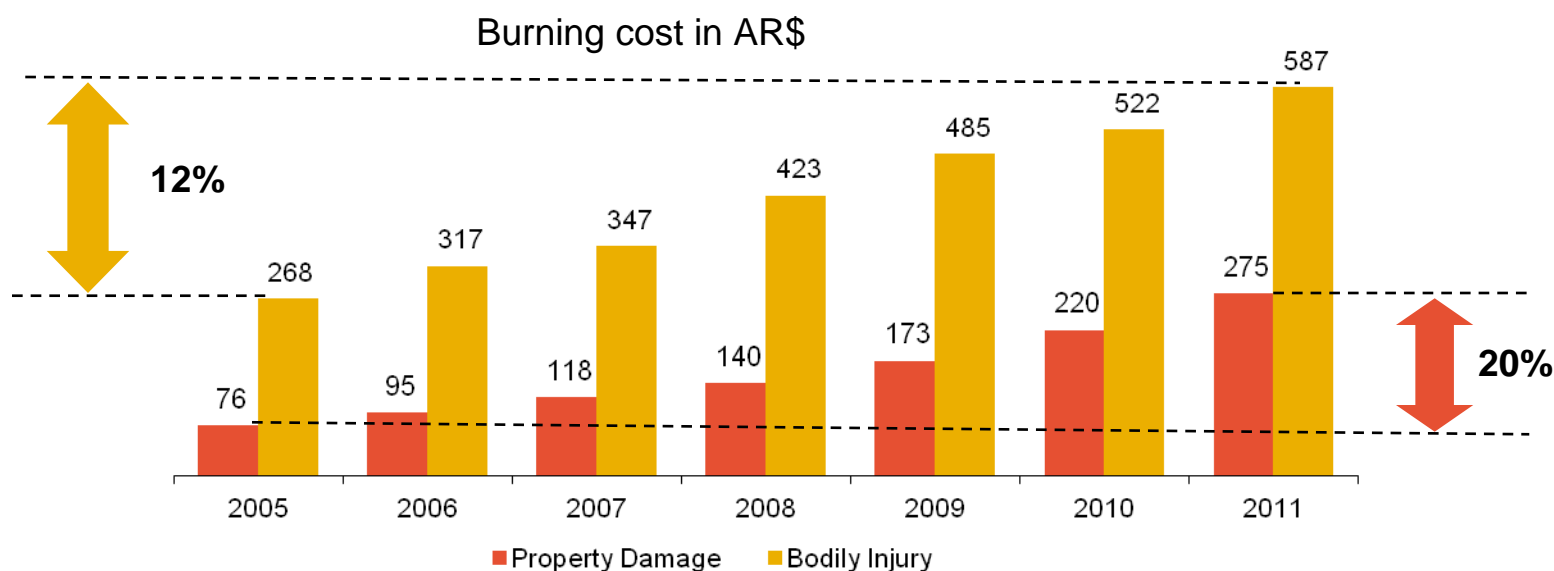
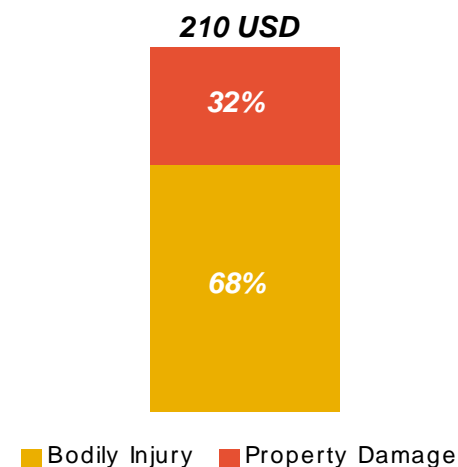
- There are 60 active motor companies as of June 2011

Insurers	GWP ('000 USD)	Market Share
Caja Seguros (Generali)	530	13.8%
Federación Patronal	462	12.0%
San Cristobal	227	5.9%
HSBC	226	5.9%
Sancor	194	5.0%
Segunda C.S.L.	184	4.8%
Bernardino Rivadavia	171	4.4%
Provincia	137	3.6%
Zurich Argentina	136	3.5%
Mapfre Argentina	120	3.1%



Property Damage / Bodily Injury

- Almost 70% of the Third party loss costs come from Bodily Injury
- Claim loss cost inflation for Property Damage is greater than for Bodily Injury





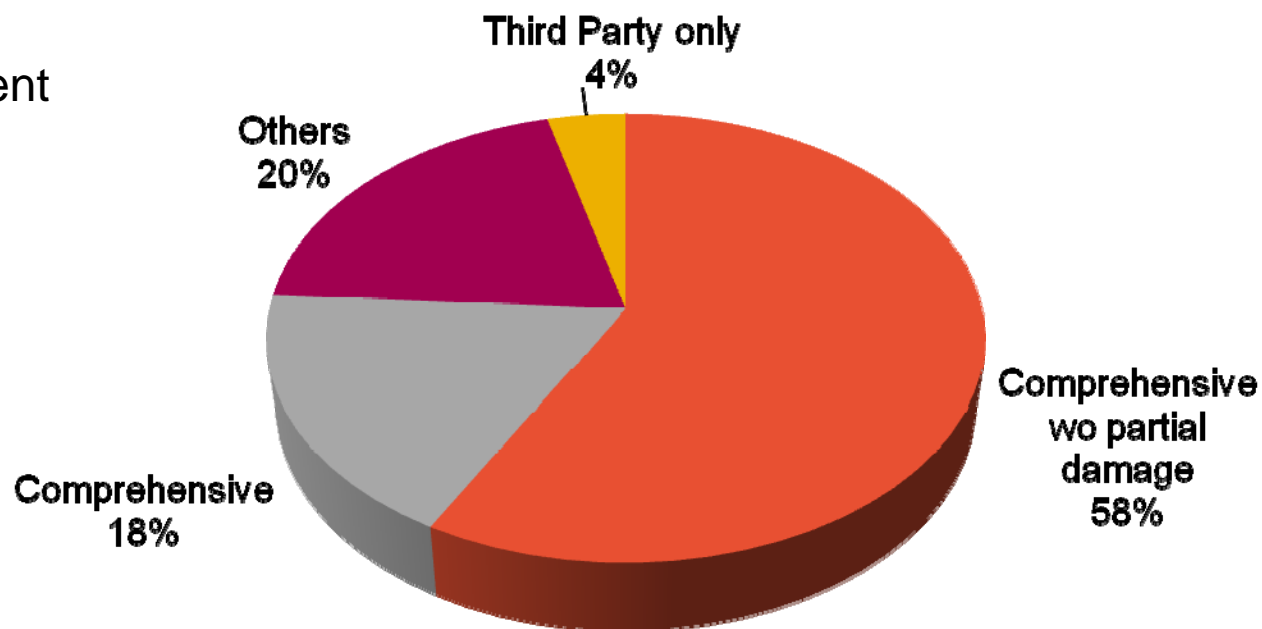
Special Regulatory Environment

- New digital motor policy system
- New motor insurance **standard policy wording** (in force since sep 2011)
- The **main packages** and their coverage's:
 - Third Party Liability:
 - Compulsory
 - Maximum limit: 3MM AR\$ (730,000 USD) for private cars and AR\$ 10MM (2.200.000 USD) for trucks and buses.
 - Covers: personal injury and property damage, medical expenses, funeral expenses, legal cost and interest on awards payable up to 30% of the insured limit,
 - Comprehensive without Partial Damage: third party liability + total loss by accident and total and partial fire or theft
 - All risk (comprehensive) with varying deductibles, including third party liability and total and partial loss by accident, fire or theft



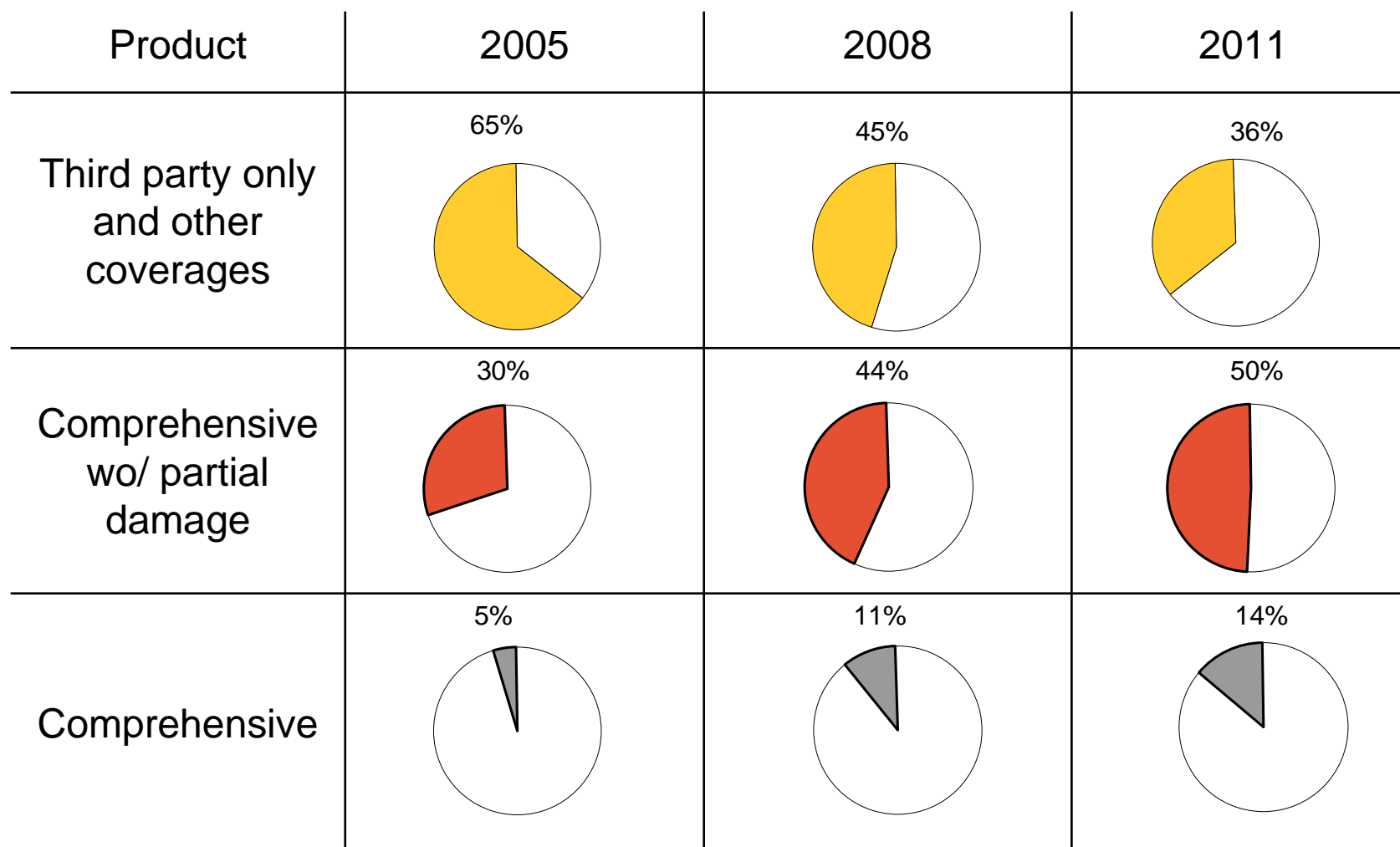
Motor Products

- Additional covers, like mechanical assistance, breakage of windscreen and locks by theft, are normally included in all packages
- Other additional coverages offered in the market:
 - “Brand new” benefit
 - Hail coverage
 - Stealing content





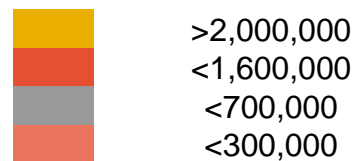
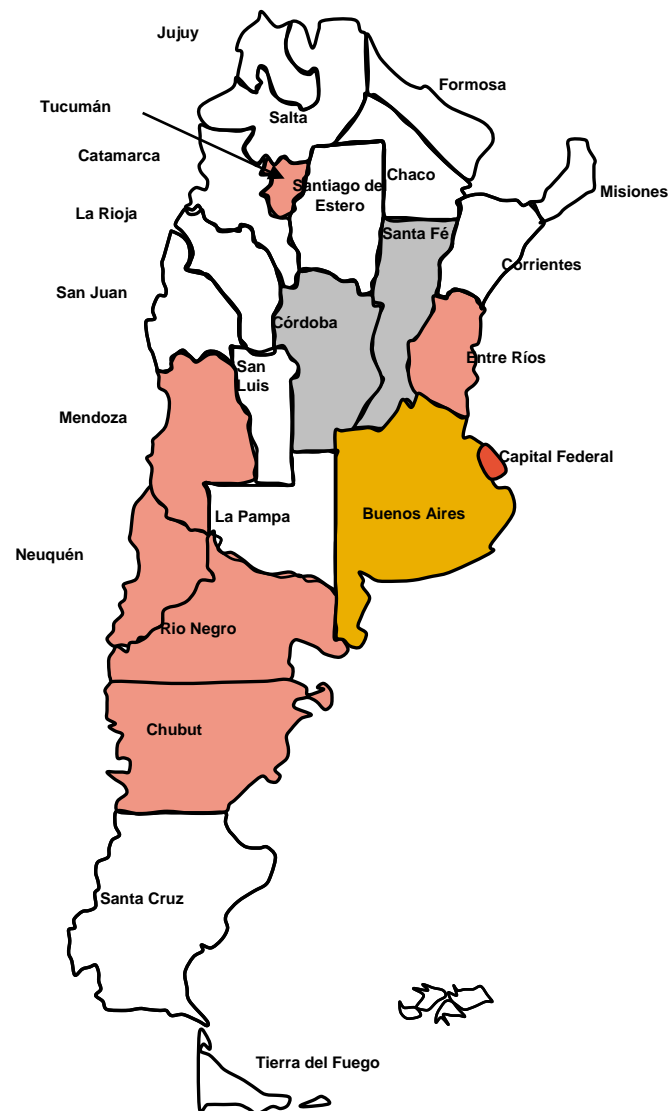
Portfolio composition change





Regional distribution

Rank	Province	Market Share
1	Buenos Aires	43.7%
2	Capital City	18.9%
3	Santa Fe	8.5%
4	Córdoba	8.4%
5	Mendoza	3.5%
6	Entre Ríos	2.3%
7	Chubut	1.4%
8	Tucumán	1.4%
9	Neuquén	1.3%
10	Río Negro	1.3%





Rating & Deductibles

- Third party premiums are fixed based, mainly, on:
 - Geographical area (between 3 and 8 zones according to the company)
 - Type of vehicle insured (normally group in 3 or 4 classifications)
- There is no deductible for Third Party covers
- Own damage premiums are calculated as a percentage of sum insured - main variables used:
 - Geographical area
 - Type of vehicle
 - Make & Model
 - Vehicle age
- Deductibles are very common for Own Damage, normally apply as a percentage of sum insured



Princing challenges

- Most non-life companies do not have actuarial teams
- Rates are determined based on past experience and further adjusted to follow inflation
- Underwriters have a major influence in the definition of rates
- Bonus schemes are recognized as being more commercial than technical
- Very few companies use GLM techniques, only top companies



Distribution Channels

- The traditional channel in the market is **intermediaries**, including both small agents and brokers, employing marketing managers who are responsible for the development of sales
- Very few companies use their own sales forces
- Some companies also work **through branches** and sales offices in the provinces
- Other direct selling used in Argentina is by means of **telemarketing**, through call centers
- There are indications that insurers are beginning to exploit the **synergies offered by the banks** and some insurers in the same group



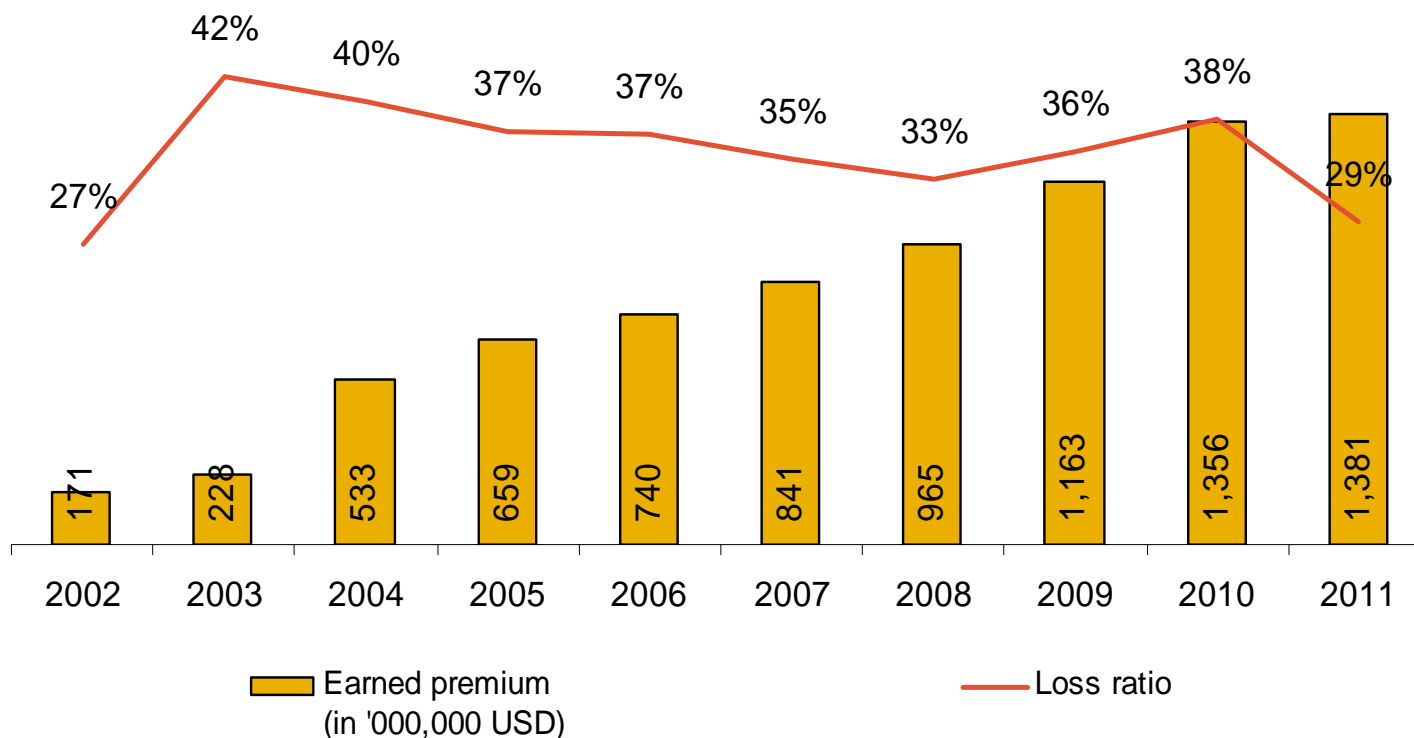


Homeowners



Performance

- Homeowners is perceived as a very profitable class, although the theft risk can give cause for concern
- Loss ratio have remained favorable and relatively stable over recent years





Typical Product

- A typical package policy will provide basic coverage of fire, lightning and domestic gas explosion coverage.
- Additional insurable perils available will typically include storm, tempest, hurricane, tornado, hail, smoke, etc
- Optional additional coverages:
 - Electrical damage
 - Collapse
 - Theft
 - Glass breakage
 - Electrical equipment
 - Personal liability
 - Loss of payment of rent

Typical percentage of sum insured

Fire, lightning & explosion	100%
Personal liability	50%
SRCC	50%
Robbery or theft	10%
Loss of rent	10%
Glass breakage	10%
Electrical damage	7.50%

Source: Axco



Rating & deductibles

- The composite rate for fire and extended perils depends on various factors including construction and location
- Theft coverage increases the rate significantly and some companies do not offer flood cover because of the high level of anti-selection involved
- Brazilians are averse to the concept of deductibles, although most packaged policies are subject to a deductible – typically 10% of the sum insured
- Premium rates for apartments are slightly lower



Major companies

- Top 3 insurance groups hold around 55% of the market
- Homeowners market about 1/15th the size of the Auto market

Insurers	GWP ('000 USD)	Market Share
Caixa Seguradora S/A	541	21.0%
Bradesco Auto/Re Companhia De Seguros	198	7.7%
Itau Seguros De Auto E Residência	180	7.0%
Santander Brasil Seguros S/A	112	4.3%
Mapfre Seguros Gerais S.A. "Em Aprovação"	64	2.5%
Porto Seguro Cia De Seguros Gerais	63	2.4%
Maritima Seguros S/A	61	2.3%
Allianz Seguros S.A.	55	2.1%
Sul América Cia Nacional De Seguros	48	1.8%
Companhia Excelsior De Seguros	43	1.7%
Top 5	1,094	66.2%
Top 15	1,363	82.5%
Top 15	1,535	92.9%



Market Participants - Homeowners

Homes Insured protect roughly 4.5% of Homes

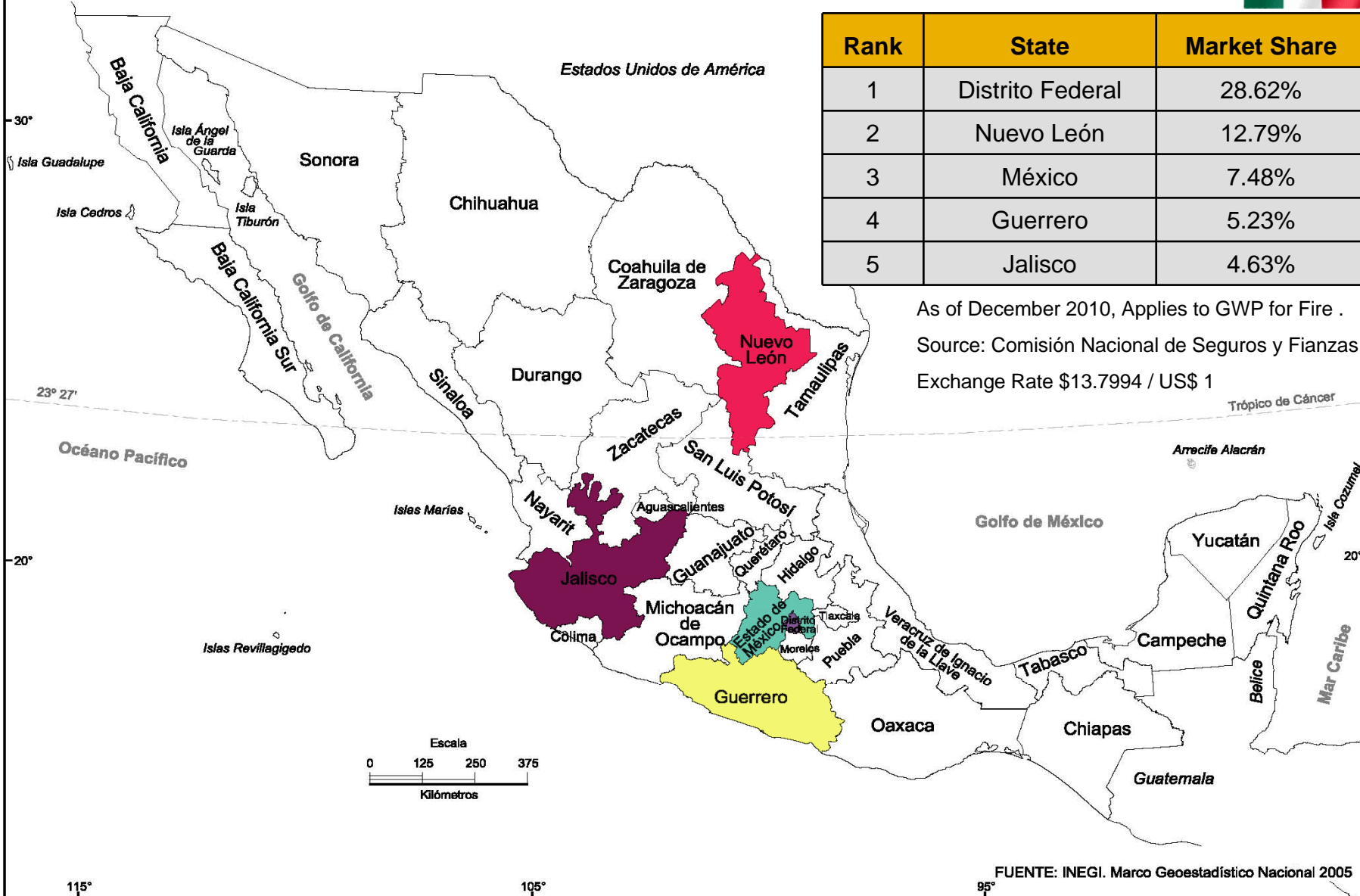
Rank	Company
1	AXA Seguros
2	Mapfre Tepeyac
3	Seguros Atlas
4	G.N.P.
5	Zurich
6	ABA Seguros

* As of September 2011,

Source: Asociación Mexicana de Instituciones de Seguros

Estados Unidos Mexicanos

Regional Distribution - Homeowners





Main Variables – Homeowners

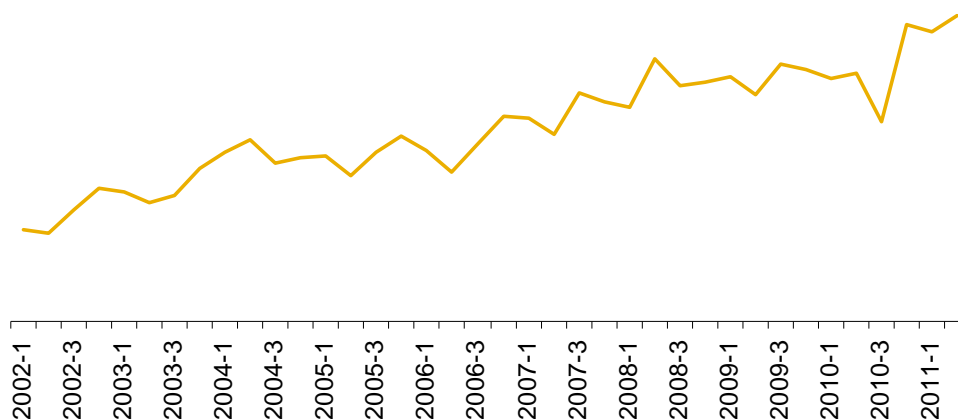
- The main variables used for pricing or risk selection for an Insurance Company:
 - Geographic Zone
 - Construction Type.
- There is a law in Mexico City that force the flats or houses in a condominium area to buy Homeowners insurance.



Overview

- Unofficial market sources estimate that no more than 30% of homes in the country have insurance
- Cover is bought by upper and upper-middle classes
- The lower-middle class is overwhelmed by offers through the banks
- A variety of covers is available

Issued policies



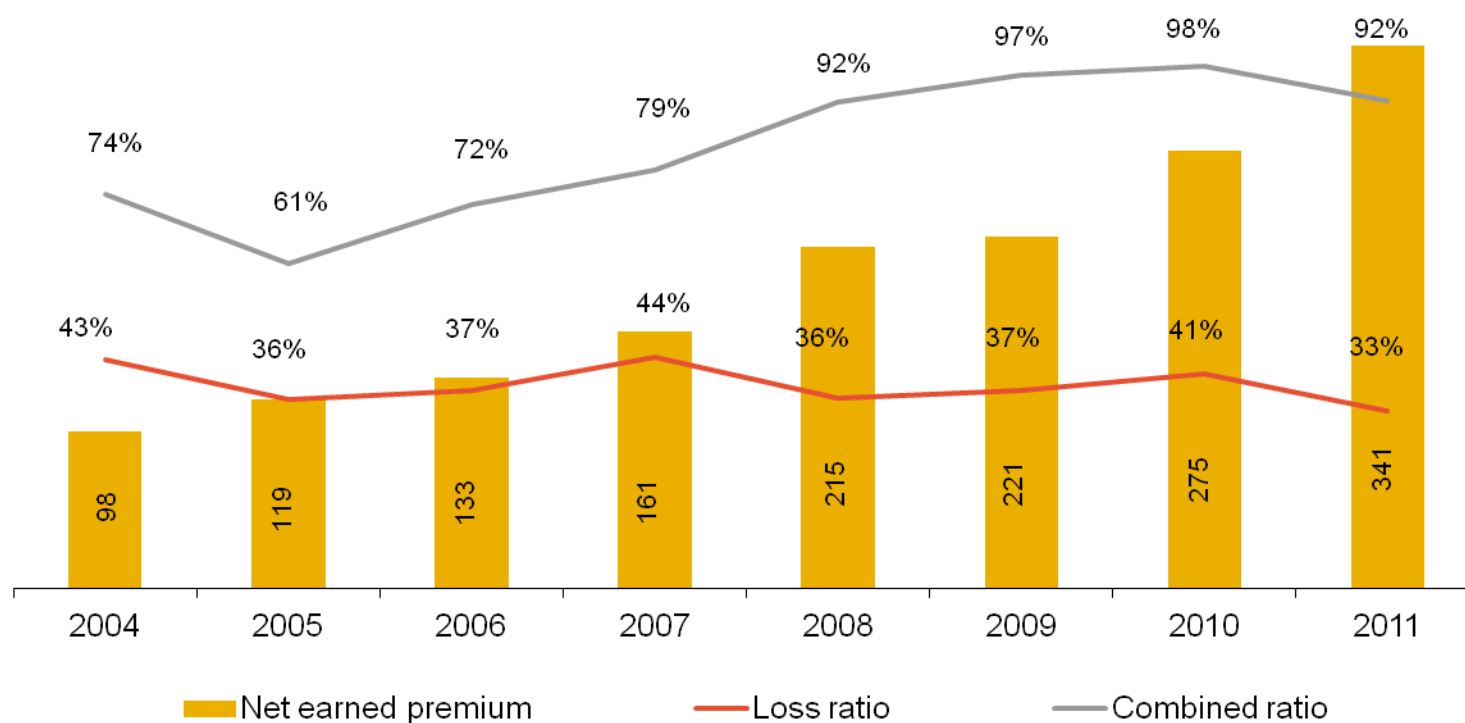
**13% average
annual change
rate**

Homeowners' insurance is not especially price sensitive and prices have simply accompanied inflation in the past two years. Quality of service, on the other hand, is becoming more and more important.



Performance

- Loss experience has been good, with Loss ratio being around 40% for the last 8 years.





Products

- Products are **highly commoditized**, with a great range of different products
 - **Pre-packaged**, inflexible products, offering basic buildings and/or contents cover for a pre-determined range of sums insured at low prices, normally **offered by banks**
 - **Slightly wider and more flexible covers** through major department stores and utility companies, although they are **also packaged**.
 - **Tailor made policies** for insureds purchasing through brokers or directly from the insurance companies



Typical basic cover

- The typical basic cover offered by a standard package includes:
 - Buildings and/or contents
 - Burglary and theft
 - Third party
 - Glass and lock breakage
 - Contents within the insured property
 - Emergency assistance
 - Personal accident
 - Cover for electronic equipment
 - Legal expenses cover



Major companies

- There are 63 active companies as of June 2011

Insurers	GWP ('000 USD)	Market Share
Sancor	146,656,687	8.1%
Federación Patronal	126,452,643	7.0%
Hsbc Seguros	120,946,513	6.7%
Galicia Seguros	108,740,011	6.0%
Mapfre Argentina	107,525,191	5.9%
Santander Rio	96,384,368	5.3%
Allianz Argentina	91,922,809	5.1%
San Cristóbal	85,321,300	4.7%
Meridional	84,474,451	4.7%
Zurich Argentina	76,817,303	4.2%
Top 5	610,321,045	33.7%
Top 15	1,304,115,528	72.0%
Top 20	1,512,539,625	83.5%



Rates and Deductibles

- Risks are rated according to their type, the security measures they offer and their location.
- Deductibles are not common for commercial reasons





Distribution

- Banks handle a large volume of the business
- They generally have several different package policies with differing scopes of cover that are sold to the banks client base





What Separates the winners and losers?

- **Main:**
 - Price
 - The sales force – agents and banks
- **Variables that may have influence:**
 - Quality of claim service
 - Customer service
 - Specialization in LOB or product
 - Infrastructure and geographic coverage
- **The companies have not fully implemented predictive models - they have taken to managing risk selection**



Questions