

A map of Latin America, including Mexico, Central America, and South America, rendered in a light blue color. The map is centered on the continent and serves as a background for the text.

# Non-Life Insurance in Latin America

2009 Casualty Loss Reserve Seminar

Scott Kurban, FCAS, MAAA

September 14, 2009

# Regional Perspective - State of the Market

- Relevant Insurance Markets (By Population in millions)
  - Brazil (191 mm)
  - Mexico (110 mm)
  - Colombia (45 mm)
  - Peru (29 mm)
  - Chile (17 mm)
  
- Relevant Insurance Markets (By Insurance Growth Potential)
  - Peru (1.50% of GDP)
  - Mexico (1.78% of GDP)
  - Colombia (2.40% of GDP)
  - Brazil (2.98% of GDP)
  - Chile (4.01% of GDP)

- England about 12% of GDP
- USA about 9% of GDP

# Latin America

- Reserving Requirements and Methodology
- Accounting and Cultural Issues
- Regulatory Environment and State of the Market
- Solvency and Capital Requirements
- Potential Impact of IFRS and Solvency II

# Reserving Requirements and Methodology

- Loss Reserves
- Unearned Premium Reserves
- Catastrophe Reserves
- Other Unique Exposures/Coverages
- Loss Adjustment Expenses
- Other Considerations

# Reserving Requirements and Methodology

- Loss Reserves – IBNR Methodology
  - Requirements for IBNR Relatively Recent
    - First Introduced Approximately 10 years ago in Brazil and Mexico
  - Technical Notes Generally Required to Document Methodology
    - Companies must follow methodology
    - Incurred Loss Development Method
  - Insurance Regulator Prescribed Methodologies
  - Gross versus Net of Reinsurance

# Reserving Requirements and Methodology

- Insurance Regulator Prescribed IBNR Methodology #1

<i>Time Period</i>	<i>Retained Paid Losses</i>	<i>Index to 2009 Level</i>	<i>Adjusted Late Reported Losses</i>
Reported and Paid in 2006 from 2005 and Prior	A	B	$C = A * B$
Reported and Paid in 2007 from 2006 and Prior	D	E	$F = D * E$
Reported and Paid in 2008 from 2007 and Prior	G	H	$I = G * H$
Estimate at 6/30/09 (Average)			$(C + F + I) / 3$

# Reserving Requirements and Methodology

- Insurance Regulator Prescribed IBNR Methodology #1
  - Captures a portion of the “pure” IBNR element only
  - Method Assumptions
    - Claims Reporting Pattern Long Enough and Consistent
    - Consistent Volume
    - Paid Losses Accurately Reflect Ultimate Losses
    - Late Reported Claims are Paid in the First Year of Report
    - Claims Already Reported have Adequate Reserves
  - Method projects pure IBNR losses only one year ahead
    - Provides reserve for claims that will be reported and paid in 2009 only

# Reserving Requirements and Methodology

- Insurance Regulator Prescribed IBNR Methodology #2

- Annual or Longer Policies

- Percentage of Retained Claims from Prior 12 Months Adjusted for Inflation

Line of Business A	1.5%
Line of Business B	6.0%
Line of Business C	2.5%
Line of Business D	1.5%

- Monthly Policies

- Percentage of Average Monthly Retained Claims over Prior 6 Months

Line of Business B	75.0%
Line of Business C	25.0%
Line of Business D	15.0%
Line of Business E	15.0%
Line of Business F	95.0%

- Companies can Use Different Percentages with Justification and Approval



# Reserving Requirements and Methodology

- Loss Reserves – Judicial Claims
  - Claims with Attorney
  - Categorized with either a Probable/Possible/Remote chance of eventual payment to the claimant (Brazil)
  - Inconsistent Categorization
  - Inconsistent Reserves Booked According to Category
  - Claims often Maintained Outside Company Claims System
    - Claim History Can be Difficult to Track
  - IBNR?

# Reserving Requirements and Methodology

- Loss Reserves – Judicial Claims
  - Possible Reserve Testing Methods
    - Triangles
      - Included versus Excluded with Other Claims
      - Adjust for Inflation
    - Back-testing
      - Compare Actual Payments to Prior Reserves by Category
      - Still Need IBNR
    - Statistical Model
      - Complicated
      - Requires Time and Expense

# Reserving Requirements and Methodology

- Unearned Premium Reserves
  - Daily Pro-Rata Most Common Approach
    - Exceptions Exist – Rule of Eighths
  - Net of Reinsurance
  - Gross versus Net of Prepaid Expenses
    - 100% of Net Retained Premiums
    - 80% of Net Retained Premiums
    - X% of Net Retained Premiums by Line of Business
  - Premium Deficiency Reserves
    - Included with UPR versus Separate Line Item
    - No Guidance versus Prescribed Formula

# Reserving Requirements and Methodology

- Catastrophe Reserves

- Contingency Reserves for Events that have NOT yet Occurred
  - Earthquakes
  - Hurricanes
  - Other CATs
- Calculated According to Prescribed Formula
  - Probable Maximum Loss
  - Net Sum Insured or Premiums
  - Other Parameters
- Increase Incrementally with Each Calculation
- Released Only Following CAT of Required Magnitude
  - Requires Regulator Approval to Release Reserve

# Reserving Requirements and Methodology

- Other Unique Exposures/Coverages
- SOAT
  - Seguro Obligatorio de Accidentes de Transito
  - Mandatory Coverage
  - Voluntary versus Mandatory Participation
  - Fixed Profit Margin?

# Reserving Requirements and Methodology

- Loss Adjustment Expense Reserves
  - ALAE
    - Future Expenses Directly Attributable to Individual Claims
    - Generally Included with Losses
  - ULAE
    - Future Expenses Not Assignable to Individual Claims
    - Not Required or Established in Latin America

# Reserving Requirements and Methodology

- Other Considerations

- Data

- Historic Loss Payments or Case Reserves Not Always Maintained
    - Significant Improvements in Recent Years
    - Can Be Limiting Factor for Independent Review and Stochastic Modeling

- Inflation

- 1980's and 1990's Decades Extremely Volatile
    - Stabilization of Moderate Rates in Recent Years
    - Economic Environment can Quickly Change

- Currency Risk

- Insurance Products Offered in Both Local Currency and US\$
    - Historically, US\$ has been the stronger currency (until recent years)
      - Used by Consumers as Hedge against Local Inflation

# Reserving Requirements and Methodology

- Other Considerations

- Asset /Liability Matching

- Lack of Proper Investment Instruments Corresponding to Nature of Liabilities
      - Duration Mismatch – Investment Instruments in the market typically do not go beyond 6-8 years
      - Reinvestment Risk can be Serious Issue
    - Currency Risk

- Reinsurance

- Reinsurance Regulatory Environment Varies Across Region
    - Brazil – Historic Monopoly of State Owned IRB Brazil Re
      - December 2007 Approval to Open Reinsurance Market
      - Open Competition Transition



# Accounting and Cultural Issues

- IBNR – Best Estimate Versus Compliance
  - Actuarial Certification?
- Judicial Claims Reserves
  - Included with Loss Reserves?
  - Increasing Attorney Involvement?
- Catastrophe Reserves
  - Segregation of Surplus versus True Loss Reserve
  - Can be Significant
  - Pose a Strain on Release of Capital for Modeling Purposes
- UEPR Net of Prepaid Expense versus DAC

# Accounting and Cultural Issues

- “Special Reserves”
- *Depósitos Reaseguradores*
  - Deposit Reserve for Premiums Ceded to Foreign Reinsurers
  - Effectively a contingency reserve for the risk that foreign reinsurers will not pay their claim obligations
  - Effectively creates a cost of capital in the first year of business, followed by a decrease in the following year
- Role of Actuaries
  - Historically Limited
  - Changing?
  - Expats

# Solvency and Capital Requirements

- Most countries follow Solvency I guidelines as defined by European Union
  - Technical Surplus Calculated by Formula (Variation of “Surplus”)
  - Two Solvency Tests of Technical Surplus
    - First Test – Comparison to Minimum Capital Requirements
      - Minimum capital requirement for P&C company
      - Additional capital requirements by line of business
    - Second Test – Comparison to a Solvency Margin
      - Solvency Margin is the greater of 2 Solvency Margins
        - » One Based on Premium (% of Premium times Net to Gross Claims Ratio)
        - » One Based on Claims (% of 3 Year Claims Average)

# Solvency and Capital Requirements

- Some Countries are Moving to Update Solvency Requirements
  - Mexico now Requires a Dynamic Solvency Test
    - Closer to the Concept of Risk Based Capital
  - Brazil has Recently Passed New Regulations on Capital Requirements
    - Incentives for Insurers to Develop Internal Risk Models
    - Began with Underwriting Risk
    - Trending towards use of Stochastic Models in Calculating Economic Capital
- Discussions to Adopt Stochastic Models in Move Towards Supervision Based on Risk
  - Brazil, Chile, Mexico
  - Rest of Region Limited by Actuarial Expertise to Manage and Regulate, as well as lack of quality historical data

# Potential Impact of IFRS and Solvency II

- Commitment to Adopt IFRS
  - Brazil
  - Chile
- Anticipate Adoption of Solvency II Version
  - Mexico
  - Colombia

# Potential Impact of IFRS and Solvency II

- Discounted Reserves at Market Interest Rates
- Explicit Risk Margin
- Reserves on Balance Sheet Gross of Reinsurance
- Reinsurance Receivable Shown Separately
- Catastrophe Reserves
  - IFRS 4 requires that any reserve that is not directly related to the obligations of existing contracts cannot be shown as a liability
  - Certain “reserves” often known as catastrophe or equalization reserves are not related to current obligations from existing policies
  - IFRS 4 requires they be included with equity rather than shown as liabilities

# Potential Impact of IFRS and Solvency II

- Significant disclosure regarding the expected timing and potential variability of future cash flows
- Most companies adopting IFRS will not have produced this information in the past
- Increasingly complex technical skills required

# Regulatory Environment

- Governmental Regulatory Bodies
- Associations of Insurance Companies

## **Brazil**

<http://www.susep.gov.br>  
<http://www.fenaseg.org.br>  
<http://www.irb.gov.br>  
<http://www.ans.gov.br>

## **Chile**

<http://www.svs.cl>  
<http://aach.cl>  
<http://www.isapre.cl>

## **Colombia**

<http://www.superfinanciera.gov.co>  
<http://www.fasecolda.com>  
<http://www.supersalud.gov.co>

## **Mexico**

<http://portal.cnsf.gob.mx>  
<http://www.amis.com.mx>  
<http://www.banxico.gob.mx>

## **Peru**

<http://www.sbs.gob.pe/PortalSBS/>  
<http://www.apeseg.org.pe/>



Questions?