Reserving for Mortgage Insurance in a Changing Real Estate Market

Casualty Loss Reserve Seminar

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September 10, 2007

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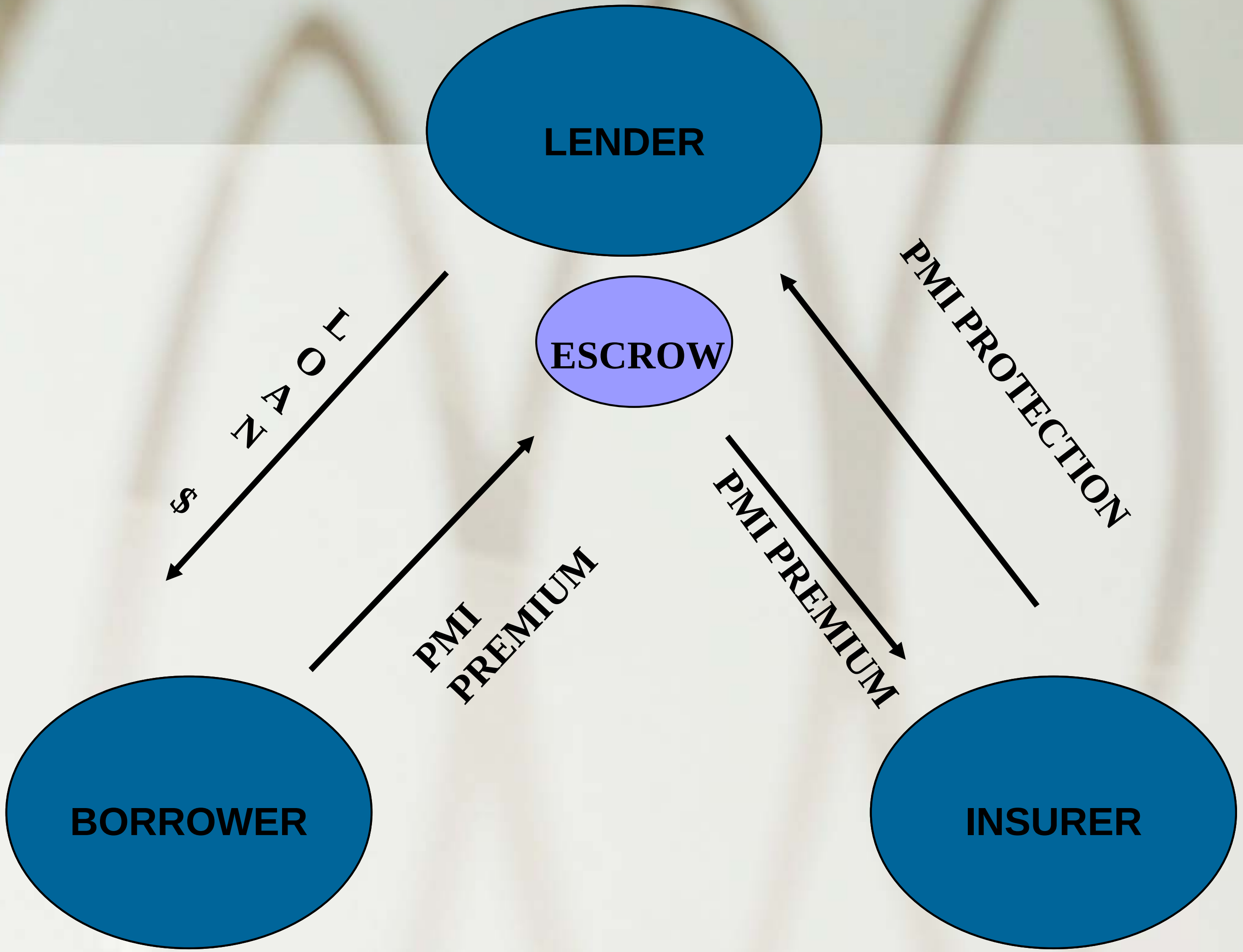
Outline of Presentation

- What is Mortgage Insurance - Basics
- Reserving Framework
- Methods for Reserving (and pitfalls/challenges)
- Current Conditions

Dynamics of The Contract

- Premium Payer - Borrower
- Insured - Lender/Investor
- Insurer - Private Mortgage Insurer



LENDER
ESCROW
LOAN $
PMI PROTECTION
PMI PREMIUM
PMI PREMIUM
BORROWER
INSURER

Basics of Mortgage Guaranty Insurance (MI)

- Covers lender/investor for financial loss if borrower defaults
- Required if (loan > 80% x property value)
- Lender selects MI carrier, submits the premium, receives the claim benefit
- Lender bills MI via escrow payment
- MI carrier prohibited from paying the lender a commission, policyholder dividend or rebate

Coverage
Private Mortgage Insurers

- Purpose: Protect Lenders From Default Related Losses for Purchases With Down-Payments Below 20% of Purchase Price
- Expenses: - Accrued Interest During Delinquency & Foreclosure (Typically One Year)
  - Legal fees
  - Home Maintenance & Repair Expenses
  - Real Estate Broker Fees
  - Closing Costs
- Expenses Typically 15% or More of Loan Amount
- Additional Loss if Property Resold for Less Than Original Purchase Price

Coverage (Continued)

- Guarantee Payment to Lender of Top 20-30% of the Claim Amount
- Act as Review Underwriter for Credit (& Collateral) Risks on Individual Loans
- Major Investors Fannie Mae and Freddie Mac Require Mortgage Insurance or other credit enhancement on Low Down-payment Loans

Claim Process

- Type and Amount of Coverage Selected by Lender Determines How Much Insurer Will Pay
- Borrower Defaults and Lender Initiates Foreclosure and Takes Title to the Property
- Lender Can Then Submit Claim to Insurance Company
- Claim Amount Generally Includes:
  - Outstanding Loan Balance
  - Accrued Interest due on Loan
  - Legal Expenses During Foreclosure
  - Home Maintenance Expenses
  - Any Tax or Insurance Advances Made by Lender

Claim Process (Continued)

- Insurer Has the Following Options:
  - Pay Entire Claim Amount and Take Title to the Property (REOs)
  - Pay the Coverage Percentage of the Total Claim Amount As Stated in the Policy and Let the Lender Retain Title to the Property
  - Negotiated Settlement
- Insurer’s Critical Evaluation - What Is the Estimated Resale Price for the Property After Real Estate Agent and Other Expenses

The Risk Factors

- Size of down-payment
  - (Rates and Risk Vary With LTV)
- Property Appreciation Potential
- Borrower Credit History
- Documentation of Income/Assets
- Purpose of Loan
- Type of Mortgage Instrument
- Interest Rate

The Risk Factors (Continued)

- Policies Are Guaranteed Renewable
  - Risk Cycle Generally Lasts for 7 to 10 Years
  - Policies Renewable at the Lender's Option
  - Renewal Premium Rates Set at Inception
  - Insurer Cannot Change Rates to Reflect Changes in Risk Characteristics
- Property Value Risk Factor is Root of Catastrophic Nature of Mortgage Insurance
  - Dependence on Economic Conditions
  - Considerable Losses Have Resulted From Regional Recessions
    - Energy Producing Regions - Early 1980s
    - Defense Industry Regions - Early 1990s

Restrictive Statutory Rules

Original MI industry failed during 1930s; losses impaired multi-line insurers -- Hence rebirth in 1957 was under restrictive statutory rules:

- Monoline: Cannot endanger P&C co's w/MI risk
- Capital: 25-to-1 risk-to-capital ratio
- Exposure: Insure < 25% of any 1 loan
- Concentration: Less than 10% of risk w/1 lender
- Contingency reserve: Restricts dividends
- Reinsurance: Only with another MI or an insurer backed by a trust account/LOC

Contingency Reserves

- 50% of earned premium each calendar year is set aside into a contingency reserve and held for 10 years
- Losses in excess of a 35% loss ratio in a calendar year can be removed on a FIFO basis (this can vary by state)
- After 10 years, remaining funds, if any, can be moved to free surplus

Reserving Practices for Mortgage Insurance
Matching?

- Deferred losses: dominated by years 3 through 7
- However, premium is front loaded
  - Reflects declining insurance in-force for book year
- Poor matching
- Contingency reserve mitigates this on a statutory basis
- Premium Deficiency Reserve if extreme on a cumulative run-off basis

Reserving Practices for Mortgage Insurance

- Loss incurred when loan defaults (delinquent)
- Reserves only for current delinquencies
  - Known delinquencies (case reserves)
  - Unreported current delinquencies (IBNR)
- Statutory contingency reserve

Reserving Practices for Mortgage Insurance

Reserving Framework

- Short tail since only reserving for *current delinquencies*
- IBNR - Estimated loss reserve provision for pipeline delinquencies
  - Delinquent loans that have not been reported to insurer
  - Based on a review of lag experience
  - Small provision
- Case reserves are where the action is at!

Reserving Practices for Mortgage Insurance

Case Reserve Approaches

- Delinquency period cohort data analyzed
- Large data sets that are ripe for GLM techniques
- Frequencies: Conditional probability of a claim for a particular delinquency
  - Past delinquencies either: claim/cure/pending
- Severity ultimate loss with expenses as a percentage of risk
  - Risk = coverage on loan (varies by Loan to Value ratio)

Reserving Practices for Mortgage Insurance

Frequency/Severity Analysis

- Frequencies analyzed by delinquency status (various refinements on the following broad categories)
  - Length of delinquency or number of missed payments
    - 30/60/90/120, etc.
  - Foreclosure (pending, etc.)
  - Claim filed
  - REO

Reserving Practices for Mortgage Insurance

Frequency/Severity Analysis

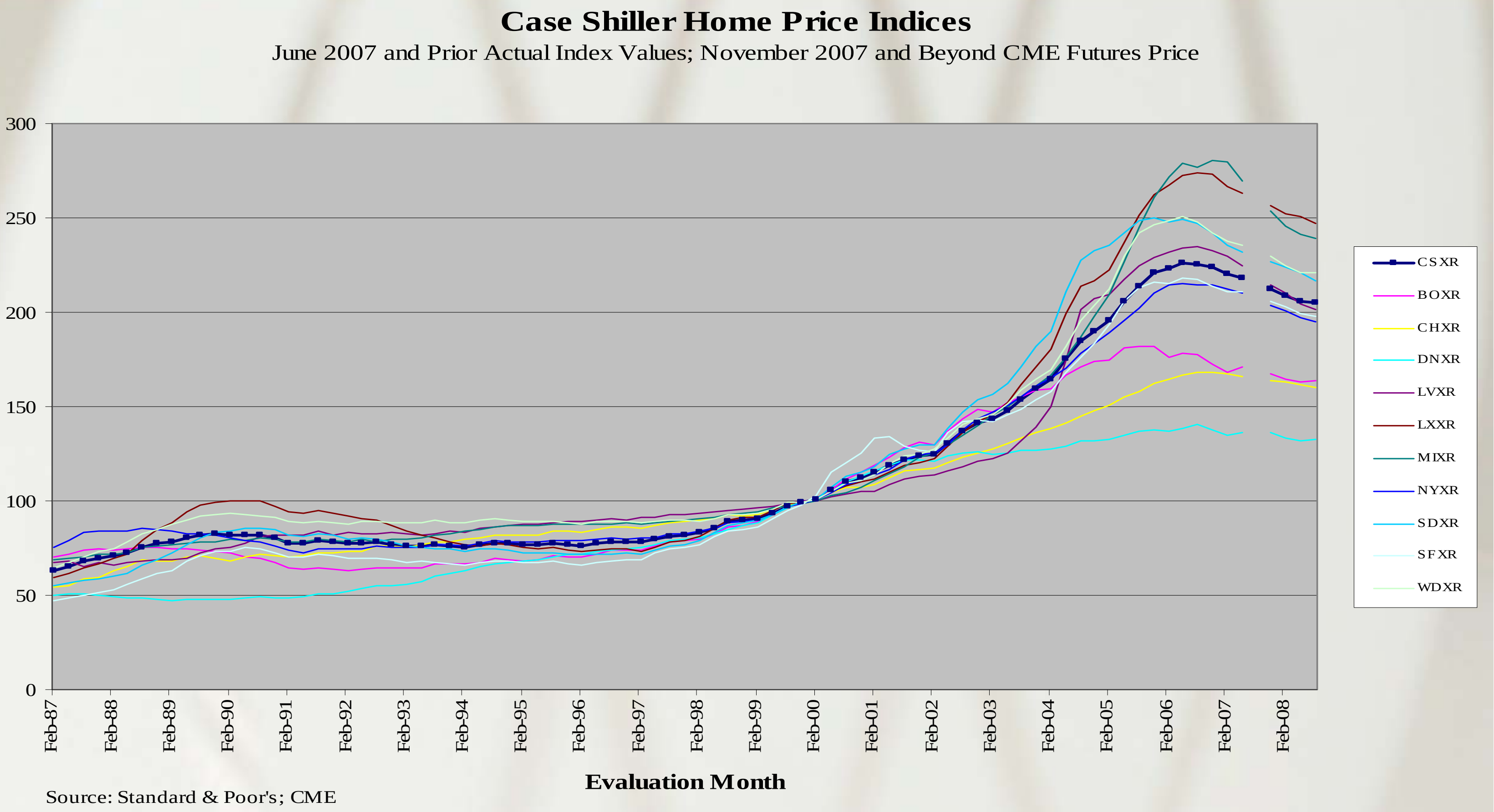
- Frequencies and Severities further analyzed by:
  - Loan to Value ratio (LTV)
  - Region (broad groups/state/MSA)
  - Product (loan type)
  - Purpose (primary residence/second home/investor)
  - Book Year
  - FICO
  - Number of delinquency trips

Reserving Practices for Mortgage Insurance

Pitfalls and Challenges

- Economically correlated risks
- Frequencies and severities strongly correlated
- Economic conditions over the next couple years critical
- Capturing emerging trends
  - Recent past experience not indicative of future
  - We are currently passing through a regime shift
  - Home price appreciation (HPA) is the critical factor

S&P Case Shiller Index



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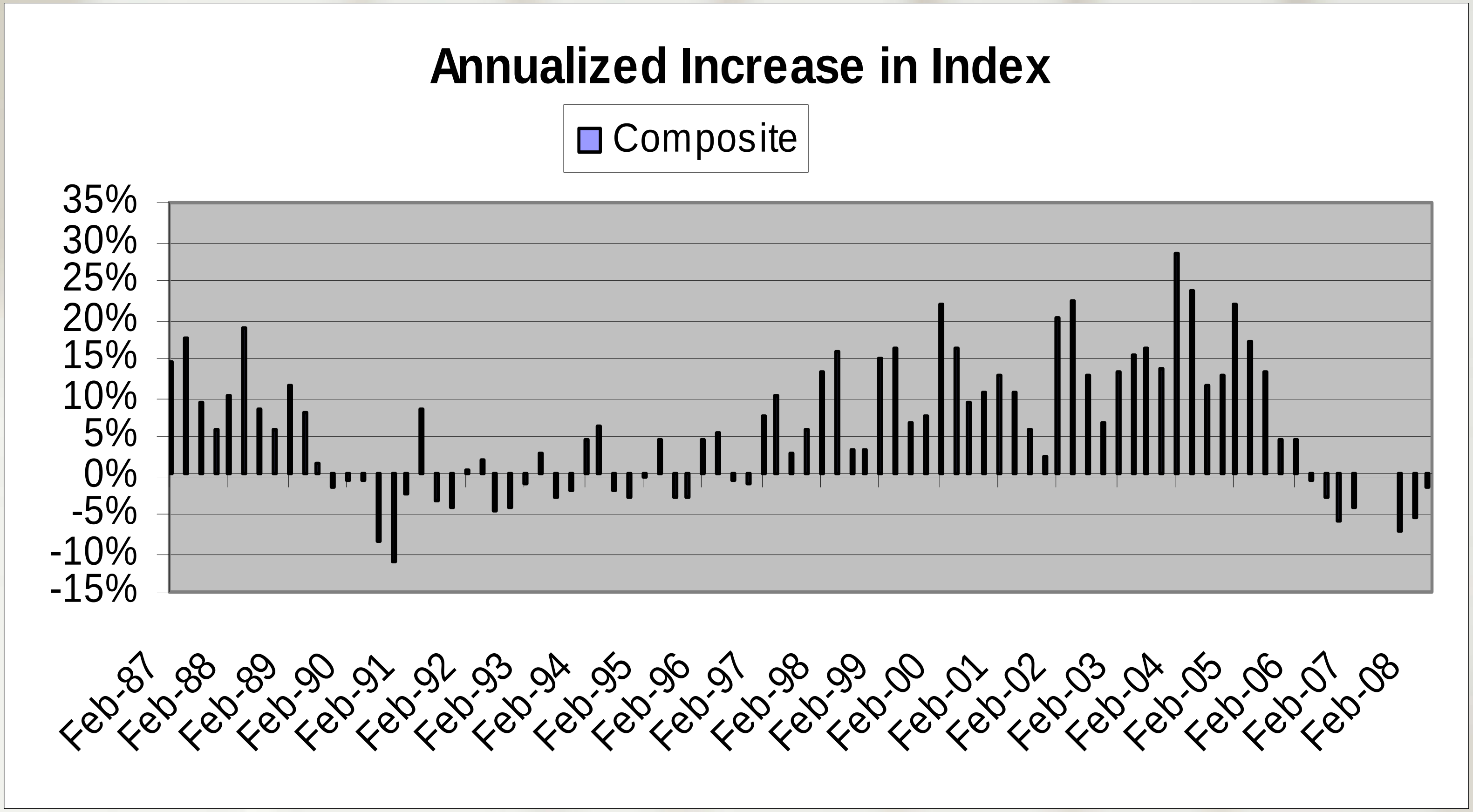

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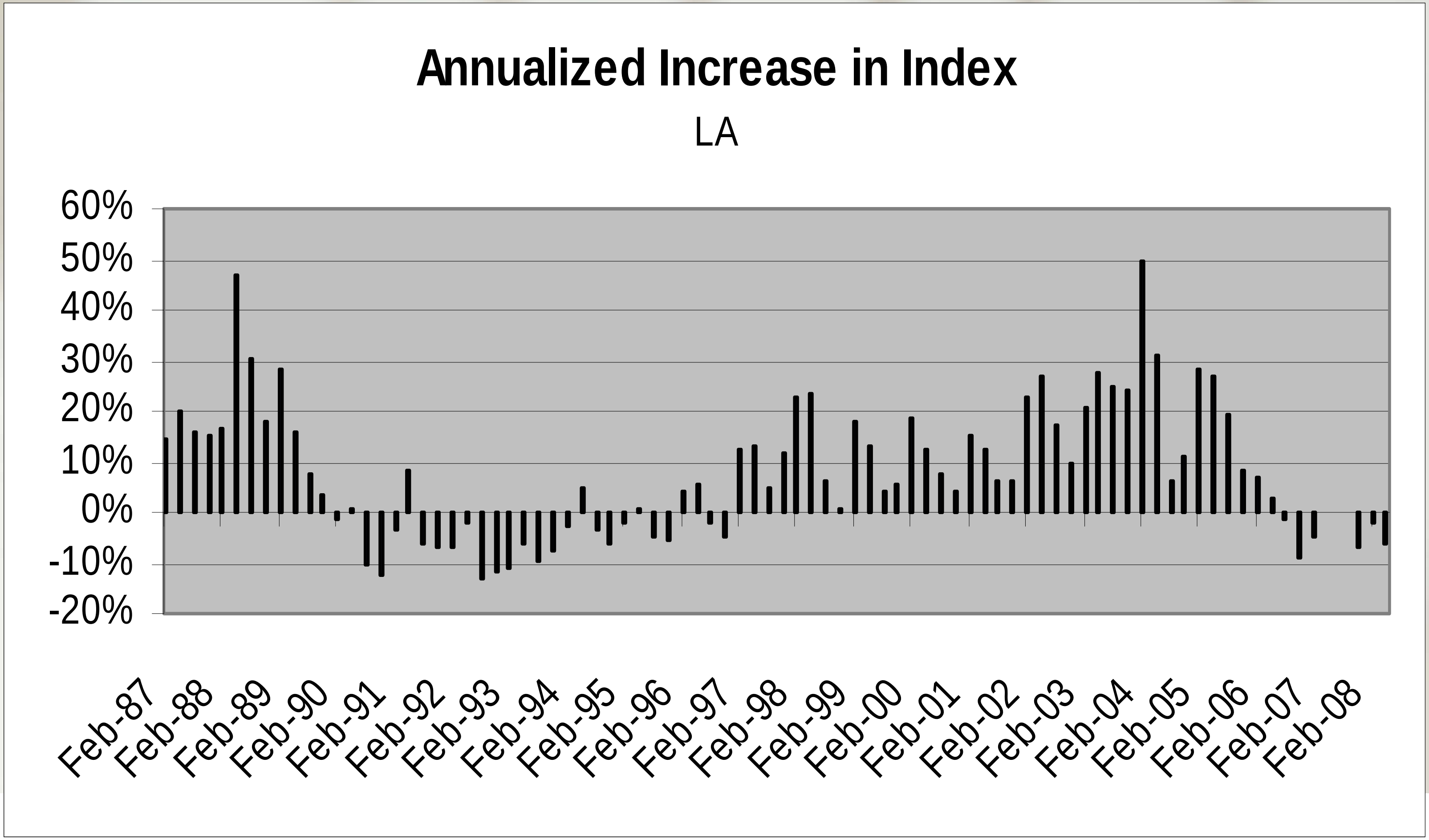

S&P Case Shiller Index

- Latest quarter decreased in 8 out of 10 cities
  - Miami leads at 13% annualized decrease
  - Composite decreased 4%
- Futures values imply decreases in all 10 continuing into 2008
  - Composite decrease of 7% annualized quarter beginning Nov 07
- Major implications for reserving

Reserve Implications

- Rising Delinquencies
  - Larger reserve bases
  - While small in comparison, pipeline IBNR increasing
- Frequencies and severities will rise sharply
  - Especially for 2006 and 2007 origination years
  - Especially in certain regions (Florida, CA, etc.)
  - Especially in certain products/purpose (IO/certain ARMs/Investor Loans)