Reserving for Mortgage Insurance in a Stressed Real Estate Market

Casualty Loss Reserve Seminar

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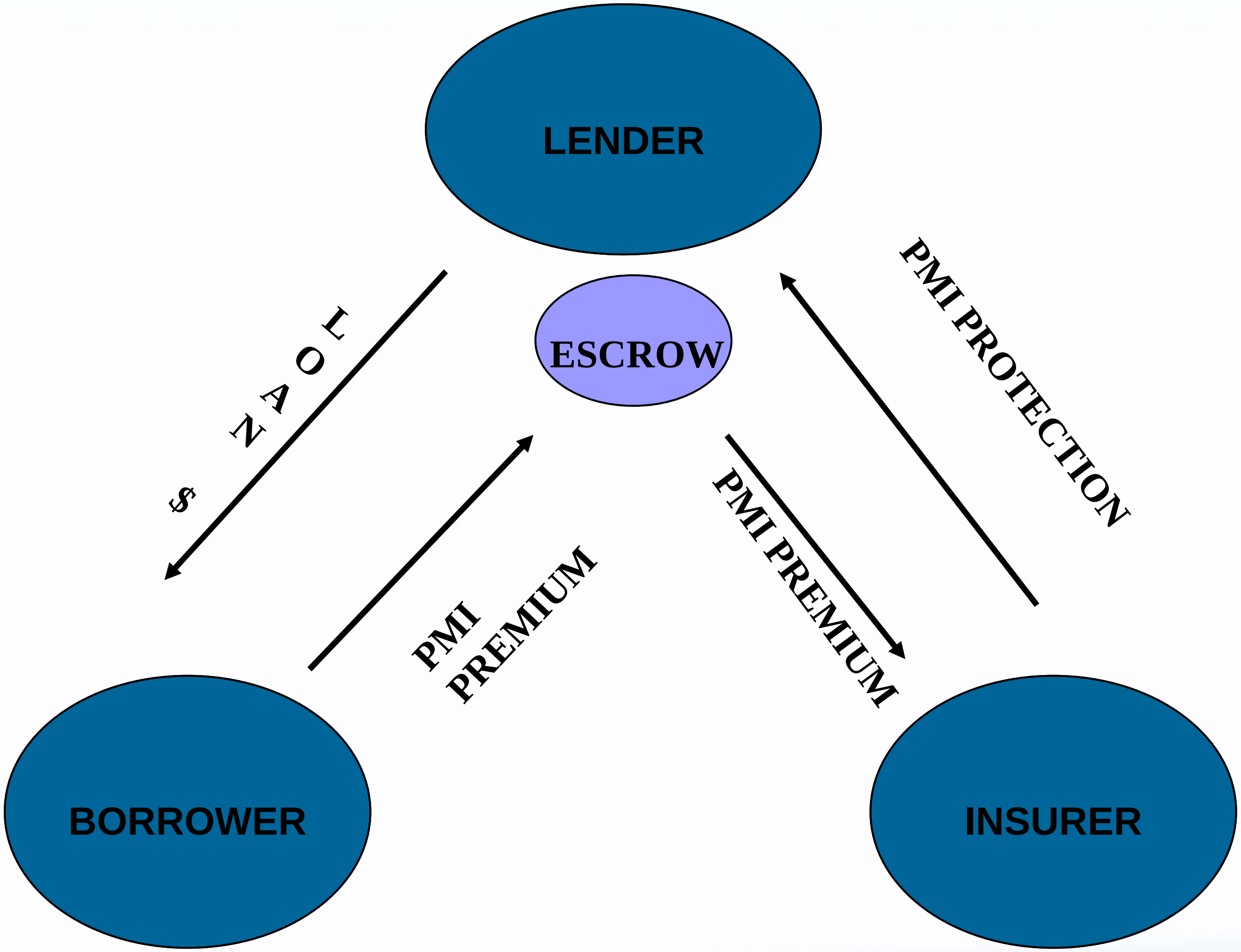
Outline of Presentation

- What is Mortgage Insurance – Basics
- Reserving Framework
- Methods of 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, policy holder 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 to 18 months on average)

  - Legal fees
  - Home maintenance and repair expenses
  - Real estate broker fees
  - Closing costs
- Expenses typically 15% or more of loan amount
- Additional loss if property sold for less than original purchase price

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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 (REO's)
  - 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

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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 7 to 10 years
  - Policies renewable at the lender's option
  - Renewable 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 condition
  - Considerable losses have resulted from regional recessions
    - Energy producing regions – Early 1980's
    - Defense industry regions – Early 1990's
    - Comprehensive declines of today

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 FICO 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 by 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 rather than IBNR
- Capital analysis is where even more action is!

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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, etc.
    - Foreclosure (pending, etc.)
    - Claim filed
    - REO

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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

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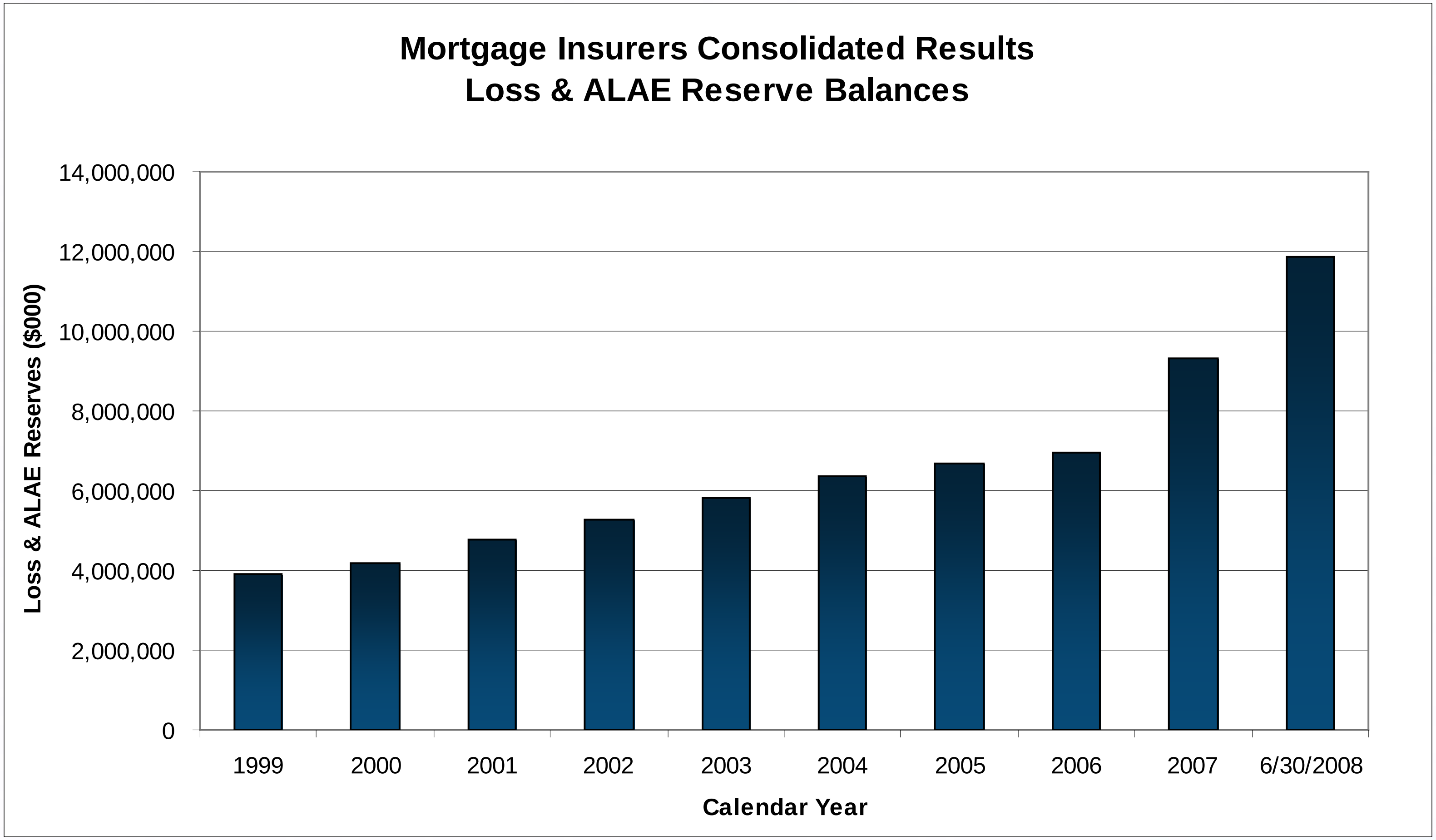
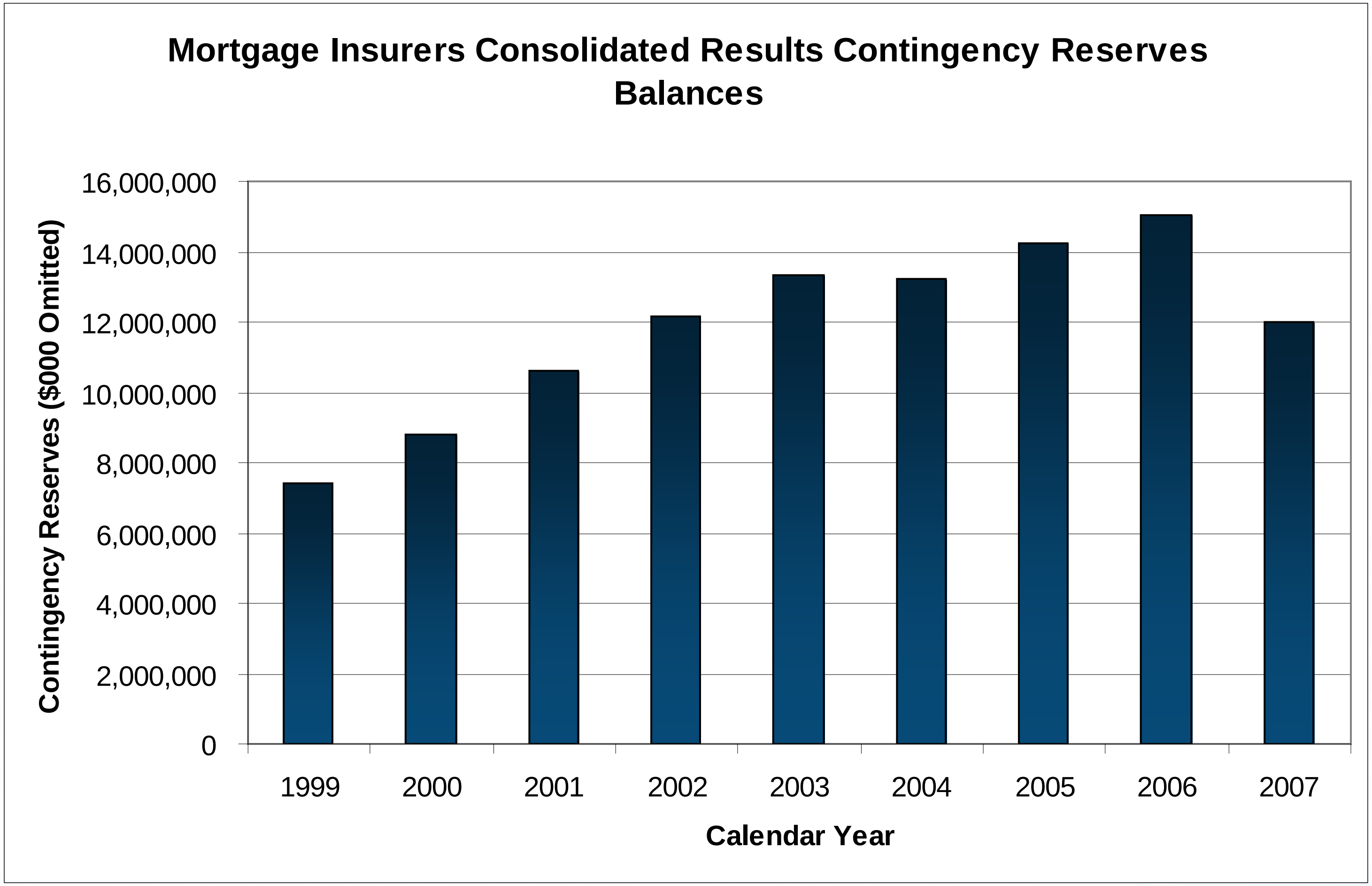
Reserving Practices for Mortgage Insurance

Pitfalls and Challenges

- Economically correlated risks
- Frequencies and severities strongly correlated
- Economic conditions over the next couple of years critical
- Capturing emerging trends
  - Recent past experience not indicative of future
  - Last year's presentation: "We are currently passing through a regime shift"
    - We have passed into that new regime
  - Home price appreciation (HPA) is the critical factor



Source: Annual Statements



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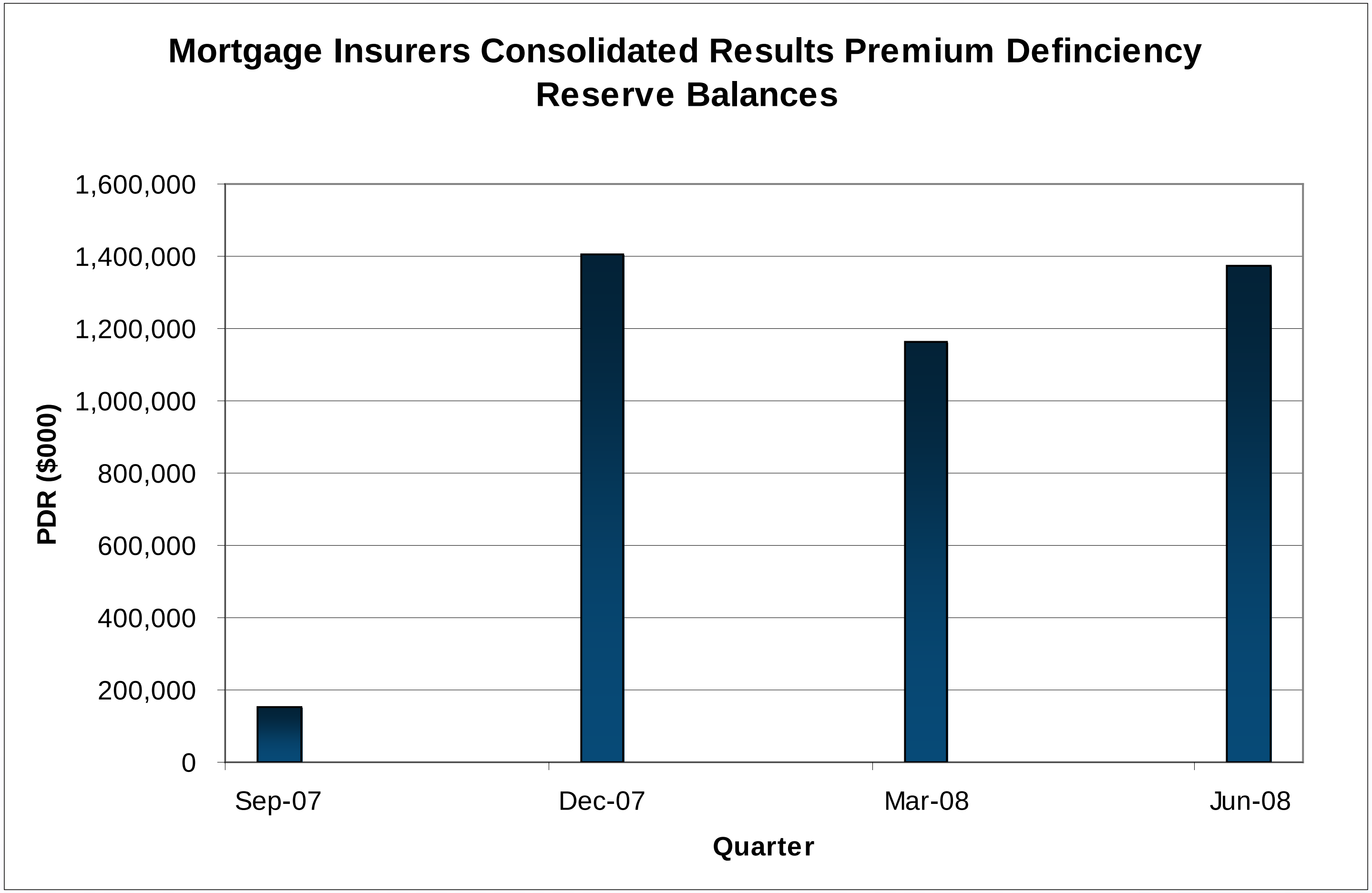

Source: Quarterly Statements

Source: Annual Statements; MBA

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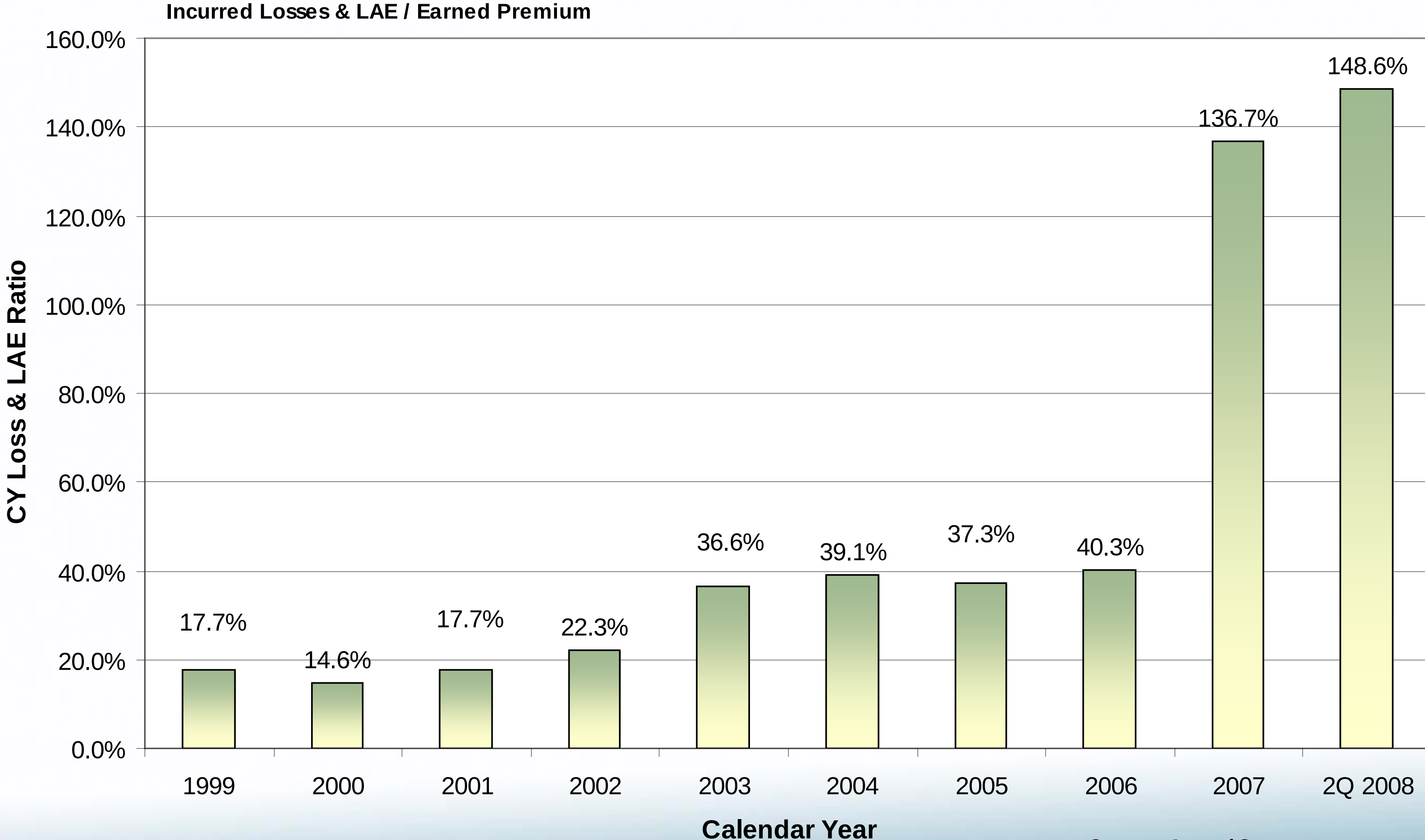
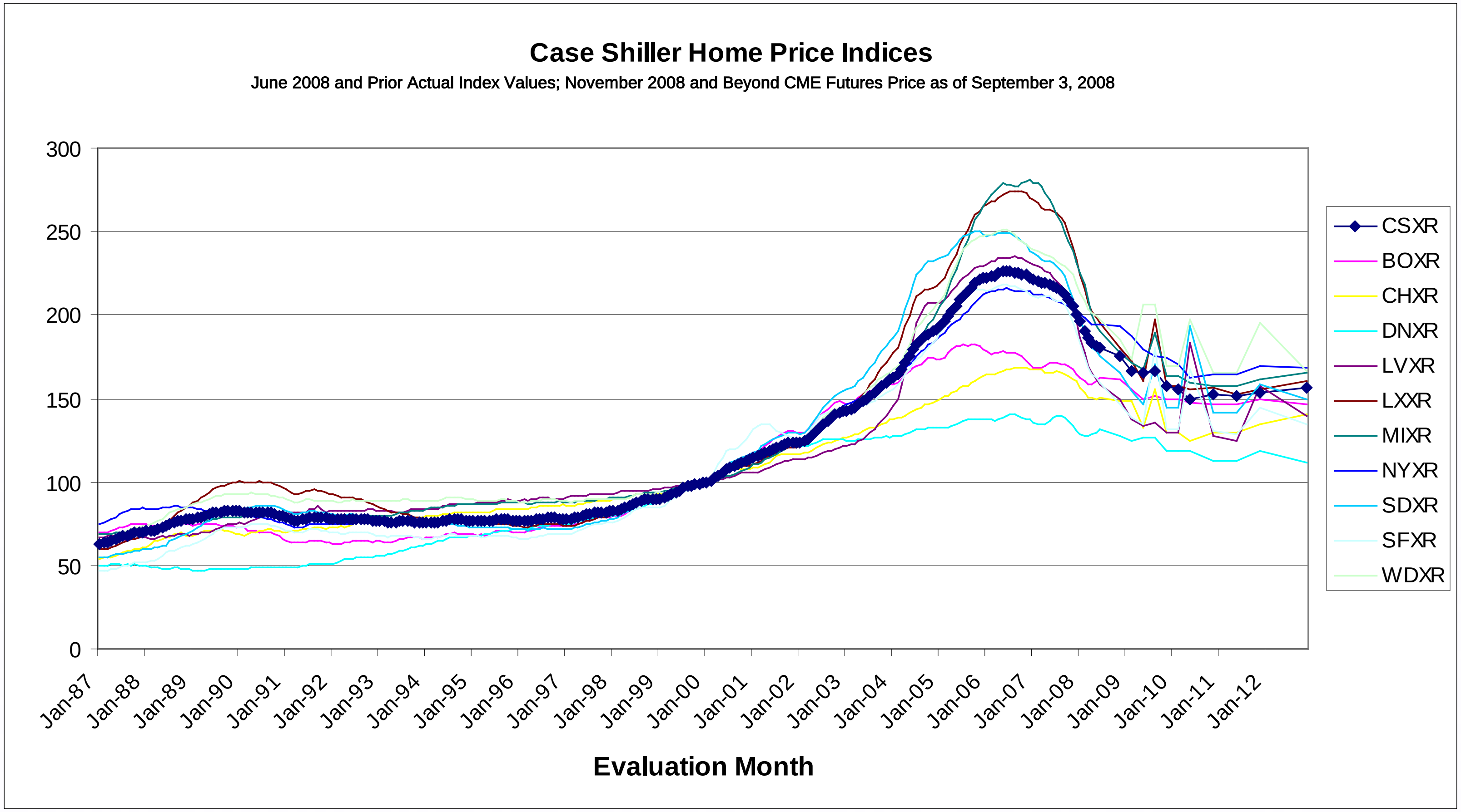
Mortgage Insurers Consolidated Results
Calendar Year Loss & LAE Ratio



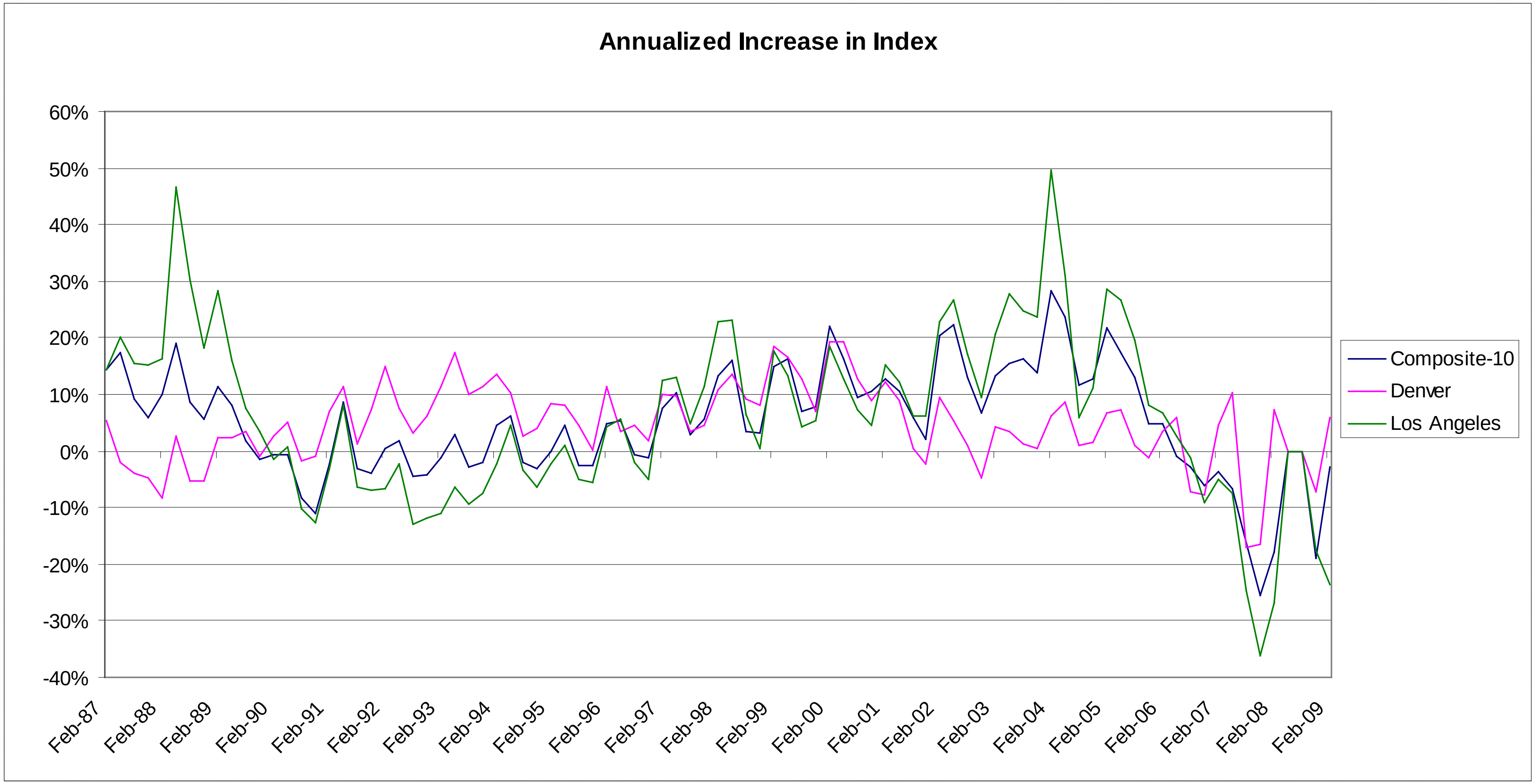
Source: Annual Statements

S&P Case Shiller Index



Source: Standard and Poor's; CSE

S&P Case Shiller Index



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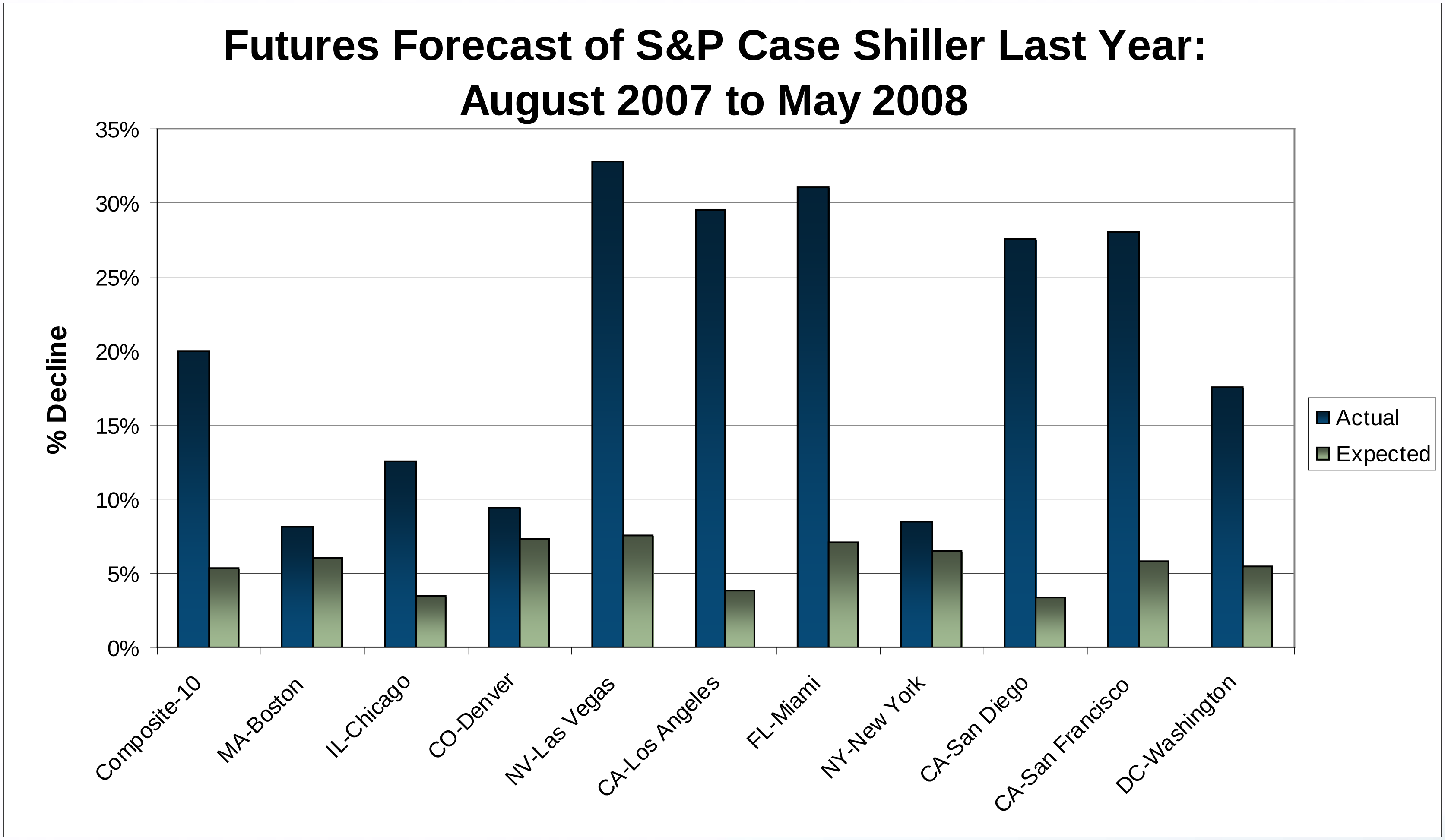

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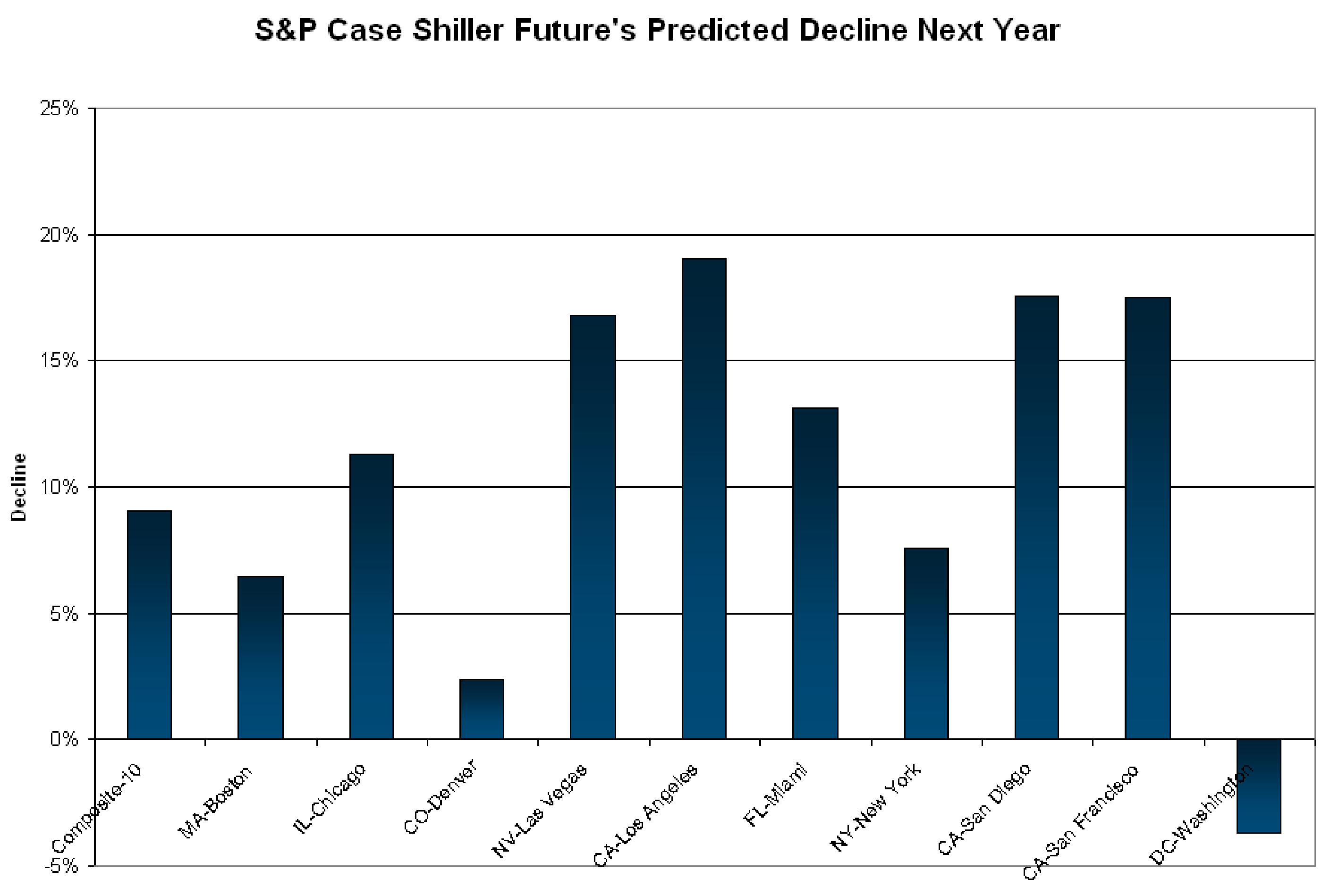

Source: Standard and Poor's; CSE

S&P Case Shiller Index

- Latest quarter decreased in 7 out of 10 cities
  - Miami leads at 32% annualized decrease
  - Composite decreased 12% (annualized)
- Futures values imply decreases in 9 out of 10 cities continuing into 2009
  - Composite decrease of 19% annualized quarter beginning Nov 08
- Major implications for reserving

Reserve Implications

- Rising delinquencies
  - Larger reserve basis
  - While small in comparison, pipeline IBNR increasing
- Last year's presentations "Frequencies and severities will rise sharply"
  - They have!!!
  - Especially for 2006-2007 origination years
  - Especially in certain regions (Florida, California, etc.)
  - Especially in certain products/purpose (IO/certain ARMs/Investor Loans)