The Subprime Mortgage Shakeout and The Role of Mortgage Servicers

Breck Robinson

University of Delaware

Banking Analytics and Supervisory Studies (BASS)
Risk & Policy, Banking Supervision and Regulation

THE FEDERAL RESERVE BANK OF RICHMOND
RICHMOND ▪ BALTIMORE ▪ CHARLOTTE

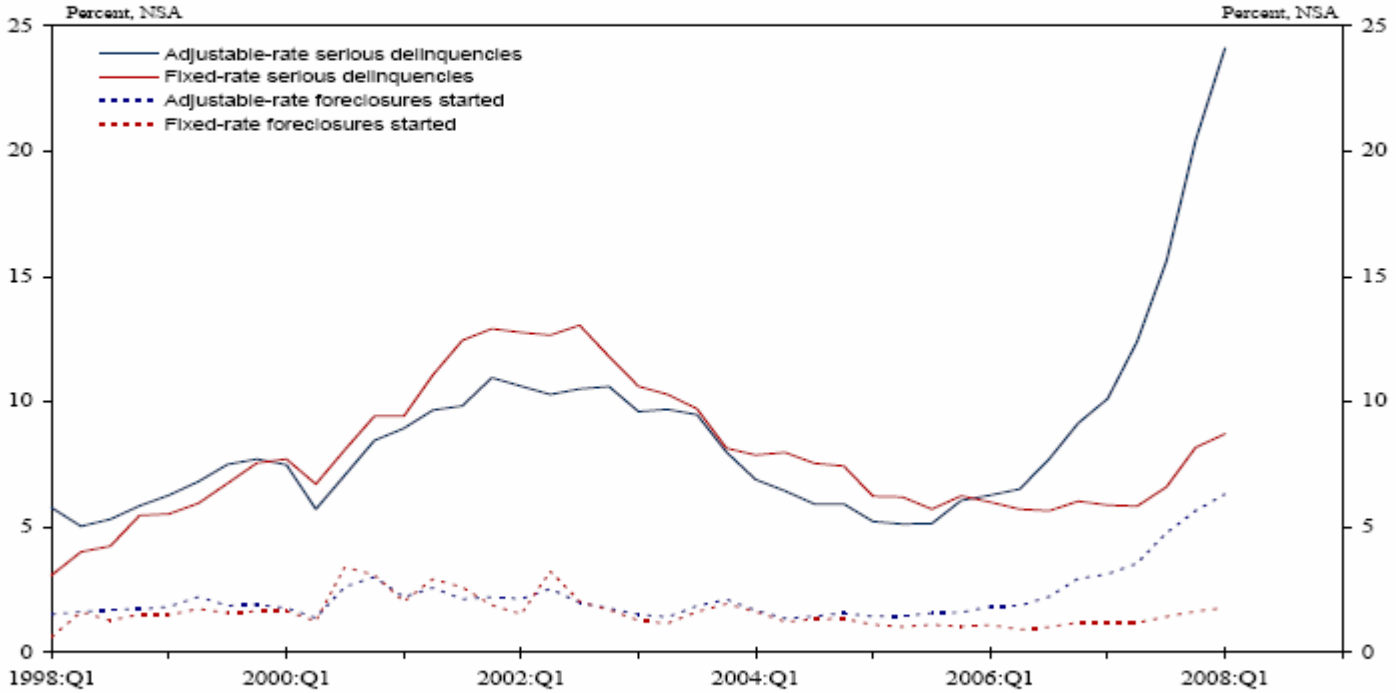
Disclaimer

- The views and opinions expressed in this presentation are those of the author
- They do not represent an official position of the Federal Reserve Bank of Richmond or the Federal Reserve System

"I THOUGHT WE WERE JUST BUYING A HOUSE!"

Breck Robinson
Banking Analytics & Supervisory Studies (BASS)

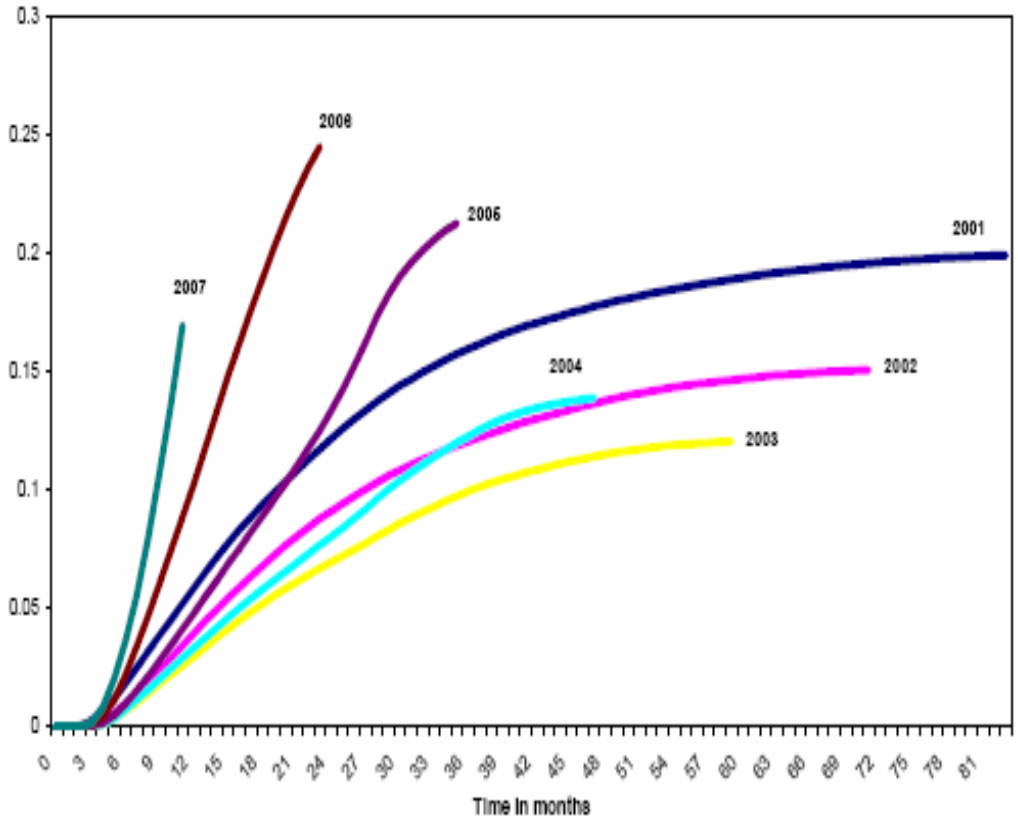
Figure 2
Subprime Mortgage Serious Delinquency & Foreclosure Start Rates
1998:Q1 to 2008:Q1



Source: Mortgage Banker's association.
Notes: Foreclosures started is the percentage rate of loans for which a foreclosure was initiated. Serious delinquencies are loans 90+ days past due plus those in foreclosure.

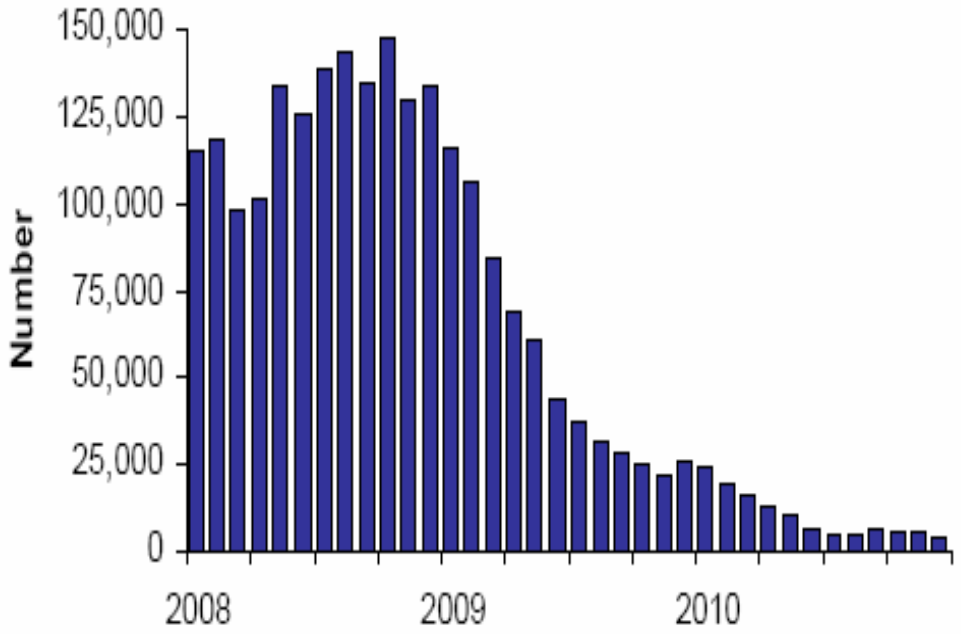
Figure 8

Cumulative Default rates on Subprime 2/28 ARMs by Origination Year: 2001-2007



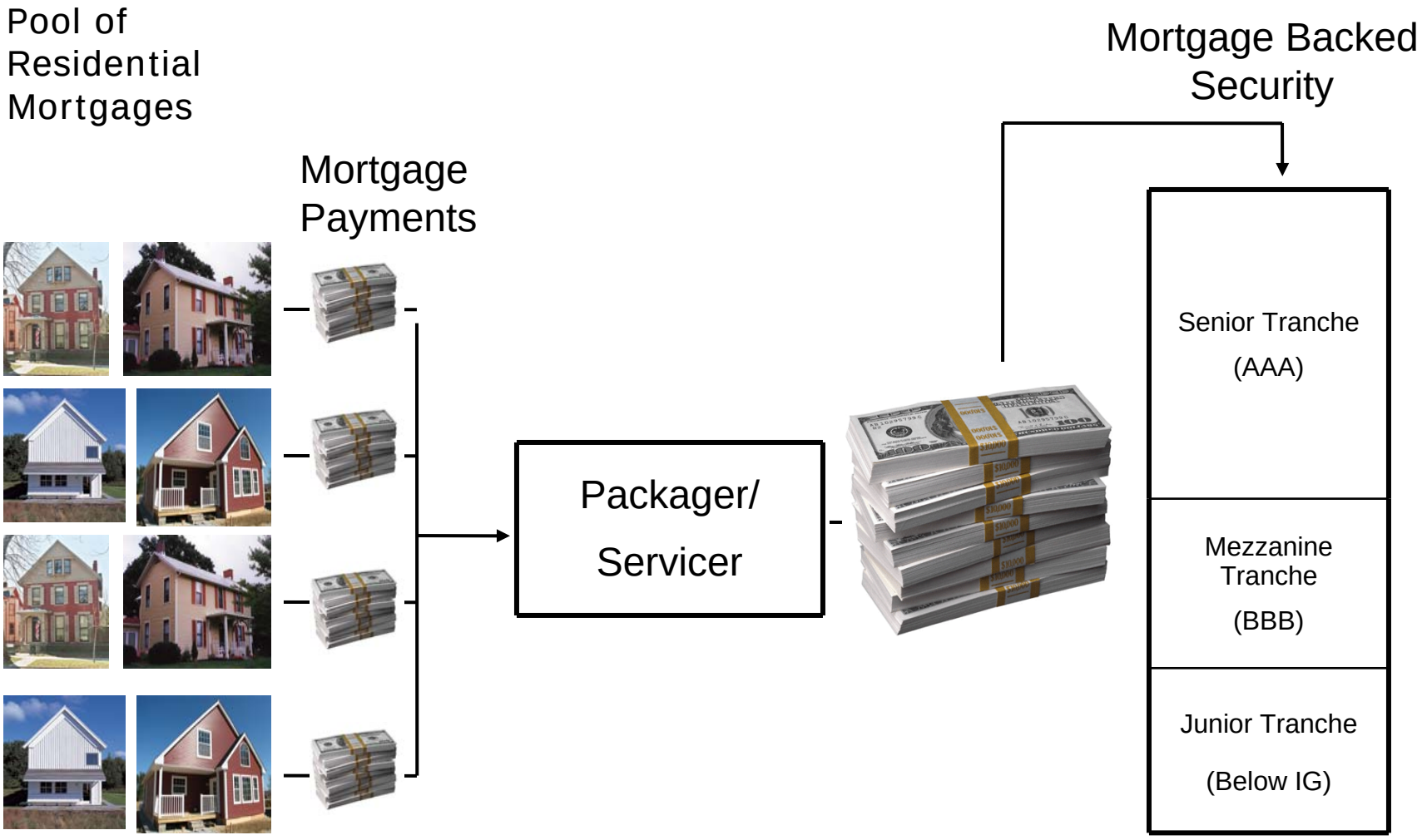
Source: Federal Reserve Board staff calculations from First American LoanPerformance data (as of January 2008).
A default is a mortgage entering the foreclosure process.

Number of Subprime ARM Resets (as of 4th quarter 2007)



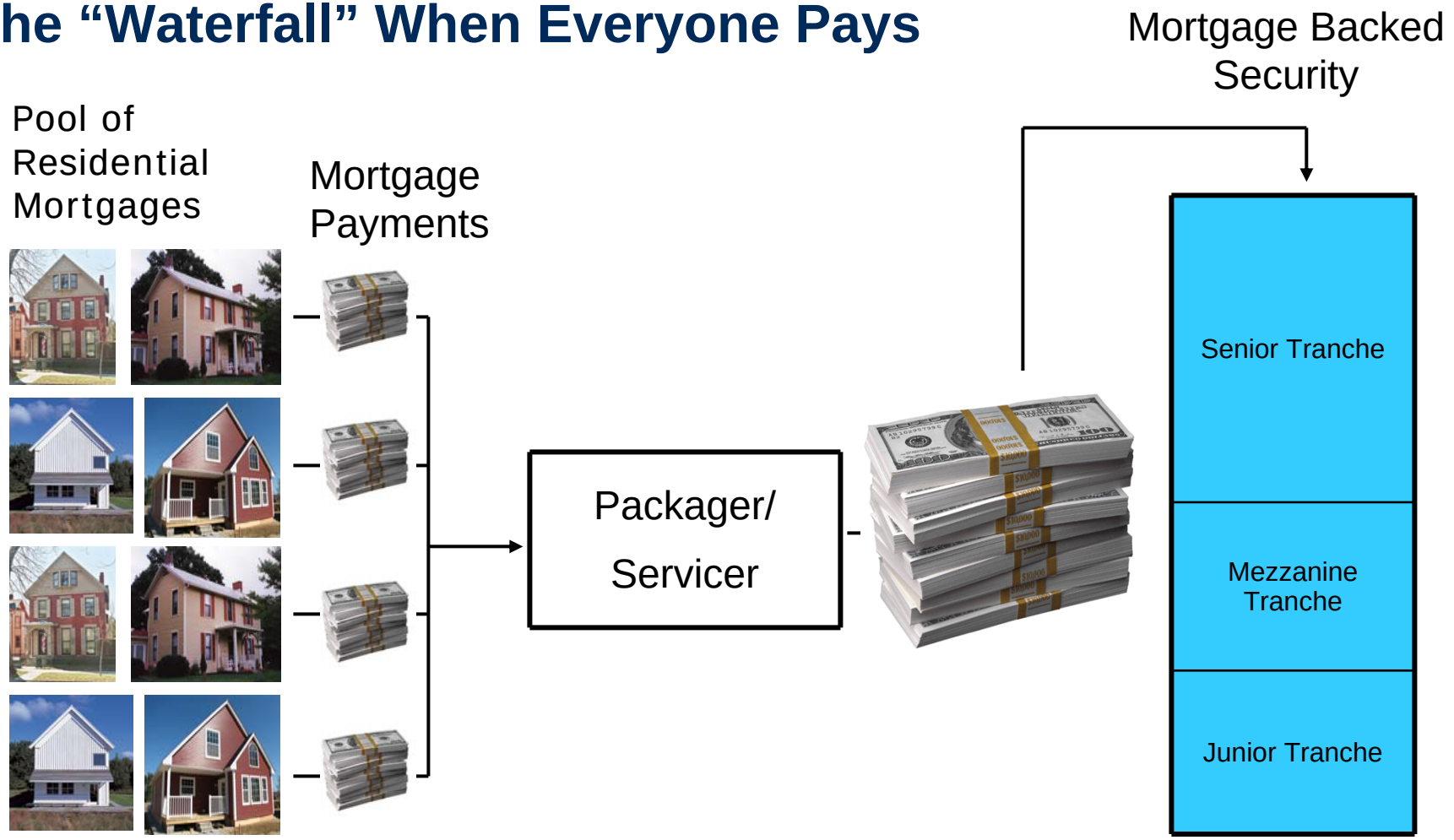
Source: Federal Reserve Board calculations from First American LoanPerformance data.

Securitization in a Nutshell



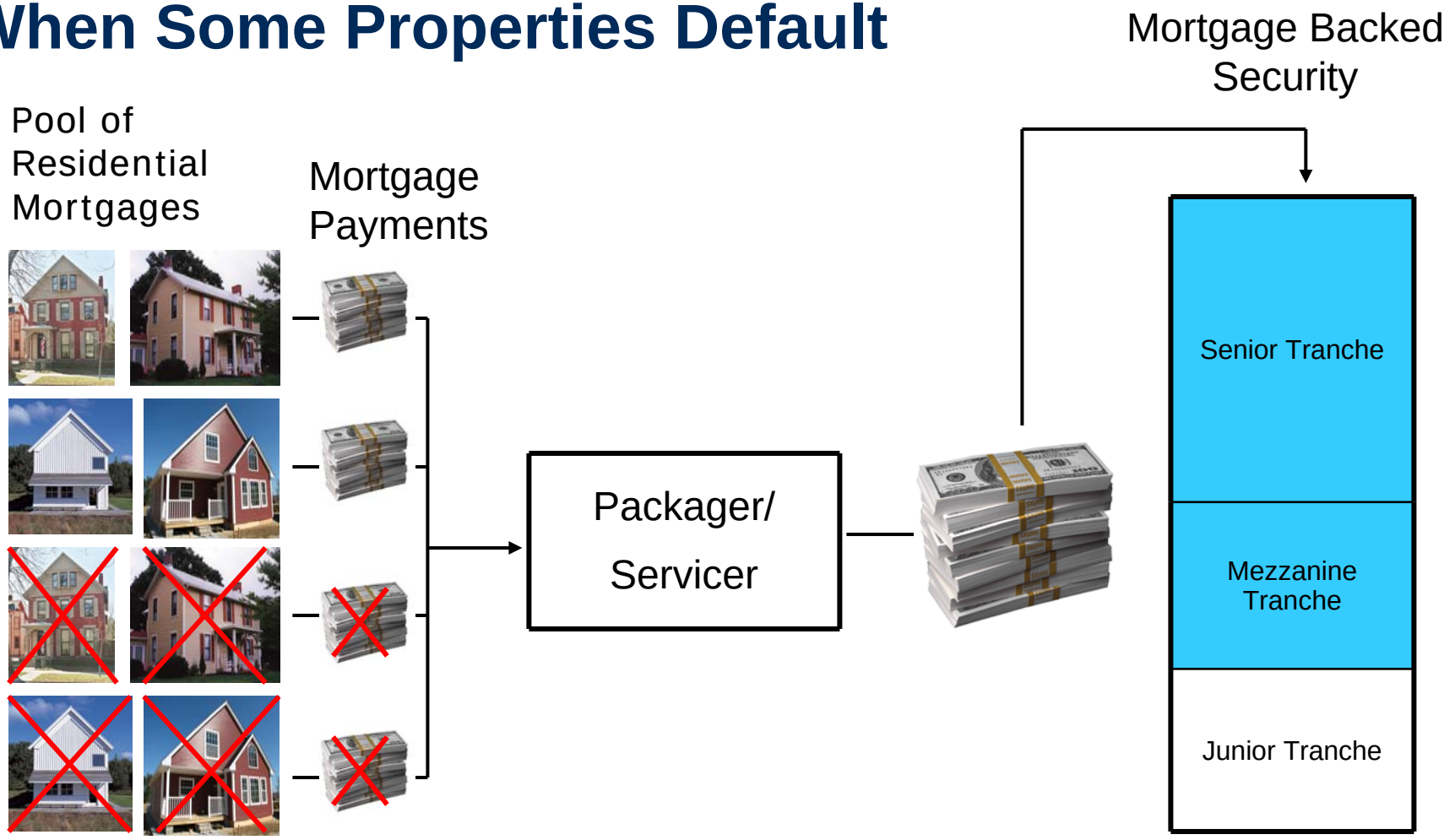
Mortgages are pooled & create a set of mortgage backed securities (MBS). MBS are bonds. Mortgage payments become interest payments to bondholders

The "Waterfall" When Everyone Pays



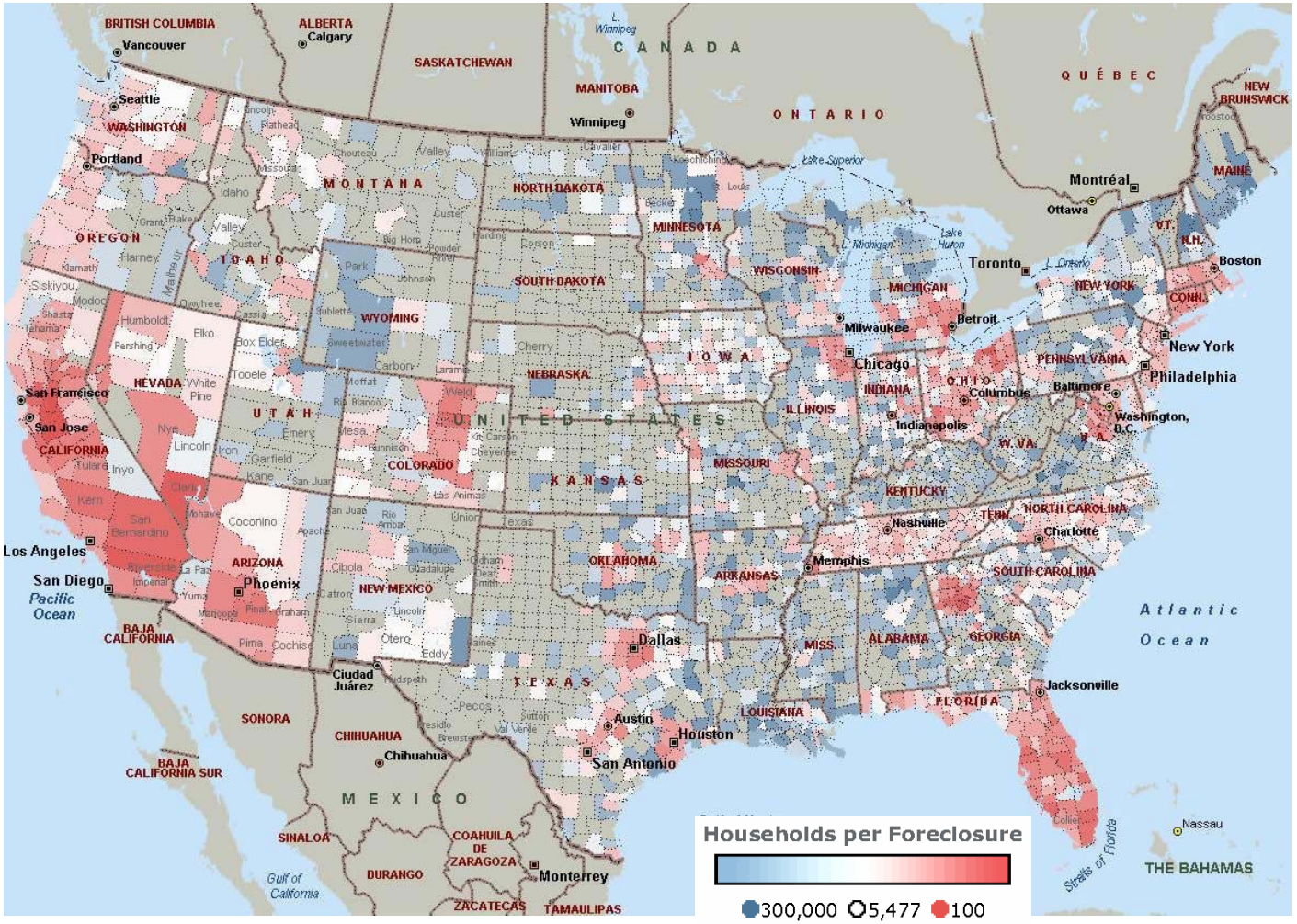
Senior bonds (with the highest credit rating) must be fully paid before subordinate bonds get anything. Called a "cash waterfall."

When Some Properties Default



When properties default, less cash goes into the top of the waterfall. Losses felt first at the bottom of the waterfall & work upwards.

Foreclosures Spread Across Much of the Country



Source: Realtytrac

Breck Robinson
Banking Analytics & Supervisory Studies (BASS)

Where are we now?

- Valuation of mortgage related assets is uncertain
  - Home prices are still falling. Down over 15%, many suggest prices will fall further
- When assets values are hard to determine, they become illiquid (hard to trade & exchange for cash)
- Liquidity can put extreme pressure on financial institutions. “How do I meet my obligations if my assets are illiquid?”
- Design of many new policies is to improve liquidity

Big institutions that suffered crises

- Bear Stearns-defunct-(now part of JP Morgan, partial support)
  - Big player in MBS. Losses, closure, of two hedge funds in July 07 was one of several key points in the crisis
- Fannie/Freddie in conservatorship
- Lehman Brothers-bankrupt. From 2004-2007 fast growth in mortgage-related with little additional equity (added lots of leverage)
  - Leverage works both ways. Big losses lead counterparties to pull back, forcing a liquidity crisis. Failed to find a strategic partner to inject capital
- AIG-(support)
  - Heavily involved in credit default swap market. Belief that failure would cause a systemic crisis. Govt injection of over $100b
- Wachovia-(now part of Wells Fargo)
  - Big losses on subprime and Golden West pay-option ARM portfolio. Deposit outflows plus counterparty problems
- WaMu-(now part of JP Morgan) big losses on mortgage-related assets

New policy developments

- The “TARP” Treasury authorized to buy $700b in troubled assets
  - Mortgage assets originated before 3/14/08, others if Fed agrees.
  - Required to price purchases to minimize taxpayer costs & maximize economic benefits of the program
  - Limits golden parachutes & exec pay for participating firms
  - Also, Treasury to take direct equity stake in banks (adds capital)
- FDIC coverage expanded to $250,000 until at least 12/31 next year
  - Also guaranteeing senior debt and non interest bearing transactions accounts.
- Fed can pay interest on reserves 3 years earlier than planned
- Many money market mutual fund assets guaranteed
- Fed starting a funding facility to serve as a “liquidity backstop” for commercial paper (the “CPFF”)
- MMIFF-Liquidity facility for money market funds. Buys CD’s, CP

Other policies that add liquidity

- Well known
  - Open market operations (fed funds target now 1.50%)
  - Discount window and new “Term Discount Window”
    - Term window loan period up to 90 days
  - Securities Lending Facility and new “Term Securities Lending Facility”
    - TSLF has expanded collateral list, longer lending period
- Newer
  - Term Auction Facility
  - Primary Dealer Credit Facility
  - ABCP Money Market Liquidity Facility
  - Foreign Exchange Swap Facility (has been used before)

The Role of Mortgage Servicers

- Bill and collect payments and fees from mortgage holders
- Monitor non-discretionary payments (e.g. taxes, insurance)
- Manage delinquencies to minimize losses and maximize asset recoveries, acting as the agent of the trustee
- Manage mortgage insurance recoveries, if applicable
- Advances on delinquent loans
- Remit payments to trustee
- Provide required information to trustees/investors regarding the performance of asset pools

Economic Incentives

- MAXIMIZE CASH FLOWS TO INVESTORS
  - Foreclosures may maximize cash flows on a NPV basis
- Compensation structure for servicers
  - Revenues: receive 25 (prime) to 50 (subprime) basis points to oversee mortgage pools, plus float and fees
    - Servicers in the subprime sector are more heavily dependent on fees to cover costs
  - Expenses: current market environment significantly increases costs
    - Labor intensive process => increasing customer service may require increasing other parts of the process => customer service to REO management
      - The need to hire extra personnel and other costs may require 125 basis points to cover the cost of doing business in this market
        - For example: loan workouts cost $1,000 per workout

Modifications May Not Help

- Investor may be worst off after a loan is modified
  - A large percentage of modified loans may eventually default
    - Estimates ranging from 40% to 60%
  - Other problems with modifying loans:
    - Class warfare => mortgages tend to be held in securitized pools where investors have different incentives based on where they are in the capital structure
      - Complicates how servicers should respond => increases risk of litigation

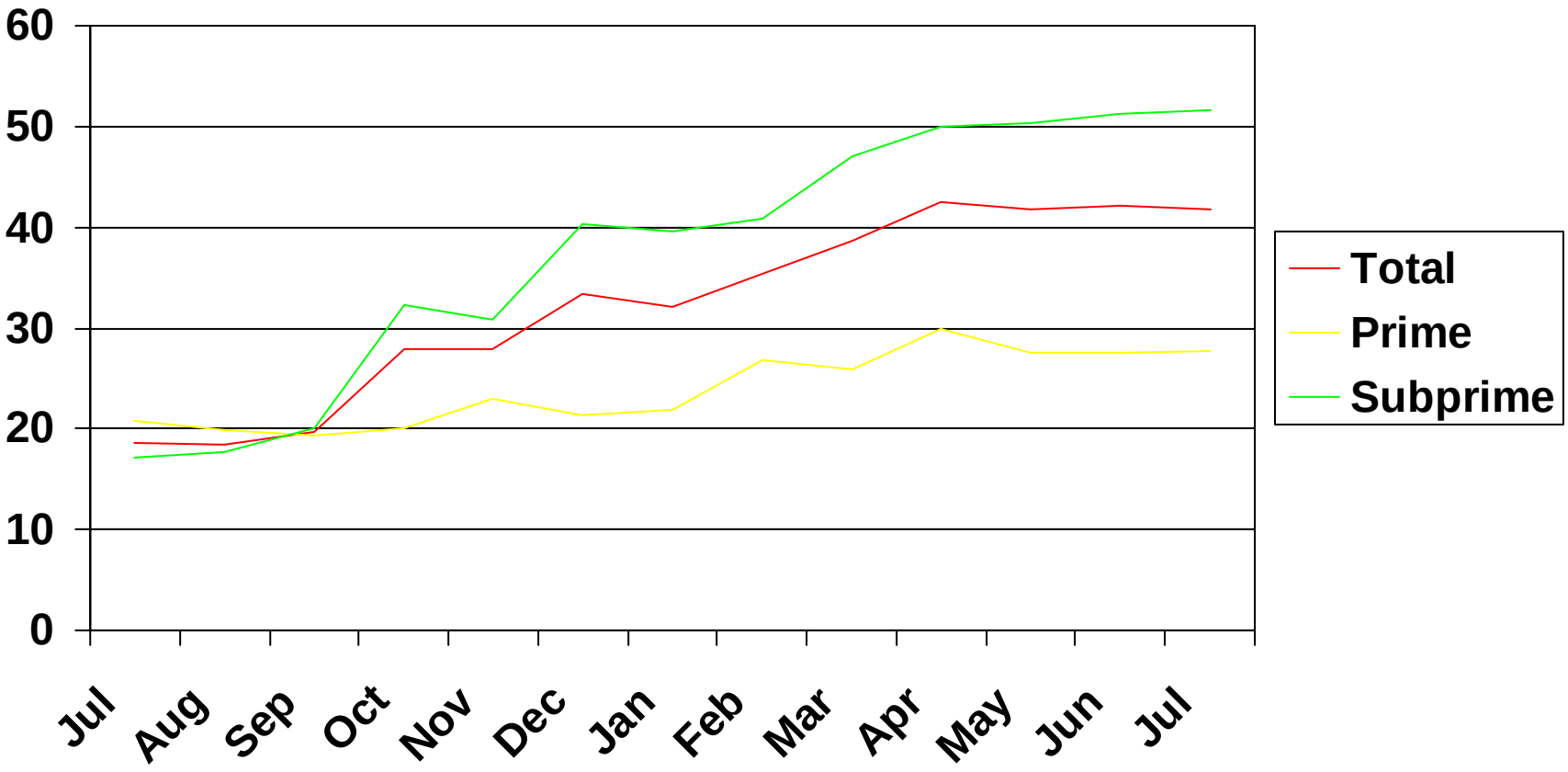
Accounting Rules

- FAS 140 allows the following:
  - Requires giving up control of the assets. Securitizing under FAS 140 transfers assets into a "special purpose entity"
    - Provides for regulatory capital relief for originators
  - These SPEs have to be "brain dead." If they make business decisions (or if servicers make them on their behalf) it violates FAS 140 and the originating bank has to bring the assets back on balance sheet
    - Need for more regulatory capital
  - A modification is a business decision. Previously, rules were interpreted to mean that servicers could not modify loans unless they are in default
    - SEC clarification: loan restructurings or modifications when default is reasonably foreseeable does not preclude an institution from continuing to treat serviced mortgages as off-balance sheet exposures

What Do We Know?

- Loan modifications as a percentage and share of loan workouts are increasing
- The current housing environment is unusual and servicers are being forced to learn on the job
  - Challenges continue to outweigh successes
    - Some actions by servicers/lenders appear to be slowing down foreclosures
- Interest rate cuts helped reduce the number of borrowers needing assistance

Modifications as a Percentage of Workout Plans (2007-2008)



Breck Robinson
Banking Analytics & Supervisory Studies (BASS)

Loan Modification Example

- ***Loan characteristics:***
  - 30 year loan
  - $250,000 loan amount
  - Zero down payment
  - 8% interest rate for 3 years and 12% interest rate for the remainder of the loan
- ***Unmodified loan:***
  - Borrower defaults 6 months after loan reset and the house is sold 3 months later for a 50% recovery rate
    - **Total NPV = $61,343.19**
- ***Modified loan:***
  - Servicer allows the borrower to keep paying 8% interest rate after the loan was expected to reset
  - Borrower defaults nine months after the interest rate was suppose to reset
  - House is sold 3 months later for a 50% recovery rate
    - **Total NPV = $60,875.60**
- **This example shows that modification can decrease NPV of cash flows**

THE FEDERAL RESERVE BANK OF RICHMOND

RICHMOND ▪ BALTIMORE ▪ CHARLOTTE