From Wall Street to Main Street: The Financial Crisis in the US

Douglas J. Young
Professor of Economics,
Montana State University
Indian Institute of Technology - Bombay
Sabbatical
Other Activities

• Extension-type tour of Gujarat
• Sponsored by the State Department
• 10 lectures in 6 days
Financial Crisis

- Causes
  - Not one, but many

- Consequences
  - In Financial Markets (Wall Street)
  - In Homes and Businesses (Main Street)
Case-Shiller House Price Index

Index January 2000 = 100

Real -31%
Nominal -43%

Latest Data: August 2015
Not Just the USA

What’s “Normal” for House Prices?

• Average Annual Percentage Increase after Inflation:
  1890-2007: 0.4% per Year
  1960-2000: 0.2% per Year

• The 2000s
  Jan, 2000 – Jan, 2006: 11.2% per Year
  Aug, 2003 – Aug, 2004: 17.3% per Year

Shiller reported at www.businessweek.com/magazine/content/08_06/b4070044774504.htm
Rising House Prices =>

• Buyers were able to *Refinance* after a few years

• And buy a new car, too!
Refinancing

• 2004: Buy $200,000 house with 20% down payment
  Mortgage = $160,000 (80% of value)

• 2006: House worth $260,000
  New Mortgage = $208,000 (80%)
  Pay Old Mortgage = $160,000
  Cash: $208,000 - 160,000 = $48,000
Rising House Prices =>

- Fewer Loan Defaults and Foreclosures =>
- Lower Lending Standards
Lower Lending Standards

• Lower Down Payment (10% - 5% - 0%)
• Lower Income Requirements
• No Income or Asset Verification
  “NINJA” Loan
    = No Income, No Job or Assets
• “Teaser” Interest Rates
• Predatory/Fraudulent Lending
Positive Feedback Loop

• Higher Home Prices =>
• More Demand for Loans and Lower Lending Standards =>
• More Demand for Homes =>
• Higher Home Prices ...
Why (Else) Lower Lending Standards?

• Financial Innovation
  – Mortgages sold, bundled, sliced into “tranches” and resold
  – MBAs/PhDs: “We can manage the risk!”

• BUT: Bad Statistical Models

• Higher Global Wealth
  – “Global Glut of Saving” =>
  – More demand for real estate-backed securities
Why (Else) Lower Lending Standards?

• Public Policy
  – Home ownership a national priority
  – Encourage lending in depressed areas and to low-income people
  – Deduct mortgage interest = “Subsidy to Debt”
  – Low interest rates

• Competition among Lenders
Home Ownership

Percent Owner Occupied

Bureau of the Census, CPS, Series H-111
But....

• Defaults up sharply if:
  – Home prices fall, and/or
  – Interest rates increase

• Why?
  – Many borrowers can’t afford payments
  – Most (all?) equity disappears as prices fall
“Definancing”

• 2006: House Value = $260,000
  Mortgage = $208,000 (80%)

• 2009: House Price down 30% => House Value = $182,000

• “Upside Down”

• Incentive: Walk away from house; maybe, put holes in the wall.
Negative Feedback Loop

- Mortgage Defaults =>
- Lower Home Prices =>
- More Defaults =>
- Lower Home Prices ...
Where Was the Oversight?

• Shareholders / Boards of Directors
  – Appropriately monitor managers?
  – Appropriate compensation?

• Rating Agencies
  – Correctly rate risk of mortgage securities?

• Regulators
  – Appreciate nature of *systemic* risk?
Consequences

• Wall Street
• Main Street
What Do Financial Institutions Do?

• Channel funds from “lender-savers” to “borrower-spenders”

• Crucial for economic performance
  – Finance new/expanded business
  – Finance consumption (cars, washing machines, AC, ...)
  – Finance homes!
## The Balance Sheet

<table>
<thead>
<tr>
<th>Assets (Uses of Funds)</th>
<th>Liabilities (Sources of Funds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-Term (cash) $5</td>
<td>Deposits $15</td>
</tr>
<tr>
<td>Long-Term $175 (loans, securities)</td>
<td>Short-Term Debt $100</td>
</tr>
<tr>
<td>Other Assets $20 (buildings)</td>
<td>Long-Term Debt $75</td>
</tr>
<tr>
<td>Total $200</td>
<td>Capital (Net Worth) $10</td>
</tr>
<tr>
<td></td>
<td>Total $200</td>
</tr>
</tbody>
</table>
What if Asset Values Decline?

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Bank Failure - 1930s
Bank Failure – 2000s

Lehman Brothers

Bear Stearns
a division of J.P. Morgan

Wachovia

WaMu
Foreclosures

- 7.3 Million Homeowners Default 2008-10
- 4.3 Million Lose Homes
- As of April 2010, 1 in 4 homeowners with a mortgage was “underwater”

“Is there anything we can do to repay you other than to repay you?”
Consumer Wealth Losses

Real Estate: -30% ≈ $6 trillion
+ Stocks (Shares): -40% ≈ $4 trillion
≈ $10 trillion Loss of Consumer Wealth
(= $1,000,000 crore = $10 lakh crore)

• Consumer Net Worth (= Assets – Liabilities) ≈ $50 trillion
Wealth => Consumption

- Consumer Demand will fall by ≈ $500 billion
- ≈ 3.0% Decline in Incomes
- Recession: Higher Unemployment
Residential Investment

Table 1.1.3. Real Gross Domestic Product, Quantity Indexes

Last Revised on: November 24, 2015 - Next Release Date December 22, 2015

Source: U.S. Bureau of Economic Analysis
Rising Unemployment

Source: US. Bureau of Labor Statistics
research.stlouisfed.org
Lessons Learned

“You CAN Lose Money in Real Estate!”

⇒ Lenders will be MUCH less likely to Offer Loans that Borrowers Can’t Pay Back
Reform

• Fannie and Freddie: How should they be owned/governed?

• Regulation:
  – Lending Standards: No more NINJAs
  – Disclosure/Transparency by Banks
  – Leverage Ratios/Capital Requirements
Summary

• US Financial Crisis Resulted from a Combination of Factors, including Public Policy, Financial Innovation, and just plain “Bubble Mania”

• Reforms: Greater transparency, greater regulation / capital requirements.

• Lenders will be more careful, anyway.

• “The Big Short” by Michael Lewis