Guaranteed to Fail
Fannie Mae, Freddie Mac and the Debacle of US Housing Finance

Prof. Stijn Van Nieuwerburgh

New York University
Stern School of Business

March 1, 2011
GUARANTEED TO FAIL

FANNIE MAE, FREDDIE MAC and the Debacle of Mortgage Finance

VIRAL Acharya
MATTHEW RICHARDSON
STIJN VAN NIEUWERBURGH
LAWRENCE J. WHITE

Published by Princeton University Press, Available in bookstores and on Amazon.com around March 15

Executive summary and evaluation of Administration’s proposal available here.
NYU-Stern Working Group on Financial Sector Reforms

  - http://whitepapers.stern.nyu.edu/home.html
  - Joint effort of 33 faculty members at NYU Stern
  - Edited by Viral Acharya and Matthew Richardson
  - 18 White Papers on Financial Crisis
    - Causes of the Financial Crisis
    - Four Principles for Future Regulation

- Regulating Wall Street: The Dodd-Frank Act and the New Architecture of Global Finance, John Wiley and Sons, November 2010
  - http://www.regulatingwallstreet.com
  - Joint effort of 40 faculty members at NYU Stern
  - Edited by Viral Acharya, Tom Cooley, Matthew Richardson and Ingo Walter
  - 18 Chapters on the Dodd-Frank Act
    - Including a foreword by Myron Scholes,
    - Systemic risk including ones on measurement, taxation, capital and liquidity requirements, the Volcker rule, resolution authority and the insurance industry;
    - Shadow banking including money markets, the repo market, OTC derivatives and hedge funds;
    - Credit markets including the GSEs, securitization and rating agencies;
    - The financial architecture including the role of the Fed and the new Consumer Finance Protection Bureau;
    - Accounting and compensation.
“The shapers of the American mortgage finance system hoped to achieve the security of government ownership, the integrity of local banking and the ingenuity of Wall Street. Instead they got the ingenuity of government, the security of local banking and the integrity of Wall Street.”

- David Frum (columnist, and former speechwriter for President George W. Bush), National Post, July 11, 2008
1) A short history of the GSEs and securitization

2) Feeding the beast: growth of GSEs

3) Race to the bottom and ticking time bomb

4) GSE Reform: Administration’s proposal versus ours
A short history

- Great depression: FHLB (1932), FHA (1934), FNMA (1938, “Fannie Mae”)
- Fannie Mae insured FHA and later VA mortgages and was government agency with federal charter
  - Exempt from state and local income taxes
  - Federal Reserve was its fiscal agent (line of credit)
  - Provide special assistance for certain kinds of mortgages (precursor of mission targets)
  - Issued agency debt to finance
- Relatively minor presence until mid-1960s
- 1968: privatized by Johnson to get it off the books
A short history

- Fannie Mae becomes publicly traded company on NYSE but keeps federal charter
- GNMA ("Ginnie Mae") founded in 1968 to insure FHA and VA loans
- Freddie Mac founded in 1970, owned by FHLB, to compete with Fannie Mae
- F&F can purchase loans below conforming loan limit ($55,000 in 1975, now $417,000)
What Freddie and Fannie do

1. Residential mortgage securitization (guarantee function)
   - Buy conforming mortgage loans from banks
   - Issue mortgage-backed securities (MBS) with mortgage pools as collateral
   - Assume all default risk, for a “g-fee” of about 0.2%
   - Currently about $3.5 trillion
   - 0.45% capital requirement

2. Residential mortgage investment (investment function)
   - Provide liquidity to MBS markets
   - Currently about $1.7 trillion
   - 2.5% capital requirement
Rationale of securitization

- Deregulation in wake of S&L crisis *(early 1980s)*
- Traditional model of banking: short-maturity deposits to fund long-term assets
- New model of banking: originate to distribute
  - Securitization transfers interest rate risk away from banking sector
  - And makes underlying mortgages more liquid – broader investor base
- Of course, transfers credit risk to GSEs
GSE Growth (1980+)
Regulatory arbitrage

- Option 1: hold mortgage loans on bank’s balance sheet: 4% regulatory capital charge
- Option 2: sell mortgages to GSEs, and repurchase MBS pools with same mortgages in it
  - GSEs hold 0.45% capital against guarantees
  - Banks hold 1.6% capital against agency MBS
  - Total regulatory capital: 2.05%, or 50% less
Portfolios funded with debt

- Massive portfolio growth funded by issuing “agency debt”
- Perceived by market as government-backed
- Funding advantage of 40bps annually
  - $14bn subsidy in 2000
  - 2/3 to homeowners as lower mortgage rates
  - 1/3 to shareholders and employees of GSEs
- GSEs had huge leverage: 25-to-1 balance sheet and 70-to-1 if guarantees are added
Race to the bottom

- GSEs start lowering lending standards starting mid 1990s

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Low- and Moderate-Income Goal</td>
<td>30%</td>
<td>40%</td>
<td>42%</td>
<td>50%</td>
<td>52%</td>
<td>53%</td>
<td>55%</td>
<td>56%</td>
</tr>
<tr>
<td>Underserved Areas Goal</td>
<td>30%</td>
<td>21%</td>
<td>24%</td>
<td>31%</td>
<td>37%</td>
<td>38%</td>
<td>38%</td>
<td>39%</td>
</tr>
<tr>
<td>Special Affordable Goal</td>
<td>NA*</td>
<td>12%</td>
<td>14%</td>
<td>20%</td>
<td>22%</td>
<td>23%</td>
<td>25%</td>
<td>27%</td>
</tr>
</tbody>
</table>

- Market share of private non-prime market (subprime, Alt-A, HELOC) grew from 14% in 2001 to 48% in 2006
- Deterioration of lending standards, especially in 2004-06
- Private label securitization to finance this growth
Race to the bottom

- GSEs lose market share (45% to 25% from 2002-06); share of risky lending (43% to 15% from 2003-06)
- Respond by further lowering lending standards, increasing credit risk
- King Kong LCFI against GSE Godzillas: not the perfect competition the deregulation of 1980s had envisioned
# Ticking time bomb

<table>
<thead>
<tr>
<th>billions of $</th>
<th>1997</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortgage guarantees</td>
<td>1,060</td>
<td>3,500</td>
</tr>
<tr>
<td>Portfolio holdings</td>
<td>481</td>
<td>1,430</td>
</tr>
<tr>
<td>Equity</td>
<td>21</td>
<td>70</td>
</tr>
<tr>
<td>Derivatives</td>
<td>256</td>
<td>2,260</td>
</tr>
</tbody>
</table>

But now
$313bn PLS, $351bn with LTV>90%,
$208 bn with FICO<620, $354 bn Interest Only,
$478 bn Alt-A

… Not your mother’s GSE
Guaranteed to fail

- House price up an unprecedented 135 months in a row between 1995 and 2006
- GSEs started to rack up huge losses in 2008
- By summer 2008, Bush Administration obtained emergency powers to take GSEs into conservatorship; on September 7, 2008
- Since then: $156bn in losses born by the taxpayer
- Total net cost of financial crisis mostly GSEs
Where to go from here?

- Freddie, Fannie, and FHA/Ginnie are the mortgage market: 95% market share today
- Broad consensus to get the government back out of the mortgage market and to wind down Freddie and Fannie
- **Economics of regulation**: only need government intervention to remedy clearly identifiable market failure
Part I: investment function

- Dismantle portfolio investment function of GSEs completely
- Move assets in a GSE Resolution Trust Corporation
  - Modeled after S&L RTC structure
- Unwind could go faster than 10% per year, probably 25% per year
  - 50% could be wound down after 3 years
  - Pass legislation to prevent reneging on this plan
Part II: guarantee function

- **Short-run:** gradually decrease conforming loan limits and increase g-fees, reduce conforming mortgages’ LTV ratios below 90%

- **Long-run:** menu of 3 options
  - A) No guarantees
  - B) Government as backstop in crisis: high g-fees
  - C) Catastrophic insurance
Our take on gvmt. guarantees

- No government guarantees necessary in long-run
  - Private market will develop around MBS with credit risk and/or around private mortgage guarantees
  - Requires tighter underwriting standards, more transparency in securitization transactions, improved credit ratings
  - Systemic risk regulation and credible resolution mechanism lest new “private sector GSEs” emerge
  - Federal Reserve is lender of last resort
Transition: public-private partnership

- Private mortgage guarantors determine price of guarantees – crucial!
- Government is silent partner, co-insures 75% of the amount, and receives market price
- Very different from catastrophic insurance scheme
- Transition to long-run by reducing conforming loan limit and/or reducing 75% share
Part III: Subsidizing home ownership

- Home ownership stimulated through tax code, GSEs, myriad of other programs – cost $300bn annually
- Only mediocre outcomes compared to other countries
- Stimulus has led to over-consumption and over-investment in housing
- Policies are regressive
- FHA should focus on low-income families, shrink its market share, and emphasize rental assistance programs