AIG: The Missing Piece of Its Failure Narrative & Why It Matters

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Why Should We Care?

- AIG was one of the biggest bailout events of the crisis. $182.3 billion was made available to AIG. We should know why it happened.
- Better understanding what happened at AIG will help us to think about what reforms should or could be made to prevent a repeat.
Today’s Agenda

• What got AIG in trouble?
• Why did government intervene?
• Did Dodd-Frank reforms address the problems at AIG?
The Standard View of AIG’s Downfall

• “AIG Financial Products, operating out of London, brought down the company and nearly toppled the U.S. economy.”  Gary Gensler, former Chairman Commodity Futures Trading Commission, May 2012
Alternate View

• “AIG blew up when its stock-lending shadow bank – an insurance company – suffered a run.”    Paul Tucker, Deputy Governor Financial Stability, Member of the Monetary Policy Committee and Member of the Financial Policy Committee, March 13, 2012
The Making of AIG

- Founded by Cornelius Vander Starr in 1919 in China as insurance company
- Expanded into other business lines
- 130 countries
- 116,000 employees
- 76 million customers
- Maurice “Hank” Greenberg—CEO for nearly 4 decades—presided over much of growth
AIG Post-Greenberg

- March 2005: Martin Sullivan, a company insider, took over as CEO
- February 2006: AIG paid over $1.6 billion to settle with DOJ, SEC, and NY on accounting, bid rigging, and workers comp charges.
- June 2008: Company was losing money fast. New CEO Robert Willumstad came in to replace Sullivan
AIG’s Business Units

- General Insurance
- Life Insurance & Retirement Services
- Financial Services
- Asset Management
# AIG’s Hundreds of Regulators

<table>
<thead>
<tr>
<th>AIG entity</th>
<th>Regulator</th>
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<tbody>
<tr>
<td>AIG Holding Company</td>
<td>Office of Thrift Supervision</td>
</tr>
<tr>
<td>domestic insurance companies</td>
<td>state insurance regulators</td>
</tr>
<tr>
<td>foreign insurance companies</td>
<td>foreign insurance regulators</td>
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<tr>
<td>AIG Federal Savings Bank</td>
<td>Office of Thrift Supervision</td>
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<tr>
<td>AIG Securities Lending Corp. (after registering as broker-dealer in 2006)</td>
<td>Securities and Exchange Commission/Financial Industry Regulatory Authority</td>
</tr>
<tr>
<td>AIG’s European operations</td>
<td>French Commission Bancaire (coordinating supervisor)</td>
</tr>
</tbody>
</table>
Origins of AIGFP

- 1987: AIG enters into joint venture with defectors from Drexel Burnham Lambert
- Howard Sosin, the original CEO, clashed with Hank Greenberg
- His successor, Tom Savage, had a key governing principle...
Mortgage-Related Assets
In 2002, Joe Cassano took over
Mortgage-Related Assets
Credit Default Swaps

- A CDS is an over-the-counter derivative.
- As a derivative financial product, it derives its value from something else—for CDS bonds.
- People use CDS to manage risk.
- AIG sold different kinds of CDS.
- AIG, with its strong credit-rating was an attractive counterparty.
AIGFP’s CDS

Corporate Arbitrage CDS

Regulatory Arbitrage CDS

Multi-Sector CDO CDS
Collateralized Debt Obligations

• Investment-grade security backed by a pool of bonds, loans and other assets with varying levels of risk. CDOs bundle the various types of debt into tranches of distinct maturities and risk levels, including tranches made of subprime loans.

--Federal Reserve Bank of New York
What Was In Those CDOs?

Lots of Residential Mortgage-Backed Securities
Was Joe Cassano a Fool or a Sage?

- Normally, CDS dealers protect themselves by hedging their exposure.
- AIGFP did not hedge; it sold a lot of CDS; it was on one side of the market.
- Joe Cassano insisted that he had hedged his exposure by only offering protection on the super-senior tranche of the CDOs.
Typical Tranche Structure of a Multi-Sector CDO Including “Super Senior” Layer

Underlying portfolio typically comprises 125-200 obligations from various sectors. Those obligations typically have their own subordination embedded.

Portfolio tranched into different risk layers:

- AAA
- A
- BBB
- BB
- Equity

Any realized credit losses are allocated sequentially: Equity, BB, BBB, A, AAA, then “Super Senior”.

::

- Residential and commercial mortgages, auto loans, etc., are securitized
- Specific individually rated tranches from those securitizations are purchased by the CDO
- The CDO is tranched into different layers of risk with the “Super Senior” layer being the most risk remote
- Protection buyer makes periodic payments to protection seller who in turn makes payments if losses, which are allocated sequentially, exceed the relevant subordination

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AIG’s Super-Senior CDS

- “super senior” risk layer
  (AIGFP net notional exposure)
  
  - AAA
  - A
  - BB
  - BBB
  - equity

Portfolio made up of tranches of securitized residential and commercial mortgages, auto loans, etc. and further separated into tranches.

AIGFP attachment point

Realized credit losses allocated sequentially.
What Could Possibly Go Wrong?
Goldman Sachs Could Call
Collateral Calls at AIGFP

- Starting in August 2007, Goldman and other counterparties began asking AIGFP to put up cash margin—essentially a pledge that it could make good if it had to.

- AIGFP fought back; the collateral calls were arguably aggressive and were based on very little pricing data.
Unrealized Losses on AIG’s Super-Senior CDS

- **Date:** 12/31/07
- **Value:** 80 billion
- **Legend:**
  - **net notional value**
  - **cumulative fair value loss**

- **Date:** 3/31/08
- **Value:** 70 billion

- **Date:** 6/30/08
- **Value:** 80 billion

- **Date:** 9/30/08
- **Value:** 70 billion

**Note:** Billions of dollars, net notional value, cumulative fair value loss.
AIGFP Could Have Been Much Worse

- AIGFP stopped writing CDS on multi-sector CDOs in early 2006—before the housing market saw its darkest days.
- AIGFP based the decision on concern that the mortgage market was spiraling out of control.
- But AIGFP did not make serious efforts to hedge its existing CDS positions.
One Part of AIG Did Not Get the Memo
Securities Lending
What Is Securities Lending?

- One party lends a stock, bond, or other security to another & receives cash or other collateral.
- Hedge funds & broker-dealers borrow for short-selling & other trading strategies.
- Life insurance companies, mutual funds & other holders of large pools of securities lend.
- Loans are usually very short-term—may roll over daily.
What Is Securities Lending?

- Borrower typically posts excess collateral—usually 102% to 105%.
- Collateral is adjusted through term of loan.
- Lender gives a rebate to borrower, the size of which depends on the scarcity of the security being lent.
- Lenders make money by reinvesting the cash collateral in low-risk investments.
How Securities Lending Works

borrower

positive rebate to borrower or negative rebate to lender

securities

cash collateral = 102% to 105% of securities

securities lender

cash

investment vehicle

return
AIG’s Securities Lending Program

- AIG set up a joint program for its life insurance subsidiaries.
- The subs pooled their securities and lent them out in exchange for cash.
- AIG’s loans were unusual in that many were for fixed one-month terms.
AIG's Approximate Share of Worldwide Cash Collateral Reinvestments During Crisis

Growth of AIG’s Securities Lending Program

- 12/31/01
- 12/31/02
- 12/31/03
- 12/31/04
- 12/31/05
- 12/31/06
- 12/31/07

securities lending payable (billions of dollars)
AIG Reinvested Much of Its Cash Collateral in ...
Residential Mortgage-Backed Securities
Collateral Reinvestment

- AIG was much more heavily invested in MBS than typical securitizer.
Difference Between Sec Lending Payable & Reinvested Collateral

The chart shows the difference between Sec Lending Payable and Reinvested Collateral from December 2005 to September 2008. The x-axis represents the months of the year, while the y-axis represents the billions of dollars. The data indicates a significant increase in the difference starting from December 2007, peaking in June 2008, and continuing through September 2008.
Why Was This a Problem?

- Securities lending transactions are short-term; they often get rolled over, but the borrower is under no obligation to renew.
- When borrowers wanted their cash back, there wasn’t any—it was all tied up in RMBS.
- The program reached its peak at $94 billion in October 2007 as AIG used proceeds from new loans to repay old ones.
Everything is fine until Borrower 2 wants its cash collateral back.
The Crisis Spelled Trouble for AIG

- In addition to making new loans to repay old ones, AIG was selling any of the securities in its reinvestment portfolio it could sell, but those securities were not hot sellers during the crisis.

- In 2008, things got worse because borrowers, along with everyone else, really wanted one thing . . .
CASH!
Haircuts Made Matters Even Worse
The standard in securities lending is to give the lender 102%-105% of the security’s value.

When securities borrowers started to get the upper hand in 2008, they only paid 100%.

Then 98 . . . 95 . . . 80 . . . 73 %.
If AIG Didn’t Repay . . .

- Borrower could sell securities
- Borrower could go after assets of participating life insurance companies

AIG contributed money to the securities lending pool to make up for undercollateralization and losses on securities sold.
### AIG’s Income and Losses

<table>
<thead>
<tr>
<th>Reporting period</th>
<th>Net income (loss), billions of dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>9.84</td>
</tr>
<tr>
<td>2005</td>
<td>10.48</td>
</tr>
<tr>
<td>2006</td>
<td>14.05</td>
</tr>
<tr>
<td>1st quarter 2007</td>
<td>4.13</td>
</tr>
<tr>
<td>2nd quarter 2007</td>
<td>4.28</td>
</tr>
<tr>
<td>3rd quarter 2007</td>
<td>3.09</td>
</tr>
<tr>
<td>4th quarter 2007</td>
<td>(5.29)</td>
</tr>
<tr>
<td>1st quarter 2008</td>
<td>(7.81)</td>
</tr>
<tr>
<td>2nd quarter 2008</td>
<td>(5.36)</td>
</tr>
<tr>
<td>3rd quarter 2008</td>
<td>(24.47)</td>
</tr>
<tr>
<td>4th quarter 2008</td>
<td>(61.66)</td>
</tr>
</tbody>
</table>
AIG’s Stock Price Reflected the Grim State of Affairs
AIG’s Credit Rating Was a Real Worry

Credit Rating Agency Downgrade ➔ More Demands for Collateral ➔ AIG’s ability to raise capital diminished
Sec Lending Kept New CEO Awake at Night

A problem coming from insurance subsidiaries would have caused AIG reputational damage and regulatory issues.

But, AIG did not have cash to spare.

In June 2008, when he started as CEO, Willumstad quickly realized that securities lending would be a problem—a liquidity drain.

He went to visit . . .
Think back to 2008

- September 2008: Government takes over Fannie and Freddie.
- September 13-14, 2008: Lehman weekend.
- September 15, 2008: Lehman files for bankruptcy.
As Lehman’s fate was being decided, so too was AIG’s.

No private sector solution materialized—Wall Street firms that went in decided AIG needed more money than its assets were worth.

Insurance regulators tried to cobble together a quick deal that effectively would use P&C companies to rescue life insurance companies.
Why Rescue AIG?

- Could markets handle another big failure?
- What would insurance customers do?
- What about AIG’s many counterparties?
- Would European banks be hurt?
Fed to the Rescue

- $85 billion revolving credit facility from the Fed under Section 13(3) Authority of the Federal Reserve Act.
- Collateralized by AIG’s assets.
- Government got preferred stock convertible into 79.9% of AIG.
- Terms of loan were tough: LIBOR + 8.5%.
AIG Spending Rate Was Alarming

- AIGFP counterparties were still asking for money.
- Securities lending borrowers asked for $24 billion between September 12 and 30, 2008.
When It Runs Out, Re-Bailout

- October 2008: Fed sets up a $37.8 billion program to step into shoes of fleeing securities lending counterparties. AIG could use cash from Fed to repay counterparties.
- November 2008: TARP funds were injected and Maiden Lane II and III are set up.
Maiden Lane Off-Balance Sheet Entities

- **Maiden Lane II**
  - To take care of AIG’s securities sending problem
  - $19.5 billion from government
  - $1 billion from AIG
  - AIG’s securities lending counterparties were paid off

- **Maiden Lane III**
  - To take care of AIGFP’s CDS problem
  - $24.5 billion from government
  - $5 billion from AIG
  - Purchased underlying CDOs from AIG’s counterparties
AIG Payments to Counterparties:
September 16-December 31, 2008

- AIGFP: 54%
- Securities Lending: 46%
In contrast to Lehman, the core operations of AIG were viable and profitable insurance companies. AIG’s financial difficulties stemmed primarily from the loss of liquidity to fund collateral calls on its unhedged derivatives positions in one part of the company—its Financial Products Division.

--Federal Reserve Chairman Ben Bernanke, November 2010
Were the Insurance Subs Healthy?

<table>
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<tr>
<th>Year</th>
<th>Statutory surplus</th>
<th>Statutory net income (loss)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>$35,058</td>
<td>$5,088</td>
</tr>
<tr>
<td>2007</td>
<td>$33,212</td>
<td>$4,465</td>
</tr>
<tr>
<td>2008</td>
<td>$24,511</td>
<td>($23,558)</td>
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</table>
Insurance Regulation

- Insurance companies are regulated by states in which they sell insurance.
- Insurance regulators had authority to intervene in securities lending matters.
- To avoid conflicts, state regulators coordinate through the NAIC.
- Insurance companies have to maintain a certain level of capital.
- When an insurance company runs into trouble, state regulators wind it down.
Risk-Based Capital System

- **Less than 70%**: Regulator must take control
- **70% and above**: Regulator may take control
- **100% and above**: Regulator exams and analysis
- **150% and above**: Company corrective plan
- **200% and above**: No intervention

Ratio of Total Adjusted Capital to Authorized Control Level Risk-Based Capital

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AIG's Largest Domestic Life Insurance/Retirement Services Companies: Regulatory Capital and Related Events

Source: GAO Sept. 2009 Update, supra note 207, at 77 (Figure 12).

- Adjusted capital (2007)
- Control level risk-based capital (2007)
- Adjusted capital (2008)
- Control level risk-based capital (2008)
- Net income / loss (2008)
- Unrealized capital losses
- Capital contributions
- Stockholder dividends

Legend:

- Red bar: Adjusted capital (2007)
- Purple bar: Control level risk-based capital (2007)
- Orange bar: Adjusted capital (2008)
- Blue bar: Control level risk-based capital (2008)
- Dark blue bar: Unrealized capital losses
- Green bar: Capital contributions
- Black bar: Stockholder dividends

Values:

- Adjusted capital (2007): $20,040
- Control level risk-based capital (2007): $2,901
- Adjusted capital (2008): $15,653
- Control level risk-based capital (2008): $2,474
- Net income / loss (2008): $(17,602)
- Unrealized capital losses: $(17,602)
- Capital contributions: $23,116
- Stockholder dividends: $(5,000)
AIG’s life insurance subsidiaries were in trouble in the fall of 2008.

Their troubles were placing real liquidity and capital demands on the AIG parent.

If the Fed had not engineered a bailout, AIG would have filed for bankruptcy and some of the life insurance companies would likely have been seized by state regulators.
Allowing AIG to fail would have:

- Taught a meaningful lesson to other companies. Careful centralized liquidity and risk management is important.
- Provided regulatory consistency. Lehman was allowed to fail because it was insolvent. AIG was insolvent too.
- Even after AIG’s initial rescue, government could have allowed bankruptcy.
What Does Adding the Securities Lending Piece of the Story Tell Us?

• Regulation is not the answer. The life insurance companies were heavily regulated by the states.
• There is no basis for assuming that the Fed will do a better job than the state insurance regulators did at monitoring risk-taking.
• AIG is not the poster child for Dodd-Frank derivatives reform that some have suggested it is.
What Should We Do?

• People care about risks when their money is on the line ➔ We need to look for ways to make shareholders and creditors bear losses when things go badly.

• We need to make sure that bailouts are not an option.

• Make bankruptcy work for large financial companies.
AIG Bailout: Investment Success?

Yes, if simply getting paid back is success. In that case, I’d like to borrow $100 from you today. I’ll pay it back in 5 years. No, if we consider opportunity cost and risk.

- Lots of companies were looking for cash in 2008.
- Private consortium had decided AIG was lousy investment.
- If gov’t is playing investor, it has to consider risk-reward tradeoff. We could have earned a better return on a lower-risk investment.
Questions?

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This presentation is based on a working paper, which is available at:
Source information is available in that paper.