AIG, Lehman Shock Hits World Markets

Focus Moves to Fate of Giant Insurer After U.S. Allows Investment Bank to Fail; Barclays in Talks to Buy Core Lehman Unit

By Suzanne Craig, Jeffrey McCracken, Jon Hilsenrath and Deborah Solomon

The convulsions in the U.S. financial system sent markets across the globe tumbling, as two of Wall Street’s biggest firms looked set to exit the scene and insurance titan American International Group Inc. turned to the Federal Reserve and the state of New York for assistance.

The U.S. stock market suffered its worst daily point plunge since the first day of trading after the Sept. 11, 2001, terrorist attacks. Financial markets were rattled by the rushed sale Sunday of Merrill Lynch & Co. and the bankruptcy-court filing of Lehman Brothers Holdings Inc., which scrambled Monday to sell its most-prized businesses before too many employees and customers walked out the door (Please see related article on Page 1C).

All day Monday, top Lehman officials were hedging in Manhattan at their Seventh Avenue headquarters. In London, the Dow Jones Industrial Average ended down 504.48 points on Monday, off 4.4%, at its daily low of 10,673.51, down 3% on the year. The Dow industrials’ 30 components, all but Coca-Cola Co.—fell, led by a 60% plunge in AIG.

In Europe, London’s FTSE 100 index dropped 3.9%. Several Asian markets, including Japan and China, were closed Monday due to holiday. By Tuesday, Coca-Cola shares were down 5% in early trading, and Hong Kong’s Hang Seng Index was down 6.1%. Monday’s action was the latest fallout in a widening financial crisis that began a year ago with the fall of American housing prices and is now reordering the U.S. financial system. Steps unvoiced by the Federal Reserve to expand its emergency lending ...
U.S. to Take Over AIG in $85 Billion Bailout; Central Banks Inject Cash as Credit Dies Up

Emergency Loan Effectively Gives Government Control of Insurer; Historic Move Would Cap 10 Days That Reshaped U.S. Finance

BY MATTHEW KAENITSCHEK, DEBORAH SOLLOMON AND LIAM PLIEFEN

The U.S. government seized control of American International Group Inc.—one of the world’s biggest insurers—in an $85 billion deal that signaled the intensity of its concerns about a danger a collapse could pose to the financial system.

The step marks a dramatic turnaround for the federal government, which had strongly resisted overtures from AIG for an emergency loan or some intervention that would prevent the insurer from falling into bankruptcy. Just last weekend, the government essentially pulled the plug on Lehman Brothers Holdings Inc., allowing the big investment bank to go under instead of giving it financial support. This time, the government decided AIG troubles were too big to fail.

Insurance businesses, giving the Fed some protection even if markets continue to sink. And if AIG rebounds, taxpayers could reap a big profit through the government’s equity stake.

“This loan will facilitate a process under which AIG will sell certain of its businesses in an orderly manner, with the least possible disruption to the overall economy,” the Fed said in a statement.

It puts the government in control of a private insurer—a historic development, particularly considering that AIG isn’t directly regulated by the federal government. The Fed took the highly unusual step using legal authority granted in the Federal Reserve Act, which allows it to lend to banks under “unusual and exigent” circumstances, something it invoked when Bear Stearns Cos. was rescued in March.

As part of the deal, Treasury Secretary Henry Paulson, insurance industries, while Wall Street has watched two of its last four big independent brokerage firms exit the scene.

The U.S. on Sept. 6 took over mortgage-lending giants Fannie Mae and Freddie Mac as they teetered near collapse. This Sunday, the U.S. refused to bail out Wall Street pillar Lehman Brothers, which filed for bankruptcy-court protection and is now being sold off in pieces. That same day, another struggling Wall Street titan, Merrill Lynch & Co., agreed to sell itself to Bank of America Corp.

The AIG deal followed a day of high drama in Washington. The Treasury’s Mr. Paulson and Federal Reserve Chairman Ben Bernanke convened in the early evening an unexpected meeting of top congressional leaders. Late in the trading day Tuesday, anticipation that the government might assist the insurer helped push the Dow Jones industrial average up.
[These events] present a challenge to standard economic theory…. policies to prevent future financial crises will depend on a deeper understanding of the processes at work.

Asymmetric information is key, precisely in the complex securities that [the standard theory] called for.

Kenneth Arrow, “Risky business,”
Guardian, October 15, 2008

Kenneth Arrow, 1921-2017
My daughter came home from school one day and said, ‘daddy, what’s a financial crisis?’

And without trying to be funny, I said, ‘it’s the type of thing that happens every five, seven, ten years.’

Jamie Dimon, January 2010
(to Financial Crisis Inquiry Commission)
The financial crisis was avoidable
Widespread failures in financial regulation
Breakdown in corporate governance
Explosive and excessive borrowing.
Lack of transparency
Government was ill-prepared and responded inconsistently
Widespread breaches in accountability at all levels.

The crisis reflected distorted incentives and failure of rules and governance.
Are financial crises unpreventable?

Is the financial system working well as long as there is no crises?
Total Liabilities and Equity of Barclays 1992-07

Hyun Song Shin, “Global Banking Glut and Loan Risk Premium,” IMF Annual Research Conference, November 10-11, 2011; Figure 22.
JPMorgan Chase: “Fortress?”

Dec. 31, 2011 (in Billions of dollars)
The Financial System Became More Globally Connected

1 The thickness of the arrows indicates the size of the outstanding stock of claims. The direction of the arrows indicates the direction of the claims: arrows directed from region A to region B indicate lending from banks located in region A to borrowers located in region B.

“Conceptual challenges in international finance” Stefan Avdjiev, Robert McCauley, Hyun Song Shin, 2016
https://voxeu.org/article/conceptual-challenges-international-finance
The US System
IMF Financial Stability Report 10/2014, Figure 2.1.1

- Lenders
  - Deposits
  - Money
  - Loans

- Nonbank mortgage originators
  - Loans
  - Money

- Banks
  - CDOs
    - Money
    - Credit & liquidity puts
    - Commercial paper
  - Super seniors
  - SIVs & ABCP
  - Monoline insurance
  - Securities
  - Money market mutual funds
  - Money

- Borrowers
  - Loans
  - Money
  - Short-term funding

- RMBSs
Central Banks: Very Special
The Mantra in Banking: “Equity is Expensive”

Expensive to whom?

Why?

Are banks so special and different that none of what we know about the economics of corporate funding applies?
Bank Debt is Special by Providing “Liquidity”

Does it follow that it is efficient for banks to have little equity? NO!!!

+ To the contrary, default destroys liquidity benefits!

+ Safer banks have fewer liquidity problems and runs.

“Bank Leverage, Welfare, and Regulations,” Admati and Hellwig, 2019
Markets Do Not Produce Efficient Outcome in Banking

Fragmented lenders (depositors, etc)
Costly or impossible coordination, monitoring
Free rider and commitment problems

Laissez faire banks are inefficiently fragile
Safety net (guarantees), debt subsidies, and “safe harbor” provisions enable/feed debt “addiction,” exacerbate inefficiencies

Regulation is essential and beneficial!
Counterproductive rules must change!
Economics has replaced the naïve fallacy of composition of the banker with other half truths, perhaps equally misleading. These have their root in the mystique of “money” --- the tradition of distinguishing sharply between those assets which are and those assets which are not “money,” and accordingly between those institutions that emit “money” and those whose liabilities are not “money”.

“Commercial Banks as Creators of ‘Money’”
James Tobin, 1967
Banks vs Non Bank Corporations Funding

<table>
<thead>
<tr>
<th>Non Banks (without regulation)</th>
<th>Banks or Bank Holding Companies (with “Capital Regulation”)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have risky, long term, illiquid assets</td>
<td>Same</td>
</tr>
<tr>
<td>Can use retained earnings (or new shares) to invest and grow</td>
<td>Same</td>
</tr>
<tr>
<td>Rarely maintain less than 30% equity/assets, often much more (despite tax advantage of debt)</td>
<td>Rarely have more than 6% equity/assets, sometimes less</td>
</tr>
<tr>
<td>Sometimes choose to avoid payouts to shareholders for extended periods (Google, Berkshire Hathaway)</td>
<td>Make payouts to shareholders (if regulators allow)</td>
</tr>
</tbody>
</table>
## Borrowing and Downside Risk

<table>
<thead>
<tr>
<th>Heavily Indebted Non Banks (no safety net)</th>
<th>Heavily Indebted Banks (many supports)</th>
</tr>
</thead>
<tbody>
<tr>
<td>May become distressed/insolvent</td>
<td>Same</td>
</tr>
<tr>
<td>Inefficient decisions</td>
<td>Same</td>
</tr>
<tr>
<td>May default or file for bankruptcy</td>
<td>May remain insolvent</td>
</tr>
<tr>
<td>✓ Shareholders are wiped out</td>
<td>✓ Depositors maintain balances</td>
</tr>
<tr>
<td>✓ Lenders are paid by seniority</td>
<td>✓ Secured lenders are protected</td>
</tr>
<tr>
<td>✓ Assets are depleted</td>
<td>✓ Access to Fed, Bailouts in crisis</td>
</tr>
<tr>
<td>Lenders try to protect themselves; heavy borrowers face harsh costs and conditions</td>
<td>Can keep finding lenders despite opacity, risk, and extreme leverage.</td>
</tr>
</tbody>
</table>
Historical Equity/Asset Ratios in US and UK

- Mid 19th century: 50% equity, unlimited liability
- After 1940s, limited liability everywhere in US
- “Safety nets” expand
- Equity ratios decline

The Safety Net of Banking Corporations is Special

Deposit insurance

Central bank support
» Central bank “liquidity support” and “lender of last resort” facility.
» Subsidized borrowing, e.g., Long term refinancing operation (LTRO) in Europe.
» Low interest rates if system weakens (“Greenspan put”)

Government bailouts
» Direct investment, e.g., Troubled Asset Relief Program (TARP) to prevent default.
» Guarantees, e.g., to support JPMorgan Chase acquisition of Bear Stearns.
» Nationalization, e.g., Royal Bank of Scotland, Lloyds, Dexia.
The Leverage Ratchet Effect

(Journal of Finance, 2018)

Anat Admati, Stanford
Peter DeMarzo, Stanford
Martin Hellwig, Max Planck Institute
Paul Pfleiderer, Stanford

Asymmetric “ratchet” forces in leverage adjustments are important, path dependence, affect investment and funding
Static “Tradeoff Theory” and Leverage Adjustments
“Optimal” static debt level (maximizing total firm value) is unstable;

With debt in place, shareholders resist all forms of leverage reduction, and choose to increase leverage/indebtedness even if high.

Leverage levels are history-dependent; agency conflicts reinforce inefficiencies on assets/funding sides of balance sheet.

Responses to ratio-based leverage constraints (covenants or regulations) are biased towards asset sales, even at distressed prices (fire sales).
High Leverage, Fire Sales, and “Deleveraging”

A 1% Asset Decline with 3% equity

⇒ 33% Balance Sheet Contraction

- Asset Fire Sales
- Illiquidity / Market Failure
- Bailouts

Asset Liquidation

- Asset Fire Sales
- Illiquidity / Market Failure
- Bailouts
Key Policy-Made Distortion: Senseless Debt Subsidies!
Exacerbate debt overhang effects, including leverage “addiction”

U.S. tax revenues forfeited as a result of interest deductibility as % of GDP

Source: Federal Reserve; Bureau of Economic Analysis; The Economist

The Economist, May 16, 2015
Private Considerations (Mostly Bank Managers)

More Debt
Others bear downside risk
Tax subsidies
ROE-based bonuses
Too Little Equity in Banking is Socially Expensive!
Excessive fragility and distortions benefit few

More Debt
- Others bear downside risk
- Tax subsidies
- ROE-based bonuses

More Equity
- Reduces risk of runs and liquidity problems
- Reduces risk and cost of insolvencies
- Reduces distortions in investments
- Reduces distortive subsidies
Zombie (Insolvent) Borrowers: Opaque and Dysfunctional
Zombie (Insolvent) Borrowers: Opaque and Dysfunctional

- Unable to raise equity
- “Gamble for resurrection”
- Anxious to take cash out
- Avoid equity
- Sell assets, even at fire-sale prices
- Underinvest in worthy “boring” assets
- Try to hide insolvency in disclosures
- Lobby policymakers for supports
Large Banks are Opaque

“Banking remains too much of a black box... for many investors scarcely an investible proposition.”
Andrew Haldane, BoE, Nov 2011

“Investors can’t understand the nature and quality of the assets and liabilities... The disclosure obfuscates more than it informs.”
Kevin Warsh, Jan. 2013

“The unfathomable nature of banks’ public accounts make it impossible to know which are actually risky or sound. Derivatives positions, in particular, are difficult for outside investors to parse.”
Paul Singer, Jan. 2014
The omission of off-balance sheet items in the standard measures implies a substantial underestimation of bank leverage.

Off-balance sheet funding is higher now than in 2007.

“Leverage, a Broader View,” Singh and Alam, IMF, March 2018
Basel II: A spectacular failure

Basel III: An inadequate tweak, “a well-intended illusion”
Thomas Hoenig, April 2013
Between summer 2007 and end of 2008, the largest 19 US institutions paid out nearly $80B to shareholders.

Regulatory Measures are Uninformative

From: Andrew Haldane, "Capital Discipline," January 2011
Regulatory Measures are Uninformative

“Tier 1” capital ratios: What crisis?

Largest 19 institutions received ≈$160B under TARP (bailouts).

Fed committed $7.7 trillion in below-market loans to 407 banks.

“Tier 2 capital” proved useless to absorb losses (except Lehman).

From: Andrew Haldane, “Capital Discipline,” January 2011
Regulatory Measures are Uninformative

“Tier 1” capital ratios: What crisis?

Market-based measures

From: Andrew Haldane, “Capital Discipline,” January 2011
### Basel Capital Regulation

(No Science, highly complex)

<table>
<thead>
<tr>
<th>Basel II</th>
<th>Basel III</th>
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<tbody>
<tr>
<td>“Common equity Tier 1 capital” to risk-weighted assets: <strong>2%</strong></td>
<td>“Common Equity Tier 1 Capital” to risk-weighted assets (RWA): <strong>4.5%</strong></td>
</tr>
<tr>
<td></td>
<td>» Plus 2.5% conservation buffer</td>
</tr>
<tr>
<td></td>
<td>» Plus 1.5% “Tier 1” to RWA</td>
</tr>
<tr>
<td></td>
<td>Leverage Ratio: “Tier 1” to total</td>
</tr>
<tr>
<td></td>
<td>» Basel III: <strong>3%</strong></td>
</tr>
<tr>
<td></td>
<td>» US: BHC: 5%, insured banks: 6%</td>
</tr>
<tr>
<td>“Tier 2” (loss-absorbing debt)</td>
<td>“Tier 2”/TLAC (loss-absorbing debt).</td>
</tr>
</tbody>
</table>
Tripling almost nothing does not give one very much.

If at least 15% of banks’ total assets, non risk-weighted assets were funded by equity, the social benefits would be substantial. And the social costs would be minimal, if any…

Temporarily restricting bank dividends is an obvious place to start.


Financial Times, November 9, 2010,

https://www.gsb.stanford.edu/faculty-research/excessive-leverage/healthy-banking-system-goal
Government (Taxpayers)
Shareholders
Other lenders (TLAC, Co-Cos, Bail-in Debt)
Short-term secured lenders
Depositors (unsecured, insured)
How much capital should banks issue? Enough so that it doesn't matter!

Curiouser and curiouser...

Into the rabbit hole...
Just about whatever anyone proposes… the banks will claim that it will restrict credit and harm the economy…. It’s all bullshit

Paul Volcker, January 2010

(From Payoff: Why Wall Street Always Wins, Jeff Connaughton, 2012)
Is More “Credit” Always Good?

- Too much or too little; boom, bust, and crises
- Credit booms are main predictors of bust/crises
- Wasteful investments in boom
- Credit crunch (overhang) in busts exacerbates recession
- Risk weights bias lending
  - favor governments over business

Credit is distorted by lenders’ extreme leverage and by bad regulation.
This rule will keep billions out of the Economy

Tim Pawlenty, Financial Services Roundtable, July 2015
This rule will keep billions out of the economy.

Tim Pawlenty, Financial Services Roundtable, July 2015
Bank capital is costly because, the higher it is, the lower will be the return on equity for a given return on assets.

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Nonsense, Excuses, Diversions and Spin

Much has been done
It’s very complicated
There will be “unintended consequences”
There are tradeoffs
We must maintain level playing field
We must fear the “shadow banking system”
We need cost-benefit estimates
etc., etc............

“The Parade of Bankers New Clothes Continues: 34 Flawed Claims Debunked,” Admati and Hellwig, last revised 2019
“Financial Innovation:” Good for Society or Regulatory Arbitrage?

“This new rules will fundamentally change the way we get around them”
Politics of Banking

Symbiosis and “bargains” banks-governments

“Banks are where the money is”

Guarantees appear free, invisible social cost, willful blindness

Banks seem sources of funding, not risk

“National champions”

Central banks support governments and private banks

Banks get away with being inefficient and reckless
Many Enablers

- Bankers and other financial sector employees
- Institutional investors
- Executives and boards of financial firms
- Auditors and rating agencies
- Supervisors and regulators
- Central bankers
- The media
- Politicians
- Academics/Economists
With such friends [as academics], who needs lobbyists?

Risk manager in a major systemic institution, 2016
Loss-Absorbing Debt (“TLAC”): Clever Bail-in or Fool’s Gold?
Governments in Europe Find Workarounds to Bail Out Ailing Banks

State injections into banks in Germany and Italy continue to protect investors over taxpayers.
“Heroic Savior” Button
Better financial system requires

- more transparency
- more equity funding
- well-designed, effectively-enforced rules to counter distorted incentives
- accountability for all involved
Change Counterproductive Policies and Laws!

Debt (tax) subsidies
Excessive “safe harbor” exemptions to repos and derivatives
Opacity of disclosure
Rules and practices that are too complex and costly relative to benefits
“Banks have paid $321 billion in fines since the crisis (but they’ve made almost $1 trillion)”

CNBC, March 17, 2017
“Wells Fargo Leaders Reaped Lavish Pay Even as Account Scandal Unfolded”
New York Times, March 16, 2017
“Wells Fargo Hit with $1 Billion Fines Over Home and Auto Loan Abuses”
NPR, April 20, 2018

“Wells Fargo Agrees to Pay $575 Million to Resolve State Investigations”
New York Times, December 28, 2018

Is the justice system working?
Thank you!

More at

https://admati.people.stanford.edu/