Remember these headlines?

Sept. 15, 2008

Crisis on Wall Street as Lehman Totters, Merrill Is Sold, AIG Seeks to Raise Cash

Fed Will Expand Its Lending Arsenal in a Bid to Calm Markets; Movers Cap a Momentous Weekend for American Finance

Ultimatum By Paulson Sparked Frantic End
Citing Grave Financial Threats, Officials Ready Massive Rescue

Lawmakers Work With Fed, Treasury To Try to Restore The Flow of Money

GOP Sees Rebound in Battle for Congress

Party Hopes Momentum Will Help Limit Losses

By Michael Gerson
Washington Post Staff Writer

Like many of her Republican rivals, George H. W. Bush is concerned about their election prospects. Sen. Elizabeth Dole of North Carolina skipped the party’s national convention in Boston on campaign

like 2000, but not in her absence, the gathering may have shown that she and other House leaders now feel that the GOP’s momentum will help limit losses in Congress.

The decision to skip the convention was made last week by Sen. Judd Gregg of New Hampshire, who is running for governor.

"I have no time to spend on any political events," Gregg said. "I think it would be a good idea for the party to focus on the issues that matter to voters."

The campaign is expected to continue through the fall, with the party hoping to return to the White House in January.

The decision to skip the convention was made in part because of the祀党’s momentum will help limit losses in Congress. But some Republicans are concerned that the祀党 may be too close to the limit on losses in Congress.

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“Fear in the financial markets, which had been building, evolved into a full-blown panic in September 2008. During a remarkable 19-day stretch, the federal government took over the two largest players in the mortgage market, allowed a large investment bank to go bankrupt, bailed out one of the world’s largest insurance companies, and steered a major financial institution through the largest bank failure in U.S. history.”

Congressional Oversight Report on the Troubled Asset Relief Program
January 16, 2014

“… it was kind of like you’re in a car wreck or something. You’re mostly involved in trying to avoid going off the bridge. And then, later on, you say: ‘oh my God.’”

- Ben Bernanke

Source: Brookings Institute
The impact to the structure of the financial system was significant.

<table>
<thead>
<tr>
<th>Institution</th>
<th>Action</th>
<th>Quarter in which distress occurred</th>
<th>Total assets ($billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citibank</td>
<td>Assisted</td>
<td>Q4 2008</td>
<td>1,938</td>
</tr>
<tr>
<td>Bank of America</td>
<td>Assisted</td>
<td>Q4 2008</td>
<td>1,818</td>
</tr>
<tr>
<td>AIG</td>
<td>Assisted</td>
<td>Q3 2008</td>
<td>1,022</td>
</tr>
<tr>
<td>Fannie Mae</td>
<td>Failed/Gov’t Conservatorship</td>
<td>Q3 2008</td>
<td>897</td>
</tr>
<tr>
<td>Merrill Lynch</td>
<td>Emergency Merger</td>
<td>Q3 2008</td>
<td>876</td>
</tr>
<tr>
<td>Freddie Mac</td>
<td>Failed/Gov’t Conservatorship</td>
<td>Q3 2008</td>
<td>804</td>
</tr>
<tr>
<td>Wachovia</td>
<td>Emergency Merger</td>
<td>Q3 2008</td>
<td>764</td>
</tr>
<tr>
<td>Lehman Brothers</td>
<td>Bankruptcy</td>
<td>Q3 2008</td>
<td>639</td>
</tr>
<tr>
<td>Bear Stearns</td>
<td>Emergency Merger</td>
<td>Q1 2008</td>
<td>399</td>
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<tr>
<td>Washington Mutual</td>
<td>Bankruptcy</td>
<td>Q3 2008</td>
<td>307</td>
</tr>
<tr>
<td>GMAC (Ally Financial)</td>
<td>Emergency Merger/Assisted</td>
<td>Q4 2008</td>
<td>180</td>
</tr>
<tr>
<td>National City</td>
<td>Emergency Merger</td>
<td>Q4 2008</td>
<td>144</td>
</tr>
</tbody>
</table>

Total Assets of Failed/Distressed Institutions: $9.79 Trillion
Average Assets of Failed/Distressed Institutions: $889.82 Billion

Total Number of Failed Banks and Thrifts

Source: FDIC
The financial crisis showed the connectivity of institutions in our financial system, including those financial firms in the “shadow” system.

Definition of “shadow banking”:

“Credit intermediation involving entities and activities (fully or partially) outside the regulatory banking system.”

In particular:

“Non-bank financing involved in bank-like activities, transforming maturity/liquidity and creating leverage, which can become a source of systemic risk.”

Transforming Shadow Banking into Resilient Market-based Finance, FSB, November 12, 2015
Growth trends of the traditional banking system
A comparison of credit provided by the banking and shadow banking sectors
The size of shadow banks and/or their interconnectivity with the traditional banking system can create systemic risk.

**Systemic events:**

- 2008 Lehman Brothers
- 2008 American International Group (AIG)

**Non-systemic:**

- 1998 Long-term Capital Management (LTCM)

...but regulation has come a long way since the recent financial crisis
The Congressional response to the financial crisis was the Dodd-Frank Act.
The Dodd-Frank Act’s focus is to end “too big to fail.”

• Resulted in the creation of the Financial Stability Oversight Council and an Office of Financial Research
• Creates a mechanism for determining that nonbank financial firms are systemically important
• Provides clear authority for the Federal Reserve to serve as consolidated supervisor for bank and financial holding companies and nonbank financial firms designated as systemically important (SIFIs)
• Implements enhanced prudential standards and new capital requirements for bank and financial holding companies with more than $50 billion in assets
• Resulted in the formation of the Consumer Financial Protection Bureau
What is required for the FSOC to declare a nonbank financial firm as systemically important?

- Size
- Substitutability
- Interconnectedness
- Leverage
- Liquidity
- Asset and liability maturity mismatch
- Existing regulation of potential nonbank SIFIs
The case to designate non-bank SIFIs

Insurers:
- **AIG**: $496.9 billion in assets (12/31/2015), $180 billion bailout in 2008
- **Prudential financial**: $757.4 billion in assets (12/31/2015), 35% of operating income from international operations
- **MetLife**: $877.9 billion in assets (12/31/2015), $30.6 billion in highly runnable liabilities that constitute “bank-like” type of activity

Non-bank-non-insurers: Re-consider designation?
- **General Electric Corporation**: Since its designation, the company has announced a strategic plan to reduce its footprint.
  - Total GE assets reduced by 52%, from $549 billion to $265 billion.
  - Financing receivables down 74%; loans to consumers down 95%, cash-like investments up 35%; commercial paper liabilities reduced by 88% and securitization funding down by 90% to just $3 billion
Other non-bank SIFIs – Financial Market Utilities

- July 2010 DFA Title VIII mandated enhanced supervision of financial market utilities (FMUs)
- July 2012 FSOC designated 8 FMUs as systemically important.
- FMUs are multilateral systems that provide infrastructure for transferring, clearing, and settling payments, securities, and other financial transactions among and between financial institutions.
- FMUs could create, or increase, the risk of significant liquidity or credit problems spreading among financial institutions or markets.
The cost of being labeled as a SIFI

- Twice annual capital stress testing under adverse economic scenarios
- Higher capital requirements (Basel III) for all banking firms plus four more anticipated requirements for the eight largest U.S. firms
  - Regulatory leverage ratio above the Basel III minimum
  - Requirements for equity and long-term debt to facilitate an orderly resolution
  - Capital surcharges for globally systemically important institutions
  - Measures to address wholesale funding risks
- Prohibitions on proprietary trading and investing in, sponsoring of, or having certain relationships with a hedge fund or private equity fund (Volcker Rule)
- Affiliates of SIFIs must have their security-based swaps contracts cleared on a central exchange
- Liquidity reforms
The cost of being labeled as a SIFI

• Annual submission of report detailing an appropriate resolution plan for the institution (living will)
• Federal Deposit Insurance Orderly Liquidation authority (back-up resolution authority)
• Limit on acquisitions by any financial firm that controls more than 10 percent of the total liabilities of financial firms in the U.S.
• Requirement that banking regulators consider “risk to the stability of the U.S. banking or financial system” in evaluating any proposed merger or acquisition.
Is the emergence of Financial Technology (FinTech) a threat to financial stability?

• In recent years, we have seen a rapid increase in the number of FinTech firms:
  – Firms seeking to profit from innovations in financial technology.
• New entrants are creating challenges and opportunities in lending and payments areas.

Who are the FinTech players?
What are the FinTech segments?

• Lending
• Payments
• Savings, Investment, and Financial Planning
• Blockchain
• Data and Technology
What do we mean by “marketplace lenders”?

- Largely unregulated marketplace lenders are connecting institutional and individual lenders, with small businesses and individuals that need to borrow money.

Source: “Marketplace Lending Grew by 700% in Four Years”, American Banker, April 8th, 2016
Payments

- FinTech start-ups now offer payment solutions that make payments easier and faster for retail clients and small businesses.
  - Volume of transactions made using these new platforms is increasing rapidly: for example, Venmo payment volume in 2015Q4 grew 174% YoY and reached $2.4B.
- Established FinTech firms, such as Apple, Google, Samsung and others have introduced proprietary digital wallets.

Q: How often do you make a payment to another person using a peer-to-peer mobile application?

Source: Accenture “2015 Digital-Payments Survey, North America” (4,000 respondents)
Foe or friend?

• FinTech “disruptors” are embracing “co-opetition” and are seeking ways to grow using the existing financial ecosystem:
  – Lending Club’s credit supplier is Web Bank, a Utah bank.
  – PayPal’s merchant acquirer is Wells Fargo.
  – Apple did not rebuild telco-infrastructure from scratch but leveraged what already existed.

• FinTech firms need an insured depository institutions for clearing and settlement.
Questions?