THE 2007-2009 FINANCIAL CRISIS: AN ECONOMIC PERSPECTIVE

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September 11, 2018
ARC OF THE CRISIS
Source: Federal Reserve Financial Accounts of the United States
Notes: GSE: government-sponsored enterprise (including Fannie Mae and Freddie Mac); ABS: asset-backed securities; MMF: money market funds
FDIC
• Resolution authority for banks, with systemic risk exemption to allow FDIC to provide broader guarantees.
• Deposit insurance for banks.

Federal Reserve
• Discount window lending for banks, and in extremis for other institutions.
• Swap lines for foreign central banks.

TOOLS AVAILABLE

NO AUTHORITY
• To intervene to manage the failure or nationalize nonbanks.
• To guarantee the broader liabilities of the financial system.
• To inject capital into the financial system.
• For the Fed to purchase assets other than Treasuries, Agencies and Agency MBS.
• To inject capital or guarantee the GSEs.
Bank credit default swap spreads and Libor-OIS

500 basis points

Increasing Stress  Early Escalation  Breaking the Panic and Resolution

Source: Bloomberg. Note: Credit default swap spreads are equal-weighted averages of JPMorgan Chase, Citigroup, Wells Fargo, Bank of America, Morgan Stanley, and Goldman Sachs.
POLICY RESPONSES
Banks were reluctant to borrow from the Fed’s discount window over fear it would signal they were in financial trouble …

... so the Fed initiated TAF in a similar role, and opened it to both domestic and foreign banks.
Mortgage-related securities issuance

$300 billion

Fannie Mae, Freddie Mac conservatorship Sept. 6, 2008

Senior Preferred Stock Purchase Agreements (SPSPAs)
GSEs receive capital backstop of up to $100 billion, Sept. 26

Fed QE 1 Fed announces it will buy GSE debt and GSE-backed MBS, Nov. 25, 2008

First SPSPA Amendment increases commitment to $200 billion per GSE, May 6, 2009

Second SPSPA Amendment increases commitment again, Dec. 24, 2009

Spread between FNMA 30-year current coupon MBS and 10-year Treasury

300 basis points

Sources: MBS issuance: Securities Industry and Financial Markets Association; agency MBS spread: Bloomberg
Anxious investors demanded ultra-short terms for commercial paper as concerns their holdings were tainted by troubled MBS caused liquidity to evaporate.

**BNP Paribas freezes three funds** over MBS concerns, Aug. 9, 2007

**Master Liquidity Enhancement Conduit (MLEC)**
On Oct. 15, 2007, Treasury facilitates plan for private banks to support the ABCP market; it is never implemented

**AMLF and money market guarantees** Sept. 19, 2008
Fed establishes ABCP Money Market Mutual Fund Liquidity Facility; Treasury announces temporary guarantee program for money market mutual funds

**Commercial Paper Funding Facility (CPFF)** established by Fed, Oct. 7, 2008

**Lehman Bankruptcy**
Sept. 15, 2008

Source: Federal Reserve
Capital raised each year

Source: Goldman Sachs

U.S. Banks
~90% of 2008-16 capital was raised 2008-10

European Banks
~50% of 2008-16 capital was raised 2008-10
Senior unsecured U.S. bank debt issuance under TLGP (DGP)*

$400 billion

FDIC bank debt guarantees

Nonbanks

Bank holding companies

Traditional banks

2008 2009 2010 2011 2012

Average-weighted CDS spread for six big banks

500 basis points

Bank CDS spreads

TLGP Debt Guarantee Program introduced
Oct. 14, 2008

Sources: Debt issuance: Federal Deposit Insurance Corp.; internal calculations; CDS spreads: Bloomberg

*Debt Guarantee Program covered debt issued by both the parent company and its affiliates
MACRO POLICIES
Quarterly effect of fiscal stimulus measures on GDP

Estimated impact on GDP from fiscal legislation

+4.0%  +3.5  +3.0  +2.5  +2.0  +1.5  +1.0  +0.5

Sources: Council of Economic Advisers; Congressional Budget Office; Bureau of Economic Analysis; calculations by Jason Furman

Note: $712 billion represents the stimulus from the Recovery Act through 2012.
OUTCOMES
$7 trillion

### How bad was the drop in GDP?
Decline in output peak to trough (real GDP per capita)

- **U.S. financial crisis**: $-9.6\%$
- **63 financial crises in advanced economies, 1857 to 2013**: $-5.25\%$

### How long was the recession?
Duration of recession

- **63 financial crises in advanced economies, 1857 to 2013**: 2.9 years
- **U.S. financial crisis**: 1.5 years

### How fast was the recovery?
Recovery of output to previous peak

- **63 financial crises in advanced economies, 1857 to 2013**: 7.3 years
- **U.S. financial crisis**: 5.5 years

Sources: National Bureau of Economic Research, "Recovery from Financial Crises: Evidence from 100 Episodes"; Bureau of Economic Analysis via Federal Reserve Economic Data, internal calculations
Real GDP, percentage change from 4th quarter 2007

Source: Organisation for Economic Co-operation and Development