International Dimensions of the Crisis and Policy Responses

Rebecca Hellerstein       Paolo Pesenti
The views in this presentation are those of the speakers and do not necessarily reflect the views of the Federal Reserve Bank of New York or the Federal Reserve System.
Roadmap of presentation

- Global contagion
- International trade collapse
- Policy responses
  - Conventional
  - Unconventional
- Measuring the impact of policy responses
  - Across programs
  - Across countries
A global domino effect…

Source: IMF Global Financial Stability Report and World Economic Outlook
…with devastating impact on capital markets

Source: IMF Global Financial Stability Report and World Economic Outlook, World Federation of Exchanges
Preconditions for global contagion

- Benign economic environment encourages excessive risk-taking
- High leverage
- What’s in your wallet? Opacity of the securitization process impairs asset valuation
- Cross-border connectedness of financial institutions
High financial integration in the 2000s

- Cross-border flows from 5% of world GDP in 1998 to more than 17% in 2007
- By the end of 2007 cross-border assets and liabilities in advanced economies were more than 220% of aggregate GDP
- Ten years earlier, this ratio was only 110%
- Mostly banks
Increase in G5 banks’ foreign exposure

Financial Claims on Rest of World

Source: BIS Banking Statistics
Transmission of financial stress

LIBOR-OIS spreads

Source: Bloomberg
Transmission of financial stress

LIBOR-OIS spreads

Source: Bloomberg
Transmission of financial stress

LIBOR-OIS spreads

Source: Bloomberg
Transmission of financial stress

LIBOR-OIS spreads

Source: Bloomberg
Synchronized international trade collapse

Source: IMF Direction of Trade Statistics
Response of global policy community

- Unprecedented policy responses to crisis, including conventional and unconventional monetary interventions, fiscal stimulus packages, new and expanded liquidity facilities…

- Preliminary evidence suggests international interventions have been effective

- Especially when they generated positive spillovers
Coordination of policy rate cuts

Source: Central bank websites
No size fits all? Fiscal stimulus in 2009

Cyclically-Adjusted Financial Balance

Change in % of potential GDP

Source: OECD Economic Outlook
Asymmetries across policy interventions

Wholesale Funding Guarantees

Unconventional Monetary Policy

Liquidity and Rescue Interventions

Source: Country sources
The impact of policy announcements…

- Dependent variable: change in credit default swap spreads and equity prices two days after the announcement.

- Announcement effects of policy interventions were substantial
  - 28 basis point decline in CDS spreads
  - 5 percent increase in equity prices
... across policy programs...

Reduction in Financial CDS Spreads

Basis points

Deposit guarantee  Funding guarantee  Capital injections  Short sale ban  UMP

0  5  10  15  20  25  30  0  5  10  15  20  25  30
... and across countries

Increase in Financial Equity Prices

Percent

Euro Area | Japan | UK | US

% Increase in Financial Equity Prices

Euro Area: 3.5%
Japan: 5%
UK: 3%
US: 4.5%
Spillover effects

- Policy moves affected spreads abroad
  - Benefits from coordination

- IMF study finds significant spillover effects on Libor-OIS spreads after announcements of
  - Wholesale funding guarantees
  - Capital injections
  - Unconventional monetary policy
Central banks’ balance sheets

Source: Central bank websites
Japan’s experience: quantitative easing…

Source: Bank of Japan
… and CPI deflation

Source: Bank of Japan, IMF International Financial Statistics
Questions for discussion

- Policy spillovers seem to matter. Should central banks coordinate the timing of the exit strategies with each other or can they rather act independently?

- High leverage fueled the global contagion. Are low interest rates creating new bubbles in asset and commodity prices?

- The U.S. trade deficit is lower than before, but we continue to borrow from foreign investors. Is this putting the dollar at risk? Or the crisis has made these concerns a feature of the past?
Reference Slides
Did current account imbalances trigger the global domino?

- Not a key role
- World saving glut contributed to regime of low-interest rates
- But specific risks associated with global imbalances have not materialized (yet?)
Heat map: Contagion across assets and countries
Synchronized cyclical conditions: Industrial production

Source: OECD
Clustering of policy responses...

International Responses to the Crisis Timeline (Sept 2008 - Oct 2008)

CAPITAL INJECTIONS AND WHOLESALE FUNDING GUARANTEES

Other Market Interventions

Liquidity and Rescue Interventions

Bank Liability Guarantees

18-Sept Ireland
- Short sales of financial stocks prohibited indefinitely

19-Sept United Kingdom
- Short sales of financial stocks prohibited, disclosure of short positions required

19-Sept Canada
- Short sales of financial stocks prohibited temporarily

1-Oct Italy
- Short sales of financial stocks prohibited temporarily

1-Oct Sweden
- Deposit insurance extended to all types of deposits, up to SEK 500,000

3-Oct United Kingdom
- Deposit insurance increased to GBP 50,000

3-Oct Ireland
- Deposit insurance increased to EUR 100,000

5-Oct Germany
- Government guarantees all private bank accounts

6-Oct Sweden
- Deposit insurance extended to all types of deposits, up to SEK 500,000

8-Oct United Kingdom
- Credit Guarantee Scheme announced to guarantee debt of short maturity

9-Oct Italy
- Government states no banks will fail, no depositors will suffer losses

13-Oct France
- EUR 50 billion fund to provide loans to banks and other financial firms announced

13-Oct Germany
- EUR 400 billion plan to guarantee bank financing announced

13-Oct Italy
- Government passes bank financing guarantee, will provide unspecified amount

16-Oct Switzerland
- Government injects CHF 6 billion into UBS and creates an SPV to buy liquid assets, funded by UBS capital and a central bank loan

18-Oct United Kingdom
- Major financial institutions must raise Tier 1 capital by GBP 25 billion combined, funds will be available

20-Oct Sweden
- Stabilization fund announced, with SEK 15 billion initially, government will be given the right to buy out shareholders in systematically important institutions at market price

20-Oct Ireland
- Deposit insurance increased to EUR 100,000

23-Oct Canada
- Canadian Lenders Assurance Facility announced to guarantee debt up to three years

27-Oct Japan
- Naked short selling banned, exchanges must disclose holders of 0.25% short position, until end of April
Clustering of policy responses...

International Responses to the Crisis Timeline (Sept 2008 - Oct 2008)

DEPOSIT GUARANTEES

Sept 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Oct 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Clustering of policy responses…

International Responses to the Crisis Timeline (Sept 2008 - Oct 2008)

**SHORT SALE BANS**

- **18 Sept** - Ireland: Short sales of financial stocks prohibited indefinitely.
- **18 Sept** - United Kingdom: Short sales of financial stocks prohibited, disclosure of short positions required.
- **19 Sept** - France: Short sales of financial stocks prohibited, plus disclosure requirements.
- **19 Sept** - Canada: Short sales of financial stocks prohibited temporarily.
- **1-Oct** - Italy: Short sales of financial stocks prohibited temporarily.
- **27-Oct** - Japan: Naked short selling banned, exchanges must disclose holders of 0.25% short position, until end of April.
## G-20 fiscal stimulus

<table>
<thead>
<tr>
<th>Country</th>
<th>Stimulus (USD bn)</th>
<th>As % of GDP</th>
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<tbody>
<tr>
<td>Argentina</td>
<td>4.4</td>
<td>1.3</td>
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<tr>
<td>Australia</td>
<td>19.3</td>
<td>1.8</td>
</tr>
<tr>
<td>Brazil</td>
<td>8.6</td>
<td>0.5</td>
</tr>
<tr>
<td>Canada</td>
<td>43.6</td>
<td>2.8</td>
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<tr>
<td>China</td>
<td>204.3</td>
<td>4.8</td>
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<tr>
<td>France</td>
<td>20.5</td>
<td>0.7</td>
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<tr>
<td>Germany</td>
<td>130.4</td>
<td>3.4</td>
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<tr>
<td>India</td>
<td>6.5</td>
<td>0.5</td>
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<tr>
<td>Indonesia</td>
<td>12.5</td>
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<tr>
<td>Italy</td>
<td>7.0</td>
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<tr>
<td>Japan</td>
<td>154.4</td>
<td>3.3</td>
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<tr>
<td>Korea</td>
<td>26.1</td>
<td>2.7</td>
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<tr>
<td>Mexico</td>
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<tr>
<td>Russia</td>
<td>30.0</td>
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<tr>
<td>Saudi Arabia</td>
<td>49.6</td>
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<td>South Africa</td>
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<td>2.6</td>
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<tr>
<td>Spain</td>
<td>75.3</td>
<td>4.5</td>
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<td>Turkey</td>
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<tr>
<td>UK</td>
<td>40.8</td>
<td>1.5</td>
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<tr>
<td>US</td>
<td>841.2</td>
<td>5.9</td>
</tr>
</tbody>
</table>
Fiscal stimulus/GDP

Source: IMF, Brookings Institute
Impact of unconventional monetary policy on financial firms’ CDS spreads
Impact of unconventional monetary policy on financial firms’ equity prices
Impact of policy announcements on financial firms’ CDS spreads (ex. US)
Impact of policy announcements on financial firms’ equity prices (ex. US)

- Deposit guarantee
- Funding guarantee
- Capital injections
- Short sale ban
- UMP

Bar chart showing the impact of different policy announcements on financial firms’ equity prices.