Preliminary Lessons From the Crisis, Global Economic Prospects, and Policy Challenges 1/

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1/ The views expressed are my own and should not be attributed to the staff, Management and Board of the IMF
Road Map of Presentation

- The Financial Crisis—what have we learnt?
  - Prelude to the crisis
  - How does it relate to previous crises?
  - Where are we now?
  - Preliminary lessons
- Consequences of the Crisis - Global Economic Prospects
- Policy Challenges Looking Forward
The Financial Crisis—What Have we Learnt?
Prelude to the Crisis
Benign Macro-Financial Conditions, but Some Concerns

- **Benign conditions**
  - High global growth and productivity; low inflation
  - Low market volatility and risk spreads

- **But some sources of concern**
  - Global imbalances, large capital inflows into US
  - Low real interest rate, search for yield

- **US is largest economy/finance**
  - Bound to have global effects because of size and interconnectedness
An Environment with Low Interest Rates, Volatility and Spreads

10-year Govt. Bonds Yields
(in percent)

Volatility and Spreads
(in basis points)

U.S.  Euro area  Japan  U.K.  China

EM BIG  U.S. High Yield, BB  VIX (Index, Jan. 1990=100)
A Global “Savings Glut”
Current Account Trends and Capital Flows
(In billions of U.S. dollars)

- United States current account
- China, Japan, and Saudi Arabia combined current accounts
- Other oil exporters’ combined current accounts

Financial flows to emerging markets
How Does it Relate to Previous Crises?
Many Commonalities with Previous Crises

- Asset price bubbles: housing, equity, .com
  - Ex-post clear, ex-ante always less

- Credit booms
  - With deteriorating lending standards
  - Now too, but this time more households

- Systemic risk buildup
  - Subprime and loans in FX, became correlated

- Regulation and supervision failures
  - Do not keep up, this time especially derivatives
A Housing Boom Similar to the Big 5 Banking Crisis

Housing Price Index 1/
(5yr prior to crisis =100)

Sources: BIS and Haver Analytics.
1/ House price index is equal to 100 five year prior to banking crises. Big Five refers to the average of indices for the 5 major banking crises. For the current crisis in the United States, the beginning date is assumed to be 2007:3.
Not Just Confined to the United States

Housing Valuation Ratios
(1997-2006; percent change)

- price/ disposable income
- price/ rent

Housing Prices in Emerging Markets
(2000-2006; percent change)

- real house prices
- real GDP per capita

Not Just Confined to the United States

Housing Valuation Ratios
(1997-2006; percent change)

- Ireland
- Netherlands
- U.K.
- France
- Spain
- Denmark
- Australia
- Sweden
- New Zealand
- Norway
- Italy
- United States

Housing Prices in
Emerging Markets
(2000-2006; percent change)

- Estonia
- Latvia
- Lithuania
- South Africa
- Czech Rep.
- India
- Argentina
- China
- Hungary

Price/disposable income
Price/rent
Real house prices
Real GDP per capita

Not Just Confined to the United States

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Price/disposable income
Price/rent
Real house prices
Real GDP per capita
Equity Prices Also Increased (in Moderation), But Different Cycle

Equity Price Index 1/
(5yr prior to crisis =100)

1/ Equity price index is equal to 100 five year prior to banking crises. Big Five refers to the average of indices for the 5 major banking crises. For the current crisis in the United States, the beginning date is assumed to be 2007:3.
In Emerging Economies Capital Flows Led to Credit Booms

Credit Inflows and Credit Growth (2004-2007)

Percentage Change in Credit over GDP vs. Net Private Capital Flows in Percent of GDP
New Elements of the Crisis
(Leverage, Opaqueness, Central Role of Households, and Interconnectdeness)
Some New Dimensions of the Crisis

- Increased opaqueness
  - Securitization: poorer risk assign, monitoring
  - Harder to value once crisis started
- Financial integration & interconnectedness
  - Larger capital flows /cross-border positions
  - Greater connection between markets
- Increased role of leverage
  - In many sectors and markets
- Central role of households
  - Complicating restructuring
Expanding (Non-Conforming) Mortgage Securitization Accompanying the U.S. Housing Boom

U.S. Mortgage Spreads
(in basis points)

Mortgage Securitization
(in US$ billions; 2008 number is annualized)

Sources: IMF staff estimates.
Rapid Increase in “Opaque” Instruments

Quarterly Issuance (US$ billion)

Historical Downgrades of Structured Products ('000)

Source: Financial Times article on February 5, 2009.
Rising Interconnectedness in Bank Lending & Exposures

Growth in International Claims, by Bank Nationality 1/
(in year over year percent change)

Foreign Exposures 4/ 5/
(in trillions of U.S. dollars)

1/ Foreign currency claims on home country residents are excluded.
2/ Danish, Finnish, Norwegian and Swedish banks.
3/ Total international claims excluding those booked by Japanese, Nordic and US banks.
4/ On an ultimate risk basis and excluding inter-office transfers.
5/ Foreign claims vis-à-vis entities (banks and non-banks) in advanced economies, booked by banks headquartered in the countries shown.
Rising Leverage in Investment & Commercial Banks

(total assets relative to household assets; percent change since 2000)

Broker-Dealers

Commercial Banks

9/08
Rising U.S. Household Leverage and Declining Savings

**Household Equity**
*(ratios to disposable income)*
- Blue: Other equity (tangible assets other than real estate minus non-credit market liabilities)
- Yellow: Financial assets minus credit market liabilities, other than mortgages
- Red: Real estate assets minus mortgages
- Green: Total Equity

**Household Indebtedness**
*(in percent of disposable income)*
- Yellow: Home mortgages
- Green: Personal savings (rhs)
- Red: Consumer credit
- Cyan: Other liabilities
Where Are We Now?
(Systemic Risks Remain High)
Systemic Risks Remain Elevated Despite Government Interventions

CDS Spreads for High-Grade Financials
(basis points)

Europe
US (rhs)

Banks begin issuing govt. guaranteed debt
Bear Stearns collapse
Lehman Bros. Bankruptcy
Bleak Economic Releases
Globally

Source: Bloomberg
Credit Deterioration is Deepening and Spreading

Estimates of Potential Financial Sector Writedowns on US Assets
(as of January 2009)

2008 GFSR Loss Estimate
($ 1.40 tn)

Updated Loss Estimate, 2009
($ 2.20 tn)

Numbers are in $ Billions

Source: Staff Estimates
Interbank Spreads have Declined Sharply, But Interbank Liquidity Remains Impaired

Libor-Overnight Index Swap Spreads (basis points)

Spot and Forward LIBOR-OIS Spreads (basis points)

Source: Bloomberg
Dramatic Declines in Equity Markets and Confidence

**Equities**
(1/1/2007=100; FTSE)

- U.S.
- Japan
- Euro area
- U.K.

**Consumer Confidence**
(Jan. 2005=100)

- U.S.
- Japan
- Euro area
- U.K.

Lehman Brothers
Market Stress Levels At Historic Highs
Preliminary Lessons from the Crisis
Preliminary Lessons From the Crisis

- Macroeconomic policies and financial stability considerations were not sufficiently integrated.

- Fragmentation of financial regulation promoted regulatory arbitrage, which in turn fueled a shadow banking system – outcome was excess leverage in the system.

- Changing financial landscape of credit creation not matched by updated regulatory frameworks, while oversight not dynamic enough.

- Risk management not strong enough – need for greater emphasis on systemic (macro-prudential) risks.

- Procyclicality of prudential regulations, compensation, and accounting magnified the boom-bust cycles.
Macroeconomic Policies

- Monetary policy and asset bubbles
  - “Doctrine:” 1. too hard to predict bubbles; 2. too blunt to stop; 3. easier to clean up
  - Learned less valid when financial sector is involved and leverage is increasing
  - And while regulation and supervision should be first defense, may not suffice

- Fiscal policy
  - Build buffers in good times to create headroom
  - Adjust tax policy to avoid encouraging leverage
Regulation and Supervision

- Regulatory perimeter
  - Broaden to capture systemic institutions and anchor it on activities (not institutions); retain flexible perimeter
  - Consider systemic risk/interconnections more

- Market discipline
  - Reduce conflict of interests, encourage due diligence
  - Discourage too large/connected and ramp up oversight
  - Better resolution framework

- Procyclicality
  - Prudential regulation: buffers, leverage ratio, provisioning through the cycle
  - Accounting: complement mean with variance
  - Compensation: risk based and long-term

- Information
  - Reduce gaps; greater transparency on valuation of complex instruments; reporting of both on and off balance sheet exposure to allow systemic risk assessment
Financial Architecture

- Surveillance
  - Less fragmented, deeper, more integrated, and better communicated
- Multilateralism
  - More coordinated, ex-ante and ex-post
- Financial Regulation
  - Greater convergence in practices & rules
  - Especially cross-border, burden sharing
- Financing
  - Larger insurance/ex-ante liquidity/financing mechanisms, backed-up
Consequences of the Crisis
(Synchronized Recession)
Global Outlook Has Deteriorated, but Modest Turnaround Anticipated with Policy Stimulus

**WEO Real GDP Growth Projections**  
* (In percent change from a year earlier)

<table>
<thead>
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<th></th>
<th>U.S.</th>
<th>Euro</th>
<th>Japan</th>
<th>China</th>
<th>India</th>
<th>World</th>
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<tbody>
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<td>2009 (Jan.09)</td>
<td>-1.6</td>
<td>-2.0</td>
<td>-2.6</td>
<td>6.7</td>
<td>5.1</td>
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<td>2009 (Nov.08)</td>
<td>-0.7</td>
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<td>-0.2</td>
<td>8.5</td>
<td>6.3</td>
<td>2.2</td>
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<tr>
<td>Change</td>
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<td>-1.5</td>
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<td>-1.8</td>
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Source: IMF, World Economic Outlook.
Behind the Forecasts—Advanced Economies

- Financial stress remains higher than previously envisaged, notwithstanding policy efforts.

- The feedback loop from financial strains to real activity has proven to be stronger than anticipated.

- Output collapse being driven by lower wealth, dramatic declines in confidence, and a “wait and see” attitude of households and businesses.

- Forecasts assume sizeable fiscal stimulus; financial strains will ease gradually; and U.S. housing market will find a bottom.

- Lower commodity prices should help bolster demand.
Deteriorated Outlook Reflects Abrupt Fall in Industrial Activity and Global Trade

**Industrial Production**
*(Annualized percent change of 3mma over previous 3mma)*

**Merchandise Exports**
*(Annualized percent change of 3mma over previous 3mma)*
Banking Stress Drives Larger and Deeper Downturns

- Figure showing the relationship between banking stress and recession duration, average output loss per quarter, and cumulative output loss.

- Duration (quarters) comparison between recessions not preceded by financial stress and those preceded by bank-related financial stress.

- Average Output Loss per Quarter (percent of GDP) comparison.

- Cumulative Output Loss (percent of GDP) comparison.

1 See Table 4.2 of Chapter 4 of October 2008 World Economic Outlook.
Current Recession is Likely to be Deeper than All Previous Post-war Recessions

U.S. Real GDP Growth: Recessions and Recoveries
(in percent change from year earlier; quarterly path)

Sources: IMF, World Economic Outlook, Bloomberg L.P. and Haver Analytics.
Role of Uncertainty in the Crisis

- Affecting portfolio decisions: Shift towards riskless assets (US T-bills) away from risky assets.

- Affecting consumption/saving decisions: Wait and see, by consumers and firms.

- Both making the crisis much worse. High spreads. Demand collapse.
Elevated Uncertainty Weighing on Spending

VIX, U.S. Confidence & Spending

(Percent change, yoy)

- VIX
- Consumer confidence
- Consumer durables
- Fixed investment
- Residential investment

U.S. Vehicle Sales (in percent)

Source: Bloomberg L.P.
1/ Average of year-on-year percent changes during NBER recession dates from 1980-2008.
Behind the Forecasts—Emerging Economies

Three Major Shocks:

- Declining External Demand and Exports.
- Tighter Credit (External Financing).
- Lower Commodity Prices.
Emerging Economies Growth Slowed By Falling Exports and Industrial Production

**Industrial Production**
*(in percent change from a year earlier)*

**Merchandise Exports**
*(in percent change from a year earlier)*
Major Emerging Economies Remain Focused on Exports to Industrial Countries 1/
*(in percent of Exports to World)*

Source: IMF, Direction of Trade.

1/ Sum of Jan 2008 through July 2008.

China
- United States: 20%
- Japan and Euro area: 24%
- Rest of World: 8%
- Other Industrial countries: 16%

India
- United States: 61%
- Japan and Euro area: 19%
- Rest of World: 7%
- Other Industrial countries: 13%

Brazil
- United States: 53%
- Japan and Euro area: 25%
- Rest of World: 6%
- Other Industrial countries: 16%

Russia
- United States: 47%
- Japan and Euro area: 40%
- Rest of World: 8%
- Other Industrial countries: 5%
External Financial Pressures and Lower Commodity Prices

**Emg. Sovereign CDS Spreads**
(index: 7/1/2007=100)

- Current account deficit larger than 5% of 2007 GDP
- Current account surplus or small deficit

**Commodity Price Indices**
(index: Jan. 2002=100)

- Metal Index
- Beverage Index
- Food Index
- Agricultural Raw Material
- Energy

Graphs showing time series data from July 2007 to November 2008.
Syndicated Lending to EMs - Contracted Sharply

Syndicated Lending to Emerging Markets (in billions of U.S. dollars)

Source: Dealogic.
Market-based financing tighter with home bias

Emerging Markets Bond Financing
(in billions of U.S. dollars)

- Corporate
- Public

Source: Dealogic
Lower Growth in EMs Will Feed Back to Advanced Economies’ Banking Systems

Claims on Emerging Markets by BIS Reporting Banks, June 2008
(Percent of Creditor GDP)
Policy Challenges
Policy Challenges—Advanced Economies

- Policy action is need on two fronts - (i) Restoring financial sector health; and (ii) bolster demand.

- Overarching challenge is to address “distressed assets” on bank balance sheets, followed by a recapitalization (on a large scale) of viable banks.

- Monetary policy may need to focus on “credit easing.”

- Need to boost demand (fiscal stimulus)—focus more on spending (higher multipliers) rather than general tax cuts.

  - Big challenge if long rates go up (sustainability concern), then much of the positive effects is offset.
  - Need well defined, credible medium-run plans.
Counteracting Portfolio Shifts through “Credit Easing”

**U.S. Commercial Paper Rates**
(30-day rates; in percent)

**U.S. Credit Spreads**
(over Treasuries; in basis points)

**Charts**
- **U.S. Commercial Paper Rates**
  - Non-Financial (A2/P2)
  - Asset-backed (AA)
  - Financial (AA)

- **U.S. Credit Spreads**
  - Credit Cards ABS
  - Jumbo mortgage
  - Corporates (BBB)
  - Conforming mortgage
  - TALF
  - MBS Prgm.
Global Growth and Contributions of Fiscal Stimulus 1/

World
(in percent, GDP Growth)

United States
(in percent, GDP Growth)

Without Fiscal Package

WEO projection

Without Fiscal Package

WEO projection

1/ GIMF simulation; fiscal shock based on G-20 fiscal packages plus two-year monetary accommodation.
Rising Concerns Over Fiscal Sustainability

**Industrial Economies**
(5yr Sovereign CDS; in basis points)

- United States
- United Kingdom
- Japan

**Selected Europe**
(5yr Sovereign CDS; in basis points)

- France
- Germany
- Italy
- Spain

Source: Bloomberg, L.P.
Ireland Sovereign and Bank CDS Spreads Before and After Public Guarantees

**Irish Bank and Sovereign CDS Spreads**
*(5-year CDS Spreads; in basis points)*

- **Bank of Ireland**
- **Allied Irish Bank**
- **Ireland Sovereign**

**Government guarantees**
Policy Challenges—Emerging Economies

- Use policy buffers to smooth the impact of interruptions or reversals in capital flows - recognize some capital flows may be permanent.
  - Countries with flexible exchange rate regimes, allow the exchange rate to absorb much of the pressures.
  - Increase the flexibility of the exchange rate regime, while ensuring the maintenance of a credible anchor for monetary policy
  - Use large stock of reserves for intervention to avoid disorderly market conditions.

- Continue providing liquidity support, to reduce risks that sudden stops in foreign capital could generate solvency problems.
  - Use reserve buffers to provide foreign currency liquidity.
  - Seek recourse to swap facilities (and lines for trade credit) from major advanced economy central banks and to the new Fund facility.

- Prepare contingency plans for limiting risks of bank runs, comprehensive mechanisms to reduce the risks of systemic solvency problems, and strengthen corporate work-out frameworks.
A Global Credit Crunch may Contribute to Sharp Drop in Trade Finance

Syndicated Loans for Trade Finance
(% yoy change on 3-month moving average)

Source: Dealogic
Emerging Market Corporates will have Large Rollover Needs in Coming Years

Historical Issuance and Upcoming FX-Denominated Debt
(in billions of U.S. dollars)

Source: Dealogic, Bloomberg, Staff Estimates