How the search for efficiency led to the current financial turmoil

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Overview

- The search for efficiency
- The “Great Moderation”
- But financial imbalances have built up
- “Headwinds” in history
- Current financial turbulence
- Conclusion
The search for efficiency

- In the real economy
- In financial markets
- In the conduct of monetary policy
Efficiency in the real economy

- Deregulation in industrial economies
- Productivity and IT
- Transition economies and globalisation
- A disinflationary bias?
Efficiency in financial markets

- Deregulation and technology
- Risk decomposition and risk management
- New products and new players
- Cheaper and better services
Efficiency in financial markets

Recent growth in the market for structured products
In billions of US dollars

Structured product issuance (global)
- Collateralised debt obligations
- Asset-backed securities
- Mortgage-backed securities

US leveraged loan issuance
- Held by:
  - Institutional investors
  - Banks

Source: IMF.
Efficiency in the conduct of monetary policy

- More focus on near-term price stability
- More reliance on market processes
- More attention to communication
The “Great Moderation”

- Lower and less volatile inflation
- Higher and less volatile growth
- More resilience to shocks
But financial imbalances have built up

- 1, 2, 3, …?
- Efficiencies on the real side keep inflation down
- More efficient central banks conclude all is well
- More efficient financial markets overreach and imbalances build up
But financial imbalances have built up

- Credit growth
- Asset prices
- Sectoral imbalances
- Headwinds in history
Credit growth

- Low real interest rates and the Wicksellian natural rate
- Rapid credit growth globally
- The particular case of China
Credit growth

Real interest rates, structural budget balance and output gaps

1 General government in the OECD countries.  
2 As a percentage of potential GDP.  
3 Weighted average, based on 2000 GDP and PPP exchange rates, of OECD countries’ short-term interest rates deflated by annual consumer price inflation.

Sources: OECD; national data.
Credit growth

Aggregated private credit growth in major industrial countries and global foreign exchange reserves

Sources: IMF; national data.
Credit growth

Investment, money, credit and prices in China

Annual changes, in per cent

1 Domestic credit to the private sector. 2 Three-month moving average.
Sources: IMF; CEIC; national data.
Asset prices: bond rates and corporate spreads

1 Bond index yields against 10-year swap rates, in basis points, except for historical US yields (in %).
Sources: Bloomberg; Merrill Lynch; national data.
Asset prices: sovereign spreads
Asset prices: equity

Equity prices, profits and nominal GDP
Quarterly data; 1990 = 100 (semi-logarithmic scale)
Asset prices: real estate

Real estate prices\(^1\)
Fourth quarter 1995 = 100; quarterly averages

In nominal terms

United States
- Residential
- Commercial

United Kingdom

Ireland

\(^1\) Representative nationwide indices.
Asset prices: implied volatility

Implied volatilities of bonds\(^1\)

- Ten-year US bond
- Ten-year Japanese bond
- Euro-BUND

\(^1\) At-the-money call implied volatility; monthly averages.
Source: Bloomberg.
Sectoral imbalances

- Over extended consumer and household balance sheets
- Large external imbalances
Sectoral imbalances
Sectoral imbalances

US sectoral financial balances
As a percentage of GDP

Note: The blue lines represent the 1985–2007 means of the respective financial balances.
Source: National data.
Headwinds in history

- Net private savings
- Credit cycles and financial stress
- “Boom-bust” cycles in historical perspective
Headwinds in history

Note: The shading represents ±1 standard deviation around the mean of the observation period, and the dots the change in GDP growth two years after the indicated trough.  
¹ As a percentage of GDP.
Sources: OECD; national data.
Headwinds in history

Credit cycles and financial stress

1 Private credit as a percentage of GDP; comparability across countries is restricted by differences in the definition of private credit. The shaded areas mark the onset of stress in the financial system.

Boom-bust cycles in historical perspective

- Why history still matters
- Historical examples
- And all without inflation
Current financial turbulence: subprime as “catalyst”

- Implications of the securitisation revolution for participants
- Implications for the financial system as a whole
- Implications for the broader economy
Implications for participants; households

- Easier and cheaper access to mortgage credit
- More options, especially variable rates
- Intertemporal smoothing BUT
- Choice requires more judgement
- More exposure to market swings
Implications for participants; originators and banks

- Greater risk diversification
- Normally more sources of liquidity BUT
- Less need for “due diligence”
- Difficulties in valuing complex products
- Failure to price liquidity adequately
Implications for participants; originators and banks

The banking system under pressure

Bank share prices\(^1\)

- United States
- Germany
- United Kingdom

Expected default probability\(^2\)

1 Ratio to broad share price index, end-1998 = 100. 2 The expected probability, in percentages, that a company will default within one year.

Sources: Datastream; KMV; national data.
Implications for the financial system as a whole

- Risk transferred to those who can manage it OR
- To the most gullible and the most greedy?
- Everyone becomes suspect
- And the demand for liquidity soars
Implications for the financial system as a whole

A sudden shift in the appetite for market risk...

Volatilities\(^1\)

Risk appetite indicators\(^2\)

Global risk appetite\(^3\)

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\(^1\) Conditional volatilities of daily returns from an asymmetric GARCH(1,1) model; estimated over the period Jan 1996-Apr 2008.

\(^2\) Derived from the differences between two distributions of returns, one implied by option prices with varying strike prices and one based on actual returns estimated from historical data.

\(^3\) Derived from principle components analysis of the three risk appetite indicators; first component plotted.

Sources: Bloomberg; Chicago Mercantile Exchange; Eurex; LIFFE; BIS calculations.
Implications for the financial system as a whole

... but some still have large market exposure

Net repo financing of US primary dealers

Value-at-risk\(^3\)

1 In billions of US dollars.  
2 As a percentage of total assets of securities dealers.  
3 Market capitalisation-weighted averages of eight large institutions' total and interest rate VaR; 2002 Q1 = 100; quarterly data, in per cent.

Sources: Company reports; national data.
Implications for the broader economy

- Will current turmoil result in credit rationing?
- How vulnerable is the global economy?
- Is the global housing sector of particular concern?
- And what about the dollar?
Conclusion

- Current financial turbulence has deep roots
- The boy who cried wolf!
- How a “better” financial system can still be improved
- Implications for monetary and regulatory policy