



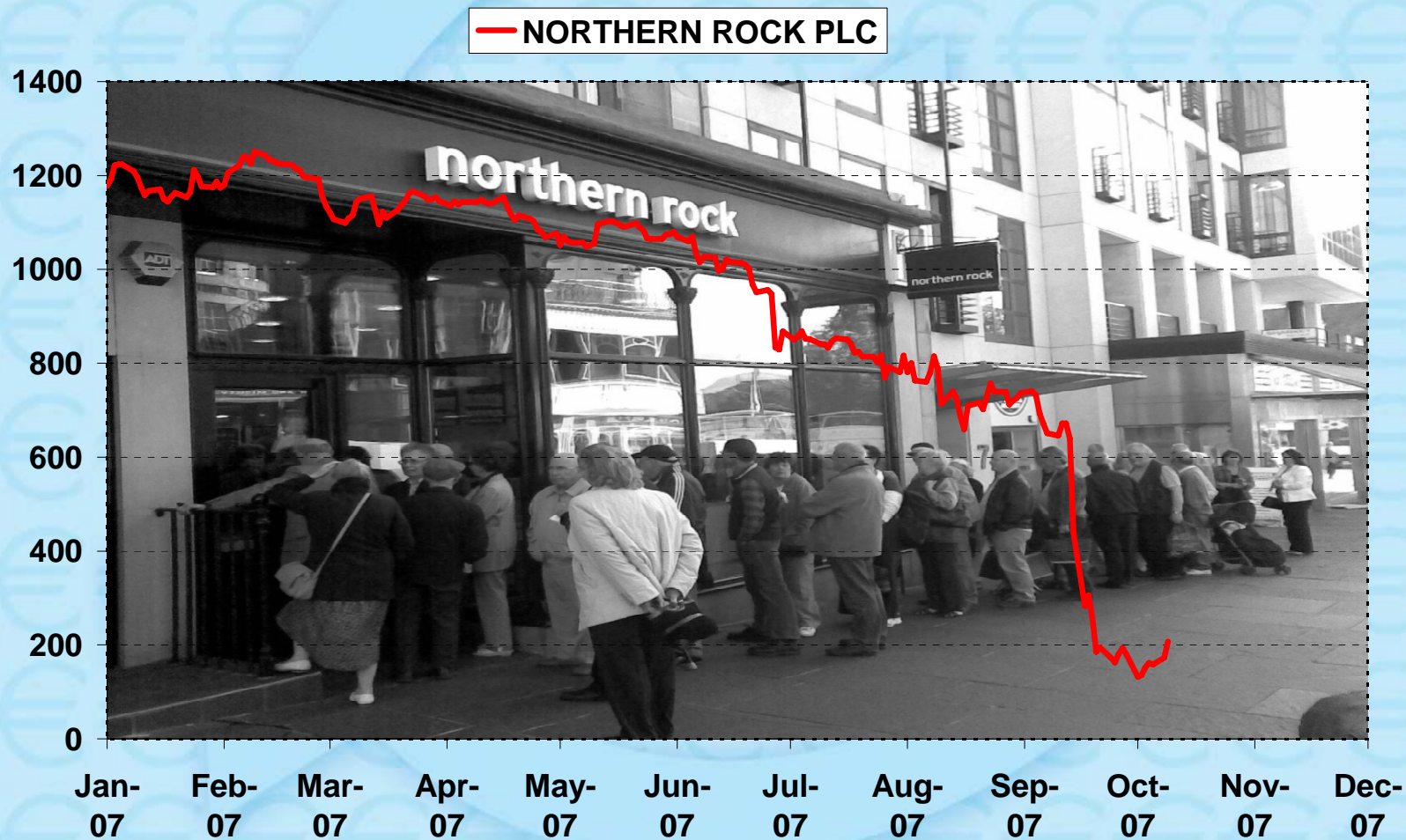
EUROJÄRJESTELMÄ
EUROSYSTEMET

On the turbulences in the money and financial
markets

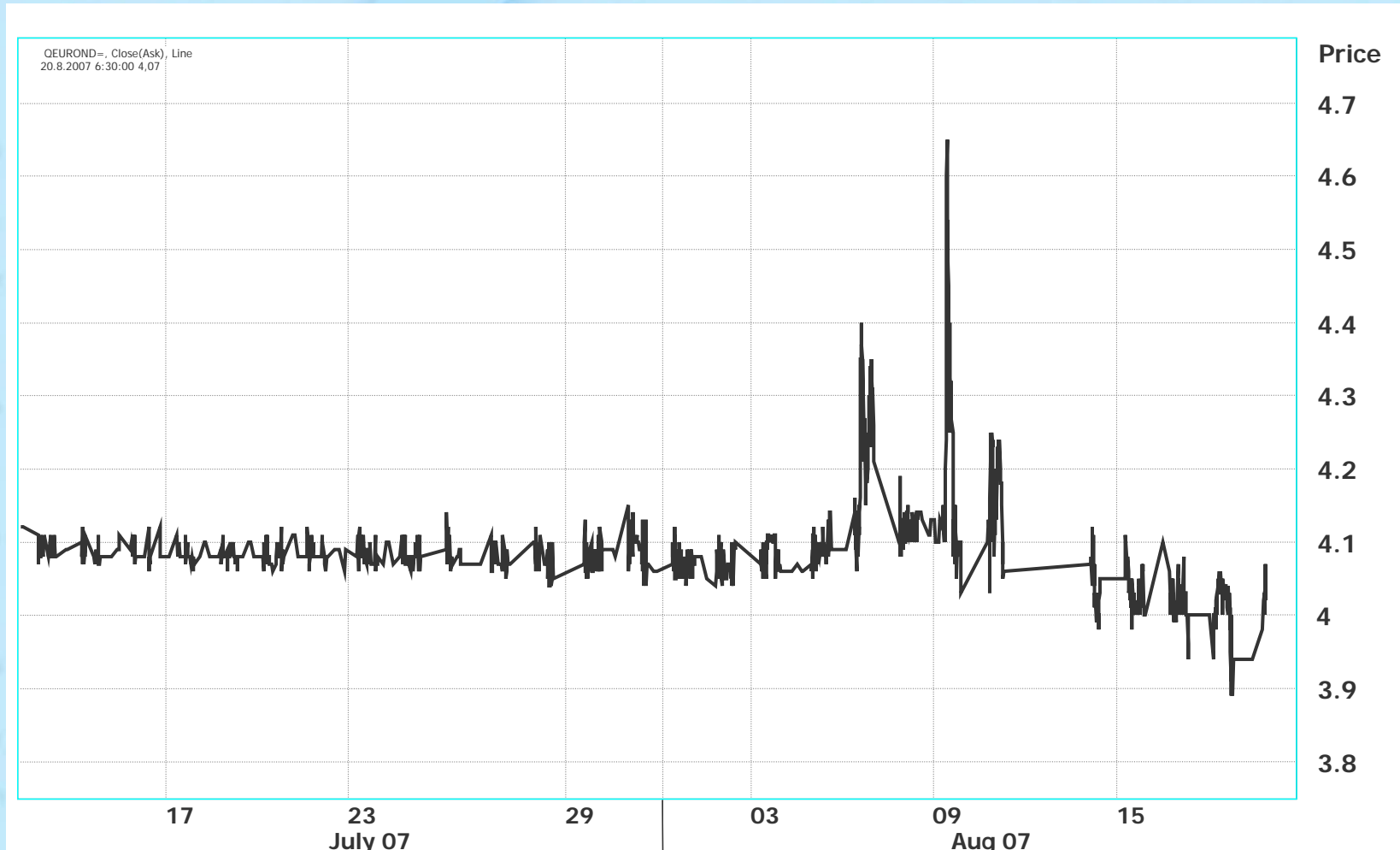
Governor Erkki Liikanen

Moscow University 10.10.2007

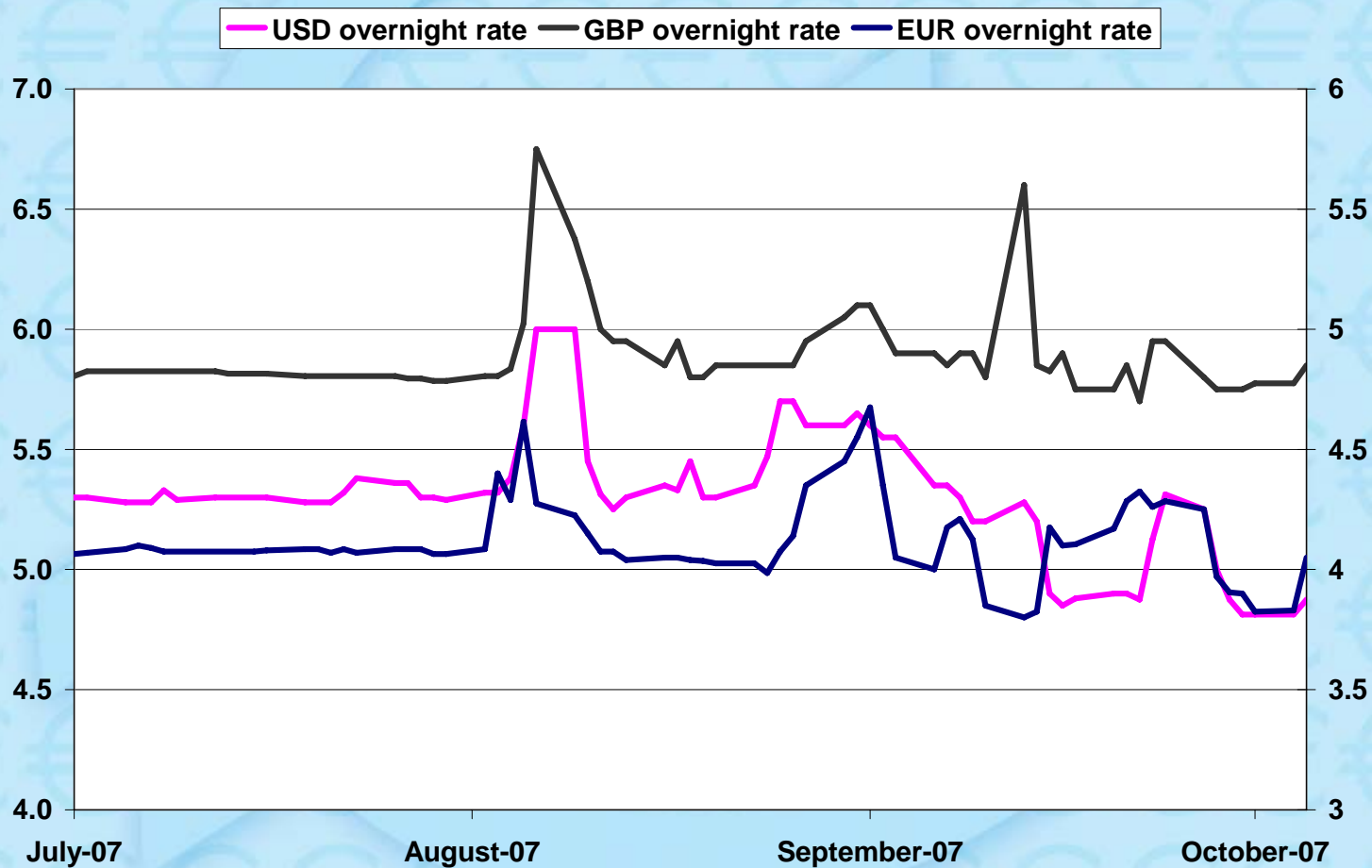
Northern Rock Plc share price



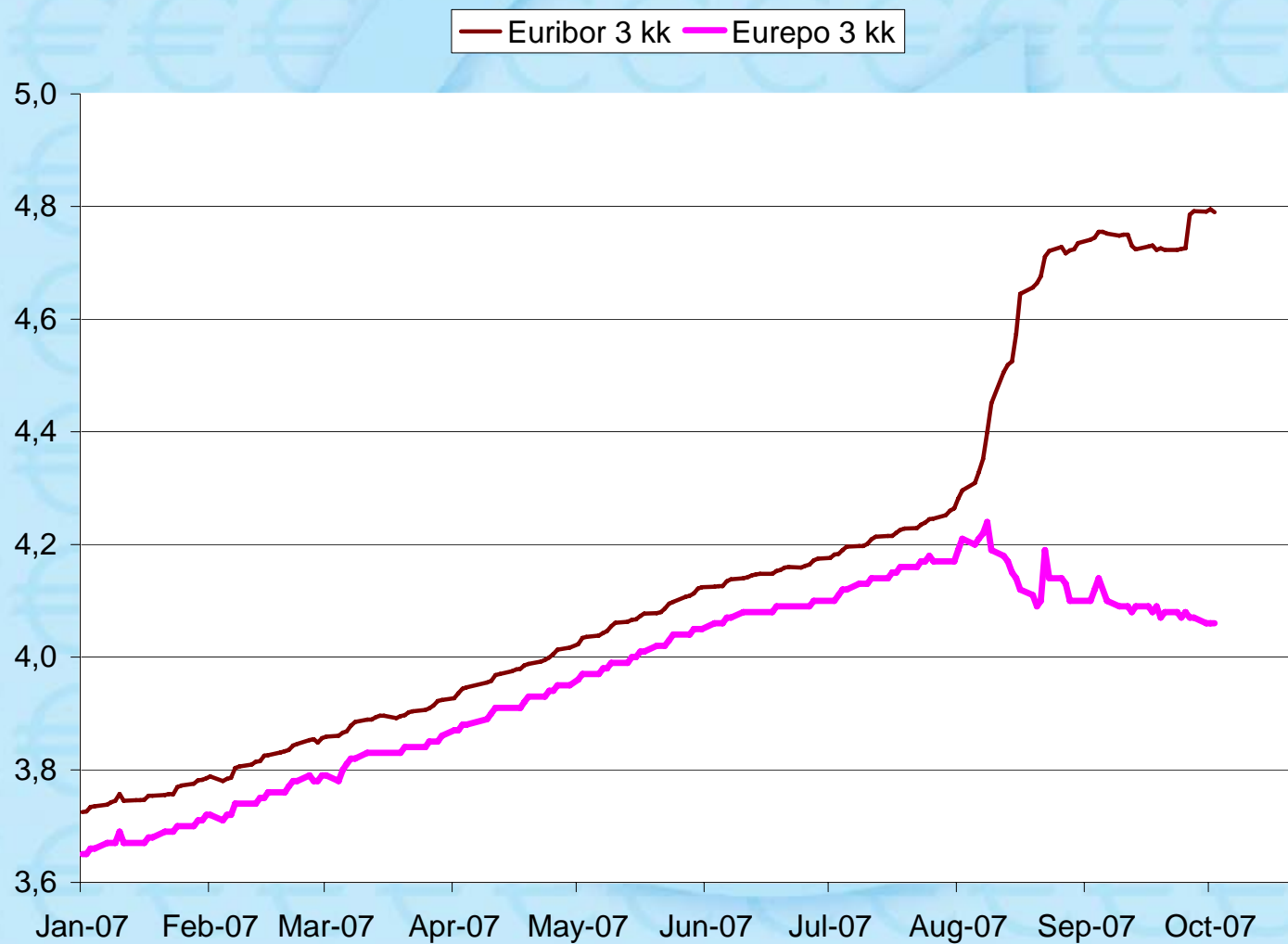
EUR overnight rate



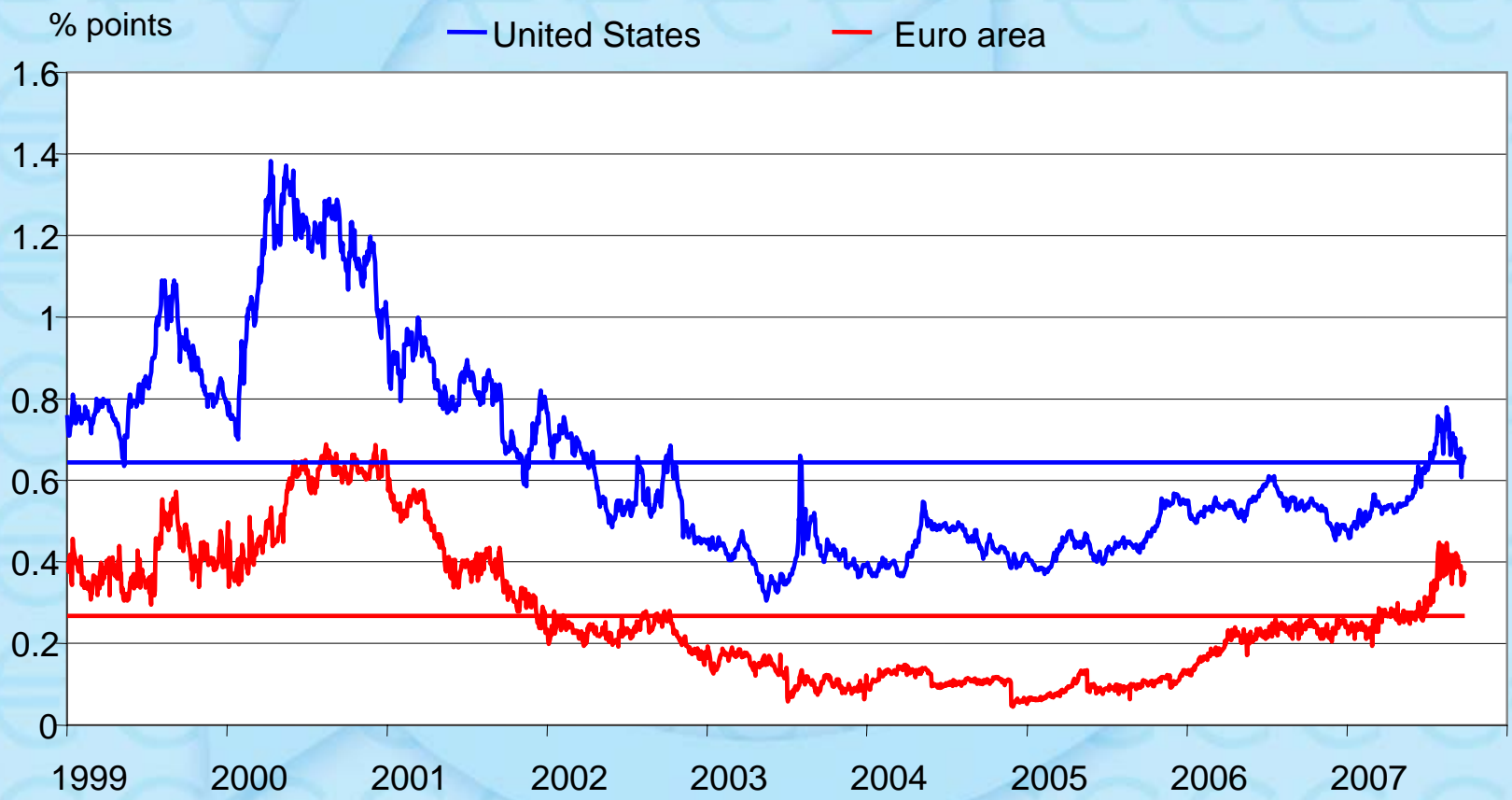
EUR, USD and GBP overnight rates



Price of money with and without collateral on euro area interbank markets

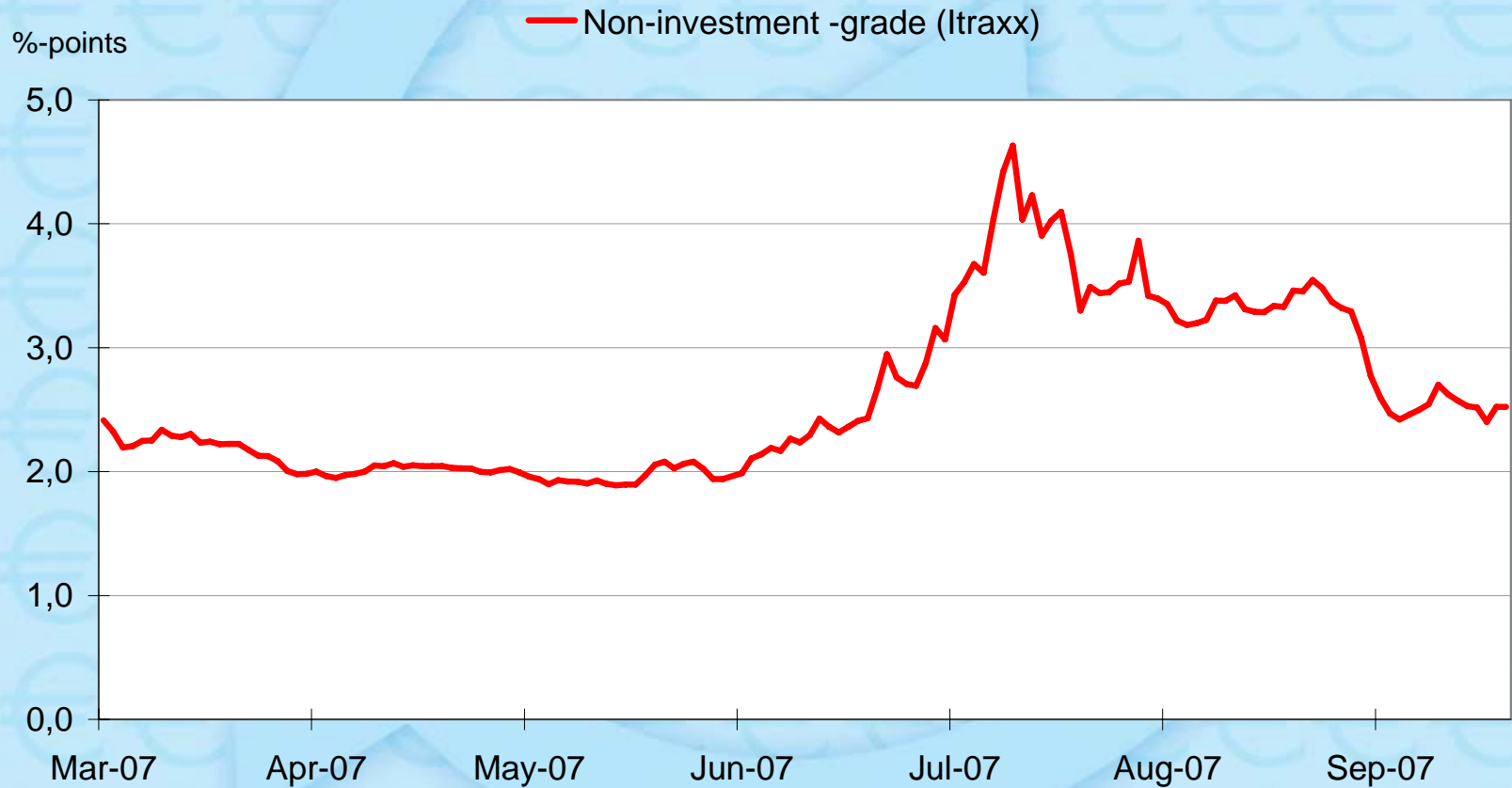


10-year risk premium over government bond return requirement



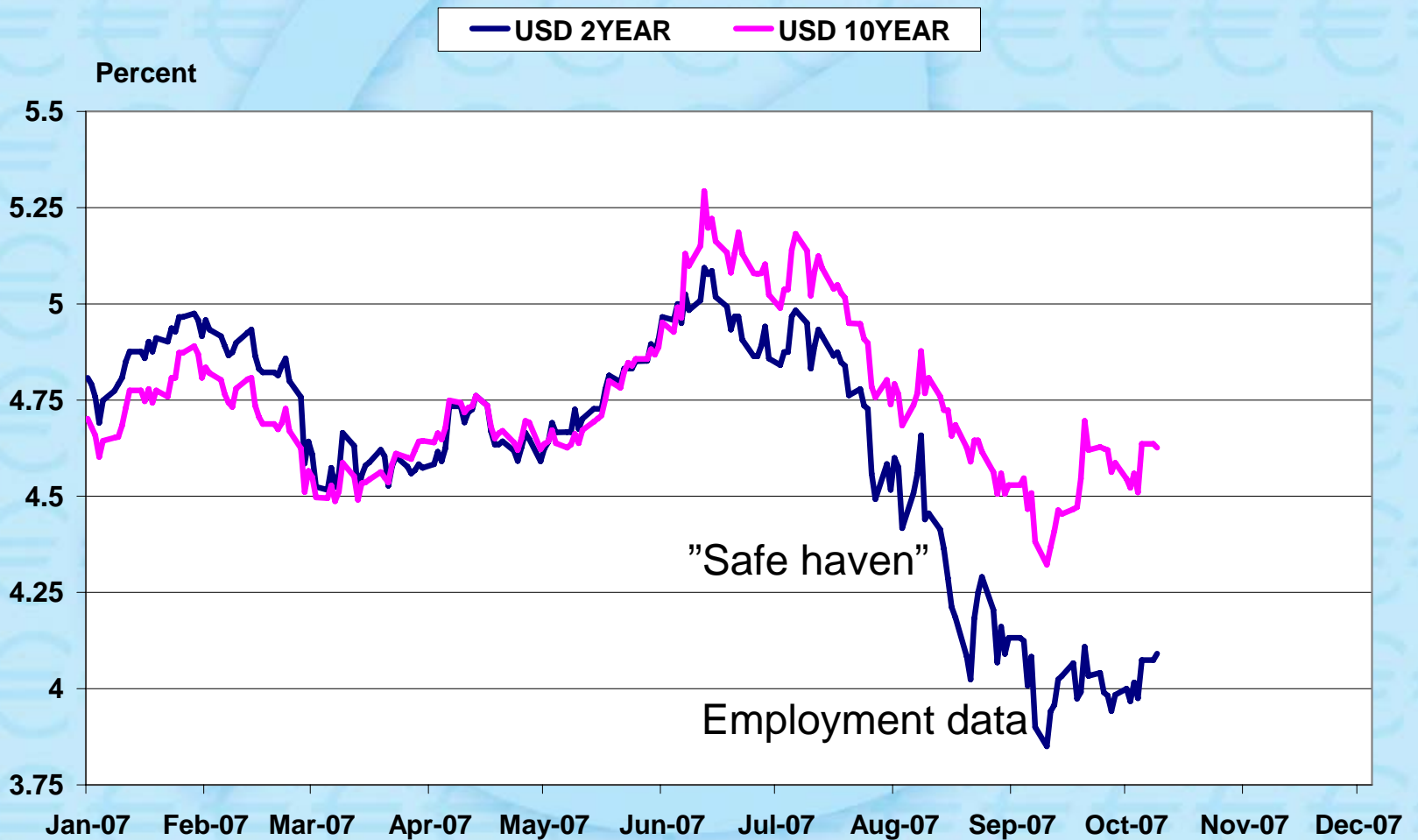
Source: Bloomberg

Price of protection from credit risk

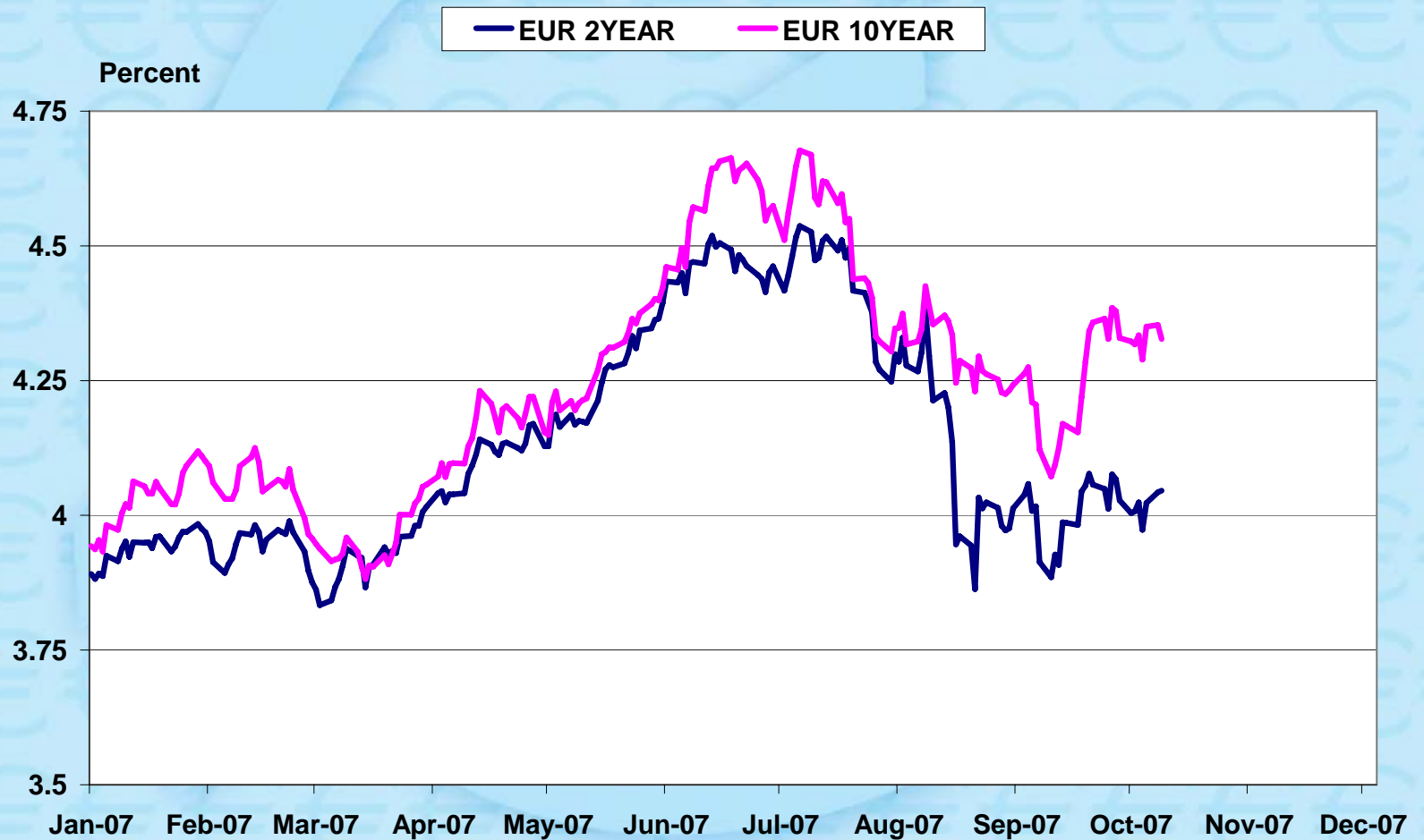


Source: International Index Company

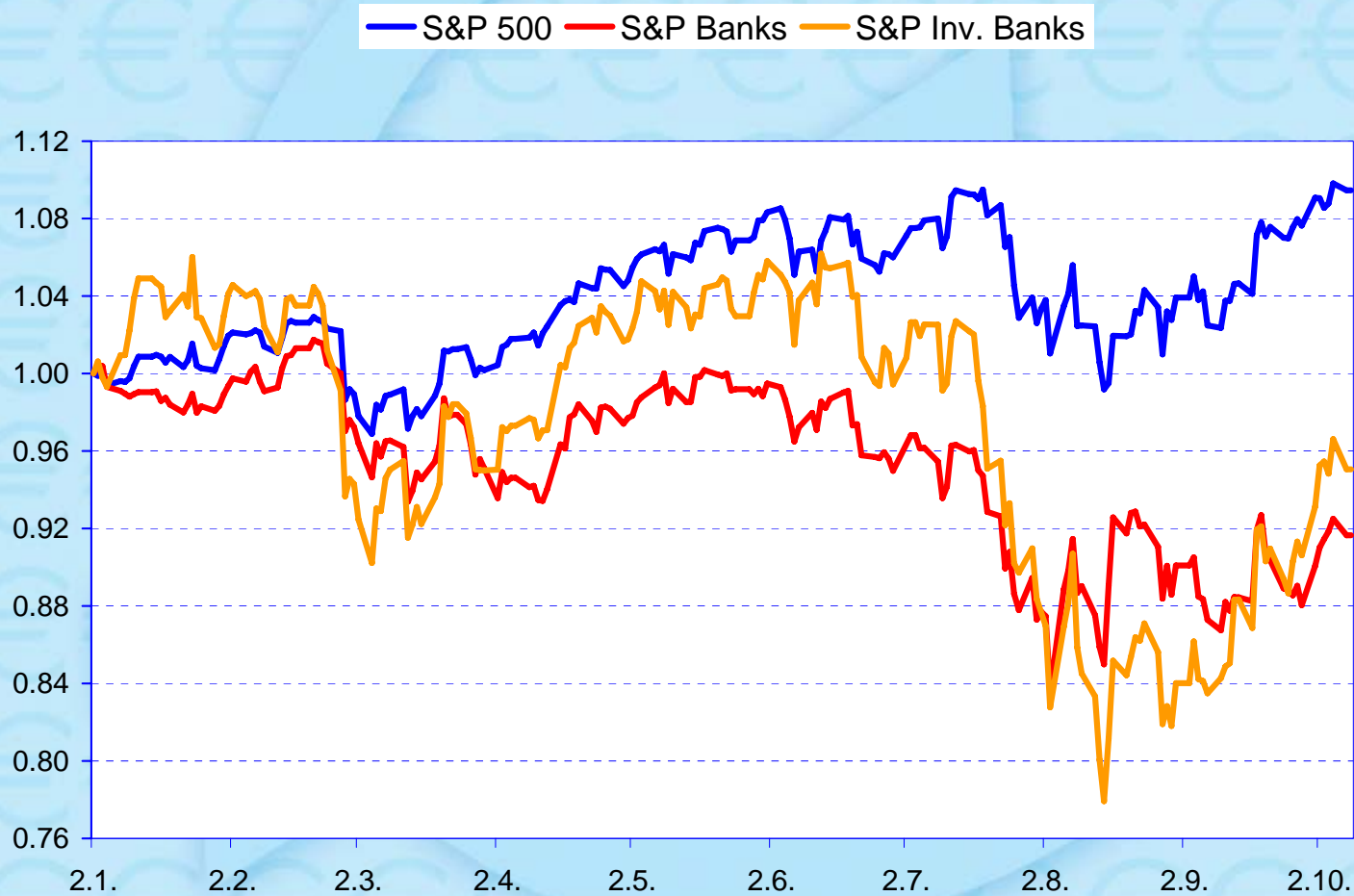
Yields on 2- and 10-year US benchmark government bonds



Yields on 2- and 10-year euro benchmark bonds

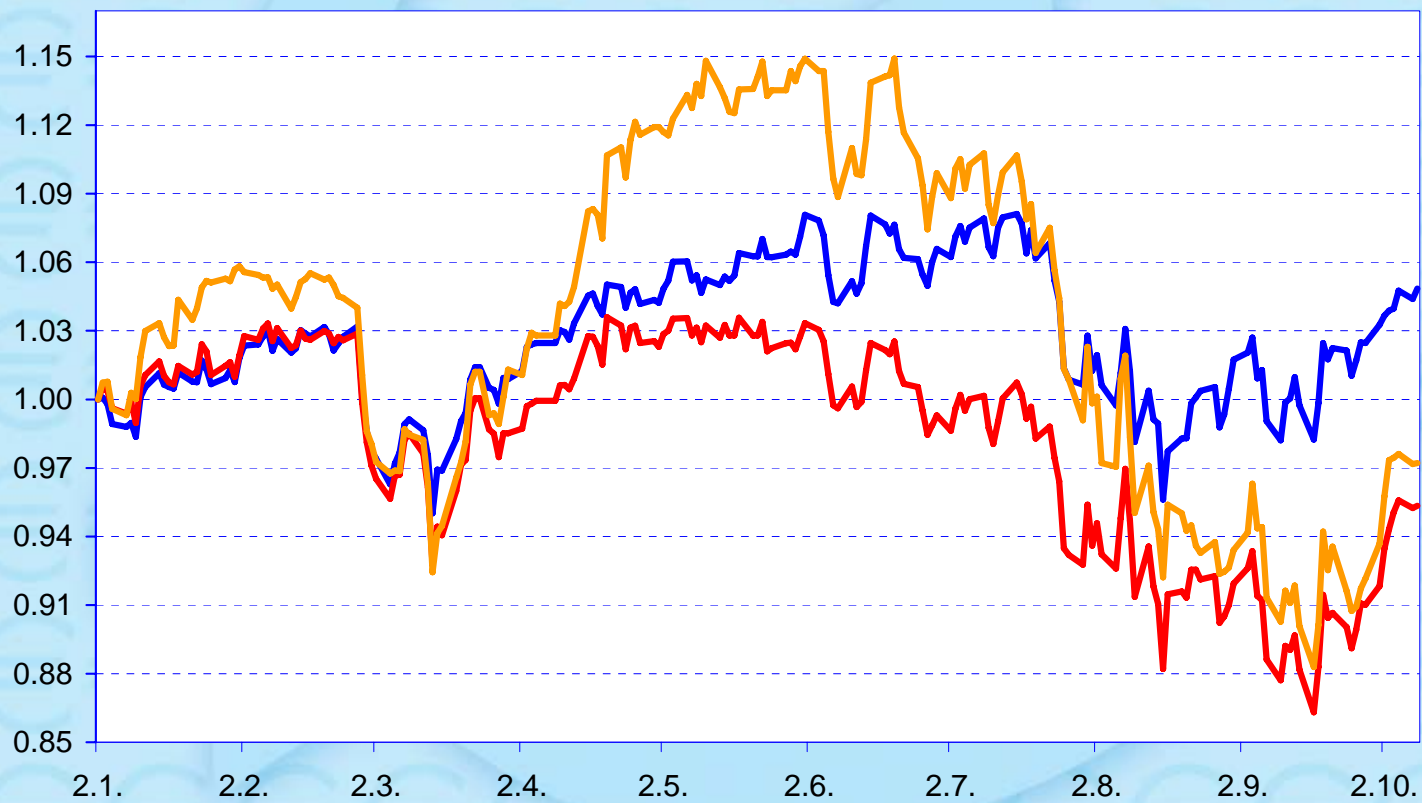


Performance of US banking sector shares

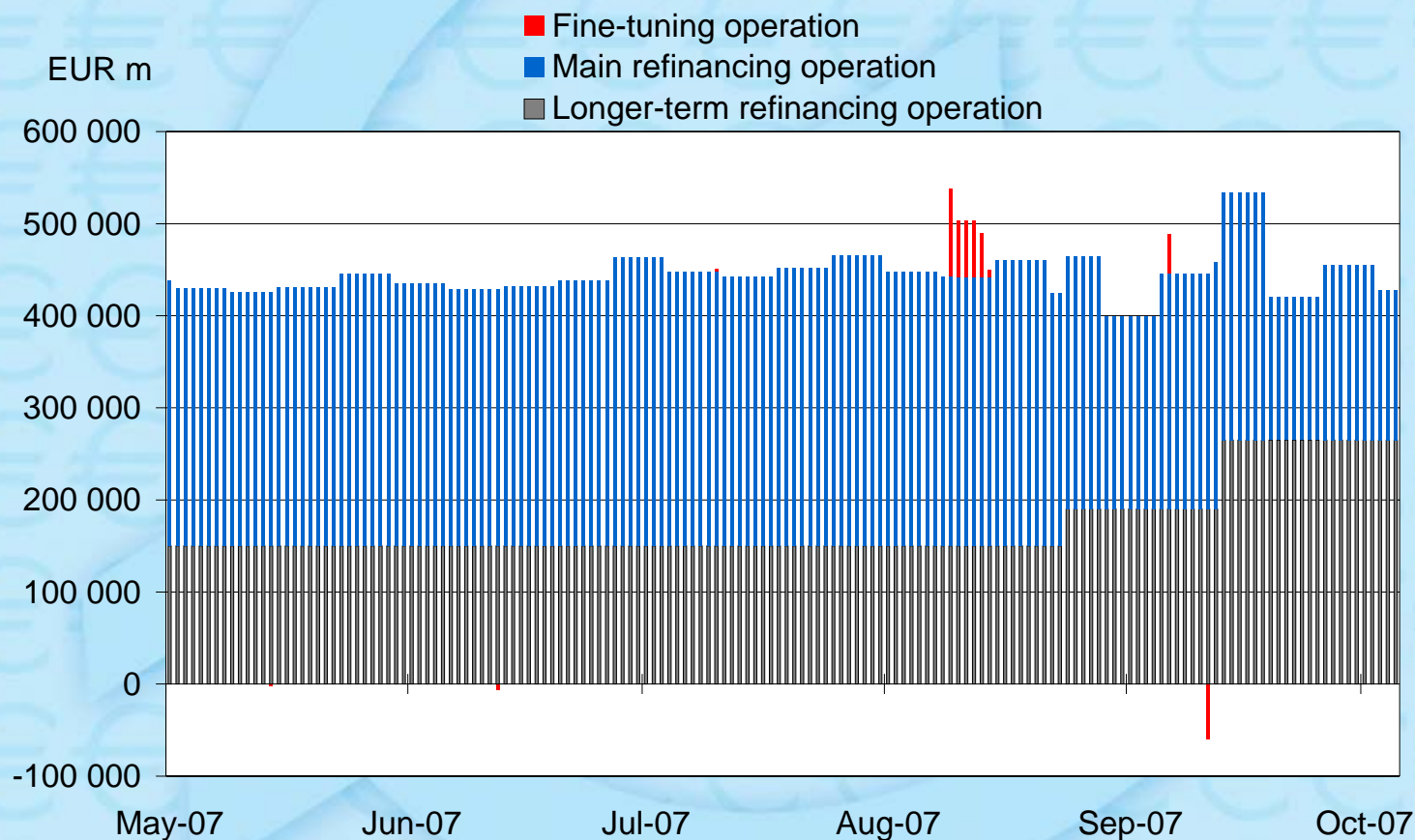


Performance of European banking sector shares

— S&P EURO 350 — S&P EURO 350 Finan. — Banks (Germany)



ECB's fine-tuning operations in relation to all open market operations



Source: Bank of Finland

ECB's monetary policy operations

Date	Operation (duration)	Volume (€bn)		Rates		Participants
		Bids	Accepted	Margin	Average	
9.8.	Fine-tuning (1d)	95	95	4,00 %	4,00 %	49
10.8.	Fine-tuning (1d)	110	61	4,05 %	4,08 %	62
13.8.	Fine-tuning (1d)	85	48	4,06 %	4,07 %	59
14.8.	Fine-tuning (1d)	46	8	4,07 %	4,07 %	41
14.8.	Main refinancing (1w)	427	310	4,08 %	4,10 %	344
21.8.	Main refinancing (1w)	440	275	4,08 %	4,09 %	355
23.8.	Extra longer-term (3m)	126	40	4,49 %	4,61 %	146
23.8.	Longer-term (3m)	120	50	4,56 %	4,62 %	168
28.8.	Main refinancing (1w)	353	210	4,08 %	4,09 %	320
4.9.	Main refinancing (1w)	426	256	4,15 %	4,19 %	356
6.9.	Fine-tuning (1d)	91	42	4,06 %	4,13 %	46
11.9.	Fine-tuning (1d) tightening	66	60	4,00 %	4,00 %	37
11.9.	Main refinancing (1w)	406	269	4,14 %	4,17 %	381
12.9.	Extra longer-term (3m)	139	75	4,35 %	4,52 %	140
18.9.	Main refinancing (1w)	356	155	4,15 %	4,16 %	371
25.9.	Main refinancing (1w)	369	190	4,27 %	4,29 %	378
26.9.	Longer-term (3m)	85	50	4,50 %	4,63 %	159
2.10.	Main refinancing (1w)	299	163	4,14 %	4,16 %	316

Market development

- ◆ High demand for dollar liquidity in Europe resulted in:
 - rise of shortest money-market rates
 - thereby to measures by central banks, such as the Eurosystem.
- ◆ Uncertainty and lack of confidence among banks resulted in:
 - friction in the financial markets
 - price differential between money with collateral and without collateral
 - drying up of market finance and
 - capital flows into lower-risk investments.

What lies behind the turbulence?

- ◆ The turbulence was triggered by an alarming increase of defaults in housing loans granted to households with low creditworthiness in the US
 - These so-called subprime mortgage loans account for about 15% of the US housing loan stock
 - Extensive spreading of the problems in the financial system is explained by two factors:
 1. Active innovation of new financial instruments
 2. Prolonged exceptionally favourable credit conditions

Innovation of financial instruments in the 21st century focused on redistribution of credit risks

- ◆ Development of securitisation techniques and credit derivatives have enabled more effective diversification of credit risks outside the financial sector, which is positive
- ◆ Risks have also been observed in the developments:
 - Complexity of pricing models and low availability of historical data used as valuation background
 - Allocation of credit risks to parties with less understanding of them
 - Backtracking of credit risks ultimately to banks due to market linkages
 - Neglect in the monitoring of banks' borrowing customers after risks have been transferred to other parties

Example of securitisation: Collateralised Debt Obligations (CDO)

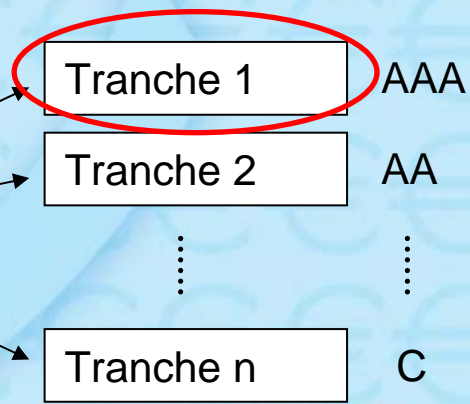
A bank bundles a large number of different assets and sells them to a special purpose vehicle (SPV)

Law of large numbers: Although there are assets with low credit ratings in the collateral pool, a debt security granting a senior privilege to the cash flows generated by a large portfolio may receive a high credit rating..

Certain structures include arrangements ensuring the solvency of the SPV, such as guarantees, credit limits etc.

The SPV finances the purchase of the assets by issuing bonds collateralised with the assets

The bonds are given different privileges to the cash flows generated by the collateral assets; bonds of different tranches have different credit ratings



Spread of the turbulence into a global liquidity crisis

- ◆ In early 2007, information released of a steep increase in defaults on the US subprime mortgage market
 - ◆ Credit ratings of subprime-linked assets were lowered from June-July onwards
 - ◆ Suspicion of potential large losses
 - ◆ Diversification of credit risks has decreased transparency of the markets ⇒ it is unknown how large the risks are and to whom ultimately belong
- ⇒ **Lack of confidence and liquidity squeeze**

Why the uncertainty over banks' risks? (1)

- ◆ Valuation of all subprime-linked assets is very difficult due to strong market fluctuation
 - Pricing models have failed and trading on the markets has dried up
- ◆ Backtracking of risks transferred away from banks' balance sheets due to credit limits granted to SPVs
 - Certain types of SPVs financed with very short-term money (asset-backed commercial paper, ABCP) ⇒ investor retrenchment reflected rapidly as problems
 - Banks have been forced to patch up the finance dried up from the markets

Why the uncertainty over banks' risks? (2)

◆ Linkages of banks and hedge funds

- Hedge funds have purchased significant exposures in credit risks previously concentrated on the banking sector
- On the other hand, banks function as the main financiers of hedge funds ⇒ ultimately the risks are still borne by banks?

◆ Financing of venture capitalists

- Banks finance venture capitalists with a large sum and resell financing interests to other investors only with a lag
- When market conditions change significantly, resale of the financing interests becomes much more difficult

Impact on EU banking sector

- ◆ Direct losses from the US subprime mortgage markets are limited
- ◆ Lack of confidence and liquidity squeeze are a significant problem – a great deal depends on the duration of the exceptional circumstances
- ◆ Subprime risks of Finnish banks are very limited

Too soon to assess quantitative impacts of the turbulence on real economy

- ◆ However, there is no doubt as to the +/- sign of the impacts
- ◆ The impacts depend on the duration, extent and depth of the shock
 - ... and economic policy reactions.
- ◆ Impacts surface through many channels
 - Financing conditions generally tighter → investments
 - Asset prices globally lower → consumption
 - Exchange rate changes → foreign trade
 - Weakened confidence has wide-reaching consequences
- ◆ In the long term, normalisation of the pricing of risks is a good thing also from the viewpoint of sustainable economic growth

Conclusion

- ◆ Long-expected correction in the pricing of risks, partly welcome
- ◆ Reveals excessive risks and deficiencies in risk management, but losses are likely to remain limited ⇒ shock tolerance of the new type of financial system is put to the test
- ◆ Banks' risk-bearing capacity is solid in a historical perspective (prolonged high profitability)
- ◆ The key issue is restoration of confidence in the markets ⇒ increase of transparency



EUROJÄRJESTELMÄ
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What are the core tasks of the Bank of Finland today
in the Eurosystem and in Finland?

Heading for stable monetary conditions

1865



MARKKA joins silver standard

1999



EURO taken into use

The Bank of Finland's four core functions

Monetary Policy

Financial Supervision

Banking Operations

Cash Supply

Monetary Policy

Key tasks

- ◆ The Governor is a member of the ECB's Governing Council and therefore is part of the monetary policy decision making process – simultaneously implementing euro area and Finland's interest rates
- ◆ Decentralisation of monetary policy implementation through national central banks
- ◆ Bank of Finland is an active participant in domestic economic policy discussions

Objective

- ◆ Price stability in the euro area



Monetary Policy

For example:

Juha Kilponen and Antti Ripatti's research was selected as the best international research undertaken by a central bank, 2005 (CEPR & ESI)

According to their paper, over time increased competition in the labour and product markets bring about improvements in productivity and welfare



Monetary Policy

Research into Russia and China

The Bank of Finland researches the Russian and Chinese economies.

The Bank of Finland Institute for Economies in Transition (BOFIT) is an internationally renowned high level research institute, specialising in economies in transition, monitoring and analysing the target countries' development and undertaking long-term research on their economies



BOFIT
Siirtymätalouksien tutkimuslaitos
Institute for Economies in Transition

Financial Stability

Key tasks

To promote the stability and efficiency of Finland's financial markets

- ◆ The Bank of Finland has oversight of the entire financial system and publishes statistics on the monetary economy
- ◆ The Financial Supervision Authority (FIN-FSA) operates in cooperation with the Bank of Finland, who together monitor the individual entities in the market, such as banks
- ◆ The Bank's responsibilities are emphasised in times of crisis in the financial markets – BoF is also the source of emergency funding

Objective

- ◆ High level stability analysis and crisis management preparedness



Banking Operations

Key tasks

- ◆ Implementation of ECB monetary policy in Finland
- ◆ Securing the Banking system's liquidity management
- ◆ Transmission of large-value payments between banks
- ◆ Investment of Bank's financial assets (incl. foreign reserves)

Objectives

- ◆ Competitive central banking services for its customers
- ◆ Prudent and productive investment of financial assets



Cash Supply

Key tasks

- ◆ Issuing banknotes and coins in Finland
- ◆ Ensuring the fitness and authenticity of the cash in circulation
- ◆ Bank of Finland works in cooperation with banks and specialist cash distribution and sorting companies

Objective

- ◆ To develop the cost-effectiveness of the entire currency supply system for the benefit of consumers and the Finnish economy



The Bank of Finland's four core functions

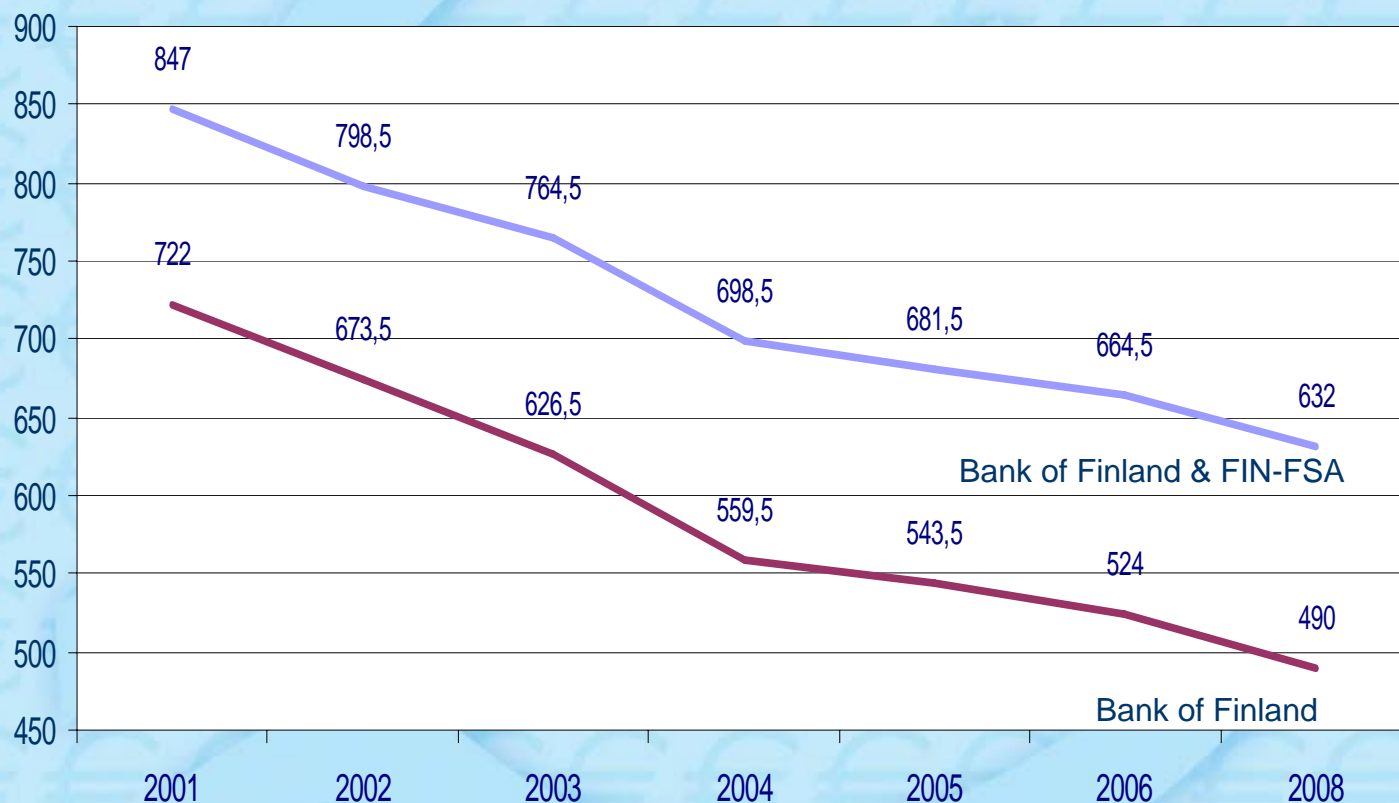
Monetary Policy

Financial Supervision

Banking Operations

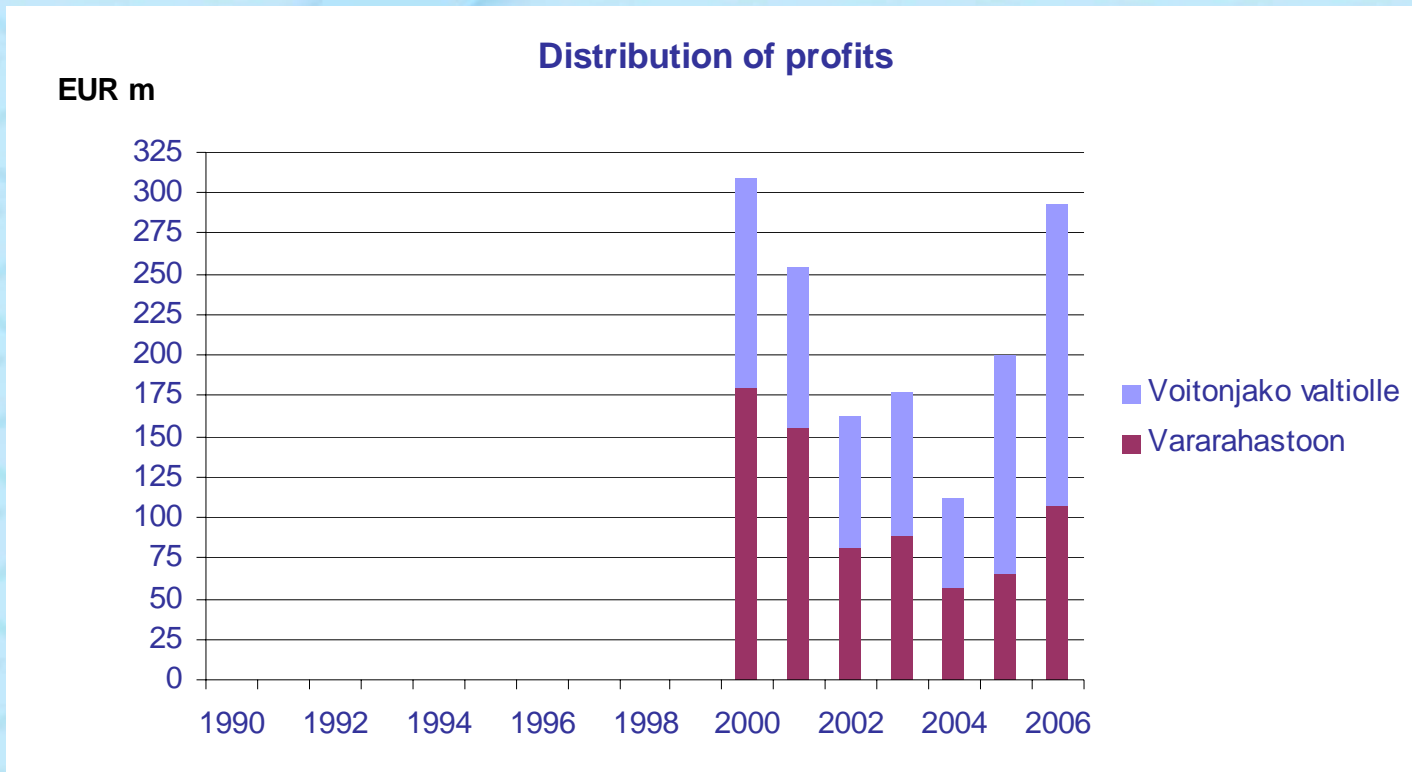
Cash Supply

Personnel development at the Bank of Finland



Change in the number of personnel in Dec/2001 – Dec/2008 is 232 persons (-32%)

Bank of Finland's balance sheet and profit and loss account



For example: Banking crisis prevented distribution of profits to the State for many years