



# ECB's pengepolitik – Et personligt perspektiv



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# Emner

- ◆ Målsætninger for centralbanker
- ◆ Centralbankers virkelighed
- ◆ Et holistisk approach
- ◆ Finansielle forhold
- ◆ Transparens og forudsigelighed
- ◆ Afsluttende betragtninger



# Målsætninger for pengepolitik

# Price stability

**Article 105** of the Treaty establishing the European Community  
“1. The primary objective of the ESCB shall be to maintain price stability.



Without prejudice to the objective of **price stability**, the **ESCB** shall support the general economic policies in the Community with a view to contributing to the achievement of the objectives of the Community as laid down in Article 2.”





## En præcisering af ECBs målsætning

Definition in 1998: "Price stability shall be defined as a year-on-year increase in the Harmonized Index of Consumer Prices (HICP) for the euro area of below 2%. Price stability is to be maintained over the medium term".

Following a thorough evaluation of its monetary policy strategy in 2003, the Governing Council further clarified that, within the definition, it aims to maintain inflation rates below but close to 2% over the medium term.



# Sveriges Riksbanks mål

- ◆ Målet för penningpolitiken är enligt riksbankslagen att "upprätthålla ett fast penningvärde". Riksbankens tolkning av detta mål är att inflationen ska vara låg och stabil.
- ◆ Mer precist är Riksbankens mål att hålla inflationen kring 2 procent per år, där inflationen mäts som den årliga förändringen i konsumentprisindex (KPI). Runt målet finns ett toleransintervall på plus/minus 1 procentenhet.



# Bank of Englands målsætning

## 11 Objectives

In relation to monetary policy, the objectives of the Bank of England shall be –

- (a) to maintain price stability, and
- (b) subject to that, to support the economic policy of Her Majesty's Government, including its objectives for growth and employment.

## 12 Specifications of matters relevant to objectives

- (1) The Treasury may be notice in writing to the Bank specify for the purposes of section 11 –
  - (a) what price stability is to be taken to consist of, or
  - (b) what the economic policy of Her Majesty's Government is to be taken to be.

\*\*\*\*\*

I hereby re-confirm the target as 2 per cent as measured by the 12-month increase in the Consumer Prices Index (CPI). In accordance with the Act, I also confirm that the economic policy of Her Majesty's Government is to achieve high and stable levels of growth and employment by raising the sustainable growth rate and creating economic and employment opportunities for all.



# Fed's målsætning

- ◆ FEDERAL RESERVE ACT
- ◆ SECTION 2A—Monetary Policy Objectives
- ◆ The Board of Governors of the Federal Reserve System and the Federal Open Market Committee shall maintain long run growth of the monetary and credit aggregates commensurate with the economy's long run potential to increase production, so as to promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates.





# Sammenfatning om målsætninger

- ◆ State of the art er inflationsmålsætning
  - ◆ Spørgsmål om lille åben økonomi
- ◆ Forskel i konkrete inflationsmål er begrænset
- ◆ Forskel ligger i hvor præcis målsætningen er
- ◆ Jo mere brug for at opbygge troværdighed, jo mere præcis



# Centralbankers virkelighed

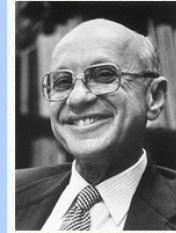


# Et 38 år gammelt statement om pengepolitik

## Friedman AEA presidential address 1968

"I believe that the potentiality of monetary policy in offsetting other forces making for instability is far more limited than is commonly believed. We simply do not know enough to be able to recognize minor disturbances when they occur or to be able to predict either what their effects will be with any precision or what monetary policy is required to offset their effects. We do not know enough to be able to achieve stated objectives by delicate, or even fairly coarse, changes in the mix of monetary and fiscal policy. In this area particularly the best is likely to be the enemy of the good. Experience suggests that the path of wisdom is to use monetary policy explicitly to offset other disturbances only when they offer a "clear and present danger."

Milton Friedman, 1912-



*Milton Friedman*



# Data revideres betydeligt og meget støj

**Table I - Summary Statistics of Final Revisions - Full Sample**

	N	Mean	Minimum	Maximum	Std. Dev.	Noise / Signal	Corr. with Initial	A/C (1)	Q-stat (20)
<b>Revisions as Percentage of Initial Announcements</b>									
Nominal Output	141	0.60%	-1.87%	3.12%	0.73%	-	-	0.68	0.00
Real Output	141	0.43%	-1.74%	2.82%	0.70%	-	-	0.72	0.00
Non-Farm Payroll Employment	422	0.26%	-1.08%	2.22%	0.70%	-	-	0.95	0.00
Industrial Production Index (Total Industry)	445	0.94%	-3.32%	7.17%	1.88%	-	-	0.94	0.00
Industrial Production Index (Manufacturing)	247	0.74%	-4.13%	2.30%	2.33%	-	-	0.95	0.00
<b>Level of Revisions</b>									
Annual Growth of Real Output	137	0.18%	-1.62%	2.03%	0.61%	0.24	-0.14	0.55	0.00
Annual Growth of Nominal Output	137	0.20%	-1.74%	2.57%	0.67%	0.25	-0.01	0.60	0.00
Annual Inflation (Output Deflator)	137	0.10%	-0.69%	1.12%	0.33%	0.13	0.32	0.67	0.00
Annual Growth of Labor Productivity	123	0.25%	-3.12%	3.34%	1.34%	0.82	-0.51	0.67	0.00
Annual Growth of Non-Farm Payroll Employment	414	0.15%	-0.83%	1.22%	0.39%	0.14	0.23	0.92	0.00
Annual Growth of Industrial Production (Total Industry)	403	0.48%	-2.66%	5.40%	0.80%	0.20	0.06	0.82	0.00
Annual Growth of Industrial Production (Manufacturing)	235	0.56%	-2.48%	2.90%	1.11%	0.23	-0.10	0.83	0.00
Quarterly Growth of Real Output	137	0.25%	-2.85%	5.12%	1.51%	0.41	-0.02	-0.15	0.15
Quarterly Growth of Nominal Output	137	0.43%	-3.60%	6.68%	1.99%	0.44	-0.07	-0.06	0.19
Quarterly Inflation (Output Deflator)	137	0.17%	-1.90%	3.15%	0.73%	0.27	0.13	0.15	0.84
Quarterly Growth of Labor Productivity	123	0.30%	-8.94%	7.02%	2.97%	0.94	-0.42	-0.17	0.50
Monthly Growth of Non-Farm Payroll Employment	414	0.37%	-4.85%	5.19%	1.42%	0.64	0.00	0.10	0.00
Monthly Growth of Industrial Production (Total Industry)	403	1.11%	-20.28%	24.12%	4.70%	0.48	-0.08	0.11	0.00
Monthly Growth of Industrial Production (Manufacturing)	235	1.21%	-12.81%	14.61%	4.58%	0.52	-0.24	0.01	0.41
Civilian Unemployment Rate	131	0.01%	-0.20%	0.17%	0.08%	0.05	0.04	-0.06	0.00
Capacity Utilization (Total Industry)	202	0.14%	-1.50%	2.30%	0.84%	0.45	-0.38	0.85	0.00
Capacity Utilization (Manufacturing)	249	0.14%	-2.10%	2.40%	0.94%	0.28	-0.41	0.87	0.00

Notes: All monthly and quarterly growth variables are annualized. Boldface denotes significance at 10% level. A/C(1) column reports the first order autocorrelation coefficient; Q-stat(20) reports the p-value associated with the Q-statistic at 20 lags.



# Stor usikkerhed i model skøn

Table 1  
Four-quarter growth in real GDP and PCE prices: selected FRB/US model forecasts

forecast date	Real GDP			PCE prices		
	forecast	data	data - forecast*	forecast	data	data - forecast*
July 1996	2.2	4.0	1.8	2.3	1.9	-0.4
July 1997	2.0	3.6	1.6	2.4	0.7	-1.6
Aug. 1998	1.7	4.1	2.4	1.5	1.6	0.1
Aug. 1999	3.2	5.3	2.1	2.2	2.5	0.3
Aug. 2000	4.5	0.8	-3.7	1.8	1.5	-0.3

\*4Q growth forecasts from the vintage of the year shown; e.g. for GDP in July 1996, forecast =  $100 * (\text{GDP}[1997:\text{Q2}] / \text{GDP}[1996:\text{Q2}] - 1)$ , compared against the "first final" data contained in the database two forecasts hence. So for the same example, the first final is from the November 1997 model database.



# Multiplikatorskøn varierer

**Table 3.1** Estimates of responses of real GDP and consumer prices to a 1 percentage point increase in the policy-controlled interest rate in the euro area

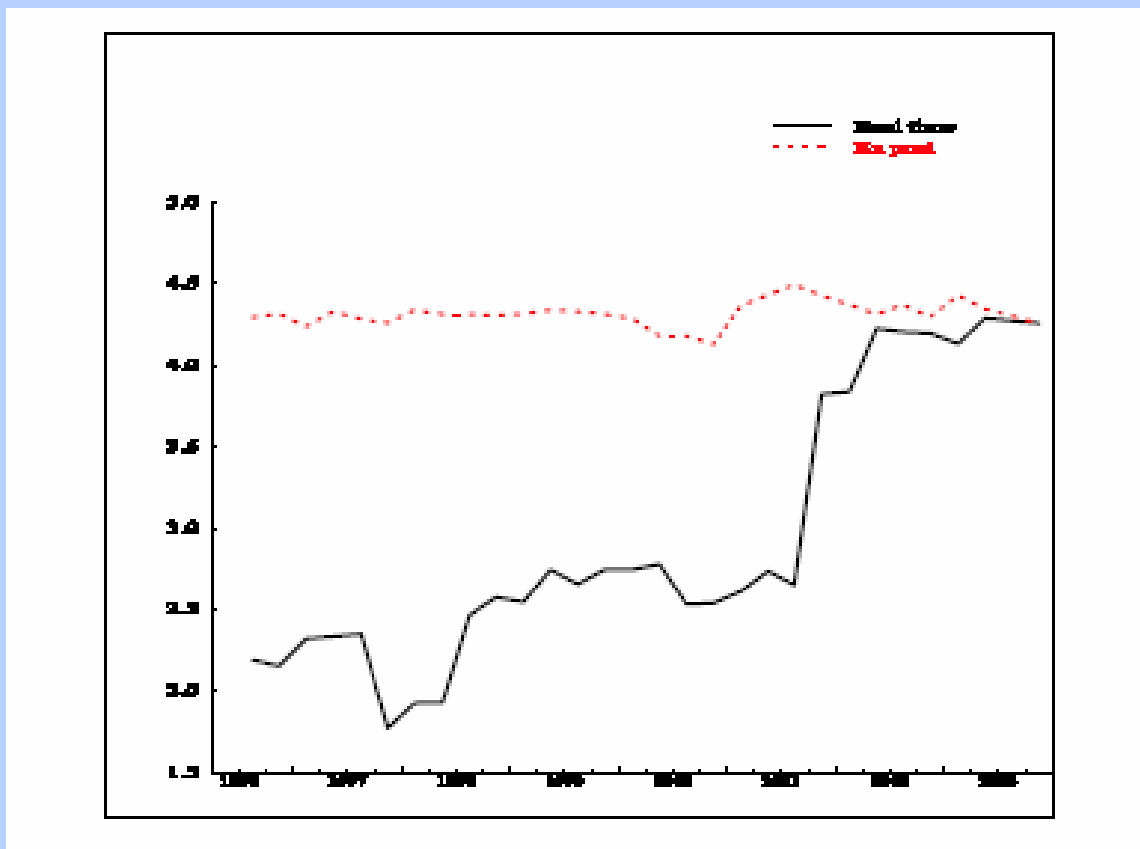
	Real GDP				Consumer prices			
	Year 1	Year 2	Year 3	Year 4	Year 1	Year 2	Year 3	Year 4
Model 1	-0.34	-0.71	-0.71	-0.63	-0.15	-0.30	-0.38	-0.49
Model 2	-0.22	-0.38	-0.29	-0.14	-0.09	-0.21	-0.31	-0.40
Model 3	-0.34	-0.47	-0.37	-0.28	-0.06	-0.10	-0.19	-0.31

Source: "Recent findings on monetary policy transmission", ECB's Monthly Bulletin, October 2002.

Notes: Numbers are expressed as a percentage change compared with the initial levels of GDP and the index of prices. Model 1 is the ECB's Area-Wide Model (AWM). Model 2 refers to an aggregate of the macroeconomic models of the national central banks of the euro area. Model 3 is the multi-country model of the United Kingdom's National Institute of Economic and Social Research. The simulations reported assume that the interest rate increase triggers an increase in the long-term interest rate and an exchange rate appreciation.



# Svaret på centrale policy spørgsmål er uklart



More precisely, the experiment is conducted by simulation, setting the target rate of inflation in a Taylor rule to one percentage point below its baseline level. The sacrifice ratio is cumulative annualized change in the unemployment rate, undiscounted, relative to baseline, divided by the change in PCE inflation after 5 years. Other rules would produce different sacrifice ratios but the same profile over time.

# The monetary policy strategy of the ECB

## Primary objective of price stability



Governing Council takes monetary policy decisions based on a unified overall assessment of the risks to price stability

Economic analysis

Monetary analysis



Full set of information







# Sammenfatning om virkelighed

- ◆ Realtidsdata indeholder en masse støj
- ◆ Det er meget svært at skønne om fremtiden
- ◆ Vores viden om effekt af renteændringer er rudimentær
- ◆ Der er brug for at kigge på alle relevante indikatorer

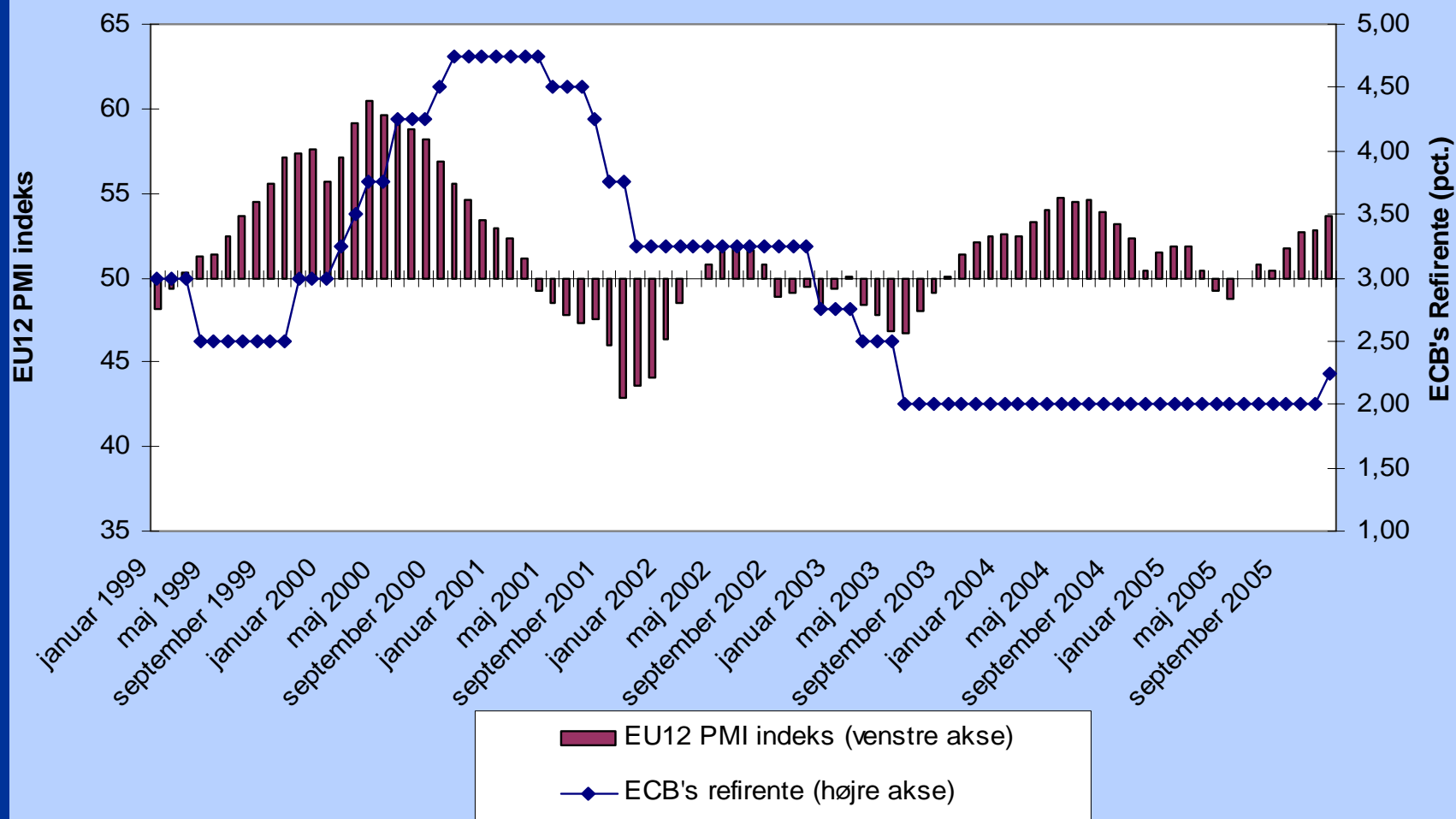


# En holistisk approach

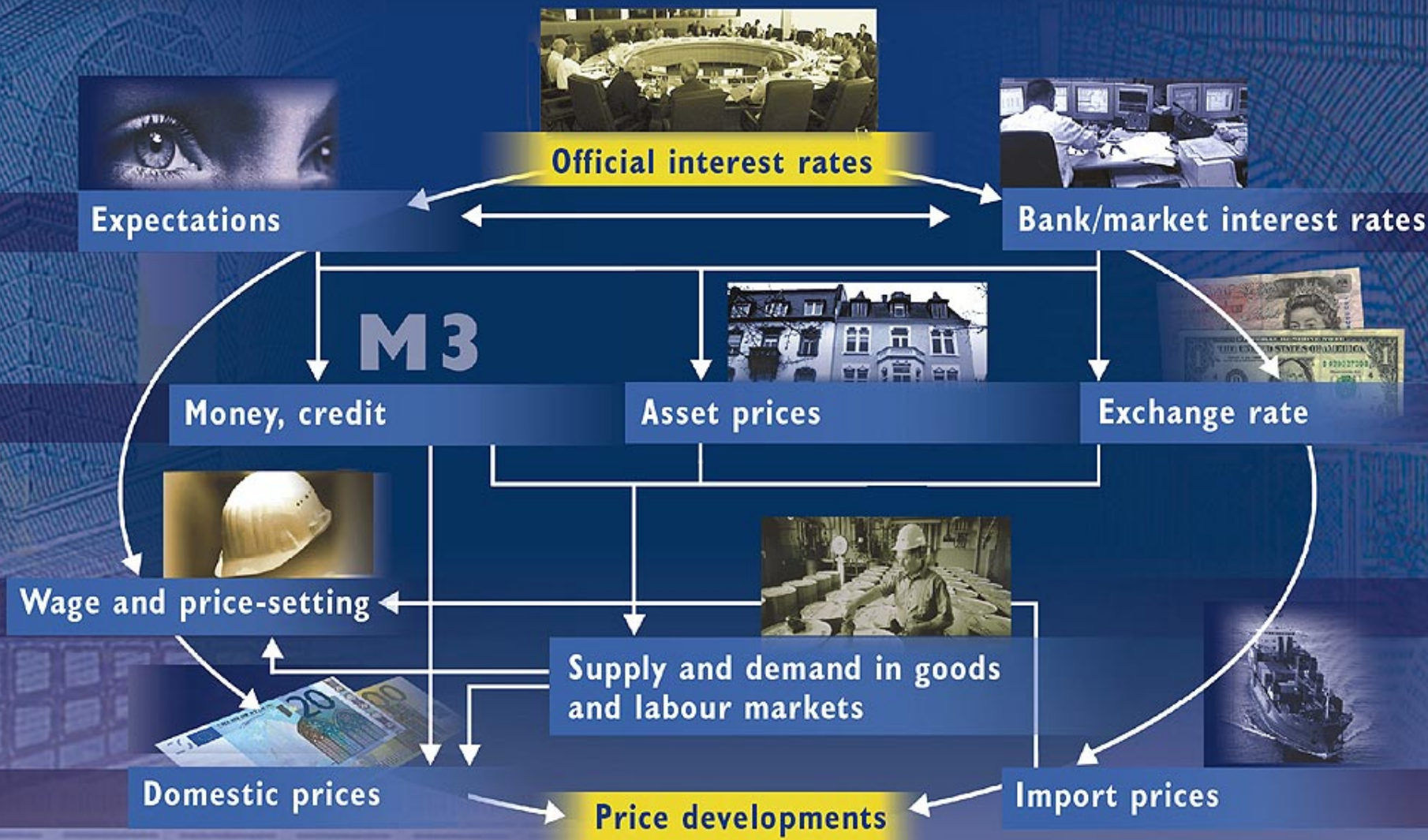


# En kendt analytikers version

## EU12 PMI og ECB's Refirente



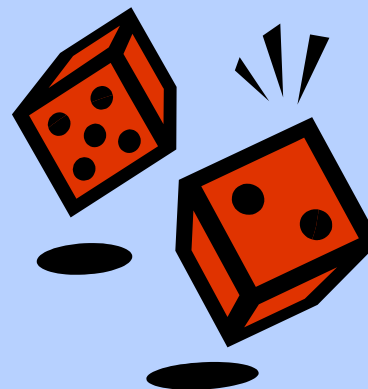
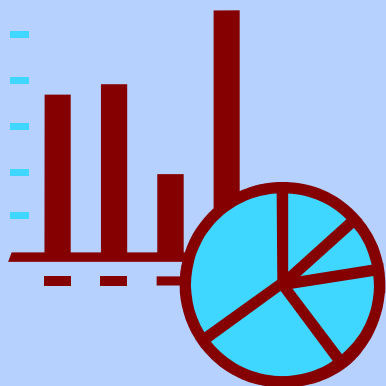
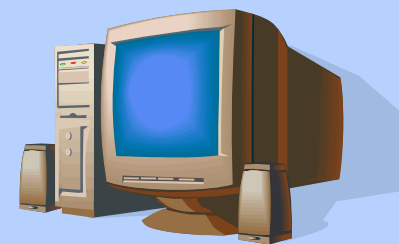
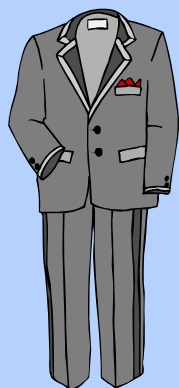
# The transmission mechanism





# Hvordan sættes renterne i Euroområdet i praksis

- ◆ Forskellige metoder





# ECB om verdensøkonomi og pengeforhold

*The global economy has continued to expand at a robust pace, mostly propelled by the United States and China, which remain the two main engines of global activity. The outlook for the world economy remains fairly benign, underpinned by favourable financing conditions and healthy corporate profits – a picture which is reflected in leading indicators for industrial countries. The main sources of risk to this positive outlook continue to be associated with renewed pressure on energy prices and the persistence of global imbalances.*

*In March 2006 annual M3 growth rose to 8.6%, the strongest rate observed since July 2003. The low level of interest rates remained the key driver of underlying monetary and credit dynamics. At the same time, there appears to have been no further dampening of M3 growth stemming from an unwinding of past portfolio shifts. In an environment of already ample liquidity, strong money and credit growth points to upside risks to price stability over the medium to longer term. Monetary developments therefore need to be monitored closely, especially in the light of the strengthening of economic activity and of strong asset price dynamics.*



## ECB om prisudvikling og realøkonomi

*Euro area inflation was estimated at 2.4% in April 2006. Domestic inflationary pressures have so far remained subdued, but pressures from commodity prices, in particular oil, have kept euro area inflation above 2%. Such pressures, as well as the high volatility of oil and energy prices, are expected to continue affecting the short-term inflation outlook. Risks to price stability remain on the upside and include further increases in oil prices, a stronger pass-through of the latter into consumer prices than currently anticipated and additional increases in administered prices and indirect taxes. Furthermore, the risk of stronger than expected wage developments due to second round effects remains, particularly in the context of a more favourable economic environment.*

*Available economic data suggest that the recovery gained momentum at the start of 2006, implying that the slowdown observed in the fourth quarter of last year was temporary. The positive readings of survey indicators, together with industrial production and labour market data, point to a strengthening of economic activity. The outlook for the euro area continues to be supported by favourable developments in the external environment, gains in earnings and business efficiency, and very favourable financing conditions. However, these prospects are still subject to downside risks stemming from uncertainties surrounding oil price movements and global imbalances.*



## ECBs specielle interesser

### Boxes:

1. Longer-term developments in loans to the private sector
2. The results of the April 2006 bank lending survey for the euro area
3. Results of the ECB Survey of Professional Forecasters for the second quarter of 2006
4. Estimates of the euro area capital stock
5. The usefulness of business tendency survey indicators for conjunctural analysis

Kilde: ECB (2006)





# ECB Projections

**Table 10 Macroeconomic projections**

(average annual percentage changes)<sup>1)</sup>

	2004	2005	2006	2007
HICP	2.1	2.1-2.3	1.6-2.6	1.4-2.6
Real GDP	1.8	1.2-1.6	1.4-2.4	1.4-2.4
Private consumption	1.4	1.1-1.5	0.9-1.9	0.6-2.2
Government consumption	1.1	0.4-1.6	1.1-2.1	0.5-1.5
Gross fixed capital formation	1.6	1.4-2.4	1.6-4.6	1.5-4.7
Exports (goods and services)	6.1	2.6-5.4	4.3-7.5	4.1-7.3
Imports (goods and services)	6.3	3.4-6.0	4.2-7.6	3.5-6.9

1) For each variable and horizon, ranges are based on the average absolute difference between the actual outcomes and past projections by euro area central banks. The projections for real GDP and its components refer to working-day-adjusted data. The projections for exports and imports include intra-euro area trade.

**Table A Macroeconomic projections for the euro area**

(average annual percentage changes)<sup>1)</sup>

	2005	2006	2007
HICP	2.2	1.9-2.5	1.6-2.8
Real GDP	1.4	1.7-2.5	1.5-2.5
Private consumption	1.4	1.1-1.7	0.6-2.0
Government consumption	1.2	1.4-2.4	0.8-1.8
Gross fixed capital formation	2.2	2.4-5.0	1.8-5.0
Exports (goods and services)	3.8	4.2-7.2	3.8-7.0
Imports (goods and services)	4.6	4.2-7.6	3.4-6.8

1) For each variable and horizon, ranges are based on the average absolute difference between actual outcomes and previous projections by euro area central banks. The projections for real GDP and its components refer to working-day-adjusted data. The projections for exports and imports include intra-euro area trade.

Kilde: ECB (2005+2006)



# Sammenfatning om holistisk approach

- ◆ Der er ingen "single" indikator
- ◆ Transmissionsmekanismen er kompleks
- ◆ Alle aspekter af den økonomiske udvikling vurderes
- ◆ Situationsspecifikke forhold vurderes ekstra nøje
- ◆ ECBs projections ligger på linje med andres



# Finansielle forholds betydning



## Tre grunde til at finansielle faktorer er vigtige

- ◆ Første led i transmissionsmekanismen
- ◆ Realtids indikatorer
- ◆ Finansiell stabilitet og priser på finansielle fordringer



# Finansieringsforhold - indikatorer

**Table 1 Overview of indicators of financing conditions**

## **Cost of finance**

Real cost of bank and market-based debt and equity finance

Overall real cost of corporate finance

Premia on debt financing

- Corporate bond spreads (broken down by rating and sector)
- Credit default swap spreads by sector

## **Sources of external finance**

Bank lending

- Non-syndicated lending
- Syndicated lending
- Loan demand and its determinants (Bank Lending Survey)

Bond issuance

- Debt securities issued by non-financial corporations and non-monetary financial corporations
- Non-financial corporate bond issuance (broken down by rating and sector)

Equity issuance

- IPO and SPO issuance
- Equity issuance (broken down by sector)

## **Balance sheet positions**

of borrowers

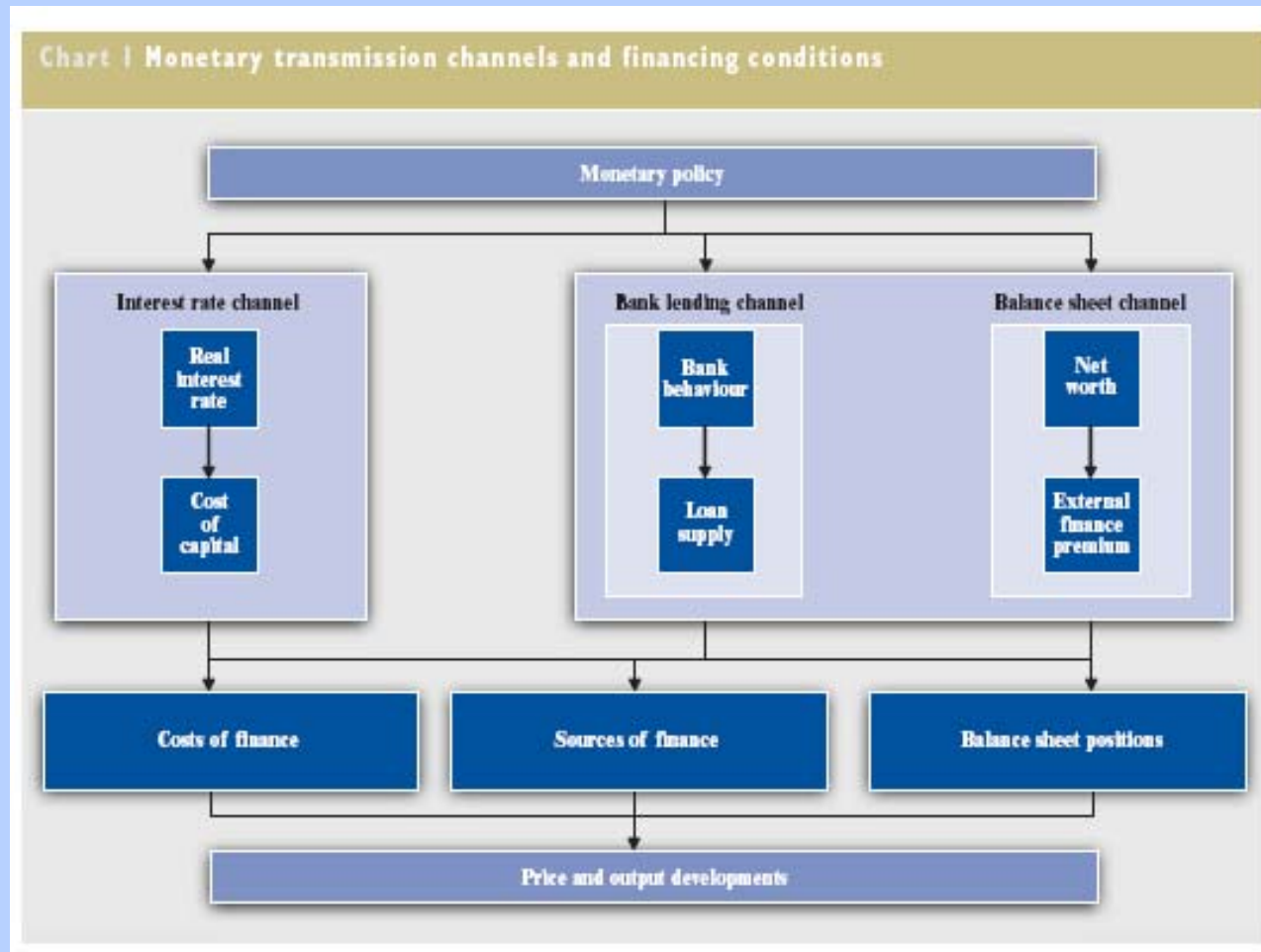
- Corporate credit risk (rating) changes
- Leverage ratios
- Sustainability ratios
- Expected earnings per share
- Financing gaps

of lenders

- Credit standards and their underlying factors (Bank Lending Survey)
- Banks' competitive conditions (Bank Lending Survey)
- Bank capital ratios
- Bank credit risk rating changes
- Bank profitability ratios
- Bank (expected) earnings per share
- Bank indicators constructed from financial markets data



# Finansieringsforhold - transmissionsmekanisme



Kilde: ECB (2005)



# Finansieringsomkostninger

Chart 2 Real financing rates of non-financial corporations according to source

(percentages per annum)

- overall cost of financing
- real short-term MFI lending rates
- - - real long-term MFI lending rates
- real cost of market-based debt
- ..... real cost of quoted equity



Sources: ECB calculations, Thomson Financial Datastream, Merrill Lynch and Consensus Economics forecast.

Notes: The overall cost of financing is calculated as a weighted average of the cost of bank lending, the cost of debt securities and the cost of equity, based on their respective amounts outstanding and deflated by inflation expectations. The introduction of the harmonised MFI lending rates at the beginning of 2003 led to a statistical break in the series. For a detailed description of how the different indices are calculated, see ECB (2005a).

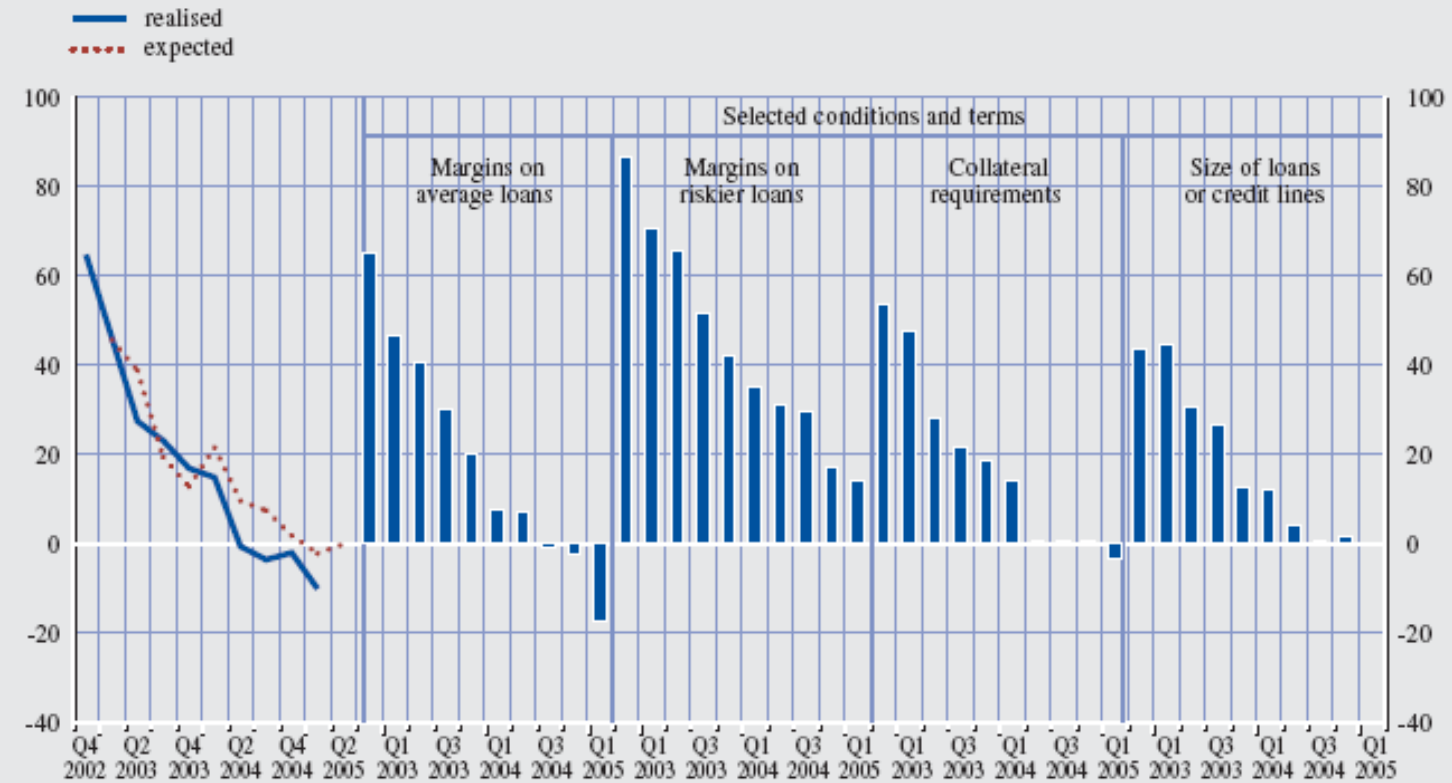
Kilde: ECB (2005)



# The Bank Lending Survey

Chart 3 Changes in credit standards and conditions applied to the approval of loans or credit lines to enterprises

(net percentages)



Source: ECB.

Note: Net percentages are defined as the difference between the sum of “tightened considerably” and “tightened somewhat” and the sum of “eased somewhat” and “eased considerably”.

Kilde: ECB (2005)



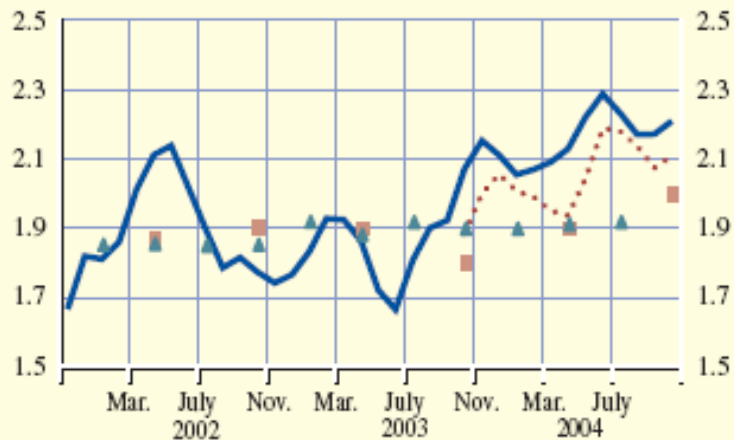


# Realtidsindikator for inflationsforventninger

**Chart 3 Break-even inflation rates and survey measures of long-term inflation expectations in the euro area**

(percentages per annum)

- 2012 maturity break-even inflation rate
- ..... 2008 maturity break-even inflation rate
- Consensus Economics forecasts six to ten years ahead
- ▲ ECB's Survey of Professional Forecasters five years ahead



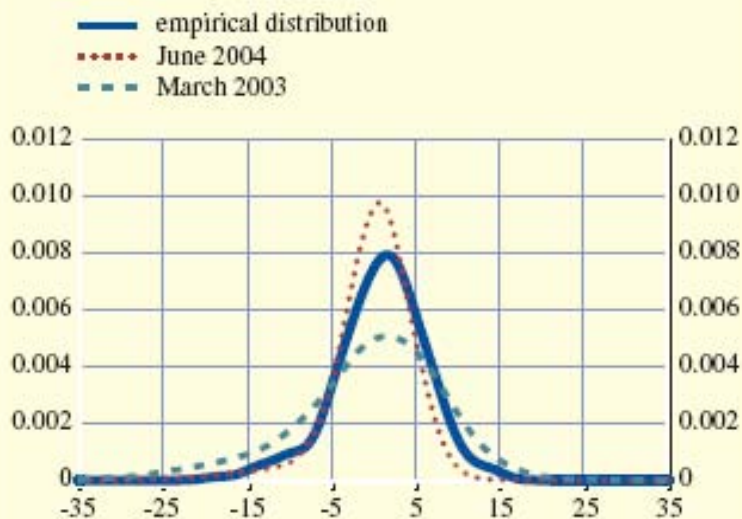
Sources: Consensus Economics, Reuters and ECB calculations.

Kilde: ECB (2004)



# Indikator for investorusikkerhed

Chart 10 Option-based and empirical stock market return distributions for the euro area



Sources: Eurex and ECB calculations.

Note: The distributions shown for March 2003 and June 2004 are risk-neutral probability density functions calculated using the prices of options with 30 days to maturity on the Dow Jones EURO STOXX 50 index.



# Finansiell stabilitet og priser på finansielle fordringer

- ◆ Selvstændigt mål
- ◆ Del af inflationsmål
- ◆ Del af transmissionsmekanisme



# Transparens og forudsigelighed



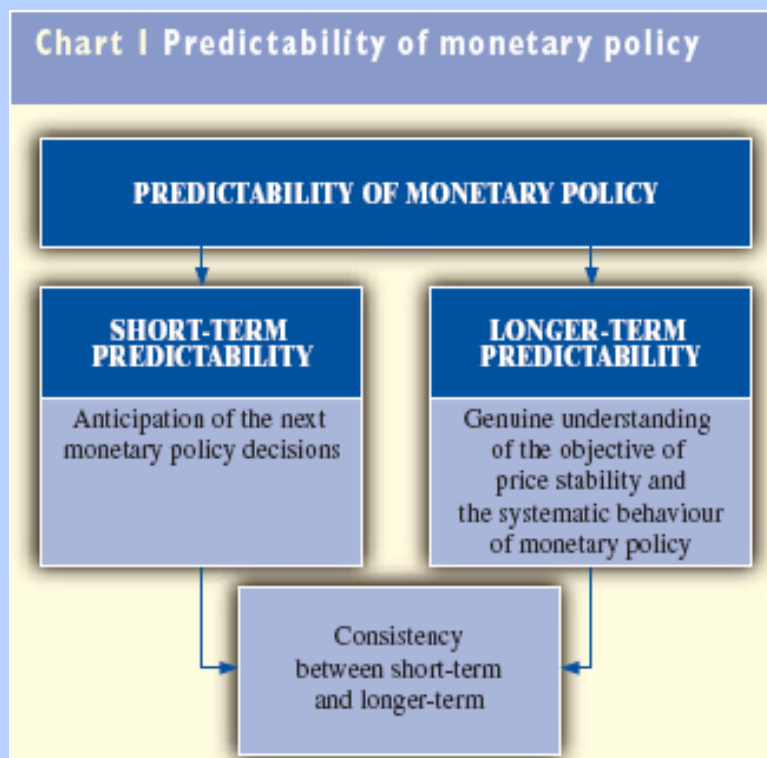
## Greenspan on transparency

*”Since I have become a central banker, I have learned to mumble with great incoherence. If I seem unduly clear to you, you must have misunderstood what I said.”*

Alan Greenspan, in testimony to US Congress, 1987.



# Forskellige slags forudsigelighed

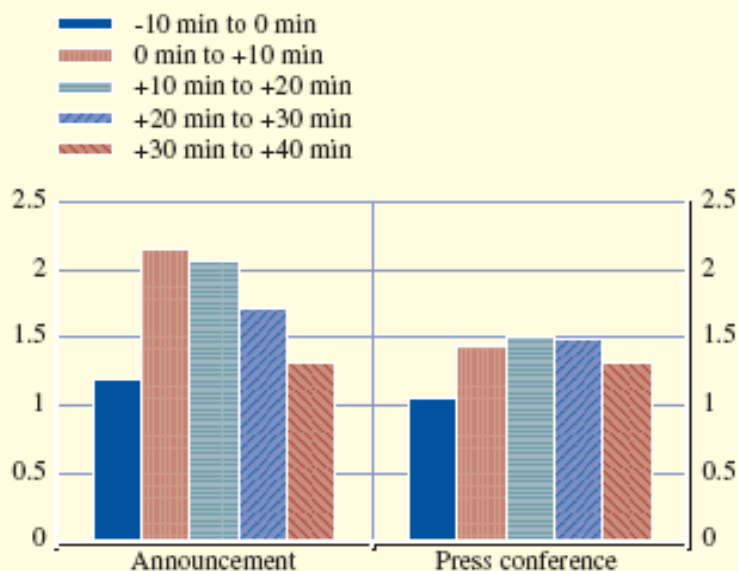


Kilde: ECB (2006)



# Finansielle markeders reaktion

## Bond price volatility around the ECB's monetary policy decision announcement and press conference



Sources: Tick Data Inc. and ECB calculations.

Note: The bars represent the ratio of the average realised bond price volatility around the time of the release of monetary policy decisions and the time of the press conference to volatility on corresponding days when there was no meeting of the Governing Council.



# Forskellige typer af transparens

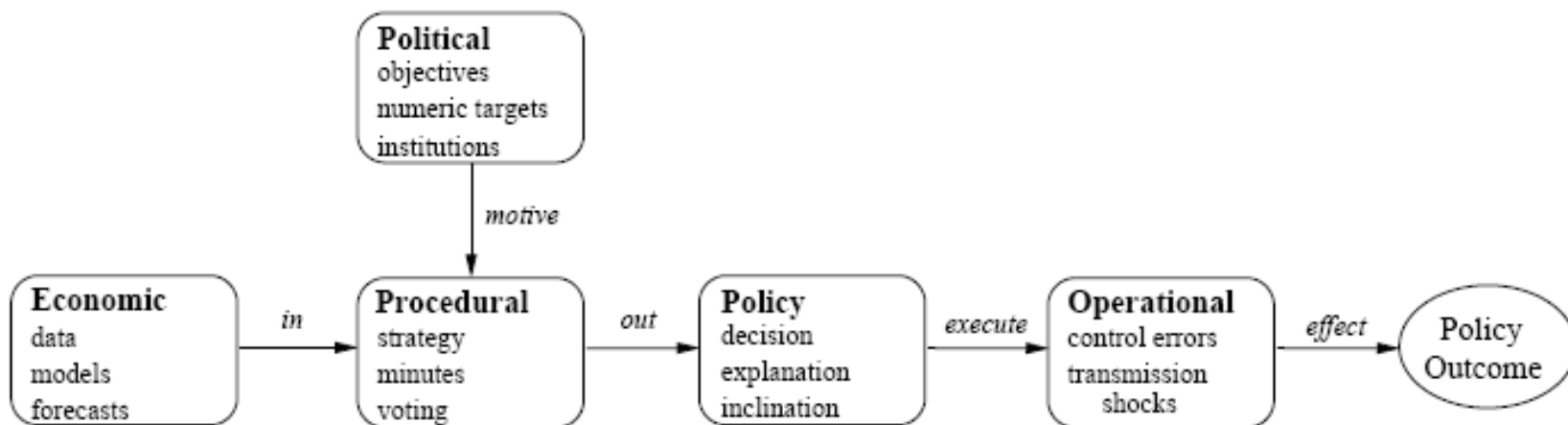


Figure 1: A conceptual framework for transparency.





# Uddybning om transparens

1. *Political transparency* refers to openness about policy objectives and institutional arrangements that clarify the motives of monetary policymakers. This could include explicit inflation targets, central bank independence and contracts.
2. *Economic transparency* focuses on the economic information that is used for monetary policy, including economic data, policy models and central bank forecasts.
3. *Procedural transparency* describes the way monetary policy decisions are taken. This includes the monetary policy strategy and an account of policy deliberations, typically through minutes and voting records.
4. *Policy transparency* means a prompt announcement and explanation of policy decisions, and an indication of likely future policy actions in the form of a policy inclination.
5. *Operational transparency* concerns the implementation of monetary policy actions, including a discussion of control errors for the operating instrument and macroeconomic transmission disturbances.



# Afsluttende betragtninger



## Mankiw's råd til Bernanke

- ◆ *Gradvis ændring af kommunikation mod regel baseret inflation targetting*
- ◆ *Klar tale på FED relaterede områder ellers kun Økonom standens konsensus synspunkter*
- ◆ *Hold kedelig offentlig profil*
- ◆ *Håb på at du er heldig*



# Sammenfatning

- ◆ ECBs mål er prisstabilitet, men tidshorizonten er pragmatisk
- ◆ At føre pengepolitik er som at køre bil, hvor man kun må kigge ud af en snavset bagrude, og der er slør i rattet
- ◆ Der er ikke en afgørende indikator, men et behov for at se det samlede billede
- ◆ Finansielle variabler giver et vigtigt realtids input
- ◆ Der er små, men velbegrundede forskelle fsa. transparens.