Modern Monetary Policy

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Modern Monetary Policy: Outline

1. Modern monetary policy regimes: Mandate, independence, and accountability
2. Flexible inflation targeting and the interest-rate path

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Modern Monetary Policy Regimes: Mandate, Independence, and Accountability

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Modern Monetary Policy Regimes

Three pillars:

1. Mandate
2. Independence
3. Accountability

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1. Mandate

- **Possible** objectives for monetary policy: What can monetary policy achieve?
  - Long run
    - **Nominal** variables (price level, inflation, exchange rates,…): Level and variability
    - **Real** variables (output, employment, unemployment, output gap, resource utilization,…): **Not levels**, only variability
    - Possible tradeoff between variability of real and nominal variables
    - Imperfect control

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1. Mandate

- **Possible** objectives for monetary policy: What can monetary policy achieve?
  - Short run
    - **Nominal** variables: Permanent impact
    - **Real** variables: Temporary impact
    - Lags: Variable, 1-2 years
    - Uncertainty:
      - Current state of the economy
      - Future effect on real and nominal variables of given monetary policy action
    - Forecasts!

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1. Mandate

- **Suitable** objectives for monetary policy: What should monetary policy try to achieve?
  - Nominal stability
    - "Price stability": Low and stable inflation
    - Costs of high inflation
      - High inflation variability → more uncertainty in economic decisions
      - Distortions (taxes, demand for financial services, transactions costs, …)
      - Arbitrary redistributions (owners vs. renters, borrowers vs. lenders, …)

1. Mandate

- **Suitable** objectives for monetary policy: What should monetary policy try to achieve?
  - Real stability
    - Stable resource utilization
  - "Flexible inflation targeting": Low and stable inflation as well as stable resource utilization
    - Reasonable compromise between stable inflation and stable resource utilization

Flexible inflation targeting

Characteristics:

1. Numerical inflation target
2. "Forecast targeting": Setting the interest rate (an interest-rate path) such that forecasts of inflation and resource utilization "look good"
3. A high degree of transparency and accountability

Numerical inflation target

- Target and index specified by government, parliament, or central bank
  - Government: NZ, Canada, UK, Australia, Norway…
  - Central bank: Euro area, Sweden…
- Pros and cons
  - Government/parliament commitment to inflation target
  - Target level and index not suitable as election issue
  - Index and level of target arguably a technical question

Numerical inflation target

- Target explicitness, level, and index vary across countries
  - Implicit target ("comfort zone") for (core) PCE deflator (Fed)
  - "Below but close to 2%" (ECB)
  - Point target (2%, 2.5%); point target w/ range (2%±1%); range (1-3%, 2-3% over the cycle)
  - Headline inflation (CPI, HICP…); underlying (core) inflation (CPIX, CPI-ATE, RPIX…)

2. Independence

- Avoids short-run interference by governments/parliaments: Political business cycle
- Avoids "inflation bias"
- Allows longer horizon in monetary policy
- Emphasizes responsibility for fulfilling mandate

2. Independence

- Several dimensions of independence
  - Functional, institutional, personal, financial
  - Goal vs. instrument
  - Formal (legal) vs. informal (actual)

2. Independence

- Strong international trend towards increasing independence (RBNZ 1990, Bank of England 1997, ECB 1998, Sweden 1999)
- Degree of independence varies across countries
- Norges Bank Watch 2002:
  "Monetary policy among the best in the world; institutional framework among the worst in the world"
- Informal independence even if not formal
- Safer with formal independence

3. Accountability

- Democracy: Independence requires accountability (Blinder)
- Efficiency: Accountability strengthens CB incentives to fulfill mandate
- Accountability requires transparency

Transparency

- Strengthens accountability
  - Improves discussion and evaluation of monetary policy
  - Strengthens CB incentives
- Improves efficiency of monetary policy
  - More effective "management of expectations"
  - Publishing interest-rate forecasts affects interest-rate expectations

Transparency

- Degree of transparency varies across countries
  - Inflation target, stabilization of resource utilization
  - CB forecasts, analysis, motivation for decisions (Monetary Policy Reports)
  - Analysis of outcomes: Unanticipated shocks, etc.
  - Alternative scenarios (interest rates, shocks, international developments, …)
  - Forecasts of output, output gap, resource utilization
  - Interest-rate forecasts (RBNZ, NB, SR, SI, CNB…)
  - Attributed (Sweden) vs. nonattributed minutes

Transparency

- Possible improvements:
  - Interest-rate forecasts (optimal interest-rate plans)
  - Resource-utilization stabilization
    - Weight relative to inflation stabilization
    - Role in decision process
    - Forecasts of potential output and output gap
  - Explicit loss functions and explicit optimal policy

Accountability in practice

- Current discussion by experts and interested parties in media, reports, conferences, etc.
- Parliaments and governments: Evaluation of **past** policy, **not** interference in **current** policy
  - Respect independence
- Hearings in Parliaments
  - Avoid superficial political points
  - Expert assistance, evaluation reports, questions
  - Submissions from interested parties

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Accountability in practice

- Official evaluations by experts
  - New Zealand 2001 (Svensson)
  - Bank of England (Kohn, Pagan, Parliament…)
  - Sweden 2007 (Giavazzi, Mishkin)
- Independent evaluations (could be sponsored by CB/Government)
  - Norges Bank Watch
  - Annual conference (ECB Watchers' Conference, US Monetary Policy Forum)

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Accountability in practice

- Evaluation of monetary policy: Difficulties
  - Lags (1-2 years), uncertainty
  - Current inflation affected by policy about 2 years ago
  - Current inflation on target
    - Policy right 2 years ago, unanticipated shocks small or cancel
    - Policy wrong 2 years ago, unanticipated shocks compensate (luck)
  - Current inflation off target
    - Policy right 2 years ago, unanticipated shocks explain deviation
    - Policy wrong 2 years ago, unanticipated shocks don't compensate
  - Ex post evaluation difficult: Must identify shocks to judge policy

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Accountability in practice

- Evaluation of monetary policy: Difficulties
  - Ex ante evaluation of decisions better
  - Evaluate decision given info at the time of decision
  - Requires transparency: CB info at the time
  - Compare w/ other forecasts/policy recommendations at the time

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Modern monetary policy regimes

- Mandate, independence, accountability
- Flexible inflation targeting
  - Works very well in many countries
- Room for further improvements of transparency and accountability
- Accountability in practice, evaluations
- We learn more from some variety across countries

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Flexible inflation targeting and the interest-rate path

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Flexible inflation targeting

- Stabilize inflation around the inflation target
- Stabilize resource utilization
- Loss function
  - Period loss function

$$L_t = (\pi_t - \pi^*)^2 + \lambda(y_t - \bar{y}_t)^2$$

  - Intertemporal loss function

$$\mathrm{E}_t \sum_{\tau=0}^{\infty} (1-\delta)\delta^{\tau} L_{t+\tau}$$

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Strict inflation targeting (λ=0)

- Only stabilize inflation around the inflation target
- Large interest-rate adjustments up and down
- Large fluctuations in resource utilization, output and employment
- Only pedagogical simplification
- All central banks with an inflation target conduct flexible inflation targeting

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Flexible inflation targeting (λ>0)

- Weight on stabilizing resource utilization may increase gradually over time to some reasonable level
- New regime
  - Establish credibility
  - Greater weight on stabilizing inflation
- Established regime with credibility
  - Larger weight on stabilising resource utilization

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Warning

- Too much weight on stabilizing resource utilization can threaten credibility
- Monetary policy cannot affect average resource utilization, only stabilize it around the given average level
- Monetary policy target for average resource utilization: Makes no sense
- Monetary policy target for inflation: Makes a lot of sense

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Forecasts

- Inflation and resource utilisation react with a significant lag to monetary policy measures
- "Long and variable lags" (Friedman)
- The Riksbank's interest-rate decision is based on forecasts for inflation and measures of resource utilization 1-3 years ahead

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Transmission mechanism

- Prices, inflation, inflation expectations sticky
- Instrument rate, inflation expectations => Short real interest rate
- Expected future short real interest rates => Future output
- Expected future inflation and output (gap) => Future inflation

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Expectations of the entire repo rate path is what matters

- The repo rate over the next few weeks has little significance for future inflation and resource utilization
- Expectations of the entire repo rate is what matters, not the repo rate the next few weeks
- “Management of expectations” (Woodford)

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Flexible inflation targeting

- Choose the interest-rate path so that the resulting forecast for inflation and resource utilization “looks good”
- “Looking good:” Inflation approximately 2% and resource utilization normal 2-3 years ahead, or inflation approaching target and resource utilization approaching normal level at appropriate pace
- Riksbank: “Well-balanced” monetary policy
- Norges Bank: “Criteria for an appropriate interest-rate path”
- “Forecast targeting”

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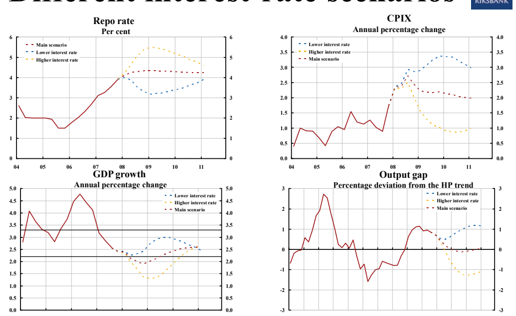
Different interest-rate scenarios



Natural trinity

- Forecasts for interest rate, inflation and resource utilization form a natural trinity
- Interest-rate forecast (assumption) necessary for forecast of inflation and resource utilization
- All central banks that stabilize inflation have interest-rate forecasts or assumption in their materials preparing the decision (even when these are not published)

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Choice and publication of interest rate path

- Monetary policy works through expectations of the interest-rate path
- The entire interest-rate path matters, not the repo rate over the next few weeks
- (Norges Bank and) Riksbank conclusion:
  - Explicit discussion and selection of main interest-rate forecast (otherwise incomplete decision-making process)
  - Publication of interest-rate path (otherwise hiding most important information)

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Norges Bank before the Riksbank

- Reserve Bank of New Zealand from 1997
- Arguments in favour from several researchers
- Norges Bank from Spring 2005
- Riksbank from February 2007
- Sedlabanki Islands from March 2007
- Czech National Bank from 2008
- Next?

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Forecasts are uncertain

- Probability distribution
  - Mean
  - Uncertainty interval
- Dependeds on available information
- Revised when new information is received
- ”Forecast, not a promise!”

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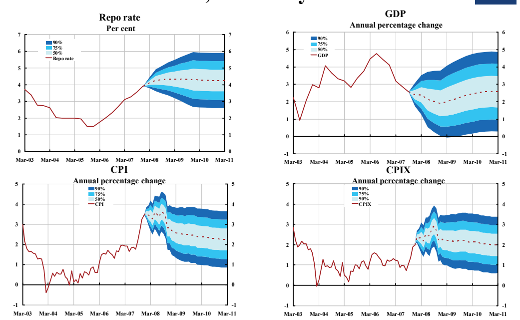
Mean value with uncertainty interval

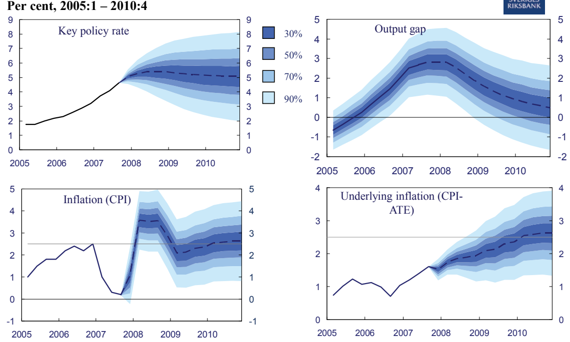
Riksbank, February 2008



Sources: Statistics Sweden and the Riksbank

Baseline scenario, Norges Bank, January 2008

Per cent, 2005:1 – 2010:4



Sources: Statistics Norway and Norges Bank 39

Forecast targeting: Handling new information

- New information relevant only if it changes the forecast for inflation or resource utilization *for an unchanged interest-rate path*
- “Filter new information through the forecast”
- New info shifts forecasts for inflation and resource utilization up (down) with unchanged interest-rate path
- Shift interest-rate path up (down)

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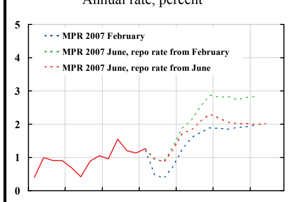
Forecast targeting: Handling new information

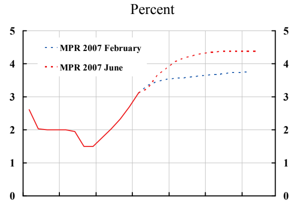
CPIX

Annual rate, percent



Repo rate

Percent



Note. Broken lines refer to the Riksbank’s forecasts Sources: Statistics Sweden and the Riksbank 41

Flexible inflation targeting and the interest-rate path: Summary

1. Flexible inflation targeting: Choose an interest-rate path so the forecast for inflation and resource utilization looks good
2. Expectations of the entire interest-rate path, not the repo rate over the next few weeks, is what matters
3. Discussion, selection and publication of the interest-rate path is the only right thing to do

- New information: Relevant only if it affects the forecasts

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