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

Modern Monetary Policy Regimes

Three pillars:
1. Mandate
2. Independence
3. Accountability

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

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!
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, …)

- **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 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)

- 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

- 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

- 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

- 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

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)

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 cancelled
  - 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

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

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

Flexible inflation targeting and the interest-rate path
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
    \[ E \sum_{t=0}^{\infty} (1 - \delta)^t \bar{L}_{t+1} \]

Strict inflation targeting (\(\lambda = 0\))
- 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

Flexible inflation targeting (\(\lambda > 0\))
- 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

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

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

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
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)

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”

Different interest-rate scenarios

- 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)

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)

Natural trinity

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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?
**Forecasts are uncertain**

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

**Mean value with uncertainty interval**

Riksbank, February 2008

**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)

**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