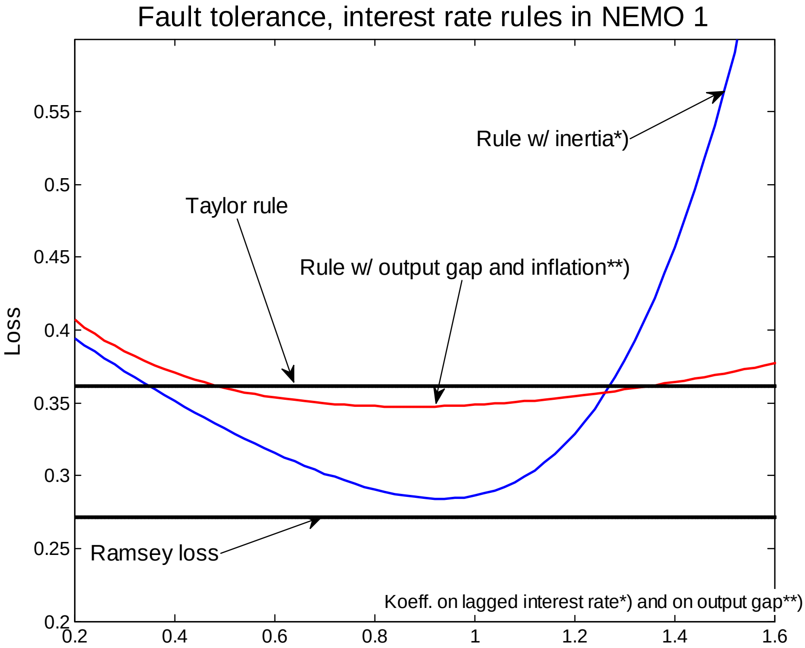
# Simple and Robust Rules for Monetary Policy

## By John B. Taylor and John C. Williams

Discussion by R. Alstadheim

Norges Bank

Oslo, June 2010


Fault tolerance, interest rate rules in NEMO 1
Loss
0.55
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
Rule w/ inertia*)
Taylor rule
Rule w/ output gap and inflation**)
Ramsey loss
Koeff. on lagged interest rate*) and on output gap**)

# Optimal rules do well in NEMO

| Loss relative to Ramsey: | NEMO 1 | NEMO 2 |
|---|---|---|
| Taylor rule*) | 34% | |
| Fine tuned rule**) | 4% | 7% |

*) $\widehat{i}_t = 1.5 * \widehat{\pi}_t + 0.5 * \widehat{y}_t$

**) Optimized coefficients for each individual model.

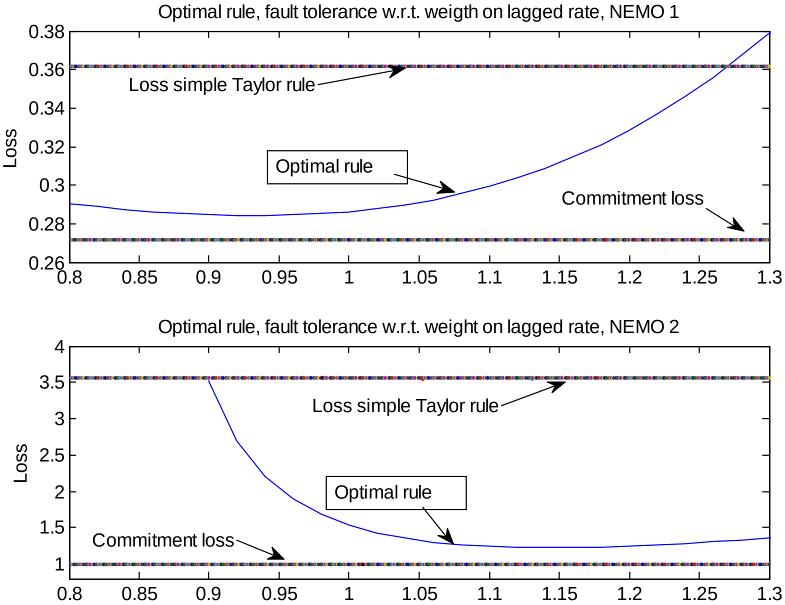
$\widehat{i}_t = \rho \widehat{i}_{t-1} + (1 - \rho)(\alpha_1 \widehat{\pi}_{t+1} + \alpha_2 (\widehat{y}_t - \eta \widehat{y}_{t-1}))$

# ...but the optimal rules are not robust:

| Loss relative to Ramsey: | NEMO 1 | NEMO 2 |
|---|---|---|
| Taylor rule | 34% | |
| Fine tuned rule | 4% | 7% |
| Fine tuned rule, wrong model | 257% | 250% |

# Still, fine tuning beats simple rule in this case:

| Loss relative to Ramsey | NEMO 1 | NEMO 2 |
|---|---|---|
| Taylor rule | 34% | 347% |
| Fine tuned rule | 4% | 7% |
| Fine tuned rule, wrong model | 257% | 250% |


Optimal rule, fault tolerance w.r.t. weigth on lagged rate, NEMO 1
0.38
0.36
0.34
0.32
0.3
0.28
0.26
Loss
Loss simple Taylor rule
Optimal rule
Commitment loss
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2
1.25
1.3
Optimal rule, fault tolerance w.r.t. weight on lagged rate, NEMO 2
4
3.5
3
2.5
2
1.5
1
Loss
Loss simple Taylor rule
Optimal rule
Commitment loss
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2
1.25
1.3

# If the space of models is NEMO 1 and 2, policy tuned to that space is best

| Loss relative to Ramsey | NEMO1 | NEMO2 |
|---|---|---|
| Taylor rule | 34% | 347% |
| Fine tuned rule | 4% | 7% |
| Fine tuned rule, wrong model | 257% | 250% |
| Simple and robust rule*) | 18% | 43% |

$*)\qquad \widehat{i}_t = 0.3 * \widehat{\pi}_t + 0.3 * \widehat{y}_t + 1.05 * \widehat{i}_{t-1}$