Monetary policy at the ZLB in the current crisis

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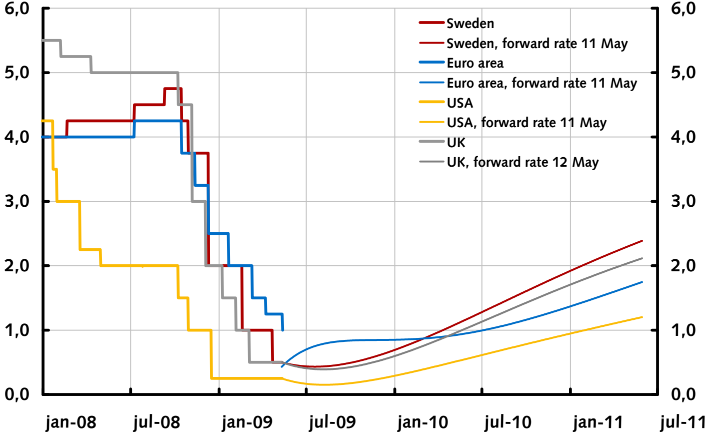
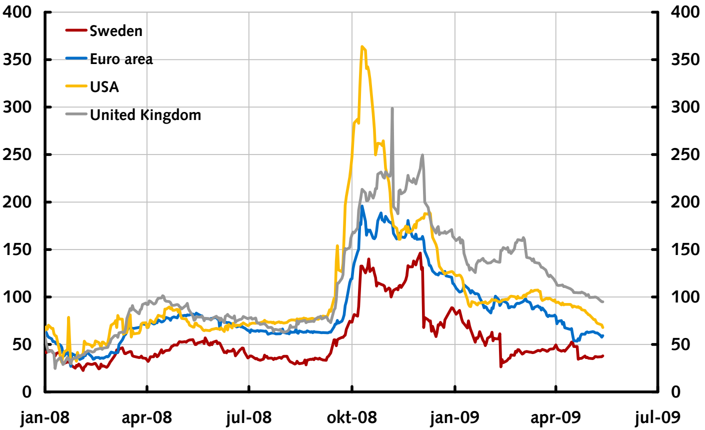
Monetary policy so far

Policy rates have been brought down



Financial stability so far

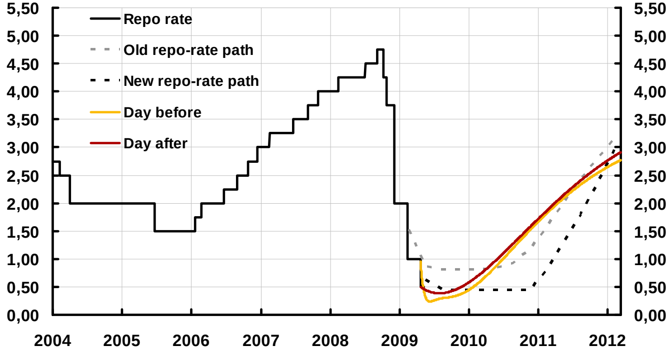
Spreads have come down from last fall



Basis spreads 3 months

Monetary policy so far in Sweden

Repo-rate path lowered to 50 b.p. through 2010



Monetary policy in a binding ZLB (ELB)

Simple New Keynesian model

Output gap

$$\begin{aligned} x_t &= x_{t+1|t} - \sigma(i_t + \delta_t - \pi_{t+1|t} - \bar{r}_t) \\ &= x_{t+T|t} - \sigma \sum_{\tau=0}^{T-1} i_{t+\tau|t} - \sigma \sum_{\tau=0}^{T-1} \delta_{t+\tau|t} + \sigma \left(p_{t+T|t} - p_t\right) + \sigma \sum_{\tau=0}^{T-1} \bar{r}_{t+\tau|t} \end{aligned}$$

x_t output gap, i_t policy rate, δ_t spread market-policy rate, $\pi_t \equiv p_t - p_{t-1}$ inflation, p_t price level, $\bar{r}_t$ neutral real rate

Monetary policy in a binding ZLB (ELB)

Simple New Keynesian model

$$x_t = x_{t+T|t} - \sigma \sum_{\tau=0}^{T-1} i_{t+\tau|t} - \sigma \sum_{\tau=0}^{T-1} \delta_{t+\tau|t} + \sigma \left(p_{t+T|t} - p_t \right) + \sigma \sum_{\tau=0}^{T-1} \bar{r}_{t+\tau|t}$$

x_t output gap, i_t policy rate, δ_t spread market-policy rate, $\pi_t \equiv p_t - p_{t-1}$, $\bar{r}_t$ neutral real rate

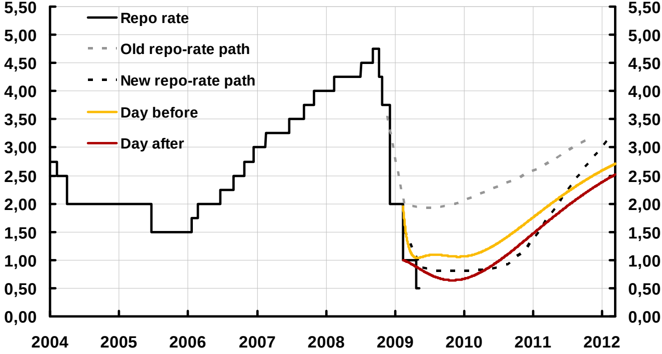
- Announce low policy-rate path further into the future, $\sum_{\tau=0}^{T-1} i_{t+\tau|t} \downarrow$
- Keep spreads low, $\sum_{\tau=0}^{T-1} \delta_{t+\tau|t} \downarrow$
- Keep up inflation expectations up, $p_{t+T,t} \uparrow$
- Keep neutral rate up, $\sum_{\tau=0}^{T-1} \bar{r}_{t+\tau|t} \uparrow$ (fiscal policy)

Zero policy rate further into the future

- Fed, Sweden, Canada
- Repo-rate path good thing
- Credibility?

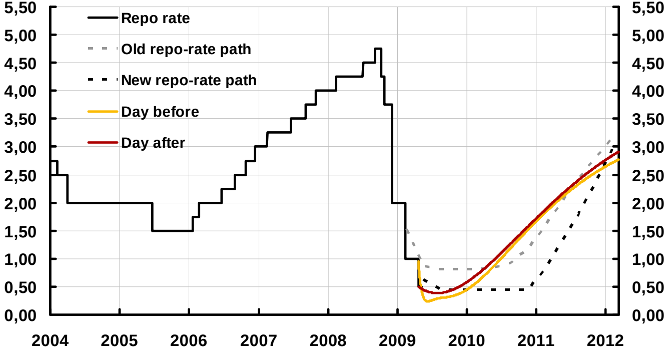
Zero policy rate further into the future

Repo rate and market expectations, February 11, 2009



Zero policy rate further into the future

Repo rate and market expectations, April 21, 2009



Zero policy rate further into the future

- Fed, Sweden, Canada
- Repo-rate path good thing
- Credibility?

- How make credible?
- Buy government bonds?
- Better? Lend at policy rate (fixed) at longer maturity

Keep spreads down

- Credit easing
- Financial-stability policy

Keep up inflation expectations

- Promise high inflation in the future (low policy rate in the future)
- Credible? (Krugman 98)
- Credible positive inflation target good
- But what if we need inflation above target?
- Price-level target (average-inflation target)
- Quantitative easing, expand monetary base/money supply (works only if believed to be permanent, otherwise probably useless)

Small open economy: The exchange rate

- Easy monetary policy is a package: Lower policy rate, higher inflation, higher inflation expectations, lower real rate, higher output gap, weaker currency
- Announce zero policy rate for longer
- Induce lower policy-rate expectations by lending longer at policy rate
- Support easy monetary policy with (threat of) FX intervention to depreciate currency/avoid appreciation (Switzerland)
- Foolproof Way, Mark II

Small open economy: The exchange rate

Foolproof Way, Mark I (Svensson 2000):

1. Price-level target (path) (above current price level)
2. Currency depreciation and peg
3. When price-level target achieved, return to floating exchange rate and price-level/inflation target

Small open economy: The exchange rate

- Weak currency, not competitive devaluation, not beggar-thy-neighbor'
- Just integrated part of normal easy monetary policy through unconventional means
- Maintain activity, maintain import
- Currency depreciation is terms-of-trade improvement for trading partners
- Easy monetary policy in all countries good
- Maintain activity, import, world trade
- Small open economy: Exchange rate important for own economy, little or no effect on rest of world
- Large economy: Exchange rate less important for own economy, large effect on rest of world