

# Session 1: “What is the Impact of Negative Interest Rates on Europe’s Financial System? How Do We Get Back to Normal?”

ECMI Annual Conference

*Towards the Right Policy Mix for a Thriving European Capital Market*

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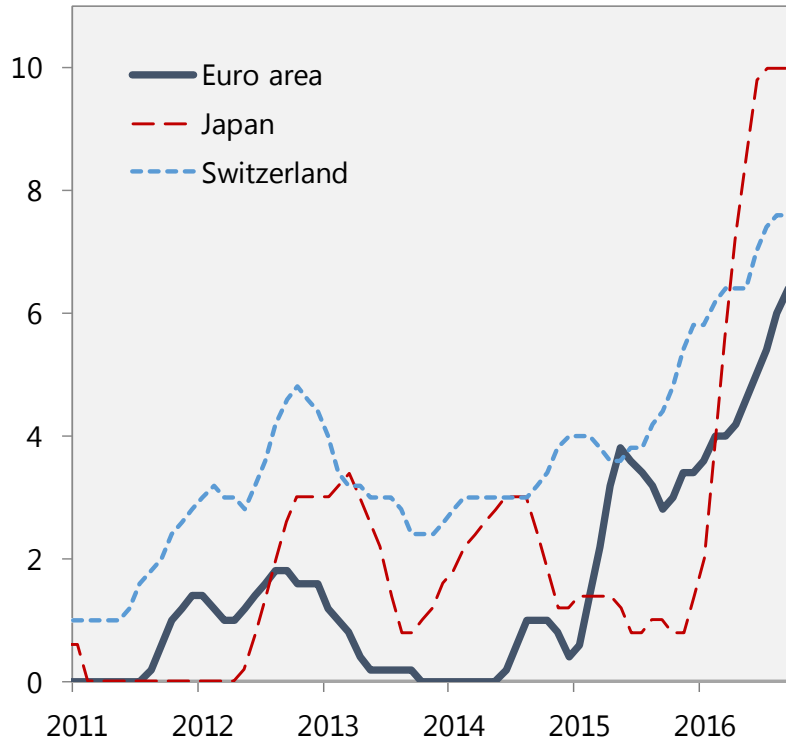
9 November 2016



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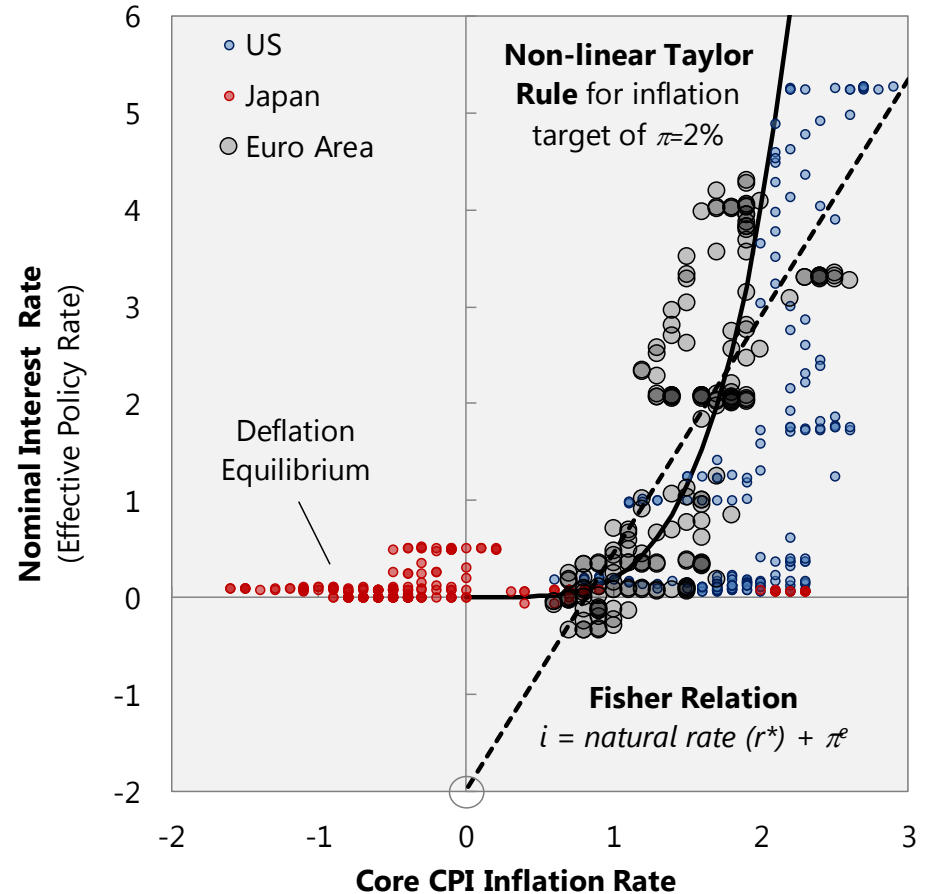
Record low long-term rates imply a **negative *real* natural rate** required to raise output to its potential level amid disinflationary pressures.

**Equivalency of Nominal Government Bond Yield and Marginal Policy Rate, Jan. 2011-Sept. 2016**  
(Years)



Source: Bloomberg LP and IMF staff calculations. Note: Euro area covers the core economies only; 1/ the "equivalency line" shows the maturity term at which the prevailing government debt yield is no higher than the marginal policy rate in the respective jurisdiction.

**Inflation and Interest Rates, Jan. 2002-Sept. 2016**  
(Percent, monthly)

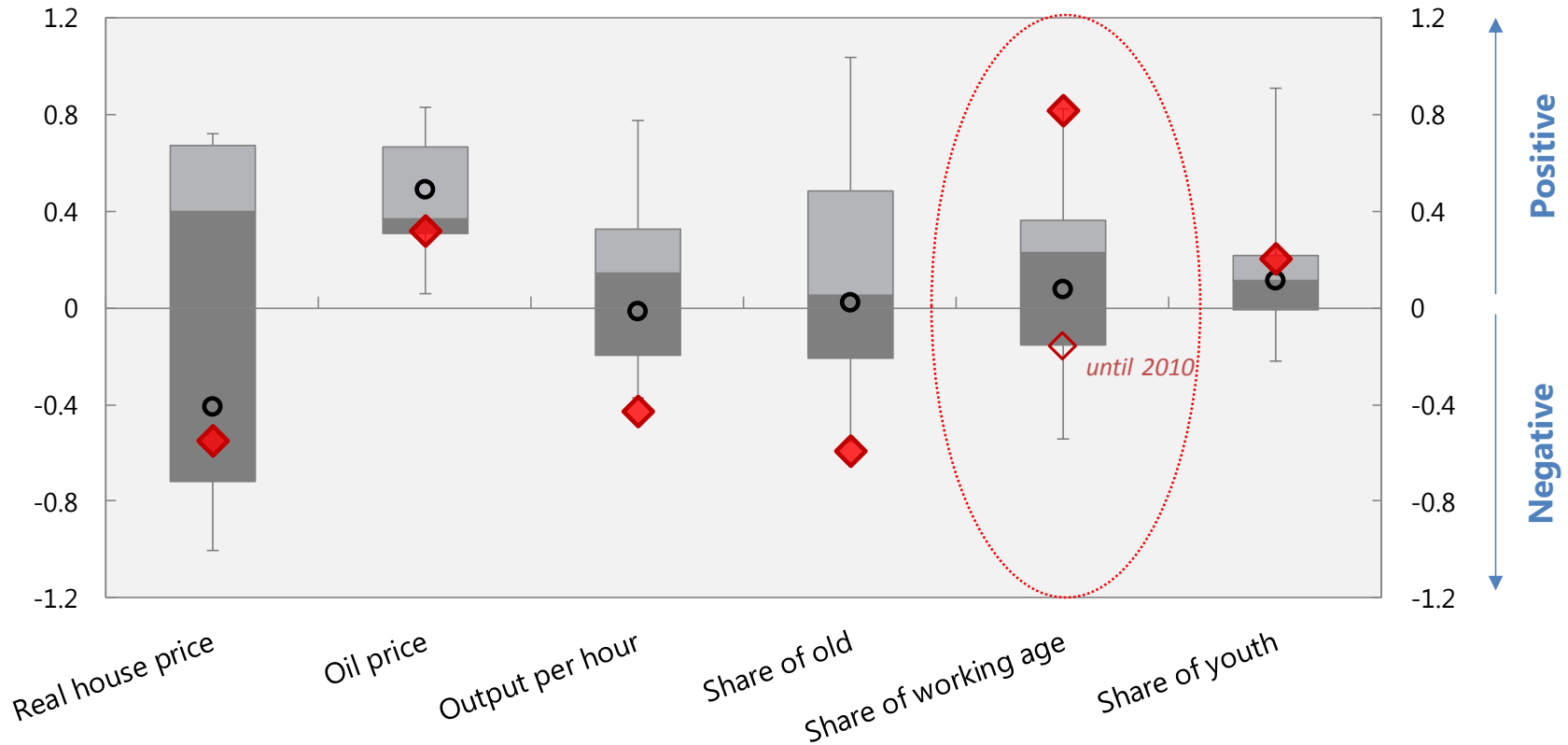


Source: Bloomberg, Haver Analytics, and IMF staff calculations.

# Structural shifts in key determinants of global inflation (demographics) can help explain *lowflation* while base effects (oil) will dissipate.

## Global Inflation (OECD): Explanatory Variables

(Bayesian coefficients of principal components, de-trended), 2001-2015 [ordered by cumulative PIP>95%] 1/

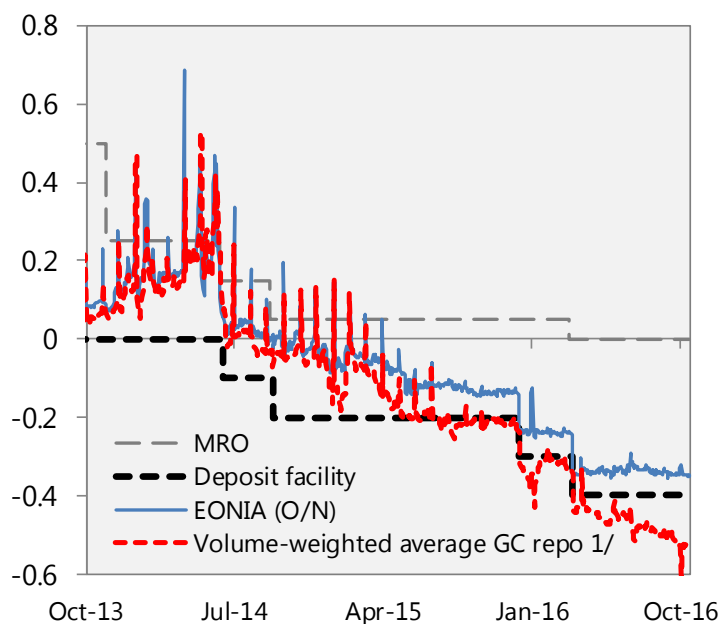


Sources: Jobst and Lin (2016); Bloomberg LP, Haver, IMF-WEO, IMF-Real Estate Index, IFS, United Nations, and IMF staff calculations. Note: Global inflation as PC of de-trended inflation rates of all OECD countries. Estimation completed using Bayesian model averaging to solve a canonical regression problem with 26 explanatory variables. Selected variables have a posterior inclusion probability (PIP)>95% to be at least once included in the 50 best models over a rolling 5-year estimation window. The estimates are generated using a random prior and 5,000 iterations of 1,000 draws via a Markov Chain Monte Carlo simulation. Boxplots include the mean (black dot), the 25th and 75th percentiles (grey box, with the change of shade indicating the median), and the 90th and 10th percentiles (whiskers). Separate markers show the average coefficient value during 2015 (red diamond) and over the entire sample (empty circle).

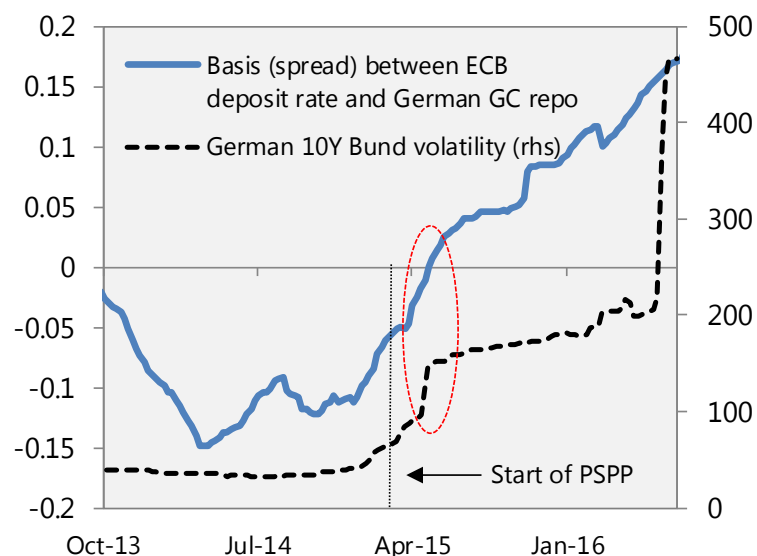
NIRP has raised the cost of “collateral services” and has made repo uneconomical, reducing incentives for market-making.

- “Scarcity premium” ( $GC\ repo\ rate < ECB\ deposit\ rate$ ) due to higher collateral demand by banks (LCR) and non-banks (tri-party repo/non-CCP derivatives): lower trading incentives → higher cash market volatility

**Euro Area: EONIA and Repo Rates**  
(Percent)

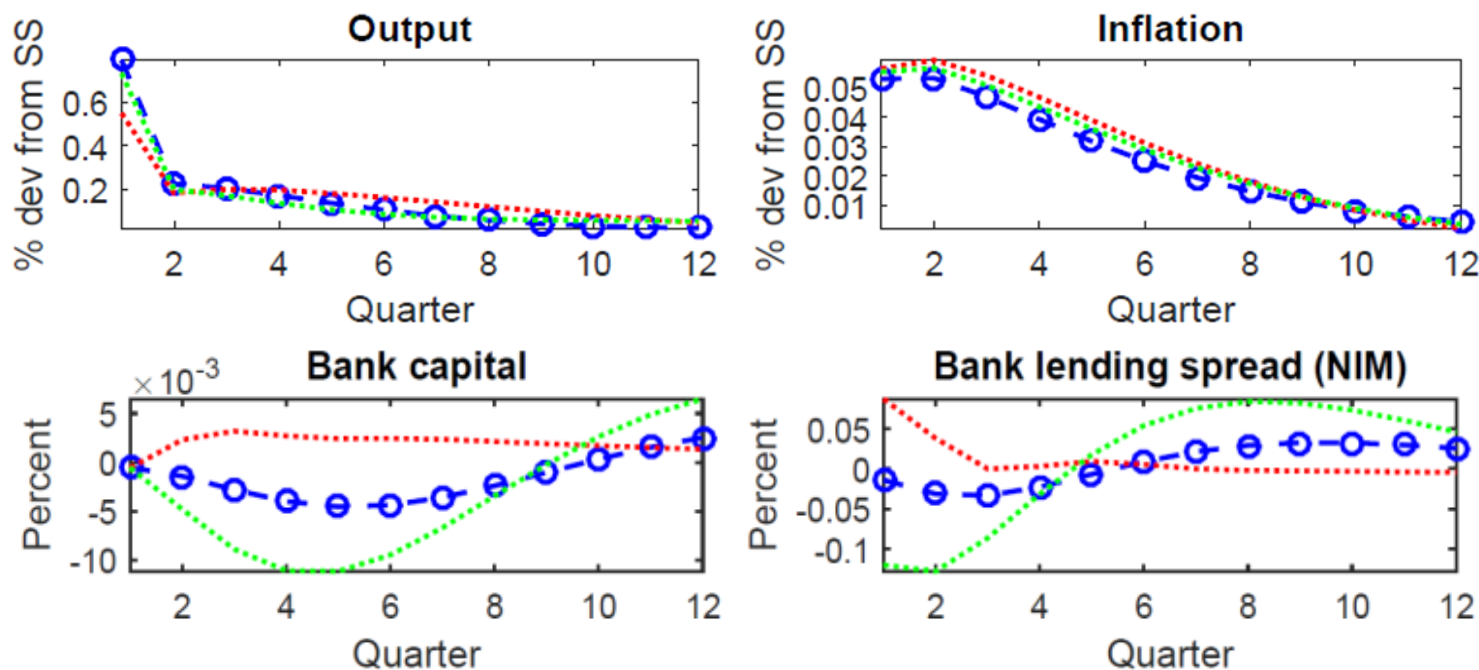


**German Bunds: Impact of Repo Rates on Cash Market Volatility**  
(Percent)



# Equilibrium view on the impact of NIRP on the bank lending channel suggests a **positive aggregate impact** ...

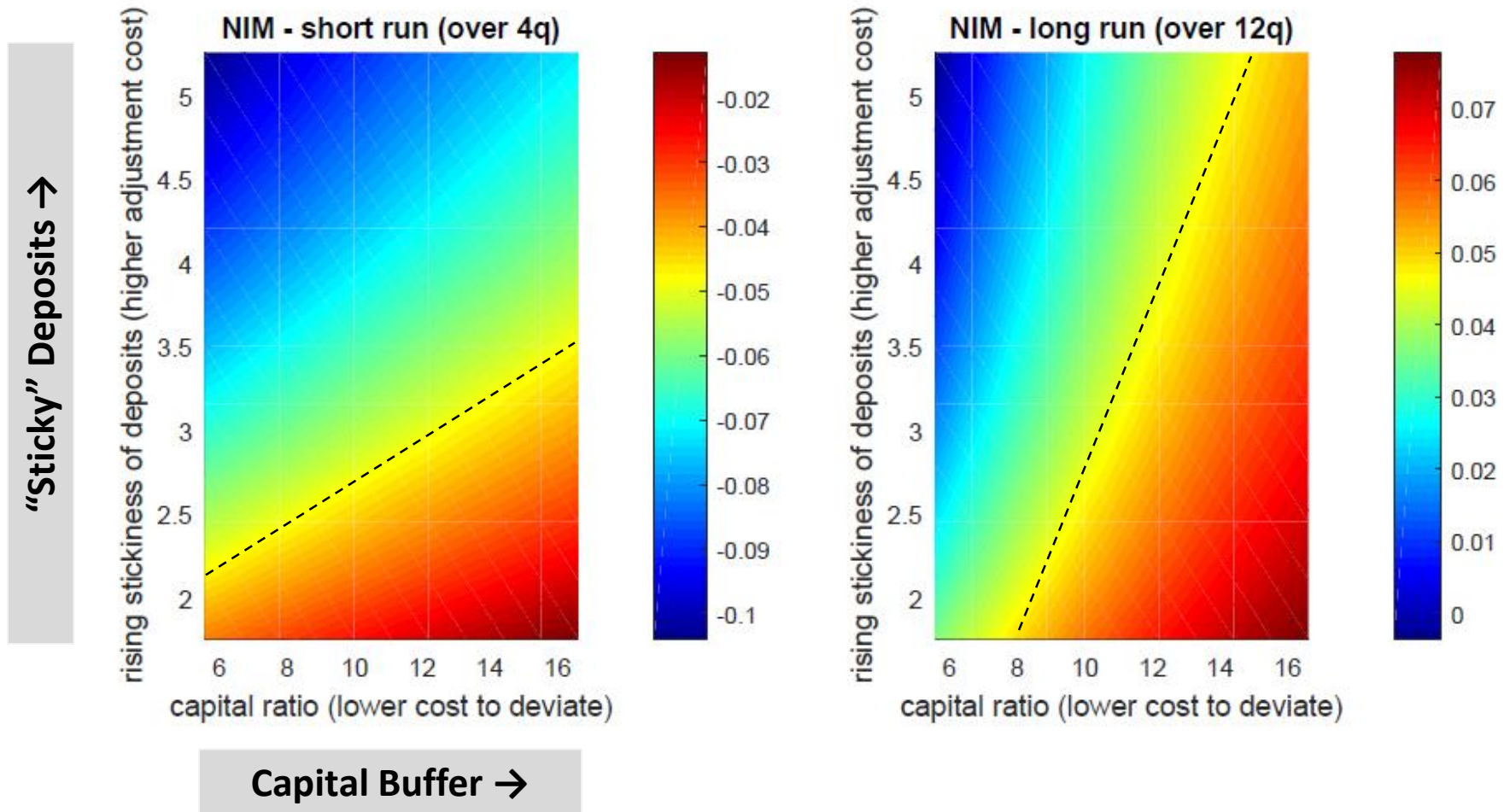
... but less so over the short term if “**sticky deposits**” squeeze bank profitability.



Banks' response to *negative* policy rate shock of  $\Delta r_t = 100$  bps

- **Scenario 1 (blue line)**—monetary transmission remains intact
- **Scenario 2 (green dotted line)**—“sticky” deposit rates and “pass through”
- **Scenario 3 (red line)**—“sticky” deposit rates and no “pass through”

The impact of “stickier” deposits on profitability is greater for less capitalized banks, but weakens over the medium term.



Thank you!  
Questions?