Central Bank's Objectives, Targets, Tools

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Introduction

CEPR Report

The ECB Strategy: The 2021 Revue and its Future

with L.Reichlin, W.McKibbin, M.McMahon, G.Ricco, R.Reiss, B.Weder

The Case for a Positive Inflation Target in the Euro Area: Evidence from France, Germany and Italy

with E. Gautier, S. Santoro, H.Weber, ECB Working Paper No. 2575

(Usual disclaimer applies...)

Central Bank Objectives

- Price stability is still the primary objective of CBs
- CBs have adopted range of additional objectives:
  - financial stability macro & micro (leverage, asset prices, banks....)
  - balanced real economy (full employment, external balance,...)
  - distributional tasks (inclusive growth,....)
  - climate change targets

Central Bank Objectives

- New tasks adopted during a period with
  - persistent shortfall with regard to *primary* objective
  - policy constraints along many fronts (lower bound, issuer/cap. key limits)
- Few additional (& effective) instruments to pursue additional tasks.

  Bank supervision, perhaps macro-pru, what else...?

Central Bank Objectives

- ECB strategy review:

  Pretense of no trade-offs between price-stability & other objectives

- Convenient position to avoid questions about primary mandate....

  ...but trade-offs lie potentially ahead:

  More forceful & persistent inflation dynamics
  $=>$ price stability vs. financial stability

- New ECB strategy:
  Little guidance on trade-offs & no framework for communication

The Primary Objective

- Many welcome changes in new ECB stragey:
  - symmetric inflation target around 2%
  - commitment to a forceful reaction to deflationary shocks
  - willingness to tolerate temporary inflation overshoots in bringing medium-term inflation back to target

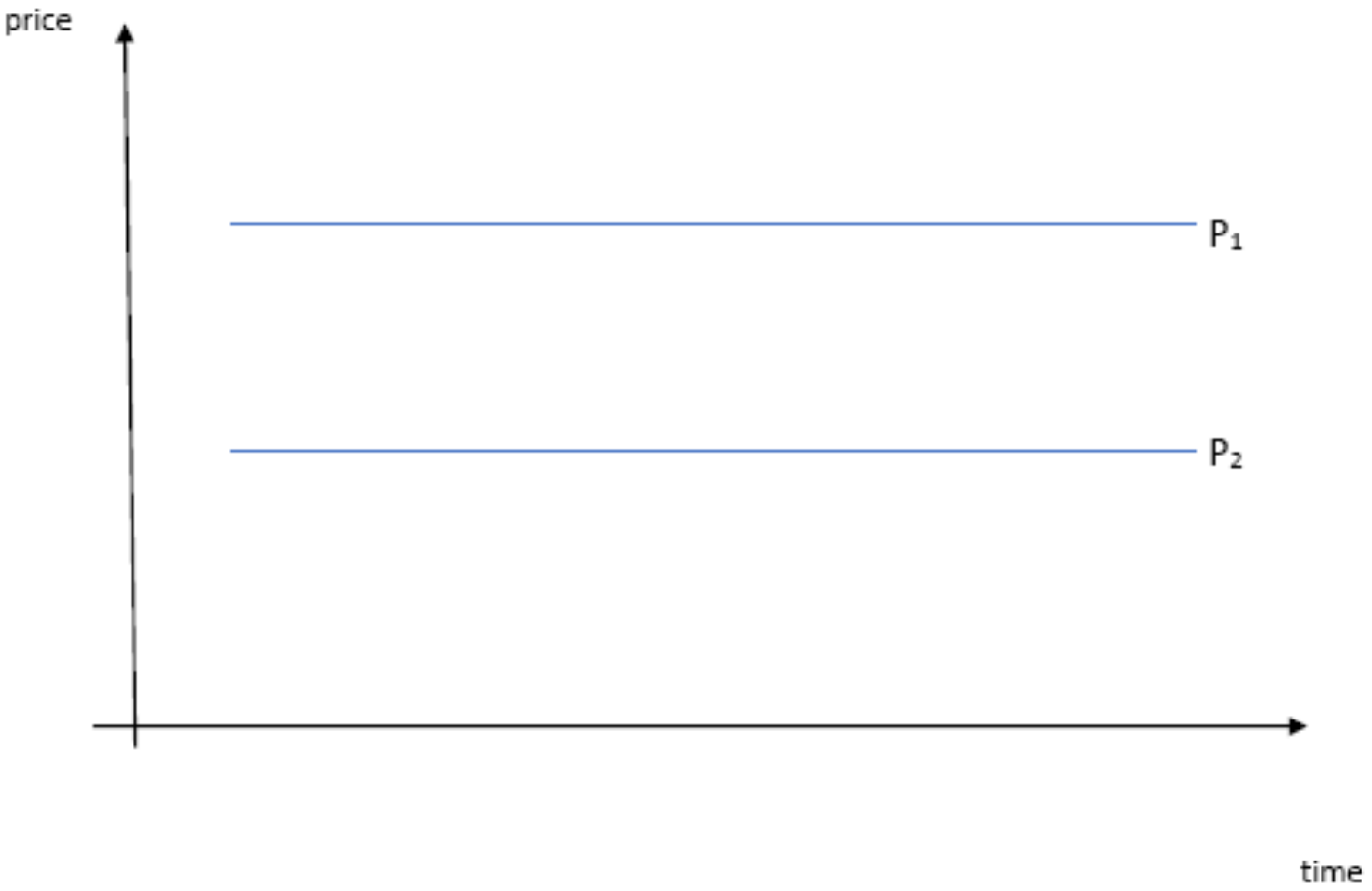
The Primary Objective

- No quantitative analysis underpinning price stability objective (2%)
- Start from baseline of 0% (optimal in ECB MP models)
  then add to that baseline:
  - avoid country-level deflation in a heterogeneous currency union
  - correct for inflation mismeasurement (unaccounted quality progress)
  - lower bound constraint & low real interest rates
- Our research: challenges the optimality of the 0% baseline.

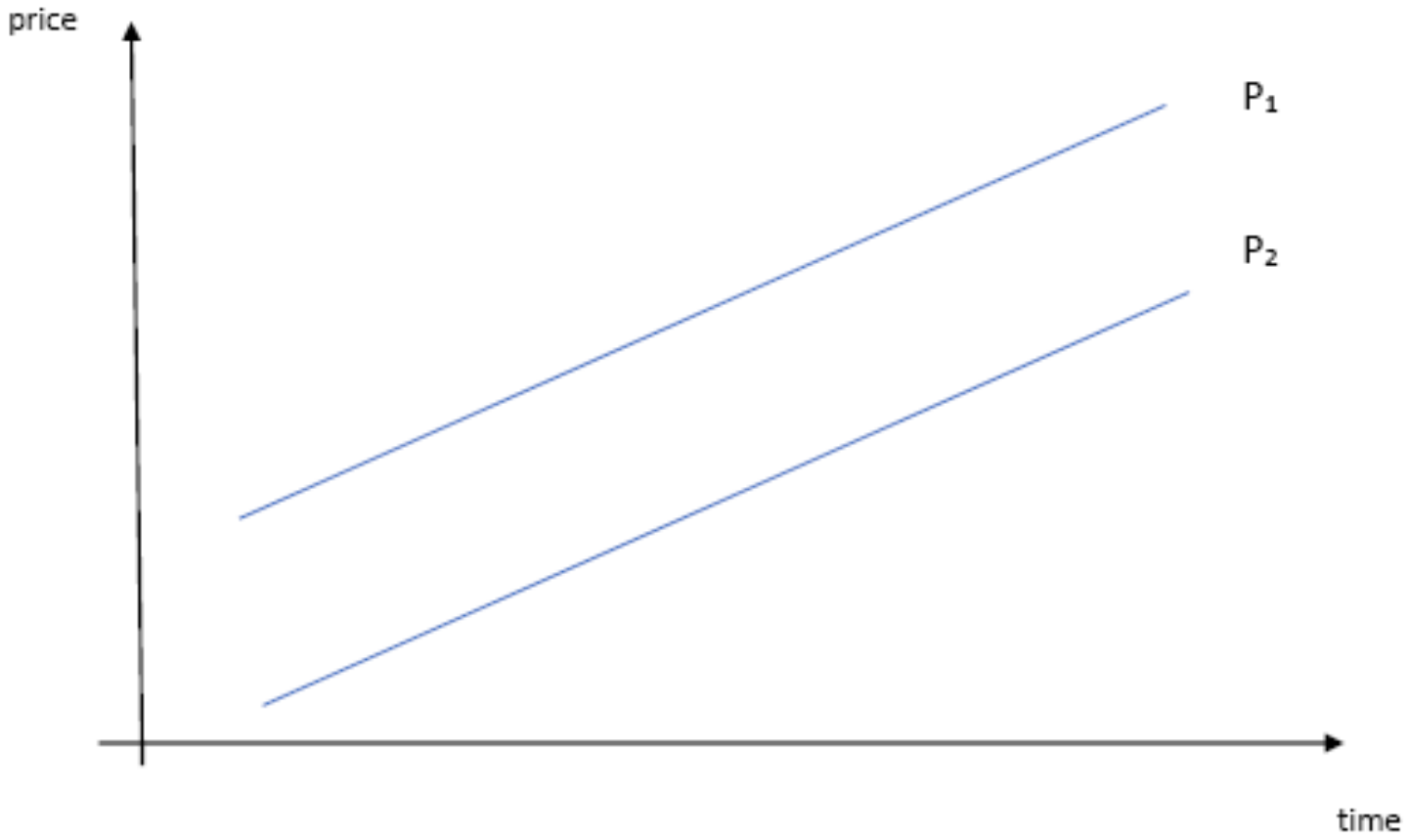
Outline of the Remaining Talk

1. Explain where the 0% benchmark comes from (intuitively)
2. Explain why benchmark makes little sense (empirically)
3. Convince you that the benchmark should be higher $\approx 1.5\%$

Zero Optimal Inflation



Zero Optimal Inflation



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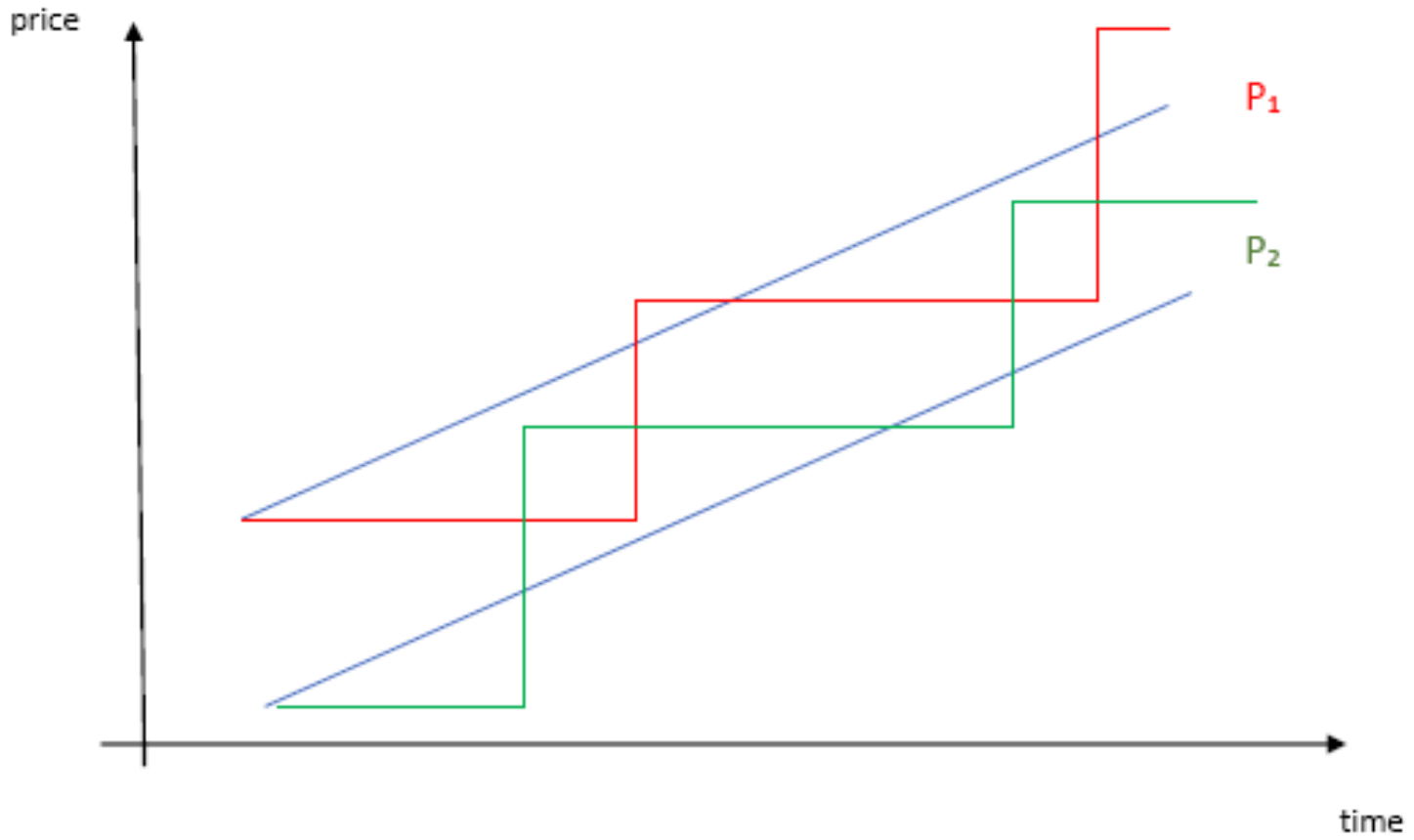

Works similarly for deflation $=>$ zero inflation optimal

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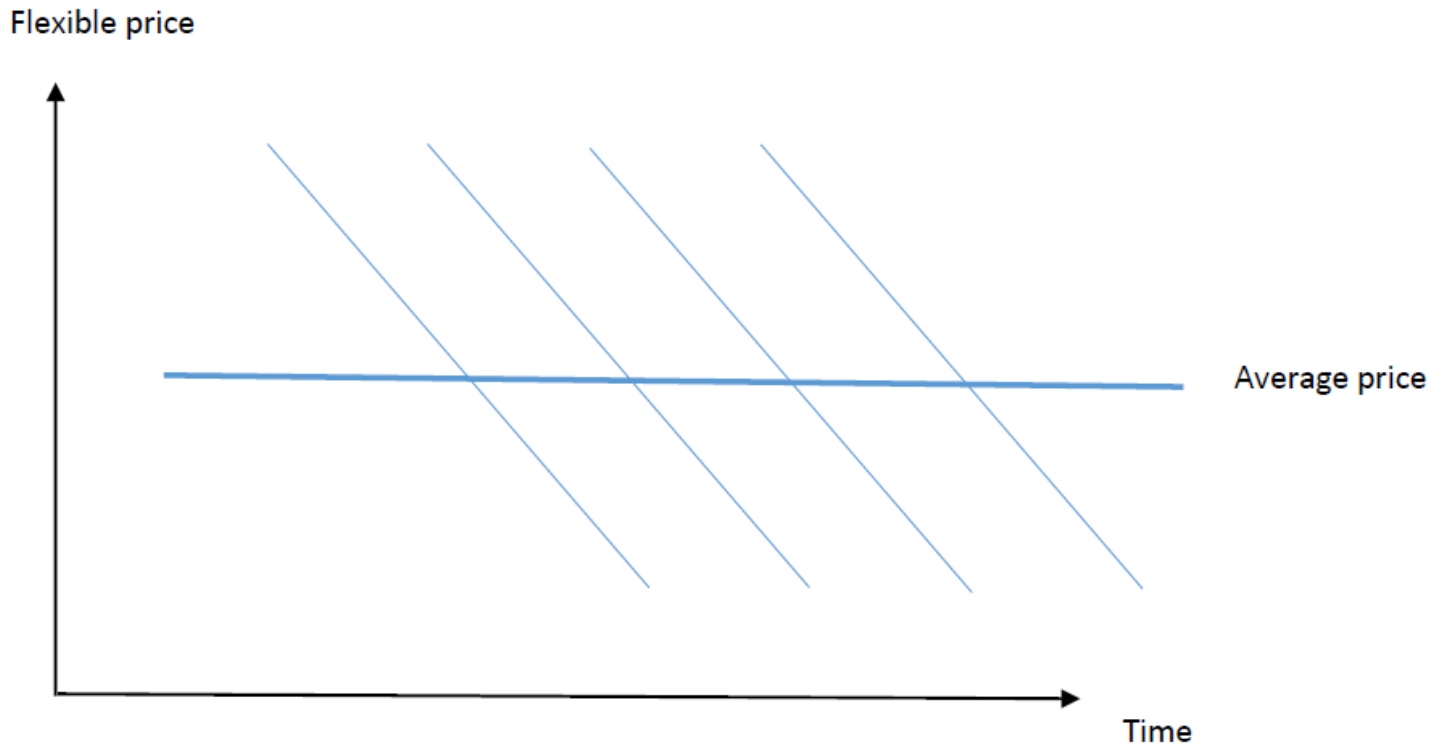
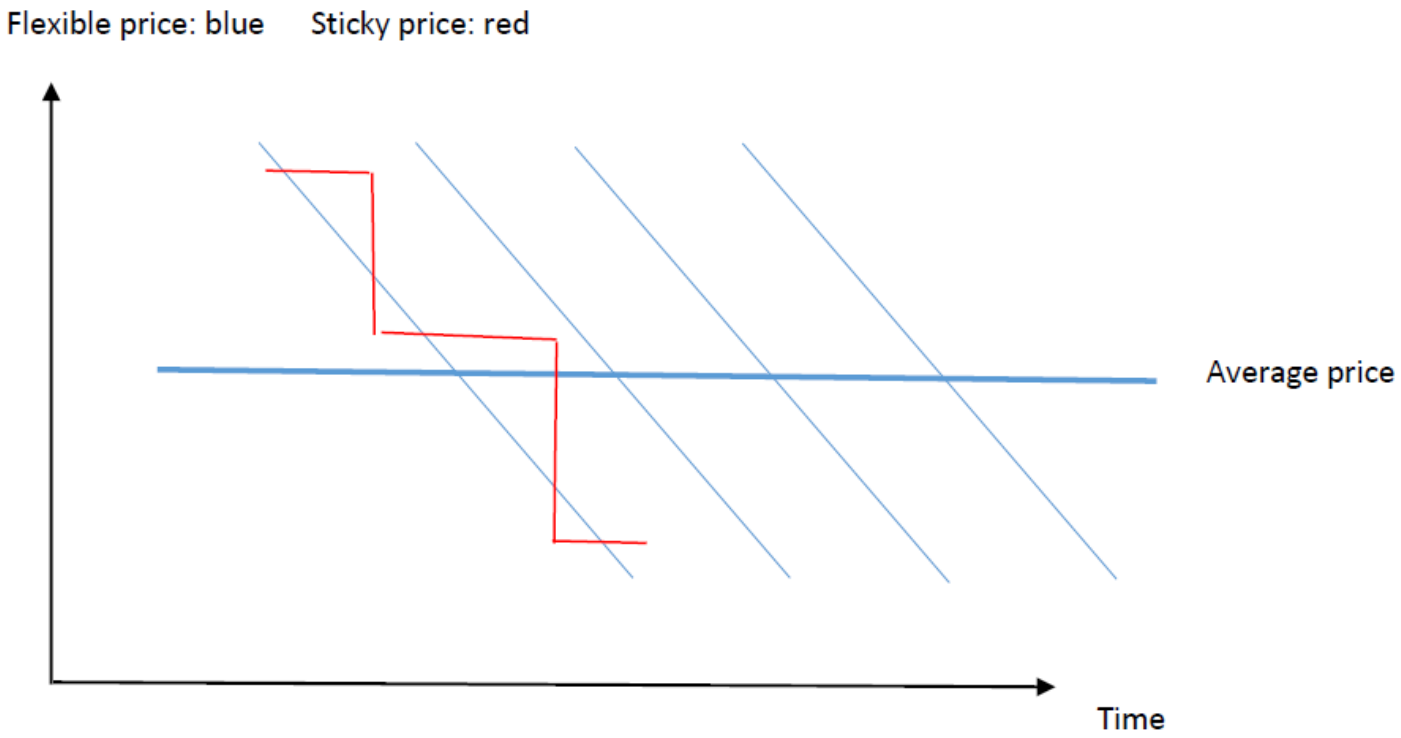
Relative Price Trends & Optimal Inflation

- **The world looks different: relative price trends everywhere**
  - newly incoming products initially expensive (relative to competitors)
  - relative price falls over product lifetime
- **What is the optimal inflation rate for such a setting?**

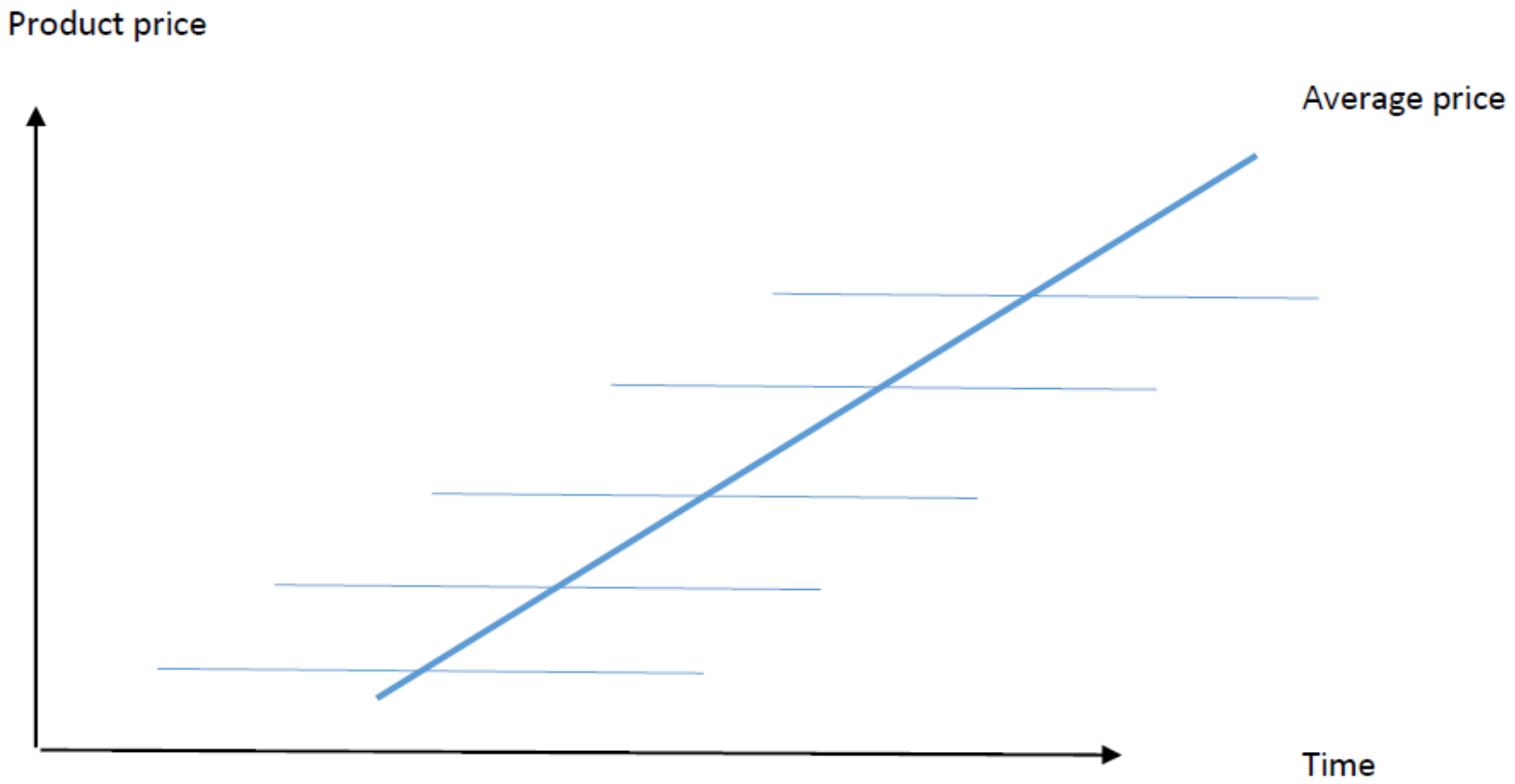
Declining Relative Prices with Zero Inflation



Declining Relative Prices with Zero Inflation



Declining Relative Prices with Optimal Inflation



Optimal increase of average price:
inverse of the decrease in relative price on previous slides

Estimation Approach

- Estimate the efficient rates of relative price for many product categories in France, Germany & Italy
- Use micro price data underlying the HICP (PRISMA network)
- Data 2010-2019: close to 100 million price quotes in total
- Compute the distribution of category-specific optimal inflation rates

Optimal Inflation Across Expenditure Categories

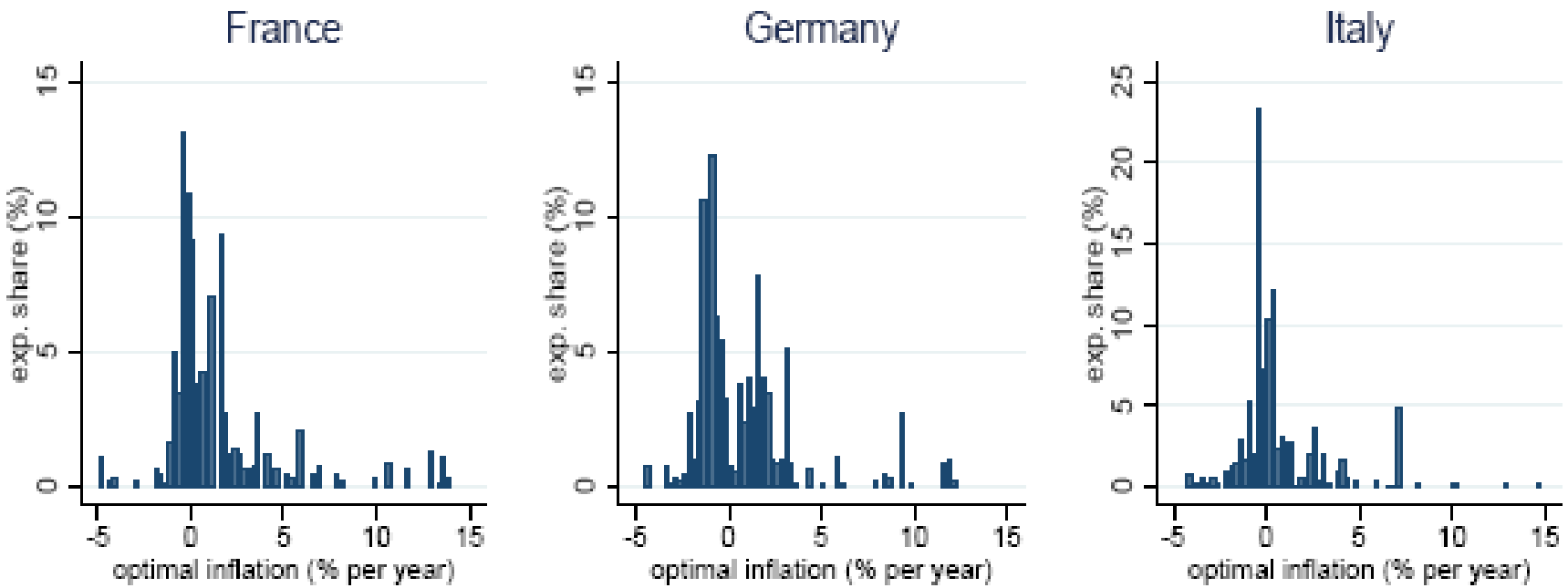


Figure 5: Optimal inflation, COICOP5 level (2015/6-2019, harmonized sample, expenditure-weighted distribution)

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Optimal Inflation Rate

- Use standard sticky price theory to derive the optimal *aggregate* inflation rate (Adam & Weber (2021))
- Optimal target with *heterogeneous efficient relative price trends*

$$\Pi^* = \sum_{z=1}^{Z} w_z \cdot b_z$$

b_z : *efficient* rate of relative price decline in category z

w_z : approximately the expenditure weight

- Holds with various price setting frictions (Calvo or menu-cost)

Optimal Inflation Rate: Baseline Estimates

	France 2015-19	Germany 2015-19	Italy 2016-19	Euro Area (FR, GER, IT)
Optimal Inflation Target	1.8%	1.8%	0.8%	1.5%

Optimal Inflation: Broad Disaggregates

	Food		Non-energy industrial goods		Services	
	Π^*	Exp. Weight	Π^*	Exp. Weight	Π^*	Exp. Weight
France	0.2%	30.9%	4.9%	34.5%	0.1%	34.3%
Germany	-0.1%	26.5%	5.5%	39.3%	-0.9%	34.0%
Italy	0.0%	26.4%	2.6%	34.4%	-0.1%	38.7%

Table 7: Optimal inflation for broad aggregates (2015/6-2019, harmonized sample)

Welfare Costs or Suboptimal InflationTargets

	Euro Area (2015/6-2019)	
	harmonized sample	country-specific sample
Optimal inflation	1.5%	1.1%
Present value of consumption-equivalent welfare losses:		
Versus actual HICP inflation	0.5%	0.0%
Versus zero inflation	4.5%	2.1%

Table 6: Welfare costs of suboptimal inflation

Conclusions

- CBs pursue broader set of objectives w/o broader instrument set
- Trade-offs: acknowledge them & explain how they are dealt with
- Primary objective:
  - benchmark rate from which to start should not be zero
  - relative price trends in FR/GER/IT $\approx 1.5\%$