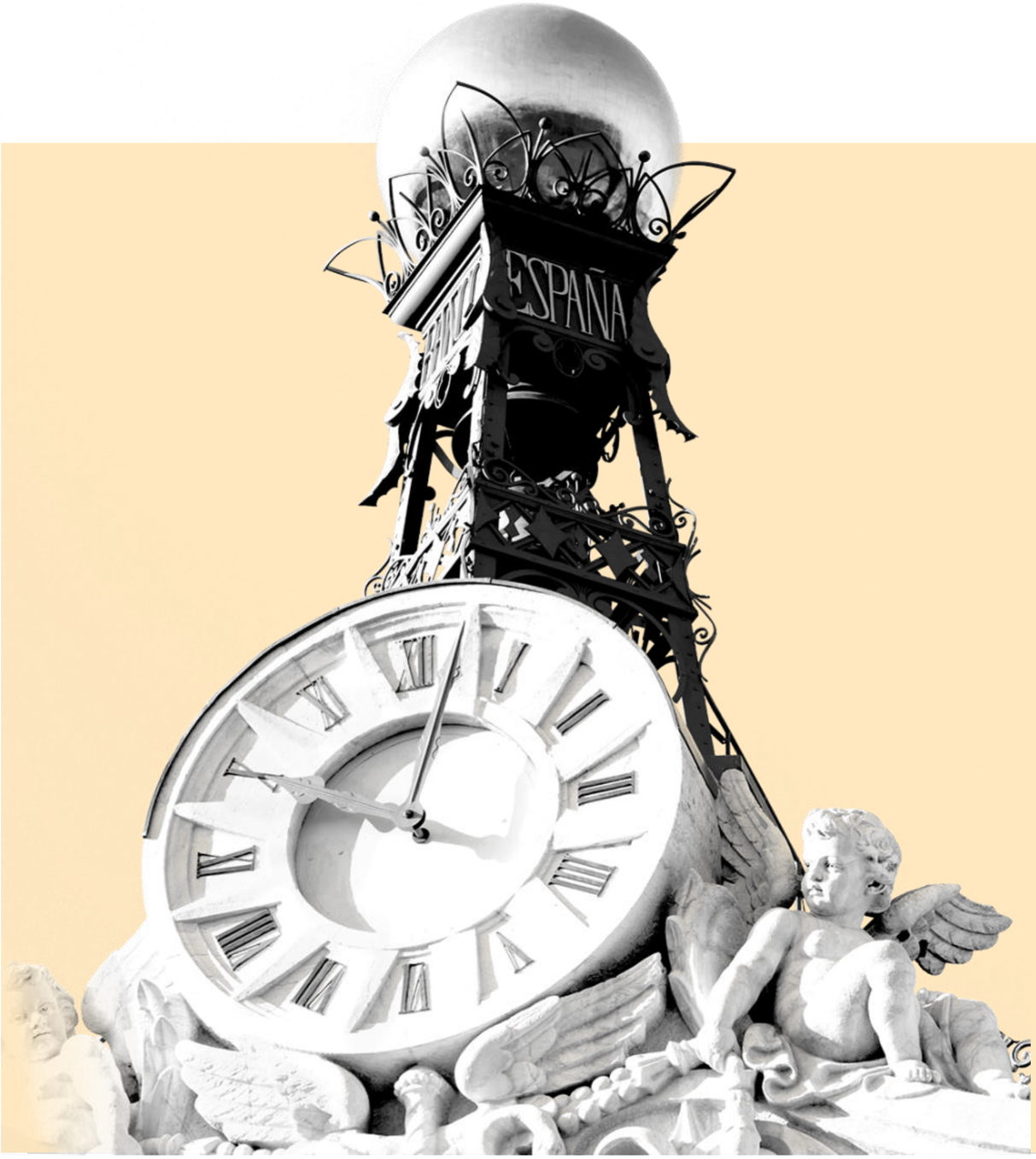
BANCO DE ESPAÑA
Eurosistema



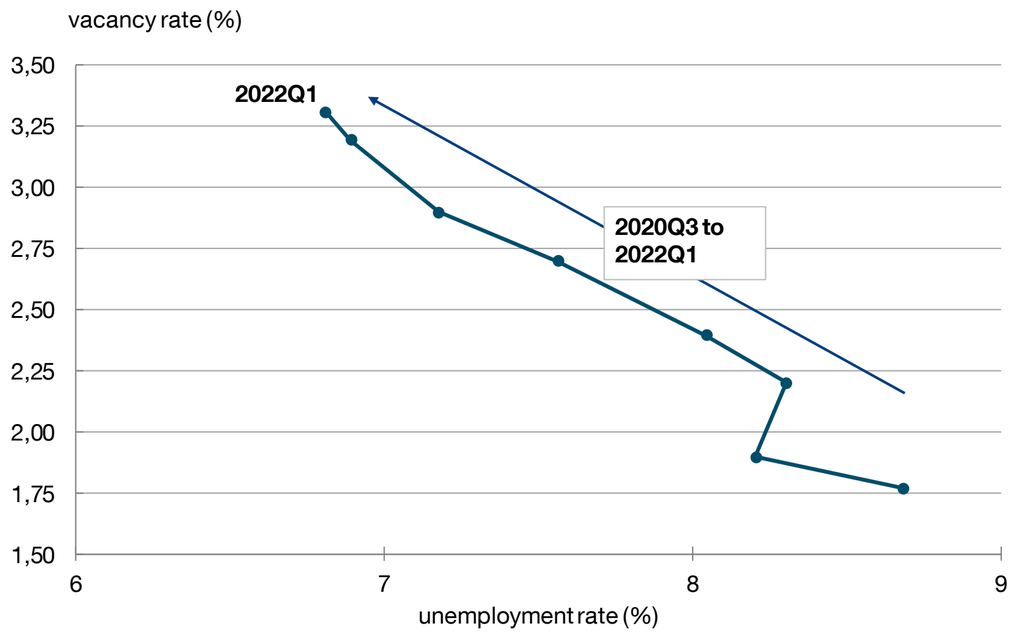
THE MAKINGS OF AN IMMACULATE DISINFLATION

José Luis Escrivá
Governor

Hydra Conference
Mallorca
September 27, 2024

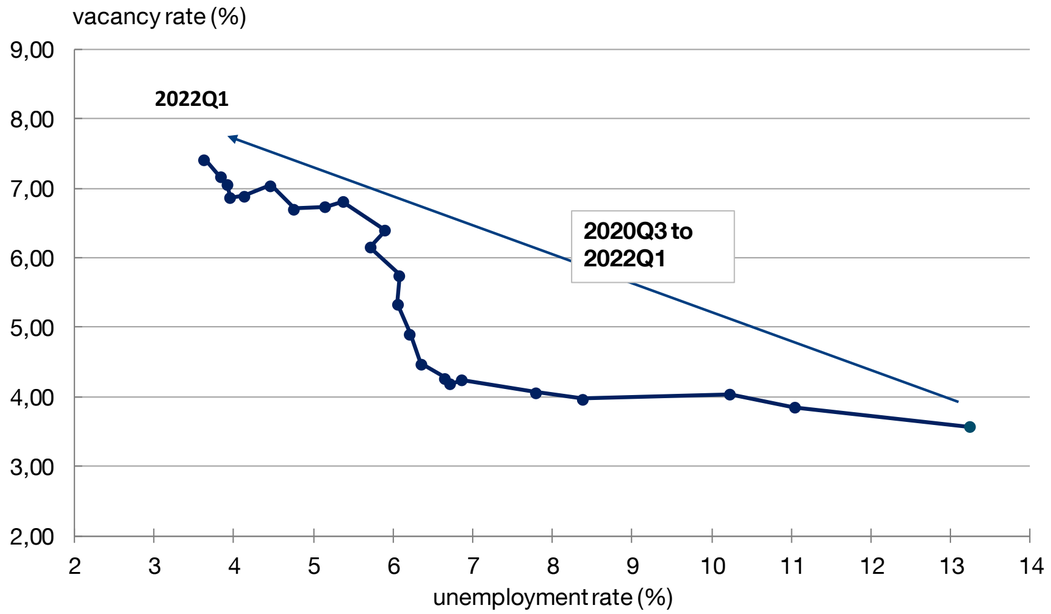
CLEAR NEGATIVE RELATIONSHIP BETWEEN UNEMPLOYMENT AND DEMAND BEFORE 2022

BEVERIDGE CURVE EURO AREA



Source: Eurostat. Quarterly Observations. Last observation: Q1 2022.

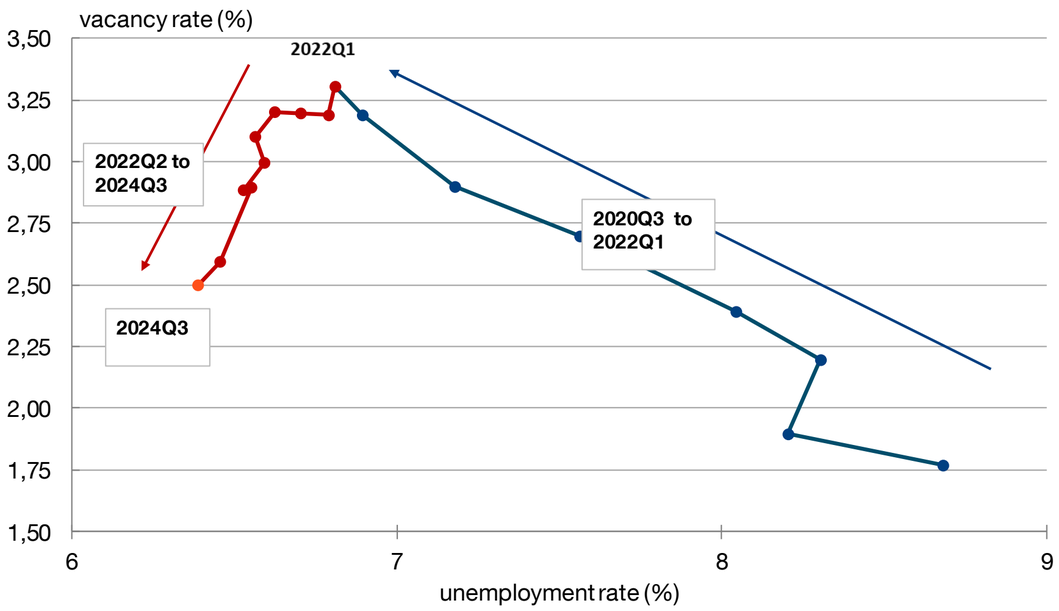
BEVERIDGE CURVE US



Source: JOLTS, Bureau of Labor Statistics. Monthly observations. Last observation: Q1 2022

THE PUZZLE: HOW DID WE AVOID AN INCREASE IN UNEMPLOYMENT ON OUR WAY BACK?

BEVERIDGE CURVE EURO AREA



Source: Eurostat. Quarterly Observations. Last observation: Q3 2024

BEVERIDGE CURVE US

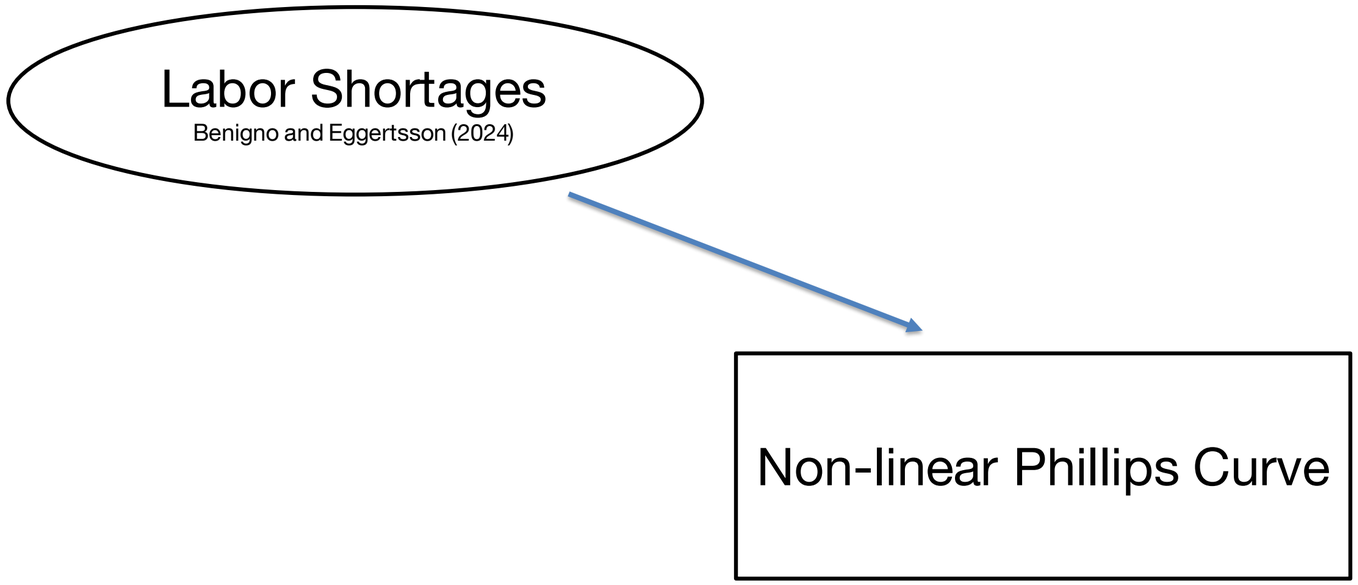
Source: JOLTS, Bureau of Labor Statistics. Monthly observations. Last observation: Q3 2024 (predicted)

DISINFLATION WITHOUT UNEMPLOYMENT SUGGESTS A NON-LINEAR PHILLIPS CURVE: WHAT ARE THE MECHANISMS BEHIND SUCH NONLINEARITY?

?

Non-linear Phillips Curve

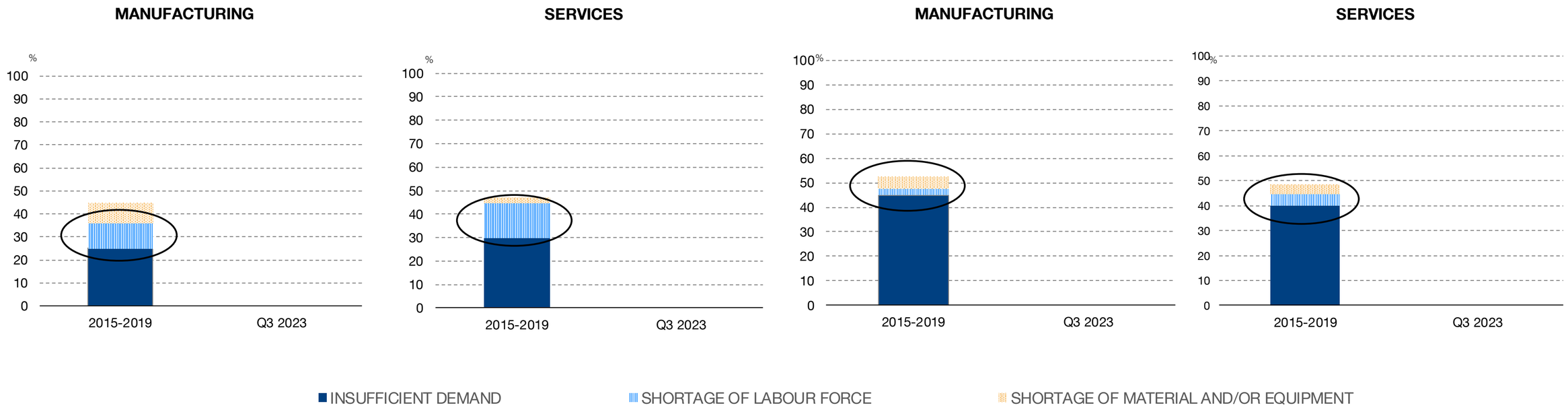
ONE POSSIBILITY IS A L-SHAPED PHILLIPS CURVE DUE TO LABOR SHORTAGES
(à la Benigno and Eggertsson (2024))



THE LABOR SHORTAGES CHANNEL: SURVEY EVIDENCE ON LIMITS TO PRODUCTION IN THE EURO AREA

EURO AREA

SPAIN

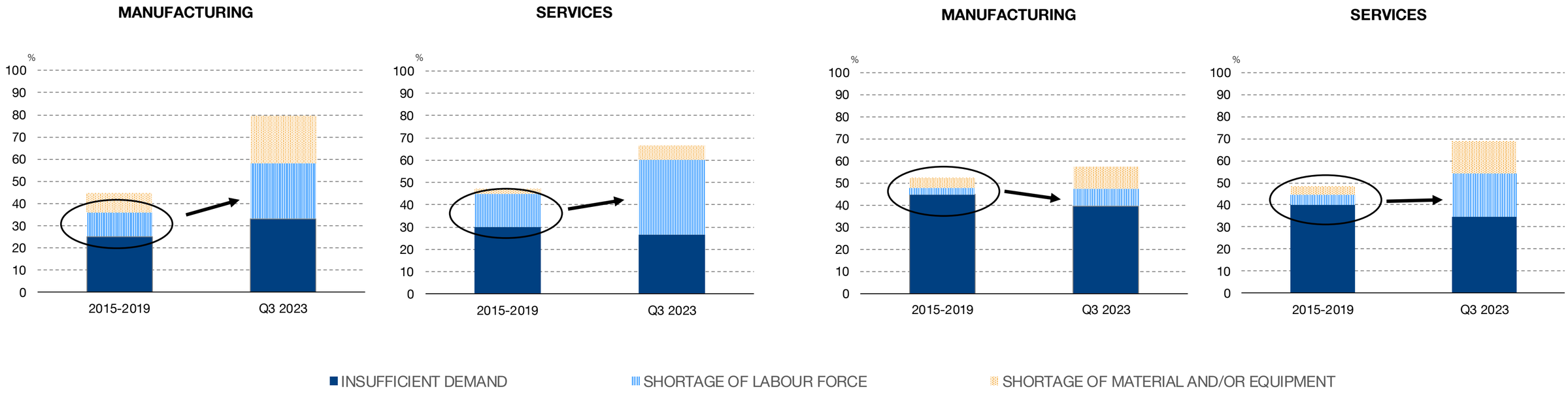


Source: European Commission. Business and Consumer Survey. Factors other than the three presented are omitted, so bars do not add up to 100%.

THE LABOR SHORTAGES CHANNEL: SURVEY EVIDENCE ON LIMITS TO PRODUCTION IN THE EURO AREA

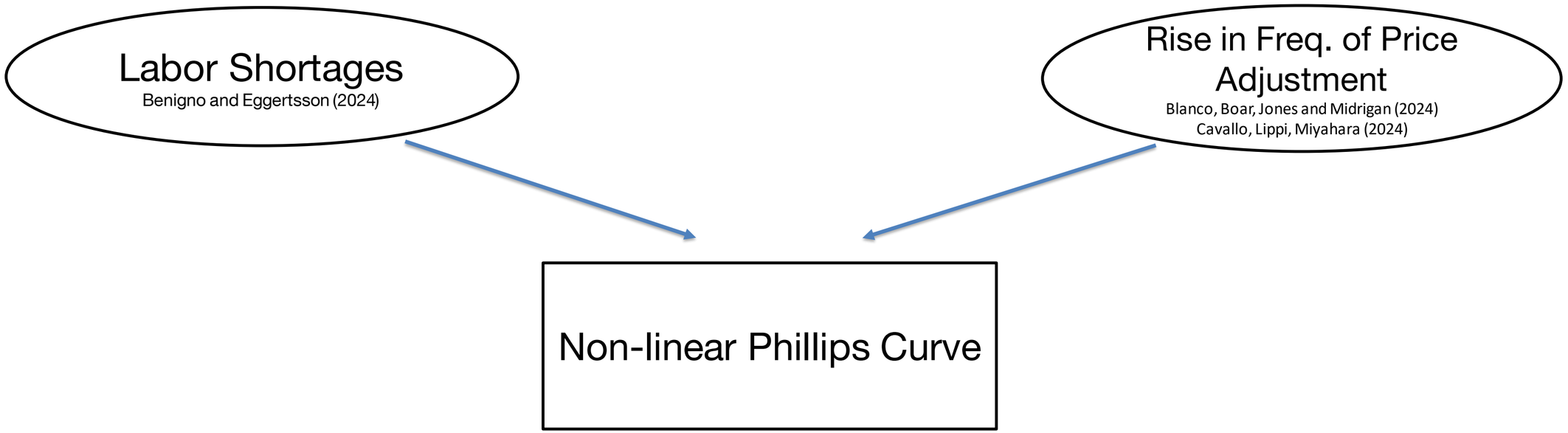
EURO AREA

SPAIN

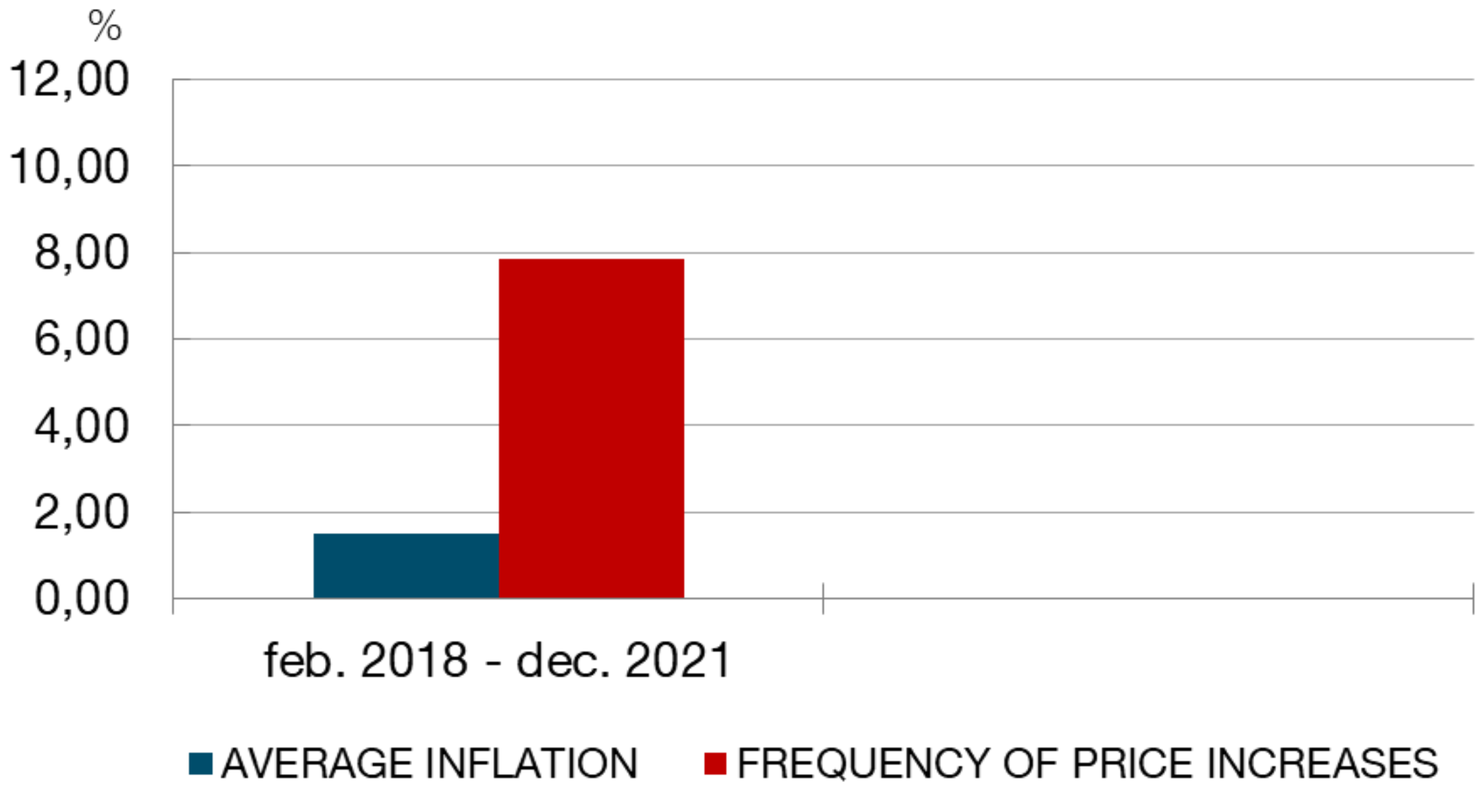


Source: European Commission. Business and Consumer Survey. Factors other than the three presented are omitted, so bars do not add up to 100%.

ANOTHER IS AN INCREASE IN THE FREQUENCY OF REPRICING

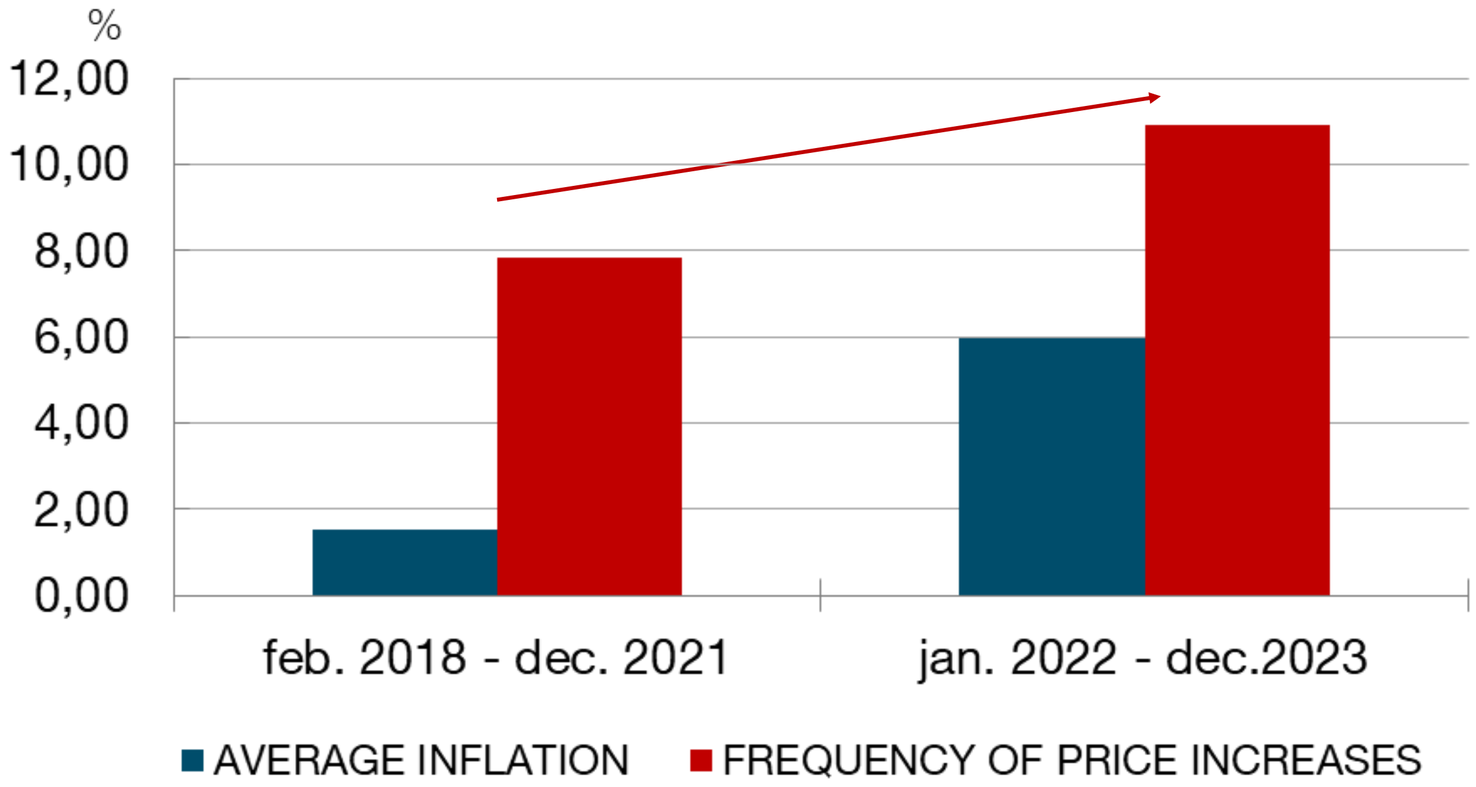


THE FREQUENCY OF PRICE ADJUSTMENT CHANNEL:
A key condition for this channel is that inflation expectations remain anchored



Note: Frequency of products that change prices. Source: Spanish National Institute of Statistics (INE) and Bank of Spain. See Gutierrez and Roldan (2024) BdE Bulletin Article. Similar evidence is found for the US (Montag and Villar (2023)) and France (Gautier, Le Bihan, and Lippi (2023)).

EVIDENCE ON FREQUENCY OF PRICE ADJUSTMENT:
When inflation increases, firms update prices more often, reducing the real effects of monetary policy



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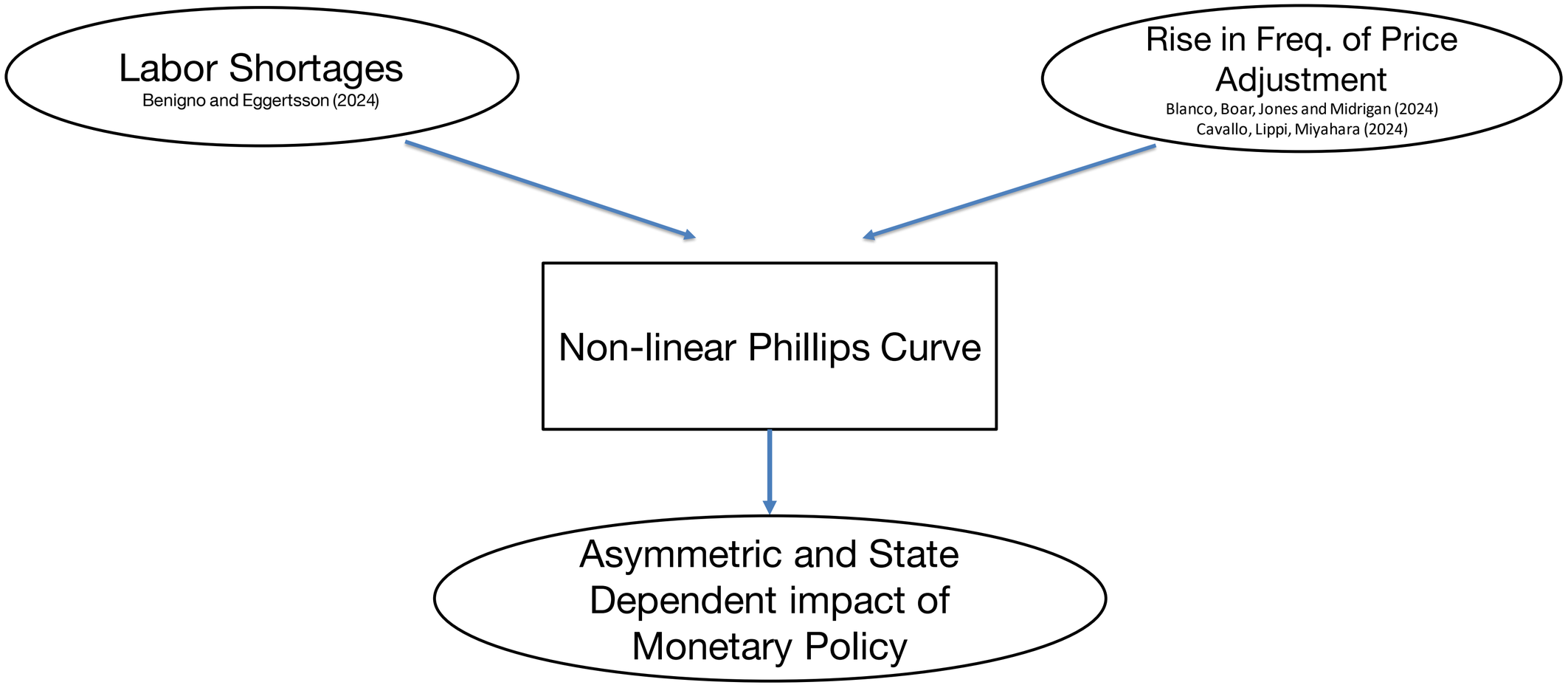
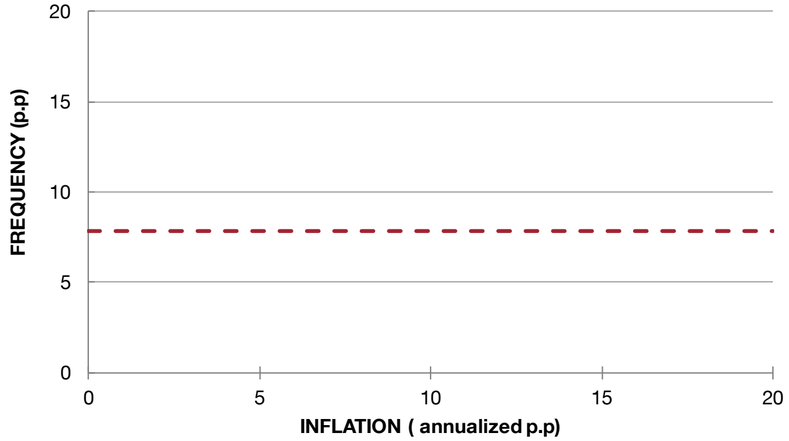
A NON-LINEAR PHILLIPS CURVE IMPLIES THAT THE IMPACT OF MONETARY POLICY DEPENDS ON INITIAL POINT AND DIRECTION OF THE CHANGE

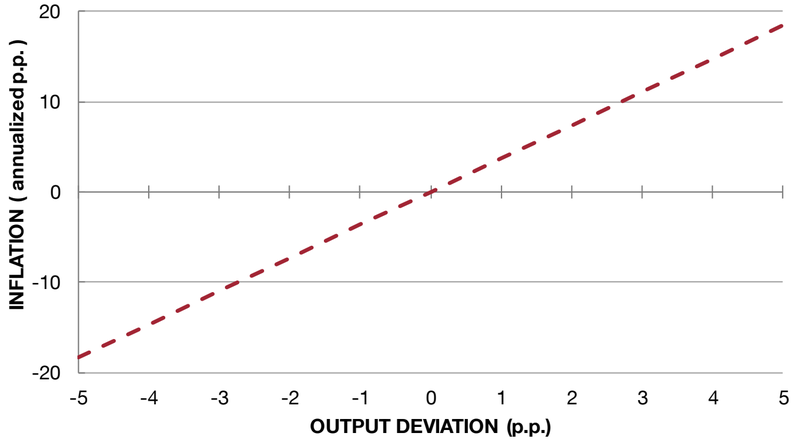


POLICY IMPLICATION: STRIKE THE IRON WHILE IT´S HOT:
With constant repricing, the response of the optimal rate to inflation is linear

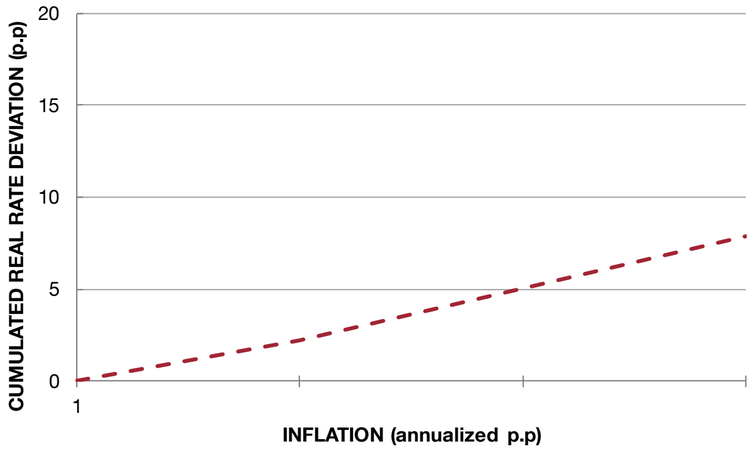
FREQ. OF PRICE ADJUSTMENT



PHILLIPS CURVE



OPTIMAL RATE

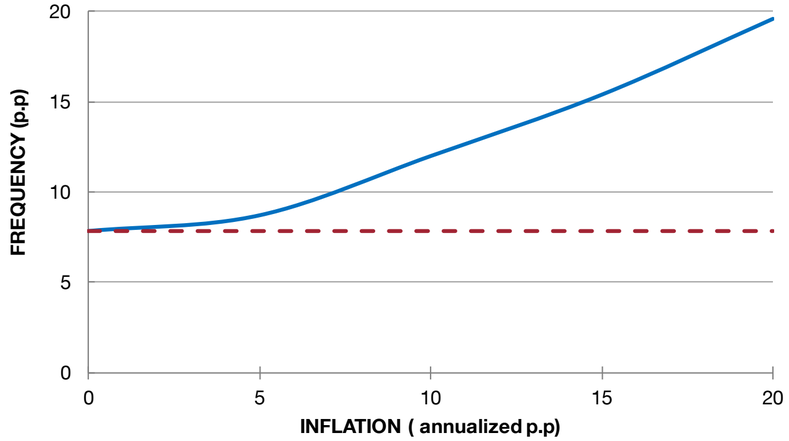


CONSTANT REPRICING

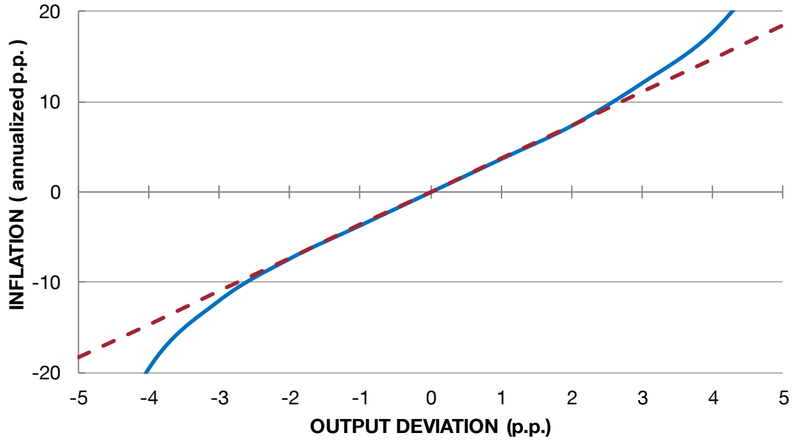
Source: Karadi, Nakov, Nuño, Pasten and Thaler (2024). The figure shows the optimal policy rule in the case where frequency of adjustment is variable (endogenous repricing, menu cost model) versus fixed (constant repricing, Calvo Model). In the “Phillips Curve” and the “Optimal Rate” graphs, the dashed red line is constructed using a calibrated frequency of adjustment that makes the Calvo model locally analogous to the menu cost model, following the Auclert, Rigato, Rognlie and Straub (2023) methodology.

POLICY IMPLICATION: STRIKE THE IRON WHILE IT´S HOT;
With endogenous repricing, the optimal rate reacts forcefully when inflation is at its peak, since that is when firms are adjusting more frequently

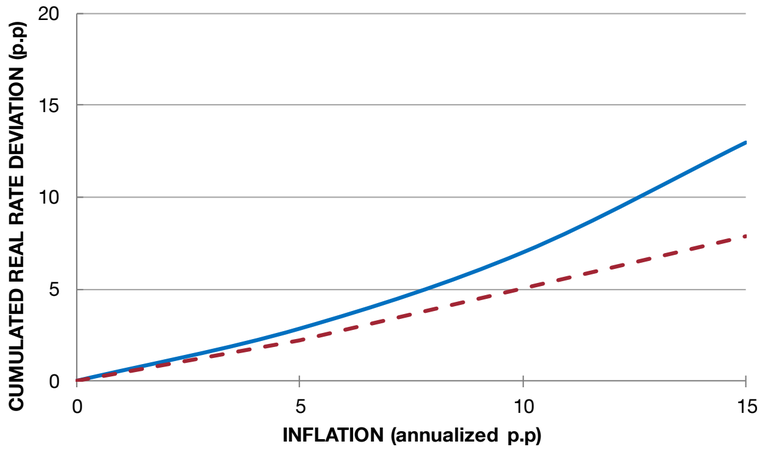
FREQ. OF PRICE ADJUSTMENT

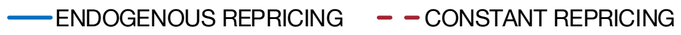


PHILLIPS CURVE



OPTIMAL RATE





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MONETARY POLICY LOOKING AHEAD: ARE WE AT THE LAST MILE OR THE LAST YARD?

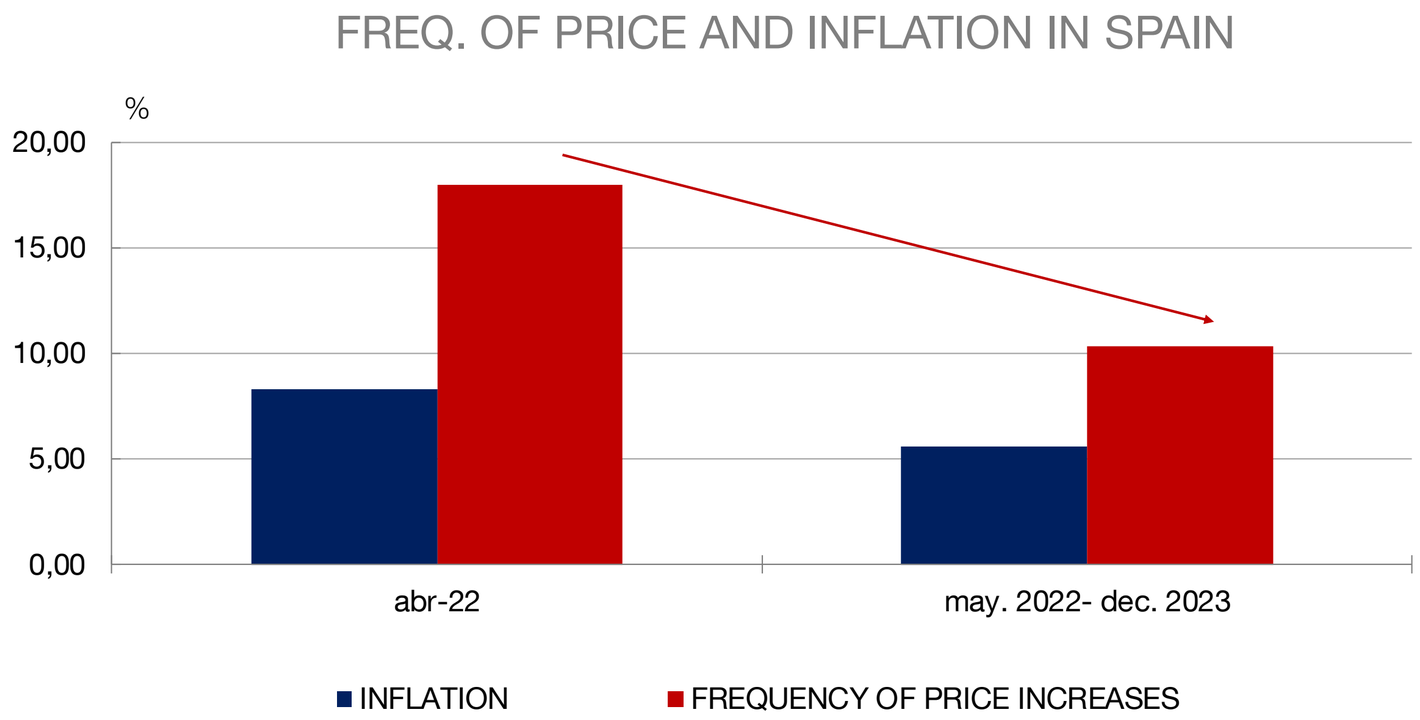
The last mile could be harder to walk…

- The **frequency of repricing has already fallen**, flattening the Phillips curve
- The **labor shortages remain**

.. but maybe we are already at the last yard

- **Real interest rates have risen** as inflation declines, thus increasing the degree of monetary policy tightening
- A closing **policy gap with the US** may impact **exchange rates** via appreciatory pressures
- In an environment with **anchored inflation expectations** and a **deteriorating economic outlook**, we can walk “the last yard” slower

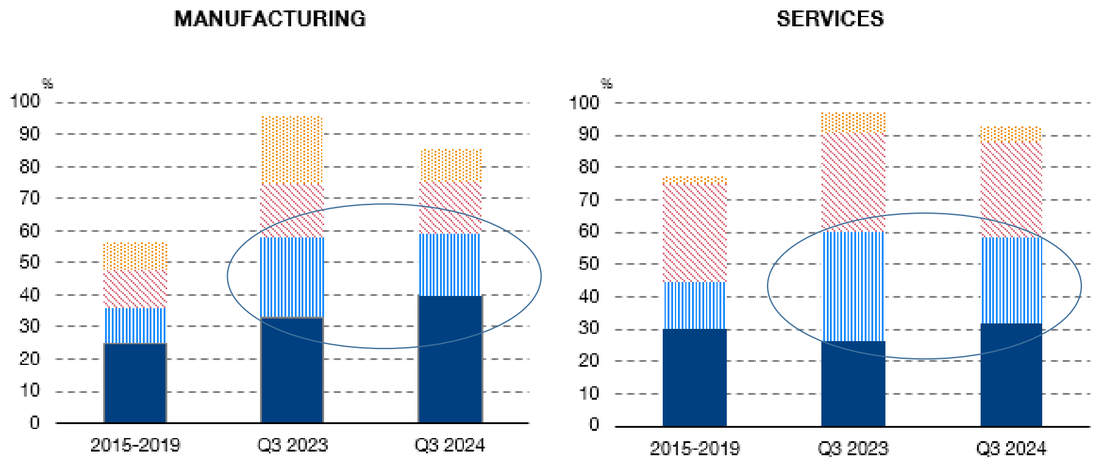
The flip side of an immaculate disinflation is that when we are back to low inflation, the sacrifice ratio increases again



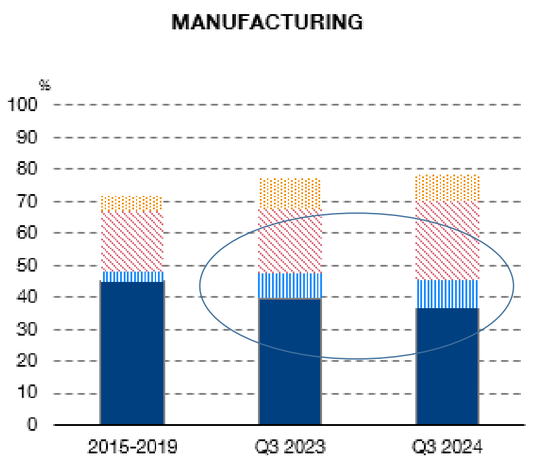
Note: Frequency of products that change prices. Source: Spanish National Institute of Statistics (INE) and Bank of Spain. See Gutierrez and Roldan (2024) BdE Bulletin Article.

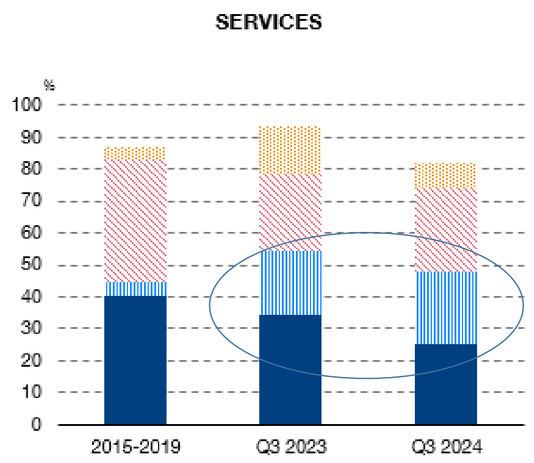
LABOR SHORTAGES REMAIN

EURO AREA



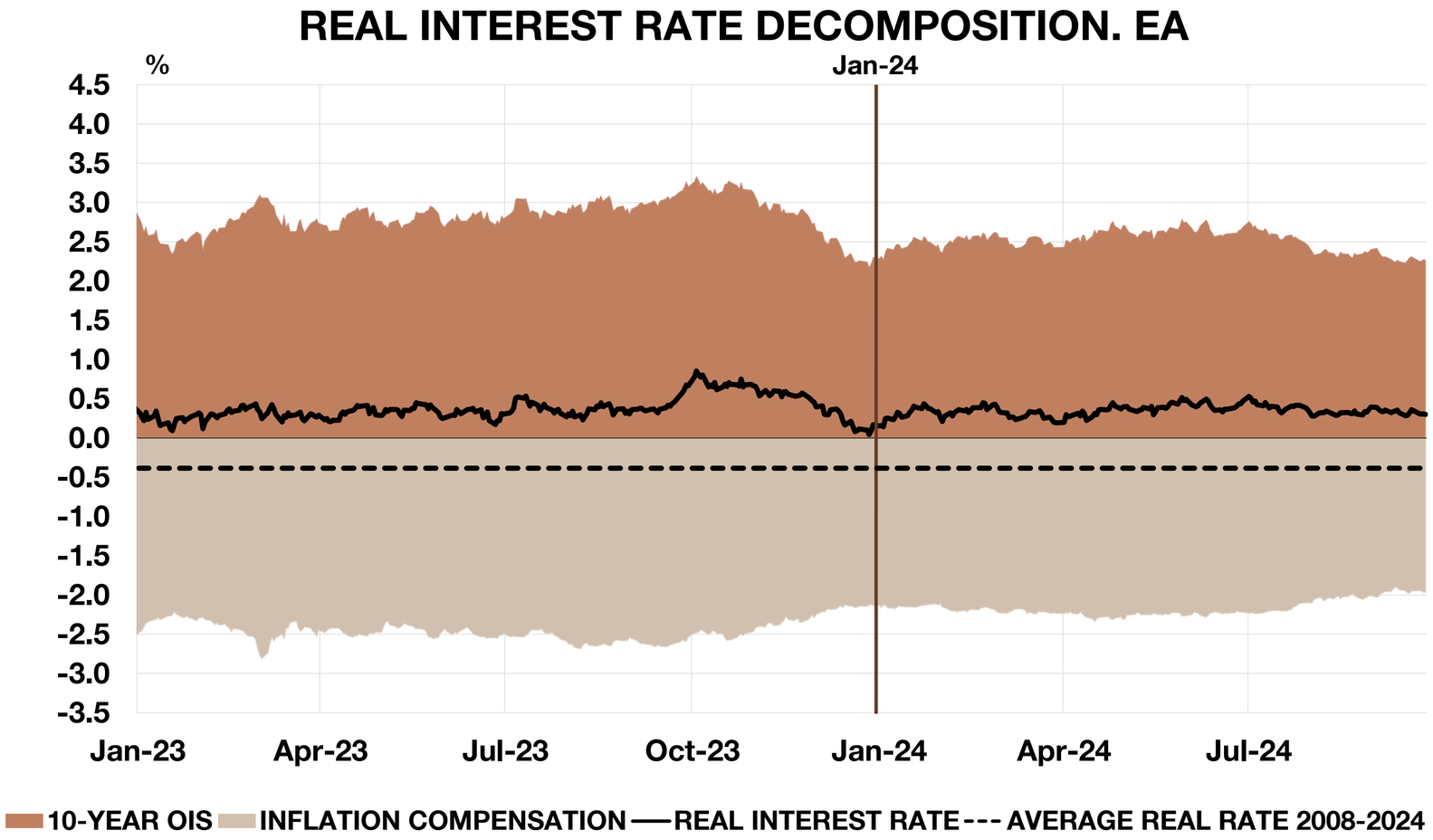
SPAIN

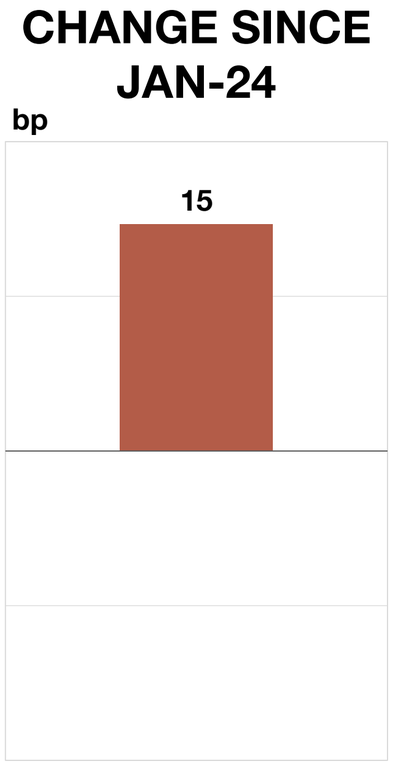




Source: European Commission. Business and Consumer Survey. Factors other than the three presented are omitted, so bars do not add up to 100%.

REAL INTEREST RATES HAVE INCREASED AS INFLATION HAS DECREASED

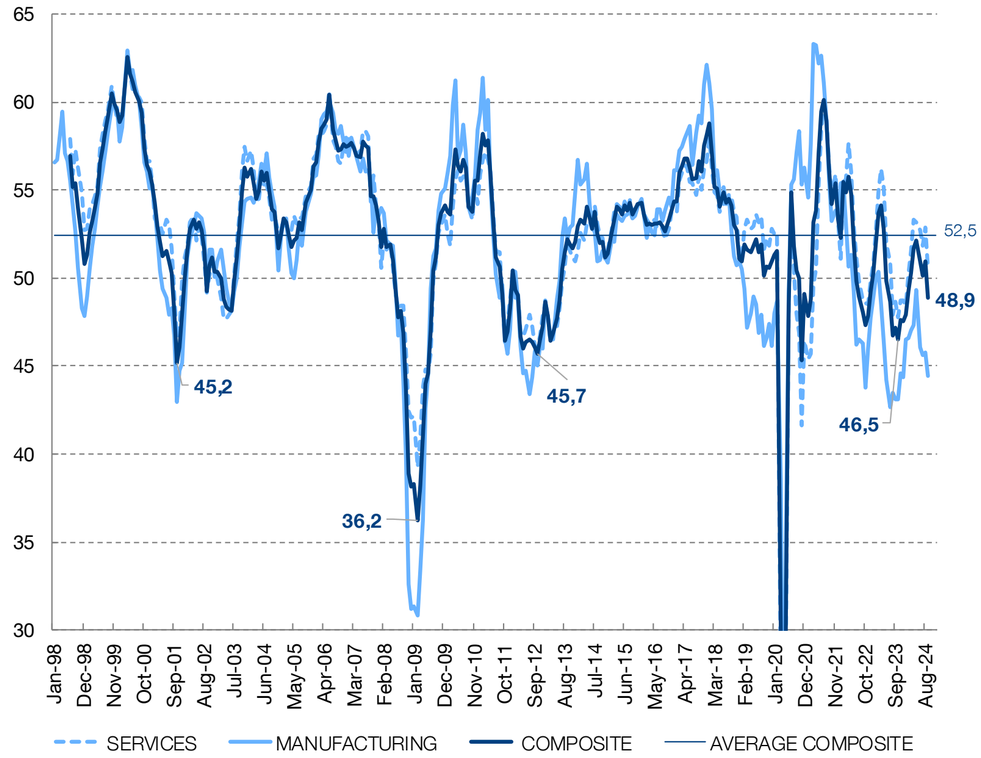




Sources: Refinitiv Datastream and Bloomberg Data License. Latest observation: 26/09/2024.

THE ECONOMIC OUTLOOK IS WORSENING

HISTORICAL EVOLUTION



SOME STYLIZED FACTS

	PMI OUTPUT INDEX. EURO AREA		
	SERVICES	**MANUFACTURING**	**COMPOSITE**
LOWEST	12.0	18.1	13.7
LOWEST EXCLUDING COVID PERIOD	39.2	30.8	36.2
AVERAGE	52.6	52.3	52.5
AVERAGE (PMI < 50)	46.1	45.4	46.0
AUG 24	52.9	45.8	51.0
SEP 24	50.5	44.5	48.9

Notes: Purchasing Managers' Index (PMI): ouput. Diffusion index. Source: S&P Global.

THANK YOU FOR YOUR ATTENTION