FX Hedging, Currency Choice, and Dollar Dominance

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Abstract

We study how foreign-exchange (FX) hedging affects firms' currency choice and exchange-rate pass-through dynamics. We develop a theoretical model that features dynamic currency choice with incomplete pass-through and limited access to FX derivatives markets. Our model predicts that having access to FX hedging favours foreign currency pricing when firms are risk-averse. We test and quantify these theoretical results by using novel French product-level data on exports to extra-EU countries and their FX derivatives positions. We find that, given the level of local currency volatility exporters face, having access to FX hedging largely favours US dollar pricing, while it does not influence local currency pricing. This means that easier access to FX hedging markets contributes to explaining dollar dominance in global trade. Furthermore, we document that FX hedging is associated with persistent lower levels of exchange-rate pass-through into export prices.

Research Questions

1. Do exporters with easier access to FX hedging engage more in local and US dollar pricing?
2. Do FX hedging firms have stickier export prices?

Why do we care?

Exports by FX Hedging firms are a big chunk (24.6% in France)

- Currency Internationalisation
- International Shocks' Propagation

Model

We extend Gopinath et al (2010) to include access to hedging. So our model features:

- a risk-averse ($\gamma > 0$) firm
- that dynamically chooses the optimal price (and currency)
- and has limited access to hedging (h)
- and gets a benefit from hedging

For $h = 0$ (or $\gamma = 0$) the model boils down to Gopinath et al (2010).

Testable implications:
The firms chooses foreign currency pricing if:

$$\bar{\Psi} = \overbrace{\bar{\Psi}^{nh}}^{\text{Gopinath et al (2010)}} - \underbrace{h\bar{\Psi}^B}_{\text{plus Hedging}} < \frac{1}{2}$$
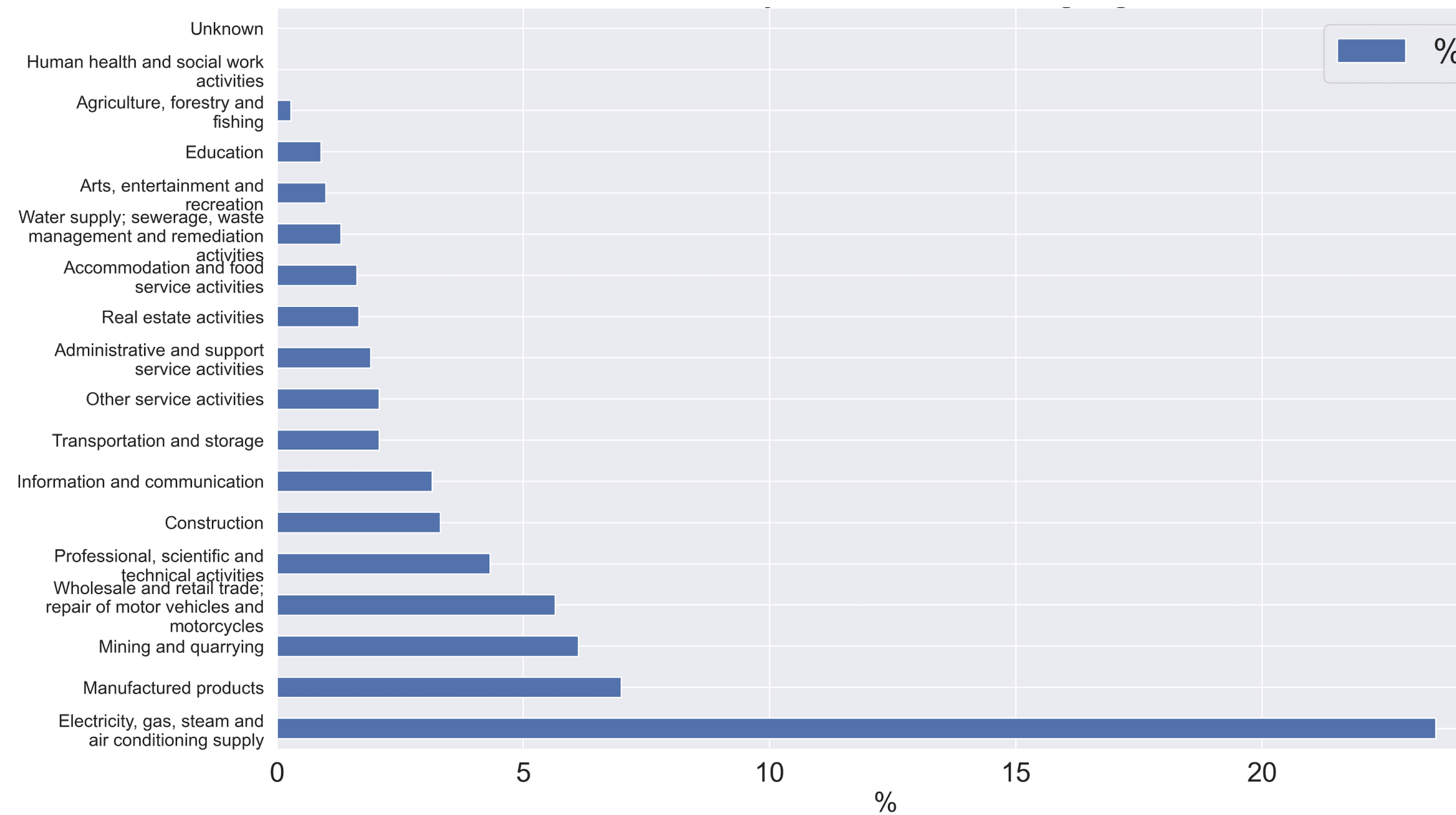
So $h\bar{\Psi}^B > 0$ means that the firm chooses foreign currency pricing the easier the access to hedging.

We test this interaction by:

- exploiting that $\bar{\Psi}^B$ is proportional to firm's exposure to local currency volatility.
- measuring h with the industry access to hedging.

Data: French export declarations to Extra-EU countries; Outstanding FX forward positions; and Currency arrangements from Ilzetzki, Reinhart and Rogoff (2019).
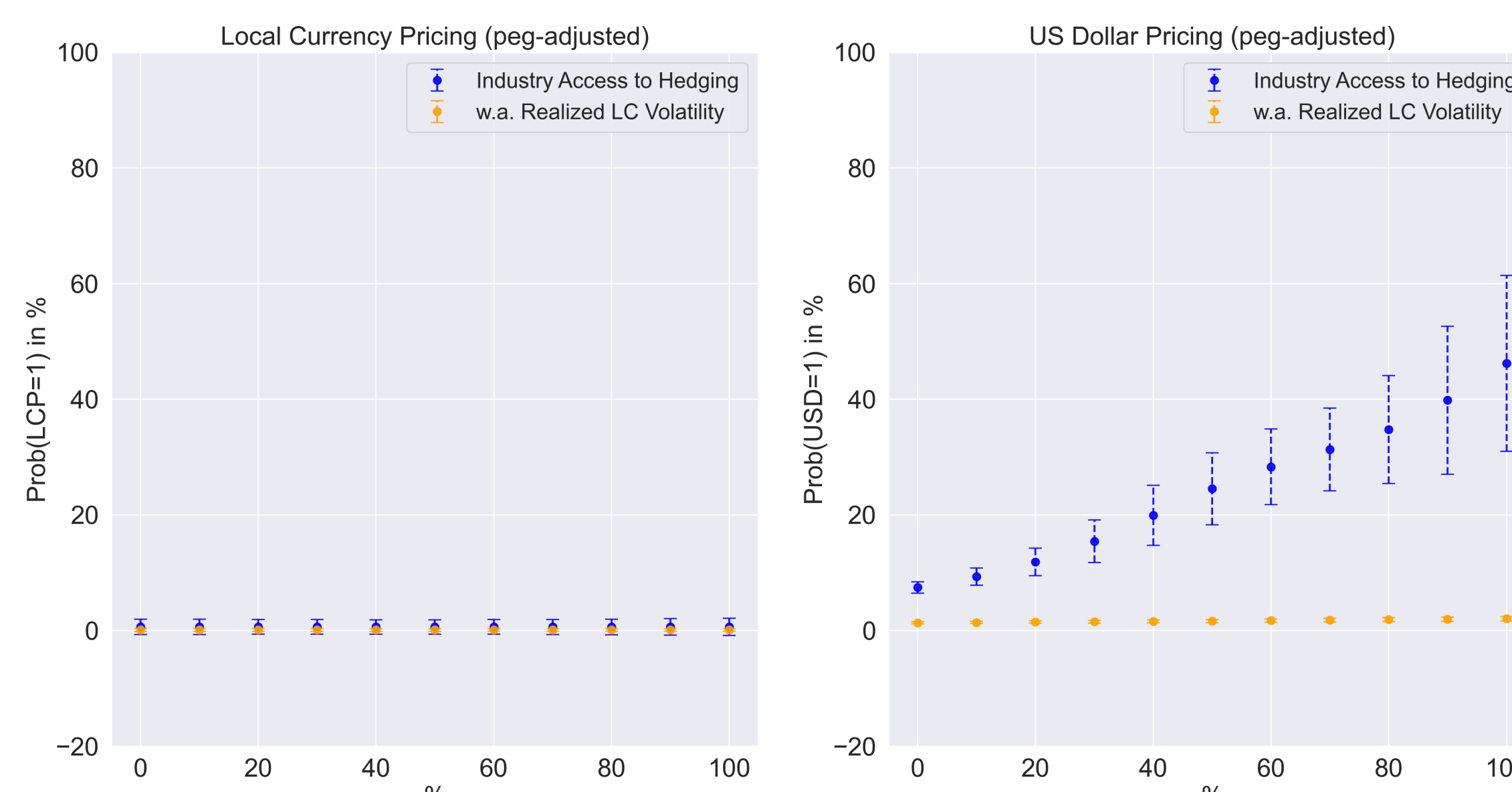
Industry Access to Hedging

This is the percentage of firms that have access to the FX forward markets by industry.

Currency Choice

Y is either w.a. **% of LCP^{peg}** or **USD^{peg}**. f is the firm, t the time (quarterly), i the industry. SE are clustered at the firm level.

$$\text{Logit}(Y_{ft}^{peg}) = \alpha_0$$
$$+ \alpha_1 \cdot \text{Ind. Access to Hedging}_i \times \text{W.A. LC Volatility}_{ft}$$
$$+ \alpha_2 \cdot \text{USD-EUR Volatility}_t$$
$$+ \alpha_3 \cdot \text{Foreign Import Share}_{ft}$$
$$+ \alpha_4 \cdot \text{W. A. Market Share}_{ft}$$
$$+ \alpha_5 \cdot \text{\# Transactions}_f$$
$$+ \alpha_6 \cdot \text{\# Unique Countries}_f$$
$$+ \alpha_7 \cdot \text{\# Unique Products}_f$$
$$+ \Theta_i \cdot \gamma_1$$
$$+ \text{Size Bins} \cdot \gamma_2 + \epsilon_{ft},$$
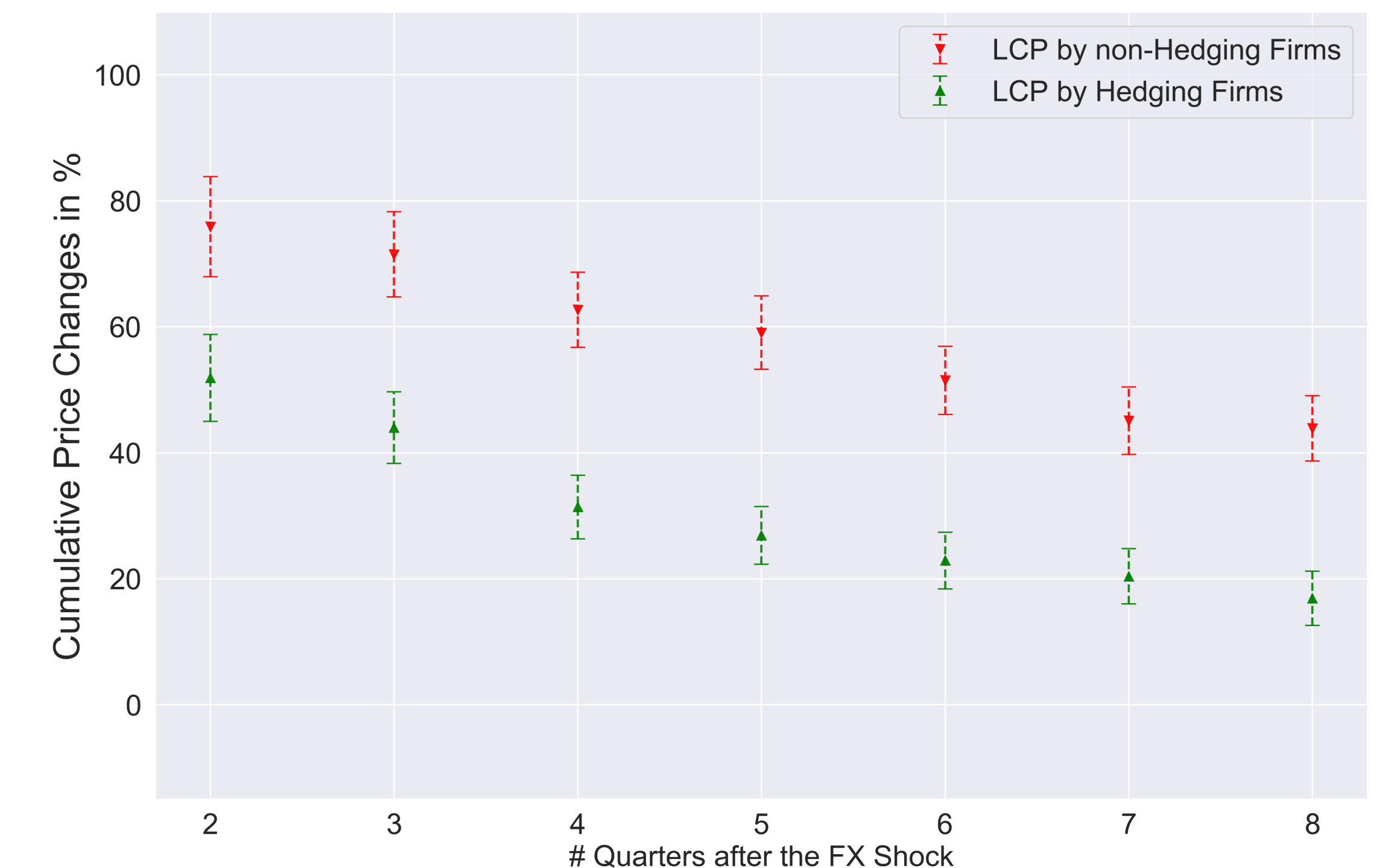
Marginal Probabilities

Take away: The marginal effects of industry access to hedging increases the probability of US dollar pricing, but it is muted for local currency pricing.

Price Adjustment Regressions

$$\Delta_l p_{d,t} = \alpha_0$$
$$+ \alpha_1 \cdot \text{PCP}^{peg} \cdot \Delta_l e_t^{j/\text{€}} + \alpha_2 \cdot \text{PCP}^{peg} \cdot \text{Hedge}_f \cdot \Delta_l e_t^{j/\text{€}}$$
$$+ \alpha_3 \cdot \text{LCP}^{peg} \cdot \Delta_l e_t^{j/\text{€}} + \alpha_4 \cdot \text{LCP}^{peg} \cdot \text{Hedge}_f \cdot \Delta_l e_t^{j/\text{€}}$$
$$+ \alpha_5 \cdot \text{USD}^{peg} \cdot \Delta_l e_t^{j/\text{€}} + \alpha_6 \cdot \text{USD}^{peg} \cdot \text{Hedge}_f \cdot \Delta_l e_t^{j/\text{€}}$$
$$+ \alpha_7 \cdot \text{USD}^{peg} \cdot \Delta_l e_t^{\$/\text{€}} + \alpha_8 \cdot \text{USD}^{peg} \cdot \text{Hedge}_f \cdot \Delta_l e_t^{\$/\text{€}}$$
$$+ \text{Fixed Effects} + u_{d,t}$$

d indicates the product-country-firm-currency dimension, and $\Delta_\ell x_t$ means $\log(x_t) - \log(x_{t-\ell})$.

Dynamic Price Adjustments

Price elasticities for goods denominated in Local Currency to bilateral exchange-rate shocks at different horizons for hedging and non-hedging firms.
Take away: FX Hedging firms have export stickier prices.

Contribution

⟹ We develop a dynamic model of FX hedging and currency choice with price rigidities.
⟹ We test its implications on a rich dataset on French export declarations and FX forward positions.

Take aways

1. FX hedging matters for currency choice and exchange-rate pass-through.

2. Having access to FX hedging largely favours US Dollar adoption, given a certain level of local currency volatility. The effect is muted for local currency pricing.

3. FX hedging is associated with more rigid prices to exchange rate shocks.

Bottom line: FX Hedging favours US dollar adoption and contributes to the exchange-rate disconnect puzzle.