# Monetary Policy Transmission in Emerging Markets: Proverbial Concerns, Novel Evidence

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# Research question

- How much traction does monetary policy (MP) have in emerging market economies (EMEs)?

- Context
  - Major progress in the assessment of MP transmission in advanced economies (AEs)
  - Evidence about transmission in EMEs is much more limited

- Focusing on EMEs is especially important given proverbial concerns about MP transmission
  - Limited financial market development
  - Currency mismatches
  - Limited institutional credibility

# EMEs' sensitivity to global financial conditions

- The literature on the global financial cycle casts further doubts on MP traction in EMEs
  - EMEs are highly sensitive to US monetary policy, even under flex exchange rates (Rey, 2015; Dedola et al 2017; Iacoviello and Navarro, 2019; Kalemli-Özcan, 2019; Miranda-Agrippino and Rey, 2020)
  - EME bond yields rise after a US MP tightening despite EMEs tend to loosen MP (De Leo, Gopinath and Kalemli-Özcan, 2022; Degasperi, Hong and Ricco, 2020)

- Does this imply impaired transmission? Not necessarily

# Global spillovers do not necessarily imply impaired MP transmission in EMEs

- US MP tightening may destabilize EMEs
  - Traditional view: EME exchange rate depreciations should boost external demand (Mundell, 1963; Fleming, 1962; Obstfeld and Rogoff, 1995)
  - Yet, effects could be muted under dollar pricing (Gopinath, Boz, Casas, Díez, Gourinchas and Plagborg-Møller, 2020)
  - … and even turn contractionary under FX mismatches and shallow financial markets (Aghion, Bacchetta, and Banerjee, 2001; Cavallino and Sandri, 2023)

- But MP easing in EMEs may still retain expansionary effects through domestic demand (Gourinchas, 2017)

➢ Need for direct evidence about MP transmission in EMEs

# MP identification and our contribution

- Evidence about MP transmission in EMEs is limited because of identification challenges
  - Narrative approach à la Romer and Romer (1994) is impractical
  - HFI à la Kuttner (2001) and Cochrane and Piazzesi (2002) is impaired by limited liquidity

- To overcome these challenges, we construct new monetary policy shocks for 18 EMEs using analysts' forecasts of policy rate decisions collected by Bloomberg
  - Analysts can update forecasts up to the time of the policy meeting

- Using these shocks, we study MP transmission to:
  - Financial markets
  - Macroeconomic conditions
  - Individual firms

# Literature on MP transmission in AEs and EMEs

- We build on a large literature using HFI in AEs to study transmission to
  - Financial markets
    (Kuttner, 2001; Cochrane and Piazzesi, 2002; Bernanke and Kuttner, 2005; Gurkaynak, Sack, and Swanson, 2005; Hanson and Stein, 2015; Gilchrist, Lopez-Salido, and Zakrajsek, 2015; Nakamura and Steinsson, 2018; Andrade and Ferroni, 2021; Swanson, 2021)
  - Macroeconomic conditions
    (Gertler and Karadi, 2015; Jarocinski and Karadi, 2020; Bauer and Swanson, 2023)
  - Firm-level data
    (Ottonello and Winberry, 2020; Jeenas, 2019; Cloyne et al., 2023; Caglio, Darst, and Kalemli-Ozcan, 2021)

- Recent studies on MP in EMEs
  - Taylor-rule residuals (Brandao-Marques et al., 2021; Deb et al., 2023)
  - Bloomberg forecasts in Chile (Aruoba, Fernández, Guzmán, Pastén, and Saffie, 2021)

# Outline

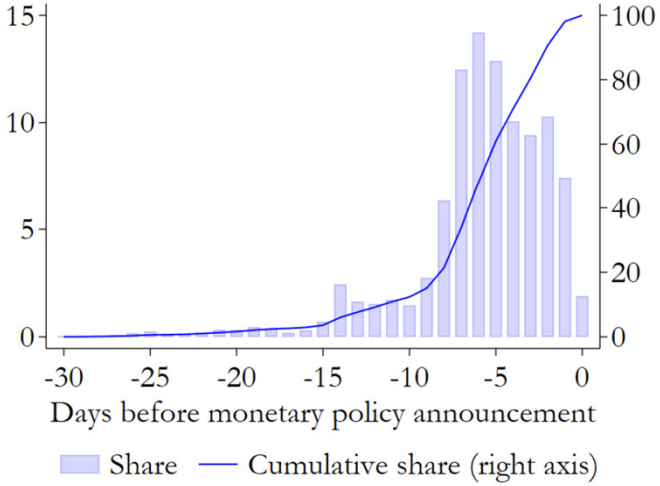
1. Monetary policy shocks in EMEs
2. Monetary policy transmission to financial markets
3. Monetary policy transmission to macroeconomic conditions
4. Monetary policy transmission across firms

# 1. Monetary policy shocks in EMEs

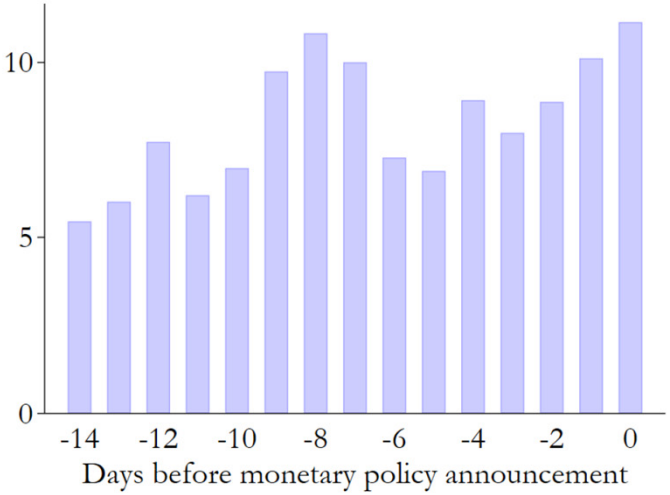
# Analysts' forecasts of policy rate decisions

- 58,321 policy rate forecasts for 2,522 MP meetings across 18 EMEs between 1999 and 2022
- Critical for identification, analysts can update forecasts up to the MP meeting
  - Indeed, forecasts errors do NOT decline as the meeting approaches

(a) Number of forecast submissions
(Percentage shares)

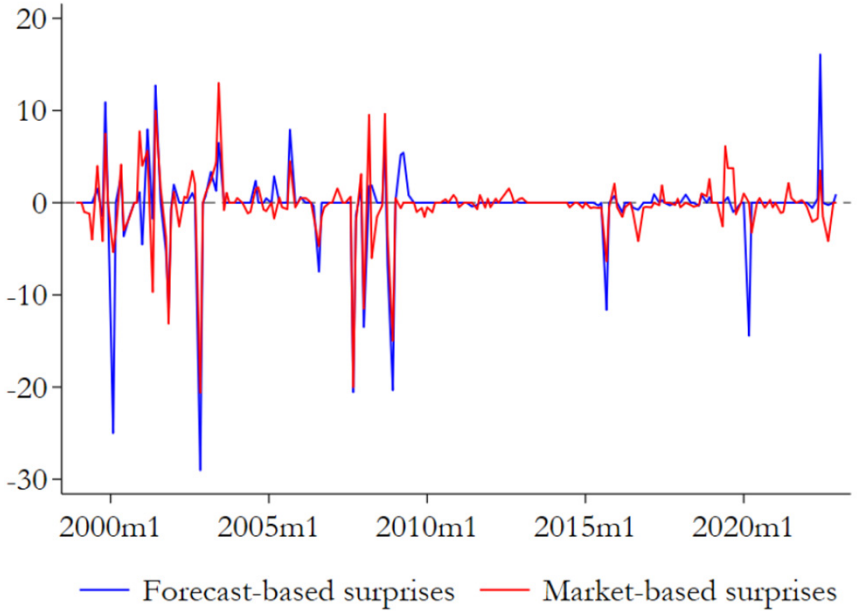



(b) Absolute forecast errors
(Average, basis points)



# Monetary policy surprises

- For each MP meeting, we construct a MP surprise equal to the average forecast error
- Forecast-based MP surprises are tightly correlated with market-based surprises in the US (Nakamura and Steinsson, 2018)



# Monetary policy shocks

- Following Bauer and Swanson (2023), we orthogonalize the MP surprises using the latest financial and economic data prior to the meeting
- We orthogonalize the MP surprises with respect to
  - Prices: inflation, expected inflation, commodity inflation, wage growth
  - Real variables: IP, expected IP, unemployment rate
  - Financial variables: NEER, expected NEER, stock prices
- We detect modest predictability, average $R^2$ is 0.08
  - Analysts tend to under-estimate MP countercyclicality
- We refer to the orthogonalized MP surprises as MP shocks

# 2. Monetary policy transmission to financial markets

# Event-study approach to examine MP transmission to financial markets

- How do EMEs' MP shocks transmit to financial markets?

- We address this question using an event-study approach (Cook and Hahn, 1989; Kuttner, 2001)

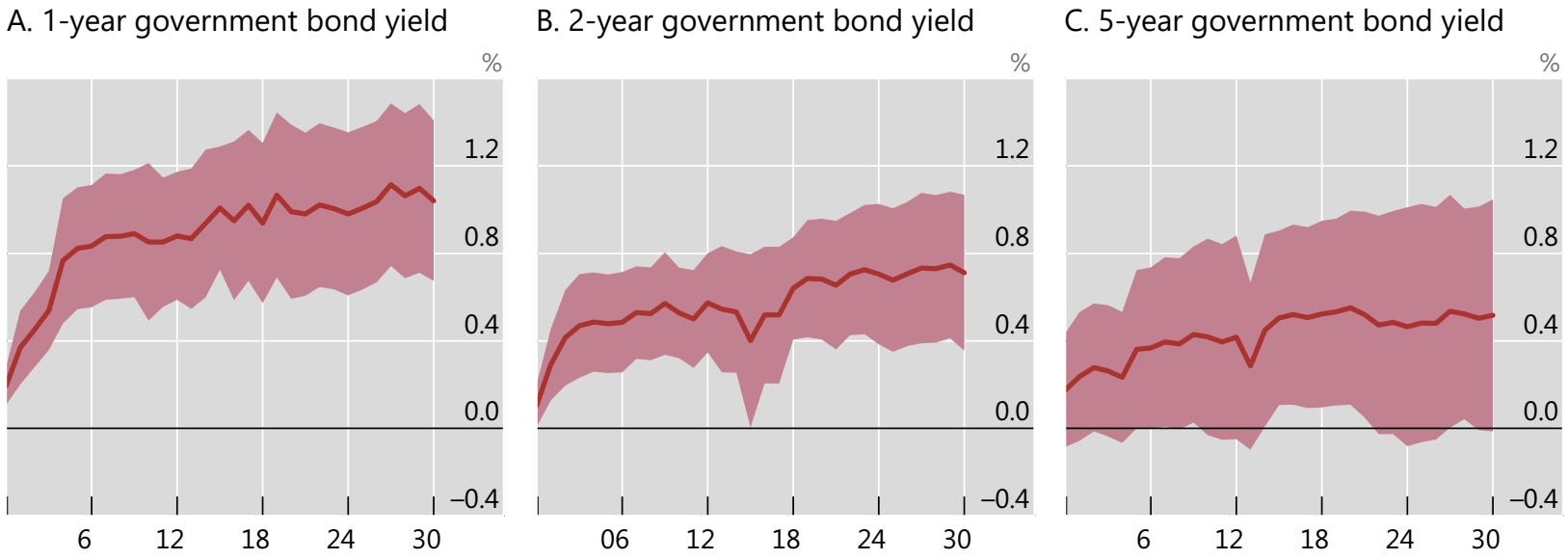
$$y_{c,t+h} - y_{c,t-1} = \alpha_c^h + \beta^h I_{c,t} + \varepsilon_{c,t}^h$$

where:

| | |
|---|---|
| $y_{c,t}$ | financial variable for country $c$ at the market-closing value on day $t$ |
| $I_{c,t}$ | monetary policy shock (orthogonalized Bloomberg forecast errors) |
| $h \geq 0$ | daily horizon |

# Strong transmission to bond yields …

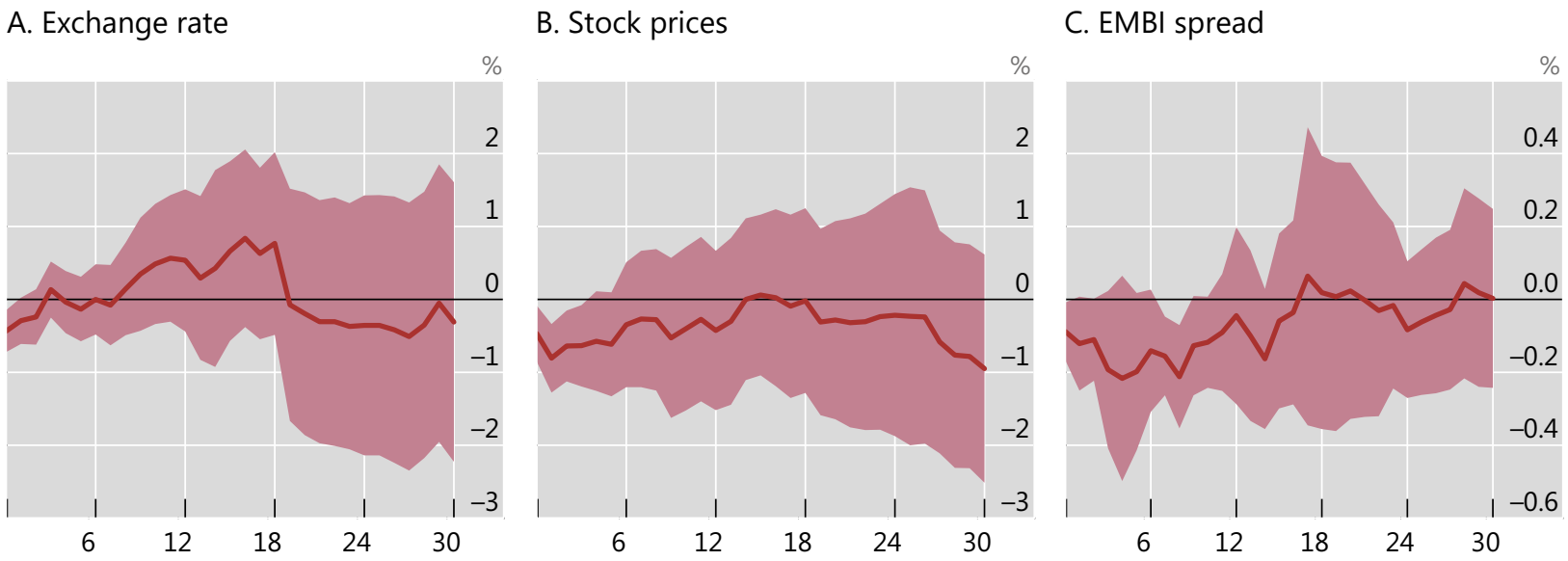
- EME MP has strong effects on local-currency government bond yields
  - Full pass-through of MP shocks to 1 year bond yields
  - MP shocks also influence longer maturities but more modestly




Notes: the horizontal axis denotes the days since a contractionary one-percentage-point MP shock.

# Strong transmission to bond yields but limited effects on risk-sensitive assets

- EME MP has very modest effects on risk-sensitive assets
  - MP tightening appreciates the exchange rate and reduces stock prices
  - But the effects are very short-lived




Notes: the horizontal axis denotes the days since a contractionary one-percentage-point MP shock.

# 3. Monetary policy transmission to macroeconomic conditions

# Local projections to examine MP transmission to macro variables

- How do EMEs' MP shocks transmit to macroeconomic conditions?

- We address this question using local projections à la Jordà (2005) on monthly data

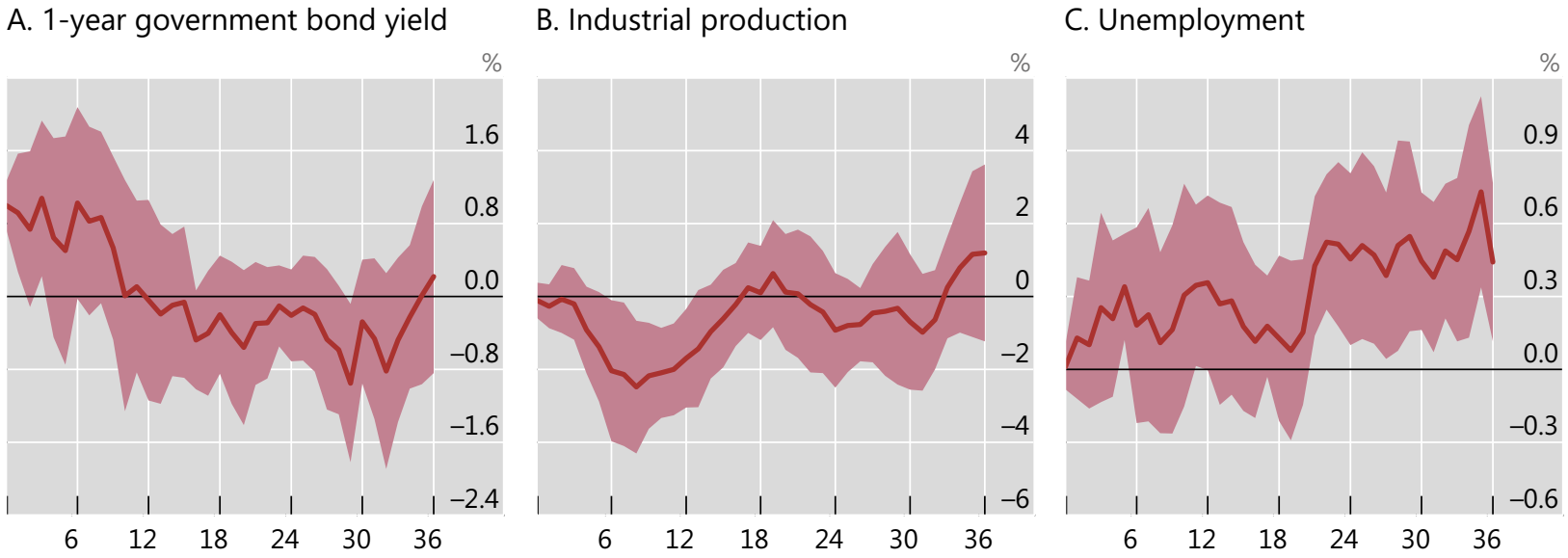
$$Y_{c,t+h} - Y_{c,t-1} = \alpha_c^h + \beta^h I_{c,t} + A^h(L)\Delta Y_{c,t-1} + B^h(L)P_{c,t-1} + \tau_t^h + \varepsilon_{c,t}^h$$

where:

| | |
|---|---|
| $Y_{c,t}$ | vector of monthly macroeconomic variables |
| $A^h(L)$ | matrix polynomial, allowing for 12 lags |
| $P_{c,t}$ | vector of pandemic controls (cases, lockdowns, economic support) |
| $\tau_t^h$ | time fixed effects to control for global shocks |

# MP tightening is contractionary …

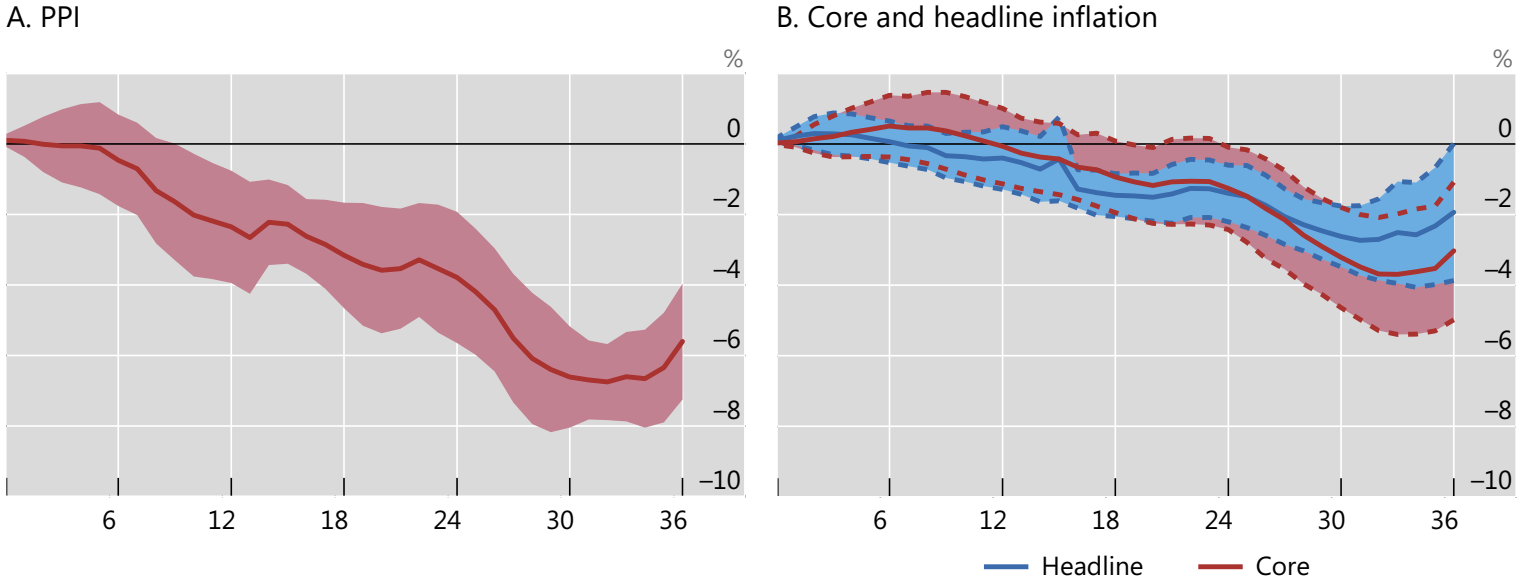
- MP tightening reduces economic activity
  - Industrial production declines and unemployment increases
  - Quantitative effects in line with US based evidence (Bauer and Swanson, 2023)




Notes: the horizontal axis denotes the months since a contractionary one-percentage-point MP shock.

# MP tightening is contractionary and disinflationary

- MP tightening curbs inflation
  - Producer prices decline after a 6 month lag. Consumer prices decline after a longer lag
  - The CPI decline is close to upper bound estimates for the US (Bauer and Swanson, 2023)




Notes: the horizontal axis denotes the months since a contractionary one-percentage-point MP shock.

# 4. Monetary policy transmission across firms

# Heterogenous transmission across firms

- In AEs, MP affects firms differently depending on financial conditions (Ottonello and Winberry, 2020; Caglio, Darst and Kalemli-Özcan, 2021; Cloyne, Ferreira, Froemel, Surico, 2023)

- Does MP also have heterogeneous effects across firms in EMEs?

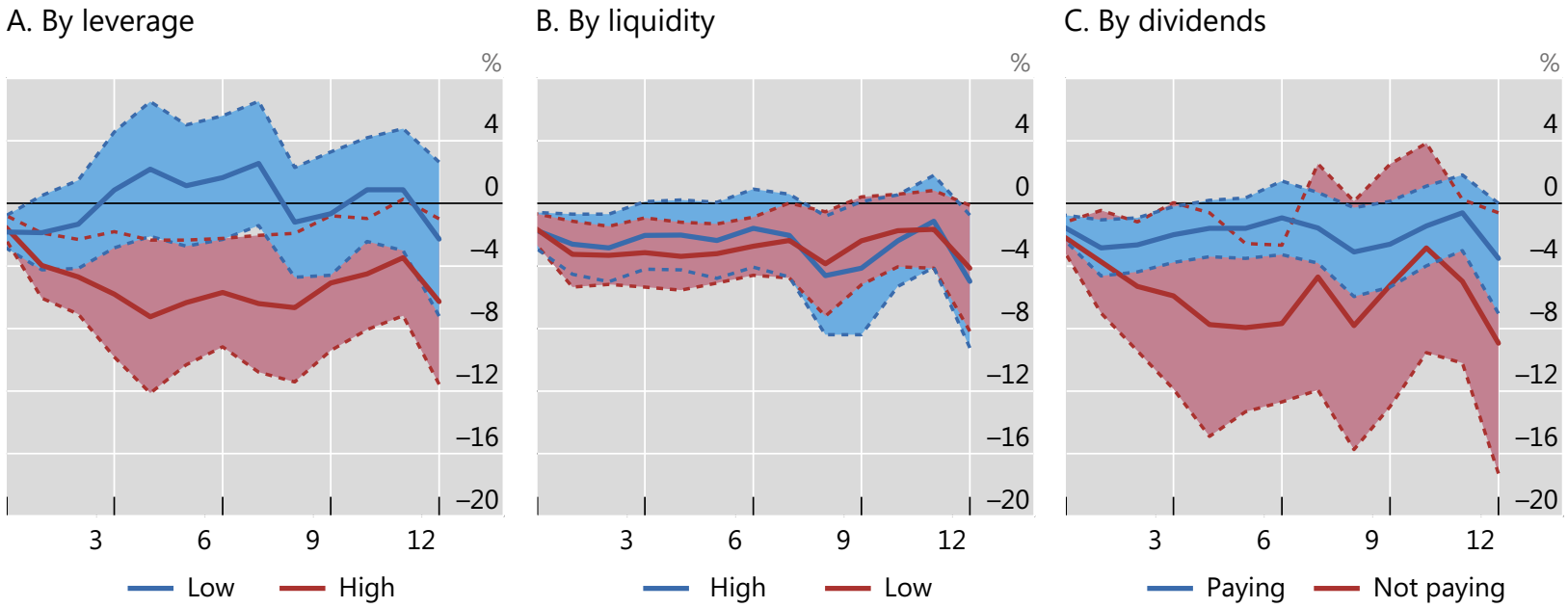
$$y_{f,t+h} - y_{f,t-1} = \alpha_f^h + \left(\beta^h + \gamma^h F_f\right) I_{c,t} + \varphi^h F_f + A^h(L)\Delta y_{f,t-1} + B^h(L) X_{c,t-1} + \tau_{s,t}^h + \varepsilon_{f,t}^h$$

where:

| | |
|---|---|
| $y_{f,t}$ | fixed capital for firm $f$ |
| $F_f$ | firm-level financial indicator (leverage, liquidity, dividend payments) |
| $X_{c,t}$ | macro controls (yields, IP, CPI, PPI, exchange rate plus pandemic variables) |
| $\tau_{s,t}^h$ | sector-time fixed effects |

# MP impact on firm-level fixed capital

- MP tightening has stronger effects on financially weak firms
  - Investment contracts more for firms with high leverage and that do not pay dividends




Notes: the horizontal axis denotes the quarters since a contractionary one-percentage-point MP shock.

# Key takeaways

- New MP shocks for EMEs based on analysts' forecasts of policy rate decisions
  - Analysts can incorporate information up to the MP meeting
  - Analysts tend to underestimate MP countercyclicality

- EME MP exerts considerable influence on domestic government bond yields…
  - Although more limited effects on risky asset classes

- … as well as on macroeconomic conditions
  - MP tightening is contractionary and disinflationary
  - Stronger effects on financially constrained firms

# Policy considerations

- Evidence about EME MP traction:
  - underscores improvements in MP frameworks
  - encourages EME central banks to confidently pursue price stability mandates

- Results do not detract from evidence of EMEs' vulnerability to global financial shocks…
  - … but underscore this does not imply loss of MP transmission

- Caveat: analysis documents effective MP transmission *on average*
  - Transmission impairments may still emerge, especially at times of financial/fiscal distress
  - Sound fiscal frameworks and macroprudential regulation remain key to support effective MP transmission

Thank you