Navigating the 2022 Inflation Surge: A Comparative Analysis of IT and Non-IT Central Banks

Patrick A. Imam and Tigran Poghosyan

WP/25/212

IMF Working Papers describe research in progress by the author(s) and are published to elicit comments and to encourage debate.

The views expressed in IMF Working Papers are those of the author(s) and do not necessarily represent the views of the IMF, its Executive Board, or IMF management.

2025 OCT



IMF Working Paper

Institute for Capacity Development

Navigating the 2022 Inflation Surge: A Comparative Analysis of IT and Non-IT Central Banks

Prepared by Patrick A. Imam and Tigran Poghosyan*

Authorized for distribution by Ali Alichi
October 2025

IMF Working Papers describe research in progress by the author(s) and are published to elicit comments and to encourage debate. The views expressed in IMF Working Papers are those of the author(s) and do not necessarily represent the views of the IMF, its Executive Board, or IMF management.

ABSTRACT: This paper examines the effectiveness of inflation targeting (IT) frameworks during the global inflation surge of 2022, a shock primarily driven by large adverse supply side disruptions following the onset of the War in Ukraine. The empirical findings suggest that (de jure) IT frameworks did not systematically deliver better inflation outcomes during this episode. The decline in inflation back towards historical norms was broadly comparable across (de jure) IT and non-IT country groups. While (de jure) IT central banks hiked their policy rates by more than non-IT central banks on average, this did not help with achieving better inflation outcomes. Also, we find no evidence that a more flexible exchange rate after the shock in (de jure) IT central banks. These findings suggest that (de jure) IT does not necessarily imply an advantage for monetary policy, particularly in the face of large, global supply shocks. Further analysis is warranted on how monetary policy frameworks can adapt to an environment characterized by more frequent and persistent supply-side disruptions. While using a de facto classification of IT regimes would be preferable, the absence of a comprehensive database makes this infeasible.

RECOMMENDED CITATION: "Navigating the 2022 Inflation Surge: A Comparative Analysis of IT and Non-IT Central Banks" by Patrick A Imam and Tigran Poghosyan IMF Working Paper No. 25/212

| JEL Classification Numbers: | E31, E52, E58, E61 | |
|-----------------------------|--|--|
| Keywords: | Inflation Targeting; Central Bank Credibility; Supply Shocks | |
| Author's E-Mail Address: | pimam@imf.org; tpoghosyan@imf.org | |

^{*} The views expressed in this paper are those of the authors and do not necessarily represent those of the International Monetary Fund or its board. We thank ICD seminar participants and Ivailo Arsov, Andy Berg, Sonali Das, Yasemine Bal Gunduz, Jakob de Haan, Martin Fukac, Thomas Harjes, Subir Lall, Rodolfo Maino, Valeriu Nalban, Jan-Egbert Sturm, Ann-Margret Westin for useful comments. Nick Staalduinen provided excellent research assistance and Von Allena for administrative support.

WORKING PAPERS

Navigating the 2022 Inflation Surge: A Comparative Analysis of IT and Non-IT Central Banks

Prepared by Patrick A. Imam and Tigran Poghosyan

Contents

| . INTRODUCTION | | |
|--|------|--|
| II. INFLATION TARGETING MEETS THE "NEW INFLATION": A SYSTEM UNDER STRAIN? | 6 | |
| III. STYLIZED FACTS: INFLATION DYNAMICS IN IT VS. NON-IT COUNTRIES | 8 | |
| A. Event Study: Was Inflation Surge Less Pronounced in IT Countries? | 10 | |
| B. Event Study: Was Inflation Surge Less Pronounced in IT Countries When Accounting for Country-Specific Unobserved Heterogeneity? | 13 | |
| C. Event Study: Is It the IT Regime, or Is It the Central Bank Independence? | 15 | |
| D. Event Study: Is It the IT Regime, or Is It About Macroprudential Policy? | 17 | |
| E. Inflation Expectations: Did Anchoring Differ Between IT and Non-IT Countries? | 18 | |
| F. Event Study: Interest Rates and the Shock: Did IT Central Banks React More Aggressively? | _20 | |
| G. Event study: Output Losses and Disinflation: Did IT Countries Have a Softer Landing? | _22 | |
| H. Event study: Did Inflation Targeting Countries Exhibit More Exchange Rate Flexibility? | 24 | |
| IV. CONCLUSIONS | | |
| REFERENCES | 28 | |
| FIGURES 1. CPI inflation in IT and non-IT countries | | |
| 2. Event study analysis: Evolution of average inflation in IT and non-IT countries | | |
| 3. Event study analysis: Evolution of average inflation in IT and non-IT countries after | | |
| controlling for country specific unobserved heterogeneity | 14 | |
| 4. Event study analysis: Evolution of differences between inflation rates in more independent CBs and | | |
| compared to less independence CBs after controlling for country specific unobserved heterogeneity _ | _16 | |
| 5. Event study analysis: Evolution of differences between inflation rates in countries with tighter | | |
| macroprudential regulation compared to countries with weaker macroprudential regulation | 17 | |
| after controlling for country specific unobserved heterogeneity | | |
| 7. Event study analysis: Evolution of average policy rates in IT and non-IT countries after | _ 19 | |
| controlling for country specific unobserved heterogeneity | 21 | |
| 8. Event study analysis: Evolution of average real GDP growth rates in IT and non-IT | _ | |
| countries after controlling for country specific unobserved heterogeneity | 23 | |
| 9. Event study analysis: Evolution of real and nominal effective exchange rates in IT and | | |
| non-IT countries after controlling for country specific unobserved heterogeneity | _25 | |
| ANNEXES Annex I | 32 | |

I. Introduction

Have inflation-targeting (IT) central banks managed the inflation surge of 2022, driven largely by global supply shocks, more effectively than their non-IT counterparts (unless otherwise noted, references to IT and non-IT regimes denote the *de jure* classification in the IMF's AREAER)? In theory, IT frameworks are designed to serve as a nominal anchor, stabilizing expectations and enhancing central bank credibility. A substantial empirical literature links IT adoption to improved inflation control, reduced macroeconomic volatility, and strengthened policy discipline under demand-driven inflationary shocks (Bernanke et al., 1999; Mishkin and Schmidt-Hebbel, 2007). However, the resilience of IT regimes in the face of large, persistent, global supply shocks remains relatively untested. The last comparable episode, the oil price shocks of the 1970s, predated the widespread adoption of modern IT, leaving unanswered the question of how such regimes respond when inflation is largely supply-side in nature, rather than generated by excess demand.

This paper addresses this gap by assessing the performance of IT during the 2022 inflation surge following the War in Ukraine. Relying on the IMF's AREAER classification of monetary policy regimes, and alternative classifications for robustness check, we compare inflation outcomes, expectations, and output responses across a sample of 33 advanced and emerging market IT countries and 37 non-IT peers. Emerging markets offer a particularly revealing test case, given their heightened vulnerability to commodity shocks and more constrained policy space. In theory, IT central banks should anchor better inflation expectations and mitigate inflation risks. In practice, however, our empirical findings for the 2022 supply-side shock present a more nuanced picture.

Despite stronger institutional signaling, IT central banks did not consistently achieve better inflation outcomes than their non-IT peers. Inflation expectations were not more firmly anchored, real economic costs were not unambiguously lower, and although IT central banks were somewhat more proactive, their policy stance did not produce significantly different macroeconomic results. These findings point to a disconnect between the theoretical promise of IT and its practical effectiveness in navigating supply-side shocks. One possible interpretation is that the nature of the shock itself constrained all central banks across the board, limiting the effectiveness of any given policy framework. This underscores the need for further analysis of how monetary policy frameworks can be adapted to an environment marked by more frequent and persistent supply-side disruptions.

Reevaluating IT in light of these findings is crucial for two reasons. First, supply-side shocks are becoming more frequent and structurally entrenched, driven by geopolitical realignments, evolving trade patterns, climate-related disruptions, and the demands of energy transition (FAO, 2023; IEA, 2024; Maechler, 2024; Hofmann et al., 2024, Greene, 2025). Second, many low- and middle-income countries currently considering IT adoption are among the most vulnerable to external shocks and operate with weak monetary transmission mechanisms and limited policy space. Under these conditions the benefits of IT may be less certain in the presence of supply-side shocks. Understanding the limitations of IT under such circumstances is essential for shaping future policy decisions on its adoption.

Had IT demonstrated a clear inflation advantage during the 2022 inflation surge, it would have bolstered the case for its continued dominance as the global monetary policy paradigm. In the absence of such evidence, it may be useful to reflect on the evolving effectiveness of IT in light of recent challenges. As supply-side shocks become more frequent and complex, further examination of whether existing policy frameworks remain well-suited to this new environment appears warranted.

Moreover, long-settled questions have resurfaced, following their failure to keep inflation close to their target (see Buiter, 2023): should central banks "look through" supply-driven inflation in anticipation of its transience, or respond preemptively to preserve credibility? Both approaches carry risks. An overly aggressive response may dampen growth without meaningfully containing inflation, while inaction could erode public trust and un-anchor expectations. For IT regimes and for monetary policy more broadly, the challenge lies in navigating this trade-off with contextual awareness, strategic clarity, and recognition of the limits of their instruments in the presence of supply-side shocks.

The remainder of this paper is organized as follows. Section II provides context by outlining the evolving inflation landscape and the increasing prevalence of supply-side shocks. Section III presents an event-study methodology comparing inflation dynamics in IT and non-IT countries during the post-shock period, examining variables such as central bank independence, macroprudential responses, inflation expectations, policy and money market rates, output growth, and exchange rate movements. Section IV concludes with a discussion of the implications for the continued relevance and potential evolution of IT in a world increasingly shaped by supply-side vulnerabilities.

II. Inflation Targeting Meets the "New Inflation": A System Under Strain?

For much of the past four decades, inflation was understood as a predominantly demand-driven phenomenon. Central banks adjusted interest rates, fiscal authorities managed the business cycle, and mainstream macroeconomic models operated on the premise that inflationary pressures could be effectively contained through aggregate demand management. Supply-side disturbances were typically viewed as transitory (Clarida, Galí, and Gertler, 1999). While supply-side shocks were present over this time period, they were typically localized and driven by idiosyncratic factors and were not global in scale (e.g. droughts in agricultural exporters, country-specific labor disruptions). These shocks mattered, but they rarely spilled over globally or were synchronized across economies.

That paradigm is now under increasing strain (see Buiter, 2023). The global economic order that underpinned this model characterized by abundant resources, liberalized trade, and geopolitical stability is fracturing. Instead of isolated, temporary shocks, we are entering a period marked by sustained and overlapping supply disruptions, many of which are structural and slow moving (Blanchard and Pisani-Ferry, 2023; Hofmann et al., 2024, Hernández de Cos, 2025).

This is not a replay of the 1970s oil crisis. Today's supply shocks are more persistent, more complex, and more deeply rooted in systemic transformations affecting global production and geopolitical dynamics¹. The War in Ukraine marked a turning point, disrupting energy markets, grain exports, and food supply chains. The ripple effects extended far beyond Europe, fueling inflation across both emerging and advanced economies (IMF, 2023). Strategic decoupling between the United States and China, heightened tensions in the Middle East, and the resurgence of economic nationalism have further eroded the reliability of cross-border trade as a source of macroeconomic stability (World Bank, 2023).

Climate change has emerged as another major driver of inflation. No longer a distant threat, it is now a disruptor of agricultural productivity, water availability, and energy infrastructure. Extreme weather events are reducing crop yields and disrupting transport networks, pushing up food and commodity prices (FAO, 2023). Simultaneously, the green transition is creating new bottlenecks (G30, 2025). The phase-out of fossil fuels is proceeding faster than the scale-up of renewable alternatives, leaving energy systems in a fragile balance and vulnerable to supply mismatches (IEA, 2024; Pisani-Ferry, 2021).

These pressures are further compounded by structural vulnerabilities exposed during the COVID-19 pandemic. Global supply chains, once celebrated for their efficiency, proved fragile under strain. Disruptions in one region cascaded through complex networks, leading to shortages and price surges. In response, firms are

INTERNATIONAL MONETARY FUND

¹ Earlier decades were turbulent, but uncertainty today, measured by uncertainty indicators, are even greater. First, shocks are more simultaneous and overlapping (pandemic, war, energy crises, fragmentation) creating nonlinear dynamics not observed in earlier periods. Second, key parameters are less stable: the natural rate of interest is drifting, Phillips curve slopes are shifting, and exchange rate pass-through is evolving, all of which complicate policy calibration. Finally, constraints and spillovers from high debt, large central bank balance sheets, climate and energy challenges, sanctions, and other factors have tightened the margin for error, particularly for small open economies.

restructuring toward greater resilience through reshoring, diversification, and higher inventories, but this transition is costly and far from complete (Carvalho, Nirei, Saito, and Tahbaz-Salehi, 2021; BIS, 2023).

Technological vulnerabilities add another layer of complexity. As economies digitize, they become increasingly susceptible to cyber risks. Attacks on transportation systems, energy infrastructure, or financial networks can trigger abrupt and significant price volatility (WEF, 2024). Meanwhile, demographic trends, especially aging populations in advanced and some emerging economies, are exerting upward pressure on wages while reducing labor supply, contributing to structural cost-push inflation (UN, 2023; Goodhart and Pradhan, 2020).

Together, these developments signal a fundamental transformation in the nature of inflation. The traditional narrative too much money chasing too few goods, is giving way to a more complex reality, where inflation often stems from deteriorating supply conditions rather than excess demand.

Does this new inflationary landscape pose a fundamental challenge to IT? Developed in the 1990s, IT was a landmark in the evolution of central banking. Mishkin and Kiley (2025) document the diffusion of IT and its core elements, an explicit medium-term target, primacy of price stability, forward-looking decision-making, transparency, and accountability, and argue that IT has been effective in anchoring inflation expectations across both advanced and large emerging economies. It instilled discipline, improved transparency, and provided monetary authorities with a clear mandate: to maintain low and stable inflation through predictable responses to economic conditions (Bernanke et al., 1999; Svensson, 1997; Mishkin and Schmidt-Hebbel, 2007). During the relatively tranquil era of the "Great Moderation," the framework proved effective, anchoring inflation expectations, reducing macroeconomic volatility, and bolstering central bank credibility.

The strong record of inflation targeting was built in an environment where inflation was mostly demand-driven and monetary transmission functioned predictably. When shocks originate on the supply side, however, the framework provides weaker stabilization. Concretely, rate adjustments cannot influence relative prices, and disinflation typically comes at higher output costs. Nuño, Renner, and Scheidegger (2024) show in a Markov-switching model that Taylor-type rules are ill-suited in such conditions, since the natural rate of interest varies across regimes. In their framework, the optimal response is to "let bygones be bygones," tolerating permanent price-level shifts rather than attempting to reverse them.

Nakamura, Riebler, and Steinsson (2025) reach a similar conclusion in their study of the post-Covid U.S. experience. Large supply shocks left the Federal Reserve with a stark choice, either follow Taylor prescriptions and risk a deep recession, or allow relative prices to adjust by temporarily tolerating higher inflation. The Fed chose the latter, deviating from the Taylor rule more than at any other time. Nakamura et al. (2025) argue that the main risk in such episodes is not model indeterminacy, which can be mitigated, but credibility. As they put it, "The primary risk associated with looking through inflationary shocks is not indeterminacy but rather loss of inflation-fighting reputation and the risk that long-run inflation expectations will become de-anchored" (p.5).

These findings underscore a broader vulnerability of IT when inflation is driven by geopolitical events, climate shocks, or structural supply constraints. In such settings, the relationships embedded in standard forecasting models shift rapidly, pass-through becomes highly state-dependent, and projection errors widen, undermining the role of baseline forecasts in policy calibration. The 2022 post-invasion surge, dominated by energy and food prices, illustrated these limits. Aggressive rate hikes could not resolve supply bottlenecks but did dampen demand and weigh on growth, with disproportionate effects on lower-income households (Carstens 2023; Avalos et al. 2025; BIS 2023; IMF 2023).

The credibility case for IT is also less persuasive under persistent supply shocks. When inflation stems from external factors, households and firms are less likely to expect monetary policy to deliver rapid disinflation. Recent evidence shows that expectations became more backward-looking during the 2022 surge, with observed inflation driving revisions rather than central bank guidance (Coibion and Gorodnichenko 2025; D'Acunto et al. 2025). This suggests that credibility rests less on announcements and more on the prompt containment of actual inflation (Romer 2013; Hernández de Cos 2025).

Taken together, these results indicate that IT regimes anchored in Taylor-type rules face structural constraints in a world of persistent supply shocks. While tolerating relative-price shifts may be optimal in theory,

in practice the ability to "look through" shocks depends critically on whether long-run expectations remain firmly anchored. If this supply-side driven "new inflation" proves persistent, monetary frameworks might need to adapt. In the following section, we evaluate how IT regimes fared compared to non-IT frameworks during the inflationary surge of 2022.

III. Stylized Facts: Inflation Dynamics in IT vs. Non-IT Countries

There's no better way to stress-test a monetary policy framework than during a genuine global crisis. For years, debates over whether IT regimes outperform their non-IT counterparts have unfolded in academic journals and central bank seminars. The 2022 supply-side inflation surge offers an opportunity to analyze the comparative performance of IT and non-IT central banks in a real-world context.

The 2022 inflation surge driven by skyrocketing energy prices and widespread supply chain disruptions hit nearly every economy on the planet. The post-invasion inflation surge was predominantly supply-driven. Energy and food prices spiked and supply chains were disrupted, with broad pass-through across advanced and emerging economies (Dao, Gourinchas, Leigh, and Mishra 2024; BIS 2024; Bernanke and Blanchard 2024, Mishkin and Kiley, 2025). Large cross-country studies attribute most of the rise, and subsequent decline, in inflation to these war-related shocks, with domestic macroeconomic conditions generally playing a secondary role (Dao et al. 2024; BIS 2024). Demand-side forces were material in a few economies, most notably the United States, where tight labor markets made inflation more persistent even as price-level (supply) shocks dominated the initial surge (Bernanke and Blanchard 2025); nonlinear Phillips-curve dynamics provide a mechanism for such amplification when slack is scarce (Benigno and Eggertsson 2024). Outside these cases, demand contributions appear modest and transitory relative to the common supply shock (Dao et al. 2024). This interpretation is consistent with earlier analyses emphasizing supply-side drivers over excess demand (Bernanke and Blanchard 2023, 2024) and with evidence that backward-looking expectations magnified pass-through during this period (Gorodnichenko 2025).

Crucially, it hit both 33 IT and 37 non-IT countries.^{2 3} Consumer price inflation (CPI) soared across the board, averaging around 9 percent globally. And here is where it gets interesting: the difference in inflation trajectories between IT and non-IT countries was not statistically significant (Figure 1). This finding is striking. Decades of theory have held a view that IT regimes should deliver better inflation outcomes through credibility, transparency, and the anchoring of expectations. But the data did not bear that out, at least in the near aftermath following the shock.

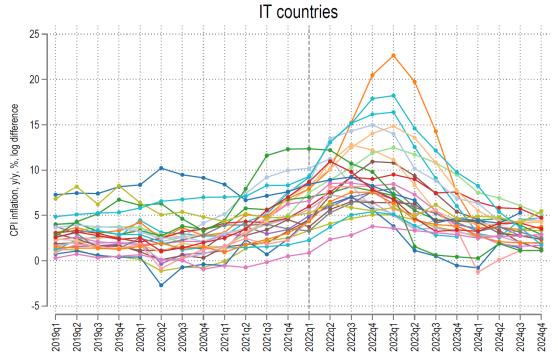
That was not just a statistical fluke and deserves a closer look. One could argue that IT regimes did their job in the early phase of the shock. With clear mandates, strong signaling, and rapid rate hikes, IT central banks may have cushioned the initial impact. Nevertheless, the eyeballing of the inflation data does not provide a clear indication that inflation increases in IT countries were decisively lower compared to their non-IT counterparts.

INTERNATIONAL MONETARY FUND

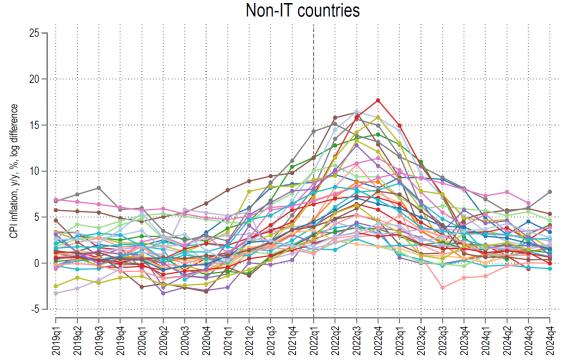
² See Table 1 in the Annex for the list of IT and non-IT countries in our sample. From the initial sample of 40 IT countries in the AREAER we have excluded Finland and Spain given that they have adopted Euro since then. In addition, we have excluded Ghana, Guatemala, Moldova, Türkiye and Uganda, since they have experienced very high annual inflation rates (more than 10 percent) before the global supply shock which casts doubt on their de facto IT implementation.

³ In some cases, classification is not clear-cut between the AREAER and the actual policy framework. The United States is not classified as an IT country, but the Federal Reserve was operating under a flexible inflation-targeting framework until August 2020, when it adopted flexible average inflation targeting. Therefore, we include the U.S. in the IT group as a robustness check. The Swiss National Bank does not describe its framework as formal inflation targeting, but its medium-term definition of price stability (0–2 percent inflation) and reliance on conditional forecasts align closely with IT practices; it is therefore tested as part of the IT group for robustness check purposes. By contrast, while some view the Monetary Authority of Singapore as an inflation-targeting central bank, its framework is centered on managing the exchange rate, and it is therefore classified as part of the non-IT group and tested as part of the IT group for robustness check purposes.

Fig 1. CPI inflation in IT and non-IT countries



Note: The sample includes 33 AE and EM IT countries. Dotted line denotes the supply shock.



Note: The sample includes 37 AE and EM non-IT countries. The dotted line denotes the supply shock.

Many IT central banks, committed to maintaining their inflation targets and protecting hard-won reputations, stayed on tightening paths even as supply-side pressures began to ease. But during an inflation episode driven not by overheating demand but by external shocks, such as war, energy volatility, logistics breakdowns, their efforts did not lead to clearly better outcomes compared to non-IT central banks.

This is not an argument that IT does not work. It does, particularly in economies vulnerable to demandside imbalances or where central bank credibility is still being built. But the events of 2022 remind us that no policy framework is perfect. In a world increasingly shaped by supply-side shocks, adaptability may matter as much as discipline.

Of course, we should be cautious. Charts can be persuasive, but they don't speak for themselves. Cross-country comparisons are riddled with structural differences, such as labor markets, fiscal responses, commodity exposures, and institutional quality vary widely. That's why serious conclusions must rest on rigorous econometric analysis that accounts for these country-specific differences and time-varying shocks. In the next step, we provide a more rigorous empirical analysis of the comparative performance of IT and non-IT central banks.⁴

A. Event Study: Was Inflation Surge Less Pronounced in IT Countries?

One of the foundational claims of IT is that by firmly anchoring expectations, it grants central banks the credibility and policy space to "look through" temporary price shocks. The logic is straightforward: when inflation is driven by external factors like energy or food price spikes, a trusted IT regime should dampen the pass-through to broader price dynamics. In this view, households and firms, confident that the central bank will steer inflation back to target, refrain from adjusting their behavior in ways that would entrench price increases.

That is the theory, but does it hold up in practice? To examine this, we implement an event study regression that compares inflation trajectories in IT and non-IT countries in the wake of the 2022 supply-side shock.

$$infl_{it} = \alpha_t + \beta_t * IT_i + \varepsilon_{it}$$

where *i* denotes countries, *t* denotes quarters, *infl* is the y/y quarterly growth in headline CPI⁵, IT_i is the dummy equal 1 for IT countries⁶, and ε is the error term. Coefficient α shows the average inflation in non-IT countries in quarter t, while the sum of coefficients ($\alpha + \beta$) shows the average inflation in IT countries in quarter t.

It is important to note that all IT central banks in our sample had adopted the regime well before the start of the sample period (2019:Q1–2024:Q4). The most recent adopters (India and Kazakhstan) implemented IT in 2015, which gives enough transition time to adopt to the new regime by the time of the supply shock. This helps in identifying the differential impact of supply shocks across IT and non-IT countries, as the IT dummy is predetermined and thus not endogenous to the dependent variable. Also, having a predetermined IT indicator removes the need to employ IV or dynamic panel estimators to address potential endogeneity concerns.

⁴ One might expect conditioning on geography to be informative. European inflation, for example, was perceived to be more exposed to war-related energy shocks, but the specification already absorbs such time-invariant geographic traits with country fixed effects. Adding regional fixed effects would be collinear with country effects and therefore unidentified, while running separate regional regressions would fragment the sample, reduce power, and weaken cross-country comparability.

⁵ We are using the headline inflation measure since this is the inflation typically targeted by IT countries. While core inflation could, in principle, offer a useful robustness check by excluding volatile components, the absence of a consistent cross-country dataset covering all IT and non-IT countries in our sample presents a practical limitation to its use.

⁶ The IT regimes were taken from the AREAER report of the IMF, 2023 vintage (see Table 1 in the Annex). It is important to mention that the AREAER definition is based on the *de jure* classification of monetary policy regimes.

Figure 2 (panel A) presents the estimated coefficients and their 95 percent confidence intervals. The results suggest that following the global supply shock, inflation surged across both IT and non-IT countries, peaking at roughly 9 percent on average. However, panel B shows that the average inflation differential between the two groups was constantly positive, indicating that IT countries, on average, experienced about 1.5 percentage points higher inflation than their non-IT counterparts throughout the sample period. While the inflation gap has remained broadly unchanged immediately after the shock, a divergence re-emerged after 2023. Inflation declined more sharply in non-IT countries, widening the difference once again.

These results suggest that the presumed advantage of inflation targeting (IT) frameworks in buffering economies during the 2022 inflation surge may not have been as strong as often assumed. There is no systematic evidence that IT central banks were more successful in insulating economies from global price pressures.

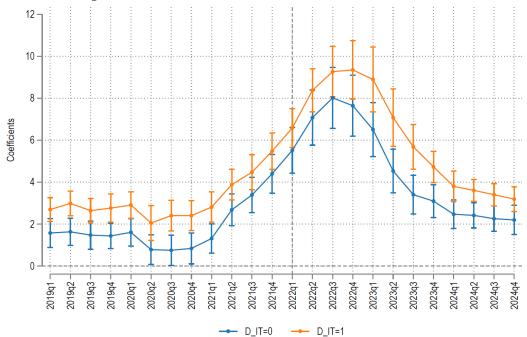
This should not be interpreted as a rejection of the IT framework. However, the findings point to an important nuance: one of the central promises of IT, namely, that a credible inflation target enhances both policy flexibility and inflation control under stress, may not always hold in practice. In this case, while IT may have helped sustain credibility, it did not necessarily shield economies from the inflationary consequences of a large and persistent supply shock. And the flexibility it offers may have been constrained by the perceived need to signal strong policy resolve.

As always, context is critical. When inflation is driven by a persistent, global supply shock, such as energy and commodity price surges, transportation bottlenecks or geopolitical disruptions, the tools available to central banks may be inherently limited, regardless of the policy framework in place. Under such conditions, even credible IT regimes face challenges in achieving inflation control without significant trade-offs.

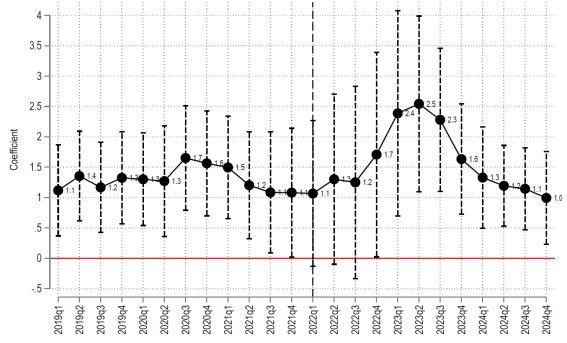
In sum, the empirical evidence from the 2022 supply shock shows that IT central banks did not consistently outperform their non-IT counterparts in terms of ensuring price stability. In fact, the dynamics of average inflation looked strikingly similar to their non-IT peers. This does not call into question the overall value of inflation targeting as a policy framework, but it underscores the relevance of reassessing how effectively it operates in an environment increasingly influenced by global supply shocks.

Fig. 2. Event study analysis: Evolution of average inflation in IT and non-IT countries

Panel A: Average inflation in IT and non-IT countries



Panel B: Difference between average inflation in IT and non-IT countries



B. Event Study: Was Inflation Surge Less Pronounced in IT Countries When Accounting for Country-Specific Unobserved Heterogeneity?

A reasonable critique of the above event study is that it overlooks structural differences between IT and non-IT countries. The raw comparison implicitly assumes that all countries share similar inflation fundamentals, which is a strong assumption that may not hold in practice. After all, IT central banks often differ in more than just their monetary policy framework. They may have lower inflation targets, stronger institutions, or distinct inflation histories. These factors could influence inflation outcomes regardless of any external shock, meaning our baseline estimates might be capturing more than just the impact of the monetary policy regime itself.

To account for this, we rerun the event study by adding country fixed effects. This approach controls for time-invariant characteristics unique to each country (λ_i), such as institutional quality, labor market structure, de facto exchange rate regime, or fiscal policy performance. In effect, it allows us to compare each country against its own historical baseline, rather than against a group average that might obscure important underlying country-specific differences:⁷

$$infl_{it} = \alpha_t + \beta_t * IT_i + \lambda_i + \varepsilon_{it}$$

The results, presented in Figure 3, paint a more nuanced picture. Before the 2022 inflation surge, the demeaned inflation in both IT and non-IT countries was broadly comparable, with little evidence of systematic differences between the two groups.

After the shock, however, a divergence begins to emerge. While the surge in demeaned inflation was broadly comparable across IT and non-IT countries in 2022, demeaned inflation in non-IT countries started to decline faster after the initial spike relative to their IT counterparts in 2023. This suggests that having a formal IT, along with credible policy communication, has not helped temper the initial surge in IT countries relative to their non-IT peers and non-countries have managed to reduce demeaned inflation faster in the medium-term despite no explicit inflation mandate.

As a robustness check, we have also run these regressions separately for advanced and emerging economies, strong and lite IT countries, and the results are qualitatively comparable (see Figures A1 – A4 in the annex). There is some evidence that strong IT countries have had a relatively smaller surge in inflation compared to lite IT countries, but in both cases there was no clear outperformance of demeaned inflation relative to non-IT peers. We have also run regressions by including only 19 non-IT countries with explicit currency pegs, 18 IT countries with relatively short-term (up to 3 years) inflation target horizons, and using inflation differentials from explicit (IT countries) and implicit (non-IT countries) inflation targets and the results are qualitatively similar (see Figures A5 – A7 in the annex). Finally, we have modified the sample by treating the U.S., Switzerland, and Singapore as IT countries, in line with Cobham (2021). This has also led to qualitatively similar results, supporting robustness to possible misclassification of monetary policy regimes (Figure A8).

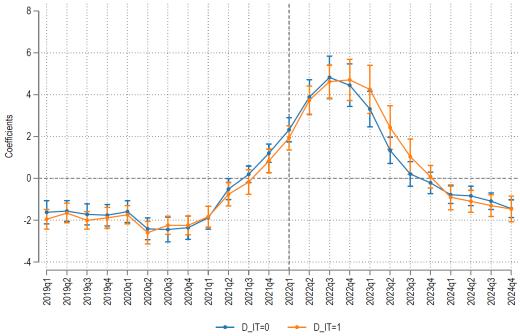
In short, once country-specific structural differences are accounted for, the fundamental takeaway holds. IT central banks did not outperform their non-IT counterparts in managing the inflationary shock. The end result is convergence in inflation outcomes over the medium term, with no decisive edge for any monetary policy framework.

⁷ To avoid multicollinearity between IT_i and λ_i , we run within regressions by demeaning the dependent variable at the country level.

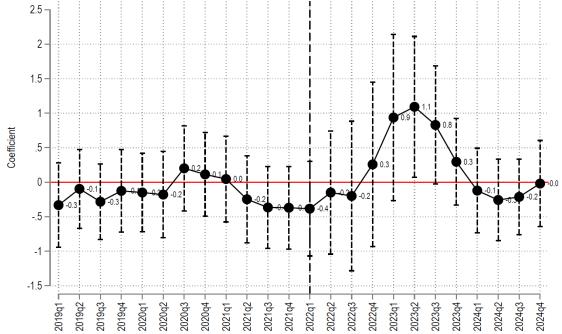
⁸ Inflation targeting lite" is not a formal AREAER category. The term appears only in the descriptive notes of the classification and refers to transitional frameworks, typically under a float, where an inflation objective is announced but does not yet serve as the dominant nominal anchor (i.e., a stepping-stone to full-fledged IT).

Fig. 3. Event study analysis: Evolution of average inflation in IT and non-IT countries after controlling for country-specific unobserved heterogeneity

Panel A: Average inflation in IT and non-IT countries



Panel B: Difference between average inflation in IT and non-IT countries



C. Event Study: Is It the IT Regime, or Is It the Central Bank Independence?

One of the lasting questions in monetary policy is whether institutional form matters more than the framework itself. Put differently, when inflation surges, is it the IT regime that matters, or is the true anchor lying in the degree of central bank independence (CBI)? To explore this, we return to our event study framework, this time interacting both IT and CBI measures with time indicators. The model specification becomes:

$$infl_{it} = \alpha_t + \beta_t * CBI_i + \lambda_i + \varepsilon_{it}$$

We use two distinct measures of central bank independence. The first is a *de jure* measure based on Romelli (2024), which classifies countries as "more independent" if their legal frameworks grant above-average autonomy to the central bank as of 2022. The second is a *de facto* measure, using KOF data on central bank governor turnover. Countries with no irregular leadership changes in the five years leading up to the shock are treated as having stronger operational independence and institutional stability.

The results, shown in Figure 4, reveal an unexpected pattern. Panel A, focusing on legal independence, shows that countries with higher *de jure* CBI experienced a significantly sharper inflation surge in the wake of the 2022 supply shock. By the fourth quarter of that year, inflation in these countries was 2.2 percentage points above their historical norms, which is higher than in countries with weaker legal protections for central banks. The result is statistically significant and counterintuitive. Over time, this gap gradually closed, and by late 2023, inflation levels had converged. But the early phase of the shock offers a surprising insight: greater legal independence did not insulate economies from inflation.¹⁰

This result is especially striking given the pre-shock trend. From 2019 through early 2022, countries with higher central bank independence consistently delivered lower and more stable inflation, exactly as theory would suggest. But once the global supply shock hit, their credibility may have acted as a double-edged sword. Trusting in anchored expectations, these central banks may have held back from aggressive early intervention. The result: a steeper initial surge, followed by a smoother path back to target.

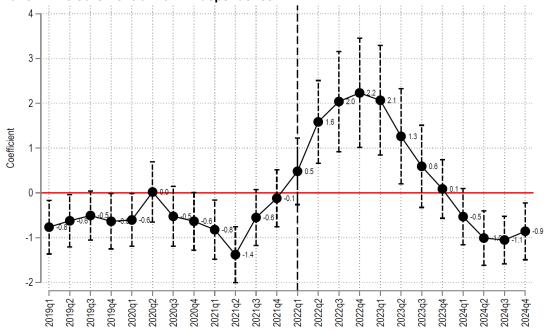
Panel B, which uses the *de facto* measure of independence, tells a similar story, though with weaker statistical significance. Countries with no irregular turnover in central bank leadership, which is our proxy for leadership continuity, also experienced a modestly stronger inflation rise post-shock. Again, this runs against the conventional wisdom that stronger institutions should offer greater resilience.

⁹ We would like to thank Jakob De Haan from the University of Groningen and Jan-Egbert Sturm from ETH Zurich for sharing their updated data (Dreher, Sturm, and De Haan, 2010).

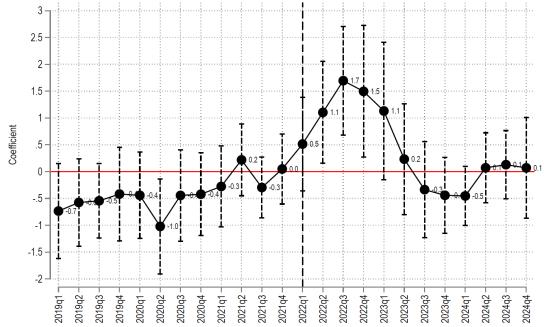
¹⁰ Looking at IT versus non-IT country groups, we found that the positive inflation differential was particularly pronounced for more independent central banks in non-IT countries. The results are available upon request.

Fig. 4. Event study analysis: Evolution of differences between inflation rates in more independent CBs and compared to less independent CBs after controlling for country-specific unobserved heterogeneity





Panel B: De-Facto Central Bank Independence



D. Event Study: Is It the IT Regime, or Is It About Macroprudential Policy?

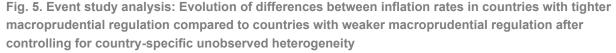
So far, we have looked at how monetary frameworks and institutional independence shaped inflation outcomes in the wake of the 2022 shock. But there is another pillar of the post-crisis policy toolkit worth examining: macroprudential regulation. In theory, tighter macroprudential settings should help shield economies from financial excesses, whether in credit markets, asset bubbles, or capital flows. This kind of insulation could, in turn, indirectly dampen the severity of inflation surges, especially those triggered by global supply disruptions.

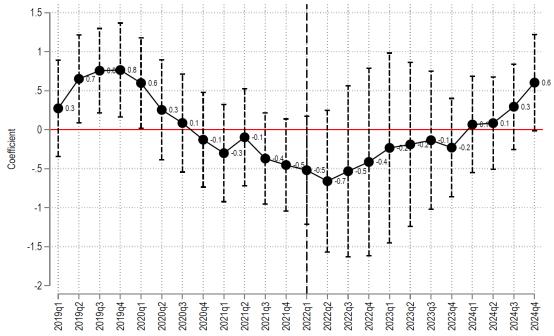
To test this idea, we return to the event study format. This time we replace the IT indicator with a dummy for macroprudential tightness:

$$infl_{it} = \alpha_t + \beta_t * MP_i + \lambda_i + \varepsilon_{it}$$

where MP_i is the dummy equal 1 for countries that had a level of cumulative macroprudential regulation exceeding the sample average as of the start of the shock in 2022:Q1. Out of 89 countries in the sample, all 89 AE and EM countries have data on Macroprudential Regulation (IMF database). Out of 89 countries, 40 had level of macroprudential regulation exceeding sample average, while 49 had the level of macroprudential regulation below sample average.

Figure 5 presents the results. It shows that tighter macroprudential regulation did not make a noticeable difference. Inflation dynamics in more tightly regulated countries was statistically indistinguishable from those in more lightly regulated peers. There were no significant gaps, no persistent patterns, and no indication that stronger macroprudential defenses offered meaningful insulation from the inflation surge.





This finding is instructive. Macroprudential tools are vital for managing systemic financial risks, which is their main purpose. But they are not designed to target inflation directly. And in the case of a global supply shock driven by energy disruptions, blocked trade routes, or climate-related food shortages, regulatory strength alone was not enough to dampen inflationary pressures.

The broader lesson aligns with the central theme of this paper: institutional strength matters, but only up to a point. Whether the framework is IT, central bank independence, or macroprudential oversight, none proved especially effective at containing the kind of inflation that originates from the supply-side and reverberates globally.

E. Inflation Expectations: Did Anchoring Differ Between IT and Non-IT Countries?

One of the main arguments in favor of IT is its ability to anchor inflation expectations. The idea is simple: when central banks commit to a clear target and back it up with consistent policies and transparent communication, households and businesses are more likely to trust that inflation will eventually return to that target, even in turbulent times. This confidence, in theory, should make expectations more stable and less reactive to short-term shocks.

So, what happens when a global supply shock hits? If the theory holds, we should see inflation expectations remain more firmly anchored in IT countries compared to those without such frameworks.

To evaluate this claim, we estimate a simple regression model to capture the shift in inflation expectations following the 2022 supply shock:

$$E[infl_{it}] = \alpha * POST_t + \lambda_i + \varepsilon_{it}$$

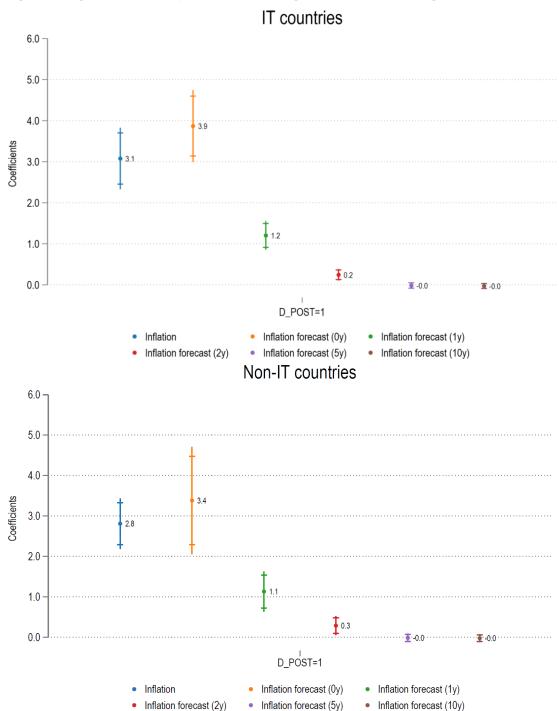
where i denotes countries, t denotes quarters, POST is the dummy variable taking the value of 1 in 2022:Q1-2024:Q4, λ_i is the country fixed effect, and ε is the error term. We include country fixed effects to control for cross-country differences in exposure to supply shocks, such as the relative weight of energy in the consumer price index. The regression is run separately for IT and non-IT countries, and for actual inflation as well as expectations at multiple horizons: current year, one year ahead, two years ahead, five years ahead, and ten years ahead. In total, the analysis covers 32 IT countries and 17 non-IT countries, using inflation expectations from the Consensus Forecast dataset.

Figure 6 tells a clear story: inflation expectations held steady in both IT and non-IT countries. At longer horizons (two, five, and ten years), the impact of the 2022 supply shock was minimal. Even after such a sizeable supply-side inflation shock, long-term expectations barely moved.

At shorter horizons, the response was more noticeable, but still fairly contained. In IT countries, the actual inflation rose by an average of 3.1 percentage points. Current-year expectations rose by 3.9 points, while one-year-ahead expectations rose just 1.2 percentage points. Non-IT countries saw a slightly lower actual inflation increase (2.8 percentage points) with current and one-year-ahead expectations rising by 3.4 and 1.1 percentage points, respectively, over the same timeframes.

The main takeaway is that IT central banks have not offered any edge in stabilizing short-term expectations and the gap between IT and non-IT central banks is surprisingly narrow. At longer horizons, the difference is negligible. Simply put, IT did not deliver a decisive advantage when it came to anchoring inflation expectations during this supply-side inflation shock.

Fig. 6. Change in inflation expectations following the 2022 inflation surge



Note: Reported are the coefficients α from the individual regressions for actual inflation and inflation expectations (current year, 1-year, 2-years, 5-years, and 10-years ahead) and their 90-95% confidence intervals based on robust standard errors. The sample includes 32 IT countries and 34 non-IT countries for which there is data available on Consensus Forecast inflation expectations.

This finding challenges a key pillar of the IT framework, namely the idea that having a formal target is what keeps inflation beliefs grounded. Expectations seem to have been anchored not just by institutional design, but by the way policymakers responded in real time. Credibility, in this case, may have come not from labels, but from actions, whether that meant timely interventions, transparent communication, or policy agility.

Interestingly, the smaller gap between actual inflation and expectations in non-IT countries hints at another possibility: greater flexibility may have allowed these central banks to respond more visibly or swiftly, building confidence through adaptation rather than strict adherence to a preset target. For policymakers, the message is that anchoring expectations is not about checking boxes or adopting the "right" framework. It's about delivering clear, timely, and credible responses, especially when inflation is driven by global supply shocks.

F. Event Study: Interest Rates and the Shock: Did IT Central Banks React More Aggressively?

One of the theoretical advantages of IT is that it should reduce the need for aggressive action. If expectations are well anchored, the central bank does not have to raise rates sharply in response to inflationary shocks. The assumption is that credibility does the heavy lifting, so the interest rate does not have to. But when theory meets reality, things often turn out differently.

To examine whether this assumption held during the 2022 supply shock, we return to the event study framework. This time, we shift the focus to interest rates, using both nominal policy rates and money market rates as dependent variables:

$$pr_{it} = \alpha_t + \beta_t * IT_i + \lambda_i + \varepsilon_{it}$$

where *pr* is the nominal policy rate or money market rate.¹¹ Country fixed effects control for structural differences in monetary frameworks. The sample includes 45 countries with policy rate data from the LSEG and 33 with money market rate data from the IFS. Of the countries with policy rate data, 23 are IT countries and 22 are not.

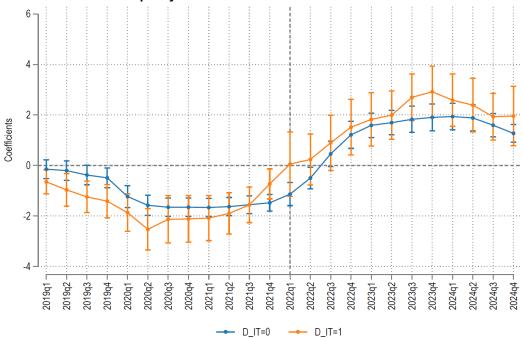
Figure 7 shows that in the aftermath of the 2022 supply shock, IT central banks raised policy rates more aggressively relative to their own historical averages than non-IT central banks. This pattern holds across both policy rates and money market rates. The hikes were not only larger, but the gap between the two groups persisted through the end of 2023. In short, IT central banks did not rely on their credibility to do less and they did more on average.

This finding cuts against the grain of standard theory. If inflation expectations in IT countries were truly better anchored, as IT frameworks are designed to ensure, then central banks should have been able to "look through" the shock. Yet, as shown in the previous section, expectations remained relatively stable in both IT and non-IT countries, and the differences were marginal.

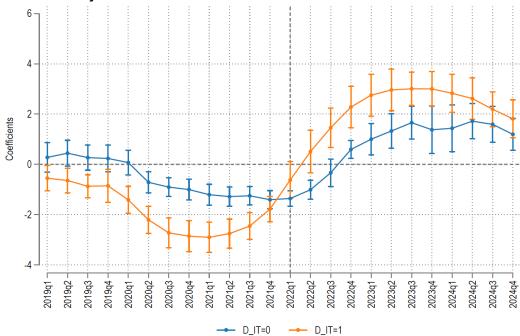
A natural extension of the analysis would be to examine developments in real policy rates and compare them to estimates of neutral rates, as the monetary policy stance is more appropriately judged in relation to the neutral rate (see Harrison and Nguyen, 2025). While this is an important consideration, implementing such an analysis across our sample is not feasible. Neutral rates are highly uncertain and difficult to estimate consistently, particularly given methodological differences across advanced and emerging economies. Instead, our analysis focuses on the relative reaction of nominal policy rates, which provides comparable and informative insights into monetary policy behavior across countries.

Fig. 7. Event study analysis: Evolution of average policy rates in IT and non-IT countries after controlling for country-specific unobserved heterogeneity





Panel B: Money market rates



The result is even more striking when set against pre-shock behavior. Between 2019 and early 2022, IT central banks consistently ran lower interest rates than their non-IT peers. They entered the shock with more policy space. But once the shock hit, they tightened more aggressively, despite no clear edge in inflation outcomes or expectation management.

This raises a question if IT central banks delivered more forceful tightening without achieving better results, what exactly was gained? Was the extra tightening a necessary defense of credibility, or an overreaction to headline inflation because of a failure to distinguish between demand- and supply-driven pressures?

The broader implication is that credibility is not just about acting decisively. A central bank that reflexively tightens in response to any inflationary surge, regardless of its cause, risks appearing mechanical rather than strategic. And when inflation is driven by supply-side disruptions, aggressive rate hikes may do little to fix the problem while imposing real economic costs. Gorodnichenko (2025) explicitly warns against 'looking through' supply shocks, arguing that central banks must react hawkishly to prevent expectations from drifting. His evidence shows that households and firms adjust beliefs to actual inflation rather than to professional forecasts, reinforcing the case for more forceful responses in such regimes.

G. Event study: Output Losses and Disinflation: Did IT Countries Have a Softer Landing?

One of the longstanding arguments in favor of IT framework is that it makes disinflation less costly. By anchoring expectations and reducing uncertainty, IT frameworks are believed to give central banks a smoother path to price stability and lower inflation with less collateral damage to output. In macroeconomic terms, the "sacrifice ratio" (the amount of output lost per unit of disinflation) is expected to be smaller in countries that explicitly target inflation. Put simply, IT countries are presumed to have a better chance of engineering a soft landing. How does this theory hold up against the evidence?

To test whether IT countries experienced smaller output costs during the disinflation phase that began in 2023, we estimate the standard event study regression using real GDP growth as the dependent variable:

$$gr_{it} = \alpha_t + \beta_t * IT_i + \lambda_i + \varepsilon_{it}$$

where *gr* is the y/y real GDP growth rate. We limit the analysis to the 48 countries in our sample for which quarterly GDP data are available. Of these, 31 are IT countries, and 17 are not.

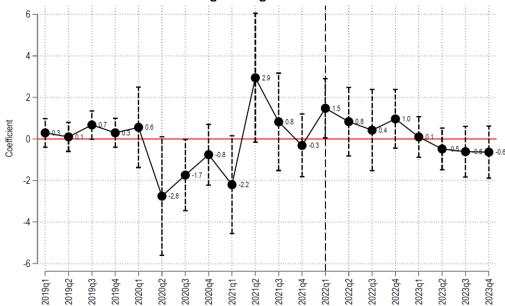
Figure 8 presents the results. As noted earlier, the disinflation process gained momentum in the first quarter of 2023. But contrary to theoretical expectations, our regression analysis reveals no meaningful difference in output losses between IT and non-IT countries. Once we control for country fixed effects, growth trajectories across both groups appear broadly similar throughout the adjustment phase that followed the shock.

In short, there is no evidence that IT frameworks delivered lower sacrifice ratios. IT countries did not achieve smoother landings, nor did they manage to dis-inflate with significantly less economic pain. This finding challenges one of the foundational promises of IT that greater credibility allows central banks to bring down inflation with less output losses.

Fig. 8. Event study analysis: Evolution of average real GDP growth rates in IT and non-IT countries after controlling for country-specific unobserved heterogeneity

12 10 8 6 4 2 Coefficients 0 -2 -6 -8 -10 -12 -14 -16

Panel A: Average GDP growth in IT and non-IT countries



Panel B: Difference between average GDP growth in IT and non-IT countries

The implications are substantial. If IT does not reduce the output cost of disinflation, its benefits may be more context-dependent than previously assumed. The framework might prove valuable in demand-driven inflation episodes or in settings where institutional credibility is weak and needs to be established. But in the face of a global supply-side shock, where inflation is externally driven rather than domestically fueled, IT does not appear to shield economies from the real costs of price stabilization.

For policymakers, the lesson is that while IT offers structure and transparency, it is not a panacea. In managing disinflation, especially in a world increasingly shaped by complex, real-side shocks, credibility may stem less from institutional labels and more from the ability to act decisively, adapt intelligently, and communicate clearly.

H. Event study: Did Inflation Targeting Countries Exhibit More Exchange Rate Flexibility?

A key theoretical tenet of IT is that it liberates the central bank from managing the exchange rate. By placing a clear and credible emphasis on price stability, IT frameworks are designed to shift focus away from currency management, allowing the exchange rate to act as a shock absorber. In theory, this enables monetary policy to remain directed at domestic inflation control, while the exchange rate adjusts flexibly to external disturbances.¹²

In contrast, non-IT central banks, particularly those without a clearly defined nominal anchor, may be more inclined to intervene in foreign exchange markets. For these economies, maintaining exchange rate stability often proxies broader macroeconomic stability, especially when inflation expectations are less firmly anchored. As a result, exchange rate management may play a more prominent role in their policy toolkit, even during periods of heightened global volatility.

But does the real-world experience validate this theoretical prediction? To explore this, we analyze the behavior of exchange rates in both IT and non-IT countries in the aftermath of the 2022 supply shock. Specifically, we apply the same event study regression framework as before, this time using the real effective exchange rate (REER) and nominal effective exchange rate (NEER) as the dependent variables:

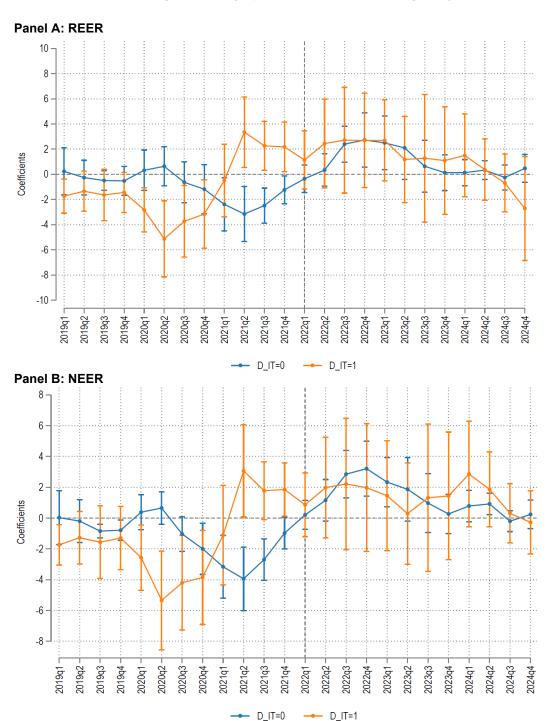
$$ER_{it} = \alpha_t + \beta_t * IT_i + \lambda_i + \epsilon_{it}$$

where *ER* is the exchange rate (REER or NEER). Out of 89 countries in the sample, only 58 have data on REER and 61 have data on NEER from IFS. Out of 36 countries, 26 are IT and 10 are non-IT countries.

Figure 9 presents the results. Beginning with the real effective exchange rate (REER), both IT and non-IT countries experienced relative appreciation following the 2022 shock, with no statistically significant difference in their trajectories (panel A). This challenges the standard expectation that IT countries would exhibit greater exchange rate flexibility, potentially including depreciation in response to external pressures. Instead, the dynamics was broadly symmetric across groups, offering no evidence that IT regimes allowed the exchange rate to absorb more of the shock.

A caveat is that exchange rate flexibility is best assessed relative to the equilibrium rate, which is difficult to gauge during the pandemic when both domestic and foreign economies were subject to large shocks. Our analysis instead focuses on relative exchange rate dynamics across countries, controlling for country-specific fixed effects, which provides informative cross-country comparisons.

Fig. 9. Event study analysis: Evolution of real and nominal effective exchange rates in IT and non-IT countries after controlling for country-specific unobserved heterogeneity



The nominal effective exchange rate (NEER) paints a similar picture in direction, though with more variation, in particular among IT countries (panel B). The appreciation trend persisted through late 2023, but the wide confidence intervals around the IT estimates suggest considerable heterogeneity. While some IT countries appeared to allow greater movement, others likely intervened more directly or were influenced by capital flows and external financial conditions beyond the control of domestic policy.

The broader takeaway is that as with inflation expectations and policy rates, exchange rate behavior did not conform neatly to theoretical predictions. IT regimes did not consistently exhibit greater flexibility, nor did they use the exchange rate as a primary adjustment tool.

This reinforces a central theme of the paper: while IT provides a structured policy framework, it does not ensure textbook outcomes amid global supply shocks. In theory, IT central banks prioritize inflation and allow currencies to float. In practice, exchange rate movements reflect a complex interplay of global capital flows, shifting terms of trade, and investor sentiment.

IV. Conclusions

IT has always represented more than a technical approach to monetary policy. It has functioned as a signal of a central bank's commitment to transparency, discipline, and long-term price stability. Historically, it performed well in environments where inflationary pressures were primarily rooted in domestic demand, fiscal imbalances, or unanchored expectations.

In recent years, however, a different inflationary environment has emerged. The post-pandemic period was marked by a series of global supply shocks, ranging from trade disruptions and energy price spikes to food shortages, leading to an inflation surge not directly tied to overheating demand. This episode posed a significant test for IT frameworks.

This paper examines how IT central banks performed during the global supply shock compared to non-IT peers. The results are mixed. Inflation outcomes were not consistently better in IT countries, and long-term inflation expectations remained broadly anchored across both groups, particularly at longer horizons. The disinflation that began in 2023 came with similar output costs across regimes. While IT central banks, on average, tightened monetary policy more swiftly and decisively, these efforts did not achieve clearly superior results.

Notably, several non-IT central banks have managed to bring inflation under control quickly, despite lacking a formal inflation target. This raises the question of whether credibility depends on the existence of a formal IT framework, or simply on the presence of a credible nominal anchor, regardless of its specific form. Similarly, central bank independence, while critical, also did not consistently predict better outcomes. This underscores the complexity of the tradeoff between credibility and responsiveness.

These results should not be interpreted as a rejection of IT. Recent BIS analysis (Hernández de Cos, 2025) emphasizes that central bank credibility rests on mandate clarity, independence, and accountability, rather than on adherence to a single rule. Our findings should therefore be read as guidance under uncertainty, not as prescriptive dogma. Rather, they point to the value of reflecting on how the framework performs in an environment where supply-side forces play a more prominent role in driving inflation. As macroeconomic conditions evolve, the traditional IT framework, which performed well in a demand-driven inflation environment, may perhaps benefit from thoughtful adaptation to better address emerging challenges. Taken together, the evidence from Bernanke and Blanchard, Gorodnichenko, and the BIS points to a broader consensus: frameworks designed around fixed-rule Taylor formulations are insufficient. The 2022 episode starkly illustrates why judgment-based, flexible frameworks are indispensable, as rigid benchmarks tend to break down when

multiple large shocks overlap (albeit with the caveat that poor judgment can carry severe inflationary consequences as well). Credibility in the next era will require contingent strategies that are robust to regime switches, persistent supply disturbances, and unanchored expectations.

Three questions emerge for future research:

- What anchors inflation expectations when there is no formal target? Understanding how expectations
 are formed during supply-driven inflation episodes, and the role of central bank communication, as well
 as credibility, is essential.
- How should monetary policy respond to inflation driven by supply shocks rather than demand excess? The 2022 experience suggests that front-loaded tightening does not guarantee improved inflation outcomes, raising questions about the appropriate pace and scale of response.
- What frameworks are best suited for a world shaped by persistent supply shocks? Shocks related to climate change, geopolitical fragmentation, and trade realignments may require a more adaptive and robust approach to monetary policy.

Overall, central banks today operate in a more complex and uncertain environment than during the earlier decades of IT. While the IT framework continues to offer important benefits, its application may need to adapt to the growing challenges posed by more frequent, global, and persistent supply-side shocks.

References

- Acemoglu, Daron, and James A. Robinson. 2012. Why Nations Fail: The Origins of Power, Prosperity, and Poverty. New York: Crown Business.
- Alam, Zohair, Adrian Alter, Jesse Eiseman, Gaston Gelos, Heedon Kang, Machiko Narita, Erlend Nier, and Naixi Wang. 2019. "Digging Deeper--Evidence on the Effects of Macroprudential Policies from a New Database," IMF Working Paper, No. 19/66.
- Avalos, Fernando; Ryan Banerjee; Matthias Burgert; Boris Hofmann; Cristina Manea; and Matthias Rottner. Commodity Prices and Monetary Policy: Old and New Challenges. BIS Bulletin No. 96 (January 8, 2025). Bank for International Settlements. https://www.bis.org/publ/bisbull96.pdf
- Ball, Laurence, and Niamh Sheridan. 2005. "Does Inflation Targeting Matter?" In *The Inflation Targeting Debate*, edited by Ben S. Bernanke and Michael Woodford, 249–276. Chicago: University of Chicago Press.
- Bank for International Settlements (BIS). 2023. *Global Supply Chain Risks and Inflation*. Available at: https://www.bis.org/
- Batini, Nicoletta, and Douglas Laxton. 2007. "Under What Conditions Can Inflation Targeting Be Adopted? The Experience of Emerging Markets." In *Monetary Policy under Inflation Targeting*, edited by Frederic S. Mishkin and Klaus Schmidt-Hebbel, 1–38. Santiago: Central Bank of Chile.
- Benigno, Pierpaolo, and Gauti B. Eggertsson. 2024. "It's Baaack: The Surge in Inflation in the 2020s and the Return of the Non-Linear Phillips Curve." NBER Working Paper 31197, April. https://www.nber.org/papers/w31197
- Bernanke, Ben, and Olivier Blanchard. 2023 'What Caused the US Pandemic-Era Inflation?' *Peterson Institute* for International Economics Working Paper 23-4, https://www.piie.com/publications/working-papers/what-caused-us-pandemic-era-inflation
- ——2024. 'An Analysis of Pandemic-Era Inflation in 11 Economies'. *Peterson Institute for International Economics Working Paper 24-11*, 2024a. https://www.piie.com/publications/working-papers/analysis-pandemic-era-inflation-11-economies
- Bernanke, Ben S., Thomas Laubach, Frederic S. Mishkin, and Adam S. Posen. 1999. *Inflation Targeting: Lessons from the International Experience*. Princeton, NJ: Princeton University Press.
- Blanchard, Olivier, Giovanni Dell'Ariccia, and Paolo Mauro. 2010. "Rethinking Macroeconomic Policy." *IMF Staff Position Note*. Available at: https://www.imf.org/external/pubs/ft/spn/2010/spn1003.pdf
- Buiter, Willem, 2023. "The widespread failure of central banks to control inflation," *Economic Affairs*, Wiley Blackwell, vol. 43(1), pages 2-31, February.
- Carstens, Agustín. 2022. "A Story of Tailwinds and Headwinds: Aggregate Supply and Macroeconomic Stabilisation." Speech at the Jackson Hole Economic Symposium, August 26. Basel: Bank for International Settlements. https://www.bis.org/speeches/sp220826.htm
- Carstens, Agustín. 2023. "Post-Pandemic Inflation Dynamics." *BIS Speeches*. Available at: https://www.bis.org/speeches/

- Carvalho, Vasco M., Makoto Nirei, Yukiko Saito, and Alireza Tahbaz-Salehi. 2021. "Supply Chain Disruptions: Evidence from the Great East Japan Earthquake." *Quarterly Journal of Economics*.
- Clarida, Richard, Jordi Galí, and Mark Gertler. 1999. "The Science of Monetary Policy: A New Keynesian Perspective." *Journal of Economic Literature* 37 (4): 1661–1707.
- Cobham, David. 2021. "A Comprehensive Classification of Monetary Policy Frameworks in Advanced and Emerging Economies." *Oxford Economic Papers* 73 (1): 2–29.
- Coibion, Olivier and Gorodnichenko, Yuriy. 2025. "Inflation, Expectations and Monetary Policy: What Have We Learned and to What End?" NBER Working Paper No. 33858 (Cambridge, Massachusetts: National Bureau of Economic Research). https://www.nber.org/papers/w33858
- D'Acunto, Francesco, Fiorella De Fiore, Damiano Sandri, and Michael Weber. 2025. "A Global Survey of Household Perseptions and Expectations", *BIS Quarterly Review* (September): 33–48. https://www.bis.org/publ/qtrpdf/r qt2509c.pdf
- Dao, Mai, Pierre-Olivier Gourinchas, Daniel Leigh, and Prachi Mishra. 2024. "Understanding the International Rise and Fall of Inflation Since 2020." *Journal of Monetary Economics*. https://www.sciencedirect.com/science/article/pii/S0304393224001119
- De Carvalho Filho, Irineu. 2010. "Inflation Targeting and the Crisis: An Empirical Assessment." *IMF Working Paper* WP/10/45. Available at:

 https://www.imf.org/en/Publications/WP/Issues/2016/12/31/Inflation-Targeting-and-the-Crisis-An-Empirical-Assessment-23679
- ——. 2011. "Month Later: How Inflation Targeters Outperform Their Peers in the Great Recession." *The B.E. Journal of Macroeconomics* 11 (1). Available at: https://www.degruyter.com/view/j/bejm
- Dreher, Axel, Jan-Egbert Sturm and Jakob de Haan. 2010. "When is a Central Bank Governor Replaced? Evidence Based on a New Data Set." *Journal of Macroeconomics*, 32: 766-781
- European Central Bank (ECB). 2021. "ECB's Governing Council Approves Its New Monetary Policy Strategy." *Press Release*, July 8. Available at: https://www.ecb.europa.eu/press/pr/date/2021/html/ecb.pr210708~dc78cc4b0d.en.html
- Food and Agriculture Organization (FAO). 2023. *Climate Change and Food Security*. Available at: https://www.fao.org/
- Fouejieu, Armand. 2013. "Coping with the Recent Financial Crisis: Did Inflation Targeting Make Any Difference?" *International Economics* 133: 72–92. Available at: https://www.sciencedirect.com/
- Fry-McKibbin, Renée, and Chuliang Wang. 2014. "Does Inflation Targeting Outperform Alternative Policies during Global Downturns?" *CAMA Working Paper* 64/2014. Available at: https://cama.crawford.anu.edu.au/publication/working-papers/
- Greene, Megan. "The Supply Side Demands More Attention." Speech delivered at the Adam Smith Business School, University of Glasgow, 24 September 2025. Bank of England. Accessed [date you accessed]. https://www.bankofengland.co.uk/speech/2025/september/megan-greene-university-of-glasgow-business-schoolG30. 2025. "The Federal Reserve Monetary Policy Framework Review: A Comprehensive Approach to Improve Robustness" available at: https://group30.org/publications/detail/5460

- Hofmann, Boris, Cristina Manea, and Benoît Mojon. 2024. "Targeted Taylor Rules: Monetary Policy Responses to Demand- and Supply-Driven Inflation." *BIS Quarterly Review* (December): 17–33. https://www.bis.org/publ/qtrpdf/r qt2412d.pdf
- Hernández de Cos, P. 2025. 'Lessons for the European Central Bank from the 2021- 2023 inflationary episode", *Breugel Working Paper 05/2025* Available at: https://www.bruegel.org/sites/default/files/2025-05/WP%2007%202025.pdf
- Hernández de Cos, P. 2025. 'Delivering on Central Bank Mandates in a Changing World,' speech delivered at the Bank of Mexico 100th Anniversary Conference, Mexico City, August 26, https://www.bis.org/speeches/sp260825.pdf International Energy Agency (IEA). 2024. *Global Energy Outlook: Transition Challenges*. Available at: https://www.iea.org/
- International Monetary Fund (IMF). 2023. *World Economic Outlook: Inflation and Global Risks*. Available at: https://www.imf.org/en/Publications/WEO
- Kammer, Alfred. 2024. "Central Banking in a Highly Complex World." *IMF News*. Available at: https://www.imf.org/en/News
- Mishkin, Frederic S., and Michael T. Kiley. 2025. "The Evolution of Inflation Targeting from the 1990s to the 2020s: Developments and Challenges." *NBER Working Paper* No. 33585. Available at: https://www.nber.org/papers/w33585
- Mishkin, Frederic S., and Klaus Schmidt-Hebbel. 2007. "Does Inflation Targeting Make a Difference?" In *Monetary Policy under Inflation Targeting*, edited by Frederic S. Mishkin and Klaus Schmidt-Hebbel, 291–372. Santiago: Central Bank of Chile.
- Nakamura, Emi, Jon Steinsson, and Venance Riblier. 2025. "Beyond the Taylor Rule." *NBER Working Paper* No. 34200. Available at: https://www.nber.org/papers/w34200
- Nuño, Galo, Philipp Renner, and Simon Scheidegger. *Monetary Policy with Persistent Supply Shocks*. CESifo Working Paper No. 11463. Munich: CESifo, November 2024. Available at SSRN: https://ssrn.com/abstract=5045497
- Powell, Jerome H. 2020. "New Economic Challenges and the Fed's Monetary Policy Review." *Speech at the Jackson Hole Economic Policy Symposium*. Federal Reserve. Available at: https://www.federalreserve.gov/newsevents/speech/powell20200827a.htm
- Romelli, D., 2022. The political economy of reforms in central bank design: evidence from a new dataset. *Economic Policy*, 37(112), 641-688
- Romelli, D., 2024. Trends in central bank independence: a de-jure perspective. BAFFI CAREFIN Centre Research Paper No. 217
- Romer, David. 2013. Advanced Macroeconomics. 4th ed. New York: McGraw-Hill.
- Stiglitz, Joseph E. 2008. "The Failure of Inflation Targeting." *Project Syndicate*, May 2008. Available at: https://www.project-syndicate.org/commentary/the-failure-of-inflation-targeting
- Svensson, Lars E.O. 1997. "Inflation Forecast Targeting: Implementing and Monitoring Inflation Targets." *European Economic Review* 41 (6): 1111–1146.
- United Nations (UN). 2023. World Population Prospects 2023. Available at: https://www.un.org

- Walsh, Carl E. 2009. "Inflation Targeting: What Have We Learned?" *International Journal of Central Banking* 5 (2): 29–82.
- Woodford, Michael. 2003. *Interest and Prices: Foundations of a Theory of Monetary Policy*. Princeton, NJ: Princeton University Press.
- World Bank. 2023. Inflation Dynamics in Emerging Markets. Available at: https://www.worldbank.org/
- World Economic Forum (WEF). 2024. Global Risks Report. Available at: https://www.weforum.org

Annex I

Table 1. List of IT and non-IT countries

| IT countries | Non-IT countries | | | |
|------------------------|------------------------|--|--|--|
| 1 Albania | 1 Algeria | | | |
| 2 Armenia (Strong) | 2 Azerbaijan | | | |
| 3 Australia | 3 Bahamas | | | |
| 4 Brazil | 4 Bahrain | | | |
| 5 Canada (Strong) | 5 Belarus | | | |
| 6 Chile | 6 BosniaandHerzegovina | | | |
| 7 Colombia | 7 Botswana | | | |
| 8 Czechia (Strong) | 8 BruneiDarussalam | | | |
| 9 DominicanRepublic | 9 Bulgaria | | | |
| 10 Georgia (Strong) | 10 CapeVerde | | | |
| 11 Hungary | 11 China | | | |
| 12 Iceland (Strong) | 12 CostaRica | | | |
| 13 India | 13 Denmark | | | |
| 14 Indonesia (Strong) | 14 Ecuador | | | |
| 15 Israel (Strong) | 15 ElSalvador | | | |
| 16 Japan (Strong) | 16 Fiji | | | |
| 17 Kazakhstan | 17 HongKongSAR | | | |
| 18 Korea (Strong) | 18 Jamaica | | | |
| 19 Mexico (Strong) | 19 Jordan | | | |
| 20 NewZealand (Strong) | 20 Kuwait | | | |
| 21 Norway | 21 Macedonia | | | |
| 22 Paraguay (Strong) | 22 Malaysia | | | |
| 23 Peru (Strong) | 23 Mauritius | | | |
| 24 Philippines | 24 Mongolia | | | |
| 25 Poland | 25 Montenegro | | | |
| 26 Romania (Strong) | 26 Morocco | | | |
| 27 Russia (Strong) | 27 Oman | | | |
| 28 Serbia (Strong) | 28 SaintKittsAndNevis | | | |
| 29 SouthAfrica | 29 SaudiArabia | | | |
| 30 Sweden | 30 Singapore | | | |
| 31 Thailand | 31 Switzerland | | | |
| 32 UnitedKingdom | 32 Tonga | | | |
| 33 Uruguay (Strong) | 33 TrinidadandTobago | | | |
| | 34 Tunisia | | | |
| | 35 UnitedArabEmirates | | | |
| | 36 UnitedStates | | | |
| | 37 Vietnam | | | |

Source: IMF AREAER, 2023 vintage, which is based on the de jure classification of monetary policy regimes. From the initial sample of 40 IT countries in the AREAER we have excluded Finland and Spain given that they have adopted Euro since then. In addition, we have excluded Ghana, Guatemala, Moldova, Turkiye and Uganda, since they have experienced very high annual inflation rates (more than 10 percent) before the global supply shock which casts doubt on their de facto IT implementation. Ukraine is removed from the IT sample given the exceptional wartime circumstances and Euro Area is removed from the sample since it is a special arrangement consisting of a group of countries making it incompatible with the rest of the sample.

Table 2. Variable definition and sources

| Variable | Definition | Sources | | |
|--------------|--|---|--|--|
| infl | Growth in CPI index, y/y, percent (measured as log difference) | IMF IFS, OECD, Worldbank | | |
| IT | Dummy: =1 for IT countries | IMF AREAER | | |
| CBI de jure | Dummy: =1 if country's Central Bank Independence score was above average in 2022 | Romelli (2022, 2024) | | |
| CBI de facto | Dummy: =1 if CB Governor turnover happened before the official end of term at least once during 2017-2022 | Dreher, Sturm, and De Haan (2010), updated | | |
| MP | Dummy: = 1 if country had a higher than average number of cumulative macropru measures for 17 indicators implemented in 2022 | IMF iMaPP Database, Alam and others (2019) | | |
| POST | Dummy: =1 for the post supply shock period (2022:Q1 - 2024:Q4) | Authors | | |
| E[infl] | Inflation expectations (current year, 1-, 2-, 5-, and 10-years ahead), percent | Consensus Forecast | | |
| pr | CB policy rates, percent | LSEG | | |
| mmr | Money market rates, percent | IMF IFS | | |
| gr | GDP growth, y/y, percent | IMF IFS | | |
| NEER | Nominal effective exchange rate growth, y/y, percent | IMF IFS | | |
| REER | Real effective exchange rate growth, y/y, percent | IMF IFS | | |

Source: Authors.

Table 3. Descriptive statistics

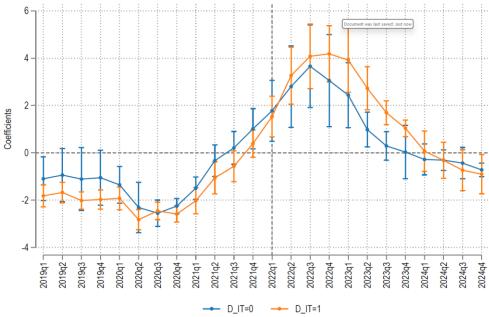
| Variable | Mean | Std. dev. | Min | Max |
|--|------|-----------|--------|-------|
| Actual inflation | 3.90 | 3.57 | -3.26 | 22.64 |
| Inflation forecast - current year | 3.95 | 3.24 | -1.29 | 21.78 |
| Inflation forecast - next year | 3.12 | 1.74 | 0.04 | 13.57 |
| Inflation forecast - 2 years | 2.85 | 1.25 | 0.54 | 9.19 |
| Inflation forecast - 5 years | 2.79 | 1.01 | 0.77 | 6.95 |
| Inflation forecast - 10 years | 2.73 | 0.93 | 0.77 | 6.95 |
| Policy rate | 4.52 | 3.89 | -0.10 | 25.00 |
| Money market date | 4.01 | 3.40 | -0.68 | 15.81 |
| Output growth | 2.26 | 5.74 | -29.70 | 42.70 |
| Nominal effective exchange rate (NEER) | 0.70 | 6.46 | -45.92 | 33.81 |
| Real effective exchange rate (REER) | 0.28 | 6.57 | -47.15 | 39.08 |
| IT dummy | 0.47 | 0.50 | 0 | 1 |
| Central Bank Independence dummy (de jure) | 0.50 | 0.50 | 0 | 1 |
| Central Bank Independence dummy (de facto) | 0.76 | 0.43 | 0 | 1 |
| Macroprudential regulation tightness dummy | 0.46 | 0.50 | 0 | 1 |

Source: Authors, based on the sources mentioned in Table 2.

Figure A.1. Advanced economies

Event study analysis: Evolution of average inflation in IT and non-IT countries

Panel A: Average inflation in IT and non-IT countries



Panel B: Difference between average inflation in IT and non-IT countries

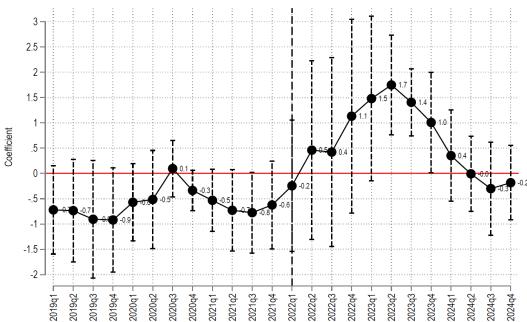
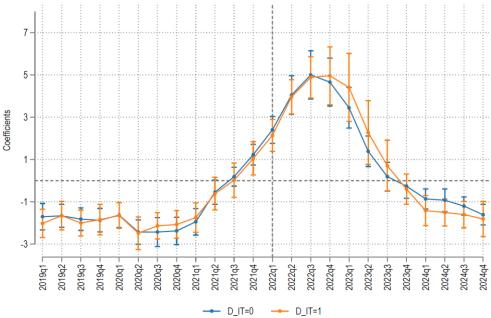


Figure A.2. Emerging economies

Event study analysis: Evolution of average inflation in IT and non-IT countries

Panel A: Average inflation in IT and non-IT countries



Panel B: Difference between average inflation in IT and non-IT countries

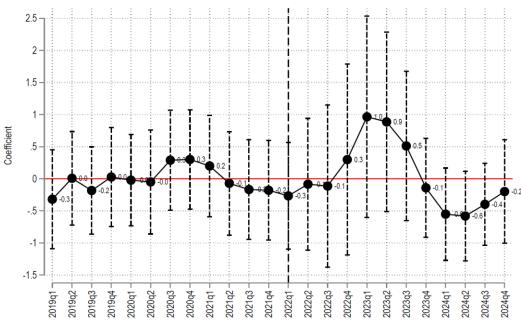
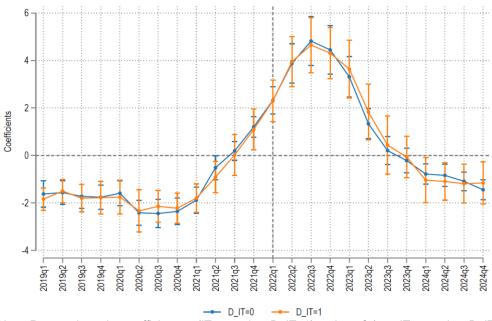


Figure A.3. Strong IT countries

Event study analysis: Evolution of average inflation in IT and non-IT countries

Panel A: Average inflation in IT and non-IT countries



Panel B: Difference between average inflation in IT and non-IT countries

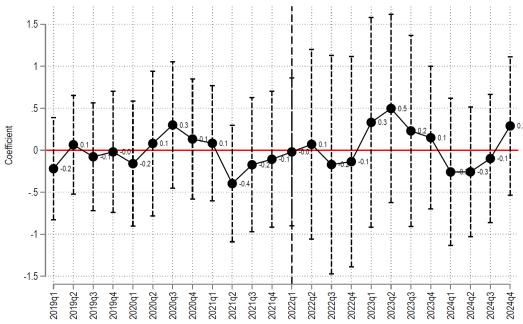
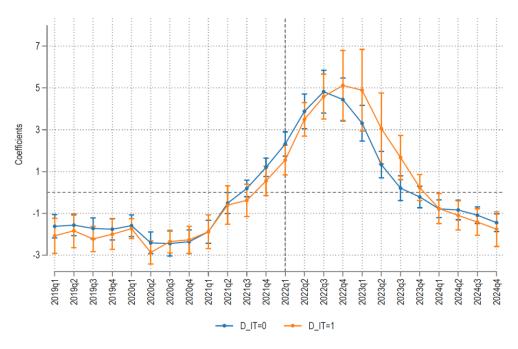


Figure A.4. Lite IT countries

Event study analysis: Evolution of average inflation in IT and non-IT countries

Panel A: Average inflation in IT and non-IT countries



Panel B: Difference between average inflation in IT and non-IT countries

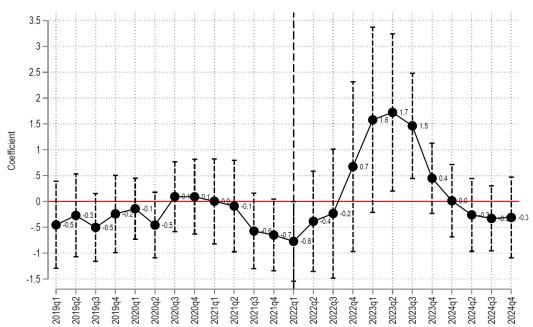
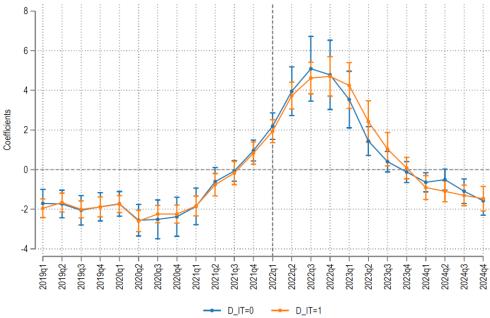


Figure A.5. Using only 19 non-IT countries with currency pegs Event study analysis: Evolution of average inflation in IT and non-IT countries

Panel A: Average inflation in IT and non-IT countries



Panel B: Difference between average inflation in IT and non-IT countries

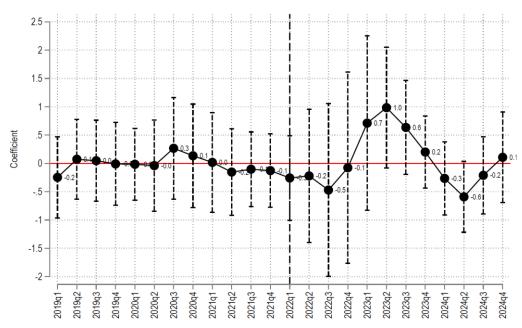
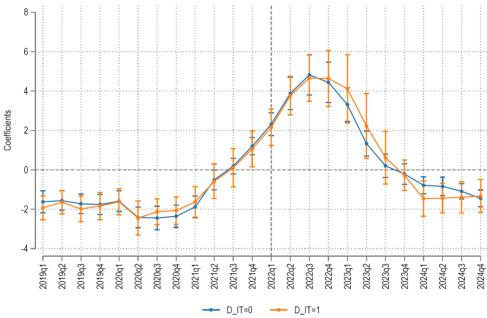


Figure A.6. Using only 18 IT countries up to 3-years inflation target horizon Event study analysis: Evolution of average inflation in IT and non-IT countries

Panel A: Average inflation in IT and non-IT countries



Panel B: Difference between average inflation in IT and non-IT countries

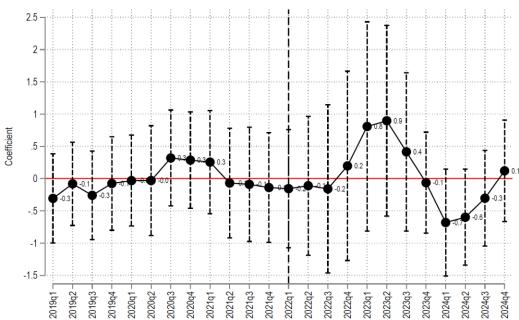
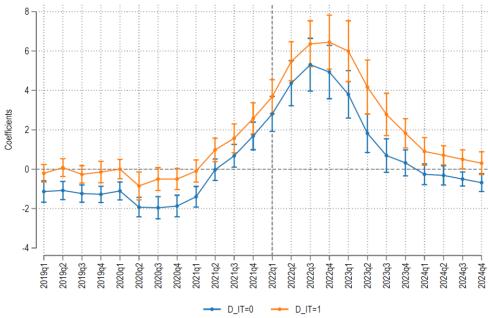


Figure A.7. Using inflation differentials from explicit (IT) and implicit (non-IT) inflation targets Event study analysis: Evolution of average inflation in IT and non-IT countries

Panel A: Average inflation in IT and non-IT countries



Panel B: Difference between average inflation in IT and non-IT countries

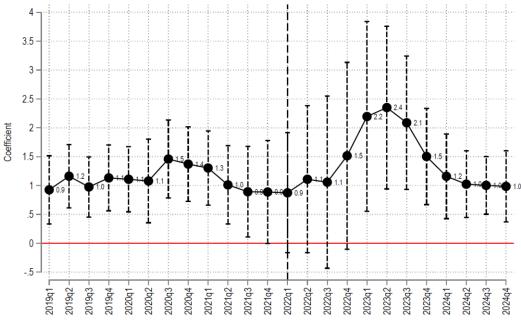


Figure A.8. Revised sample: Treating U.S., Switzerland, and Singapore as IT countries Event study analysis: Evolution of average inflation in IT and non-IT countries

Panel A: Average inflation in IT and non-IT countries 6 Coefficients 2 0 2021q3 2021q4

- D_IT=0

Note: Reported are the coefficients α (IT countries, D IT=1) and $\alpha + \beta$ (non-IT countries, D IT=0) from the regression and their 95% confidence intervals based on robust standard errors. Dotted line denotes the supply shock.

→ D_IT=1

