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Inflation Beyond Borders: A Research Agenda

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ABSTRACT

Prevailing theories explain inflation as a domestic process disturbed by exogenous shocks, an assumption that struggles to account for the strong cross-country synchronization of inflation visible both during the Great Moderation and in the post-2021 surge. We challenge this methodological nationalism and argue that domestic price dynamics are constrained or enabled by the international environment, through the distribution of power, monetary and financial institutions, and the interaction among economies. We distinguish our position from the "globe-centric" literature (Borio and Filardo, 2007; Auer et al., 2017): rather than rescaling a closed-economy Phillips curve to a single world economy, we treat inflation as emerging from the interaction among distinct but open economies. We show that the three canonical frameworks (monetarist, real-market, and conflict) remain analytically useful once recast at the international level, but imply very different cause-effect relations. We illustrate three candidate mechanisms: the erosion of labor's bargaining power, the asymmetric adjustment of the international monetary system, and financialization and global liquidity, with a review of the

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literature and descriptive evidence. We make no claim to causal identification; the paper sets out a research agenda and a set of falsifiable hypotheses for future work.

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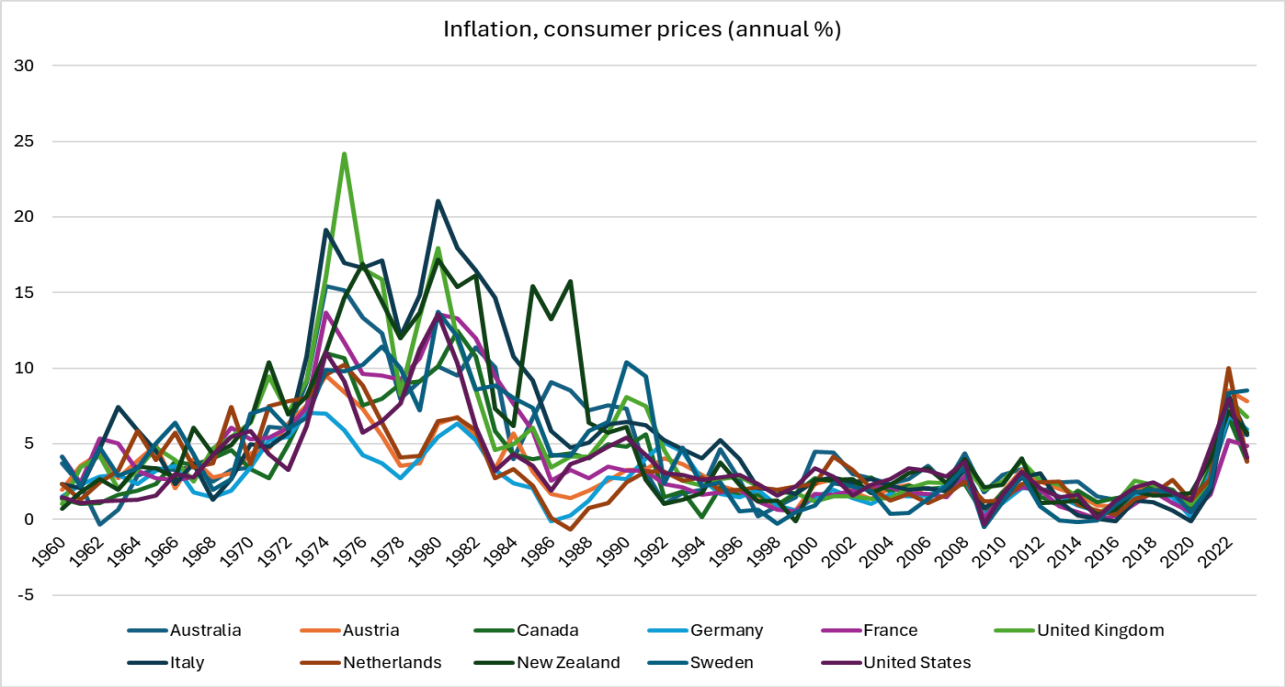
1. Introduction and motivation

Between the 1990s and the 2020s, inflation ceased to be a central concern in advanced economies and even in many low- and middle-income countries. Following the Global Financial Crisis (GFC), policy interest rates were held close to (sometimes below) zero across high-income economies, yet inflation frequently undershot central bank targets. Then, with the Covid-19 crisis and the war in Ukraine, inflation spiked globally, reigniting political and academic debates. These debates, by and large, overlook that both the long period of "great moderation" (or secular stagnation) and the sudden post-Covid inflationary surge display remarkable cross-country correlation.

Conventional economic theories assign the task of controlling inflation to national monetary authorities, while in theory central banks treat the international environment as an exogenous constraint. Although an important and growing literature recognizes global factors, these are generally incorporated as common shocks or as features of an enlarged global economy rather than as interactions among distinct economies. A relatively limited literature does consider the cross-border spread of inflation (Altansukh *et al*., 2017) but frames it as the result of unexpected shocks simultaneously affecting several countries or of "contagion". Such approaches remain largely compatible with mainstream frameworks that conceptualize inflation as a perturbation of equilibrium, typically demand-pull in nature, and grounded in an explicit or implicit theory of exogenous money. Global shocks, such as the pandemic or energy price spikes, are indeed plausible causes of inflation spikes. While clearly important, they do not by themselves seem sufficient to explain the sustained cross-country synchronization of inflation observed well before the Covid-19 pandemic and Russia's invasion of Ukraine. This suggests that explanations relying exclusively on exogenous shocks leave an important part of the pre-pandemic synchronization unexplained. The view that inflation is mostly driven by domestic factors and occasionally global shocks is a consequence of established theoretical paradigms and may partly reflect the academic centrality of the USA: a large economy less exposed to foreign shocks than most other countries, and with the unique feature of its currency being the prime world reserve asset, which among other things implies that a large share of its imports are invoiced in its own currency. For all other countries, inflation is more obviously related to the international environment, at least because 'imported inflation' may be caused by exchange rate movements that affect the price of imports.

But there is more to international inflation than simply higher prices of imports. Indeed, the recent experience echoes the 1970s, when inflation spiked internationally for causes that are still the object of debate (the oil price shocks, Keynesian policies, de-anchoring of expectations, etc.). Then, as the Bretton Woods system collapsed, mainstream theory held that flexible exchange rates would insulate the world economy from idiosyncratic shocks to single countries (D'Ippoliti and Roncaglia, 2023). In practice, then as today, international monetary arrangements have behaved differently, resulting in strong co-movement of inflation across countries as can be seen from Figure 1 (see Figures S1 and S2 in the supplementary material).

Figure 1 – Synchronization of inflation in a sample of countries (consumer price indexes, annual rate of change, 1960-2023).



Source: authors' elaboration on World Bank cross-country database of inflation.

The actual working of the international monetary system, which differs from standard theoretical expectations, may therefore represent one important explanation for the observed synchronization of inflation over time. But new trends too—at least globalization and financialization of the economy—must enter an explanation of recent events.

In this work, we ask to what extent it is meaningful to speak of 'international inflation', in the sense of a cohesive phenomenon (following Biasco, 1979) where the interaction among open economies is itself a cause or a constraint on inflation. Put simply, we contend that the extent to which domestic inflationary pressures translate into sustained inflation depends importantly on the international context, which may constrain or enable their manifestation. Otherwise, adjustment occurs through quantities such as income and output rather than prices, except in the extreme circumstances of episodes of hyperinflation, which we do not consider here.[1] Aside from those extreme cases, inflation must be understood as an international story.

[1] Hyperinflation is a case where arguably, beyond a certain point, quantitative differences become qualitative, and distinct and separate theoretical approaches are necessary. Indeed, to demarcate inflation from hyperinflation a rule of thumb proposed by Heymann and Leijonhufvud (1995) could be useful: we talk about the latter phenomenon when

At the most abstract level, macroeconomic models implicitly or explicitly consider three markets: the labor market, on which functional income distribution depends; the real market for goods and services, that in the Post-Keynesian, New Keynesian, and New Consensus approaches determines the level of aggregate demand and therefore the level of activity; and the money and financial market, determining the nominal interest rate and asset prices. Correspondingly, at a meta-theoretical level we can classify theories of inflation in three groups as shown in table 1: conflict inflation, real market (either cost-push or demand-pull), and monetarist. Evidently, in the actual explanation of concrete cases more than one approach could be employed.

Table 1 – Meta-theoretical approaches to inflation

	Domestic inflation	*Example culprits*	**International inflation**	*Example culprits*
Labor market	Conflict inflation; wage–price spirals	Wage bargaining; markups	Institutions and distribution	Capital and labor mobility; industrial policy
Real market	Demand-pull / cost-push	Fiscal policy; exogenous shocks	Globalization	macro-imbalances; GVC; market forms
Money & finance	Monetarist / financial channels	Monetary policy; credit cycles	Financialization	Global liquidity; Global Financial Cycle

In this work, we argue that the same tripartite classification helps to study inflation as an international phenomenon, provided that it is interpreted as a heuristic rather than as a set of mutually exclusive theories. Each family of theories locates the origin of inflationary pressure in one market; none of them, in a world of endogenous money and nominal rigidities, can explain why a change in relative prices becomes a sustained rise in the general price level without appealing to the reactions of other agents. This is the insight of the conflict approach (Rowthorn, 1977; Hein, 2024): shocks to costs or to demand alter the distribution of income implied by existing prices, and inflation persists only where those who lose from the change can resist it by raising their own prices or wages. We share this diagnosis, and it is the thread that runs through the three mechanisms discussed below. We do not, however, take the further

market operators start considering monthly rather than yearly price changes. For this class of phenomena, Heymann and Leijonhufvud (1995) considered money creation as the central causal mechanism.

step of treating conflict within the labor market as the universal definition of inflation. The three markets identify different actors (workers and firms; surplus and deficit economies; financial intermediaries and end users), different instruments of resistance (wages; exchange rates and trade balances; liquidity and asset prices) and different margins of adjustment. Our claim is narrower: in each of the three markets, the capacity to shift or to resist adjustment is distributed across national borders, not only within them. Global value chains and capital mobility alter the relative fallback positions of capital and labor; the hierarchy of currencies and the asymmetry of balance of payments adjustment alter the relative positions of countries; global liquidity alters who sets the prices of commodities and financial assets. Inflation, in this reading, is the visible outcome of an internationally structured distribution of the power to adjust.

We cover one example for each market: institutions and regulation of the labor markets under capital mobility; persistent balance-of-payments asymmetries and price leadership in the real markets; financialization and global liquidity in the money and financial markets. Throughout, we distinguish three kinds of empirical material and label them respectively: *stylized facts*, which we take as established and which any theory of inflation must accommodate; *illustrative associations*, which are consistent with the mechanism we propose but do not claim that by themselves they provide a definite proof in the sense of discriminating it from alternative explanations; and *hypotheses*, which we state in a form that future work can test. Our aim is to outline a research agenda, and to be clear about what the evidence presented here can and cannot support.

Our argument proceeds as follows. Section 2 summarizes the inflation debate during and after Covid, focusing on high-income economies that attract the most attention from economists. Section 3 addresses imported inflation, typically discussed in relation to mid- and low-income countries. By presenting basic data trends and their interpretation in the literature, these sections show how inflation is often seen as a domestic issue or, at most, an exogenous shock from the external environment. Next, section 4 reviews evidence of inflation synchronization across countries and two emerging literatures on the international dimension of inflation, which still largely reflect a domestic framing. By contrast, sections 5, 6, and 7 develop our main argument through three mechanisms of international inflation. Section 8 concludes with suggestions for a research agenda on international inflation.

Our contribution is conceptual and agenda-setting rather than empirical. A growing literature already documents a dominant global factor in inflation (Ciccarelli and Mojon, 2010; Ha et al., 2023), and a "globe-centric" strand at the BIS holds that global slack drives domestic inflation (Borio and Filardo, 2007; Auer et al., 2017; Ascari and Fosso, 2024). That work, however, typically aggregates: it redefines the relevant "domestic" conditions at world scale, preserving the logic of the closed-economy model. We take a different route: we ask whether inflation is generated in the interaction between economies; whether, and to what extent, domestic inflationary pressures translate into prices depends on the international context, with adjustment otherwise falling on quantities (income and output).

2. The inflation debates in the advanced economies before and since Covid

After the GFC, central banks across advanced economies and in many emerging and developing ones pursued strongly expansionary monetary policies. Yet, inflation remained subdued in most countries; attention therefore shifted to the labor market. The coexistence of divergent national labor-market conditions with uniformly low inflation generated a debate on the flattening of the Phillips Curve (henceforth PC). Explanations included more credible monetary policy and lower price stickiness in goods markets (Occhino, 2019). Other accounts emphasized international influences, such as capital flows or the "China shock", but generally treated them as external factors acting on domestic labor markets (Eichengreen et al., 2021), rather than analyzing them as outcomes of persistent international institutional and financial arrangements. This domestic framing became even clearer in the debate on the post-Covid inflation surge.

From late 2021, inflation surged almost simultaneously across advanced and emerging economies. Once again, many influential interpretations framed international influences as exogenous shocks, particularly supply disruptions and energy price increases. The debate first focused on the real market, where the central issue became whether inflation was cost-push, demand-pull, or a combination of the two. Supply-side explanations emphasized global bottlenecks, disruptions in production networks, and energy prices, which were particularly relevant in Europe. These accounts typically linked inflation to the pandemic-induced reorganization of demand and supply, which generated shortages in intermediate inputs and sharp increases in transportation and energy costs. In contrast, demand-side explanations stressed large fiscal transfers and the release of accumulated savings during the pandemic, especially in the United States, where demand effects appear to have become more prominent over time (Bernanke and Blanchard, 2024; Ferguson and Storm, 2023).

While differing in emphasis, both perspectives interpret inflation as the result of shocks impinging on domestic economies. In the United States, this view crystallized into a relatively coherent "establishment narrative", which emphasized fiscal expansion and demand pressures as the primary drivers of inflation (Ferguson and Storm, 2023). For a fiscal-theory reading of the same episode, see Cochrane (2024). Even when more complicated explanations were proposed, such as a nonlinear Phillips curve (Harding et al., 2023), global dynamics continued to enter the reflections on inflation mainly as disturbances.

The conceptualization of endogenous mechanisms was typically confined to second-round effects, particularly wage–price spirals. In this sense, there is a convergence between mainstream approaches, which increasingly acknowledge distributive tensions (Lorenzoni and Werning, 2023), and more radical post-Keynesian conflict views (Hein, 2024), despite their different theoretical foundations. The conflict models are the most explicit on the international dimension: in Wildauer et al. (2023) and Hein (2024) an imported energy price rise sets off a conflict over the distribution of the real income loss, and inflation lasts as long as the conflict does; but the rest of the world enters only as the source of the shock, not as a party to the

conflict. On the whole, even when inflation is recognized as a global phenomenon, it is generally explained through domestic transmission mechanisms. Some authors describe the post-pandemic episode as a case of "sellers' inflation", in which supply shocks facilitated coordinated price increases across firms (Weber and Wasner, 2023). Others argue that rising margins partly reflected increases in the costs of intermediate inputs, particularly energy, rather than purely strategic pricing behavior (Lavoie, 2024; Hahn and Renault, 2024). In both cases, the underlying narrative continues to rely on exogenous shocks (whether sectoral or global) as the initial impulse. The role of distributional conflict is acknowledged, but typically as a mechanism that amplifies externally generated price pressures.

Finally, although the debate has largely focused on real and labor markets, monetary explanations have also re-emerged. Since the prolonged period of expansionary monetary policy after the GFC did not generate inflation, early discussions centered on whether central banks had reacted too slowly to the initial inflation surge. Subsequently, some authors argued that monetary policy itself may have contributed to inflation, either through long and variable lags or through nonlinear effects that make monetary expansion more impactful in high-inflation environments (Borio et al., 2024; Wieladek, 2023). Yet this shift too does not fundamentally change the framing of the problem. In these accounts, inflation dynamics are understood as fundamentally domestic, with monetary policy acting either as a delayed response or as an amplifying factor. Cross-country synchronization is still explained by common shocks or parallel policy responses.

In summary, although the recent inflation debate has recognized the simultaneity of inflation dynamics across countries, it has largely explained this phenomenon through symmetric shocks or synchronized domestic responses. What remains largely missing is the possibility that inflation emerges from the interaction among open economies themselves, as a structurally global phenomenon rather than the outcome of contemporaneous national processes.

3. Exchange-rate pass-through and the global structure of inflation

The open-economy dimension of inflation is the object of a separate and specialized literature that mostly focuses on low- and middle-income countries. It does not consider international inflation in our sense (as a cohesive phenomenon arising from the integration of different economies) but it certainly allows us to take a step further in terms of realism of the analysis. Indeed, a large empirical literature has examined the extent to which exchange-rate movements are transmitted into domestic prices (Krugman, 1979; Jašová *et al*., 2019; Gopinath *et al*., 2020; Wang *et al*., 2022). This literature typically finds that the exchange-rate pass-through (ERPT) is incomplete, varies across countries and over time, and exhibits asymmetry between depreciations and appreciations (Carrière-Swallow et al., 2025). More recent contributions have emphasized the role of global factors, such as commodity prices, global demand

conditions, and international financial cycles (Cesa-Bianchi *et al.*, 2024; Flaccadoro, 2024; Mirza *et al.*, 2023). These works typically focus on low-income economies, but imported inflation is increasingly investigated in high-income economies as well. Specifically, a number of contributions examine specific transmission mechanisms linking international conditions to domestic prices: Monacelli and Sala (2009) highlight the role of tradable goods as carriers of external shocks; Amiti et al. (2019) show how variable markups dampen the pass-through of international shocks to domestic prices; Forbes (2019) analyses the impact of globalization on national Phillips curves; and Kohlscheen and Moessner (2022) document the weakening of the relationship between labor costs and prices. More recent work emphasizes global supply chains and external shocks as key drivers of national inflation dynamics (Shapiro, 2024; Garrón *et al*., 2024). While these studies identify important transmission channels, they generally interpret international factors as external influences on an otherwise domestic inflation process. Against this background, the aim of this section is to assess the quantitative importance of exchange-rate movements relative to the broader common component in inflation dynamics.

As an illustrative exercise, we estimate a simple panel model of inflation dynamics using quarterly data. Quarterly frequency is adopted as the main specification, as pass-through mechanisms are unlikely to operate fully at the monthly level and the use of lower-frequency data is standard in the empirical literature (e.g. Campa and Goldberg, 2005; Choudhri and Hakura, 2006). Inflation is measured as the quarterly log change in the consumer price index, while exchange-rate movements are constructed so that positive values correspond to an appreciation of the domestic currency.

The baseline specification is:

$$\pi_{it} = \alpha + \beta_1 \Delta EX_{it} + \beta_2 \left(\Delta EX_{it} \times D_{it}^{A}\right) + \beta_3 D_{it}^{A} + \varepsilon_{it} \quad (1)$$

where π_{it} denotes inflation in country i at time t, ΔEX_{it} is the exchange-rate change (instantiated as the NEER in Table 2 and the bilateral US dollar exchange rate in Table S1 in the supplementary material), and D_{it}^{A} is a dummy variable equal to one in periods of appreciation. This specification allows the response of inflation to differ between depreciation and appreciation episodes. In particular, β_1 captures the effect of exchange-rate changes during depreciations, while the effect during appreciations is given by $\beta_1 + \beta_2$. We estimate a sequence of models, moving from simple pooled regressions to specifications including country and time fixed effects. Country fixed effects control for time-invariant structural differences across economies, while time fixed effects absorb common shocks or other shared time components affecting all countries simultaneously, such as global commodity price cycles, supply disruptions, and international financial conditions. This empirical analysis is based on a quarterly panel dataset covering a broad sample of advanced and emerging economies over the period 2000–2025. The sample includes major advanced economies as well as a range of emerging markets, ensuring substantial cross-country variation in inflation

regimes and exchange-rate dynamics (a full list of countries is reported in Table S2 in the supplementary material). The estimation sample comprises 62 countries and 6,061 country-quarter observations between 2000Q2 and 2025Q2.[2]

Exchange-rate movements are captured using the nominal effective exchange rate (NEER) and, in a complementary specification reported in Table S1, the bilateral exchange rate vis-à-vis the US dollar. To limit the influence of extreme observations, the sample excludes observations with unusually large inflation or exchange-rate changes (see notes below the table). Table 2 reports the results for the nominal effective exchange rate (NEER), which captures broad external exposure. In the benchmark specification, the average association is negative and statistically significant, but small: a depreciation of 1 percent is associated with an increase in quarterly inflation of about 0.07 percentage points, and the model explains little of the variance of inflation. Introducing asymmetry changes the picture: depreciation episodes are associated with substantially larger increases in inflation ($\beta_1 = -0.137$ in the pooled specification), while the positive interaction term indicates that appreciations have a much weaker effect. The implied marginal effects confirm the asymmetry. In the pooled specification, the appreciation effect ($\beta_1 + \beta_2$) is positive and significant, but small (0.047); once country fixed effects are included it becomes indistinguishable from zero, and it remains so with country and time fixed effects. By contrast, the effect of depreciations remains statistically significant throughout. In the preferred two-way fixed-effects specification, $\beta_1 = -0.089$ ($p < 0.01$), while the implied appreciation effect ($\beta_1 + \beta_2$) $= -0.002$ is not statistically different from zero ($p = 0.91$).

This pattern is consistent with strongly asymmetric exchange-rate pass-through: depreciations generate inflationary pressures, while appreciations do not produce a corresponding disinflationary effect. The appreciation dummy, which allows for an intercept shift between regimes, is not significant once fixed effects are included (the asymmetry lies in the slopes).[3] In the terms of Section 1, the exercise documents an illustrative association between contemporaneous exchange-rate changes and inflation, and we use the term pass-through in this descriptive sense.

[2] Country-by-country unit root tests reject non-stationarity for the exchange-rate change in nearly all countries and for inflation in about two thirds of them, with a median first-order autocorrelation of quarterly inflation of 0.34: both variables can be treated as stationary but persistent. Since inflation is serially correlated within countries, we report standard errors clustered by country; heteroskedasticity-robust standard errors are about half as large and would overstate precision.

[3] Two extensions, reported in Tables S3 and S4 of the supplementary material, qualify the picture. Pass-through is dynamic: with four lags of the exchange-rate change, the cumulative response after one year is about twice the contemporaneous one (−0.17), and the asymmetry is preserved (−0.25 for depreciations against −0.05 for appreciations). And the pooled coefficients hide heterogeneity: in the advanced economies the association is close to zero, in the emerging economies it is larger (−0.11) and clearly asymmetric.

Table 2 – Regression results for the exchange rate pass-through.

	(1)	(2)	(3)	(4)
ΔNEER	-0.071***	-0.137***	-0.069**	-0.089***
	(0.024)	(0.039)	(0.027)	(0.030)
ΔNEER × appreciation dummy		0.185***	0.073**	0.087**
		(0.047)	(0.032)	(0.038)
appreciation dummy		-0.069*	-0.037	-0.016
		(0.040)	(0.036)	(0.035)
Observations	6061	6061	6061	6061
R^2	0.025	0.049	0.203	0.410
Country FE	*no*	*no*	*yes*	*yes*
Time FE	*no*	*no*	*no*	*yes*
Appreciation effect: β1 + β2		0.047	0.004	-0.002
p-value Wald test: β1 + β2 = 0		0.020	0.823	0.910

*Notes: * p < 0.1, ** p < 0.05, *** p < 0.01*
Standard errors clustered by country in parentheses. Positive exchange-rate changes indicate appreciation. Quarterly CPI inflation (log change) is the dependent variable. Sample: 62 countries, 2000Q2–2025Q2. Observations with |inflation| > 10 or |exchange-rate change| > 20 are excluded.

At the same time, the inclusion of time fixed effects raises the explanatory power of the model from 0.05 to 0.41. This indicates that a large share of inflation variation is common across countries rather than tied to country-specific exchange-rate movements. The time effects capture this common component but do not identify its source. The remainder of the paper therefore explores one possible interpretation of the mechanisms underlying this common component, without claiming to provide definitive causal identification. In other words, inflation dynamics appear to be highly synchronized across countries, reflecting shared exposure to global price developments and macroeconomic conditions.

Taken together, these results suggest that while exchange-rate pass-through is present and asymmetric, its quantitative importance is limited relative to broader global factors. Exchange rates appear, in this exercise, to operate as a secondary channel, rather than as a dominant driver of inflation.

Overall, the empirical evidence appears to suggest a hierarchy in the correlates of inflation. Exchange-rate movements have a statistically detectable but quantitatively modest effect, which is asymmetric and largely driven by depreciation episodes. By contrast, common time effects (a common cross-country component) account for the bulk of inflation variation across countries.[4]

These preliminary findings are consistent with the broader literature documenting incomplete and asymmetric pass-through (Gopinath *et al*., 2020), but they also suggest that the importance of exchange-rate channels should not be overstated. They cast doubt on a narrow view of inflation in which domestic price dynamics are primarily driven by exogenous exchange-rate shocks. Rather than being a primary driver of inflation, exchange-rate pass-through appears as one component within a broader system shaped by global price dynamics and structural differences across economies.

To document these global price dynamics, the next section looks at the empirical synchronization of inflation across countries and reviews how existing literature has addressed this phenomenon to date.

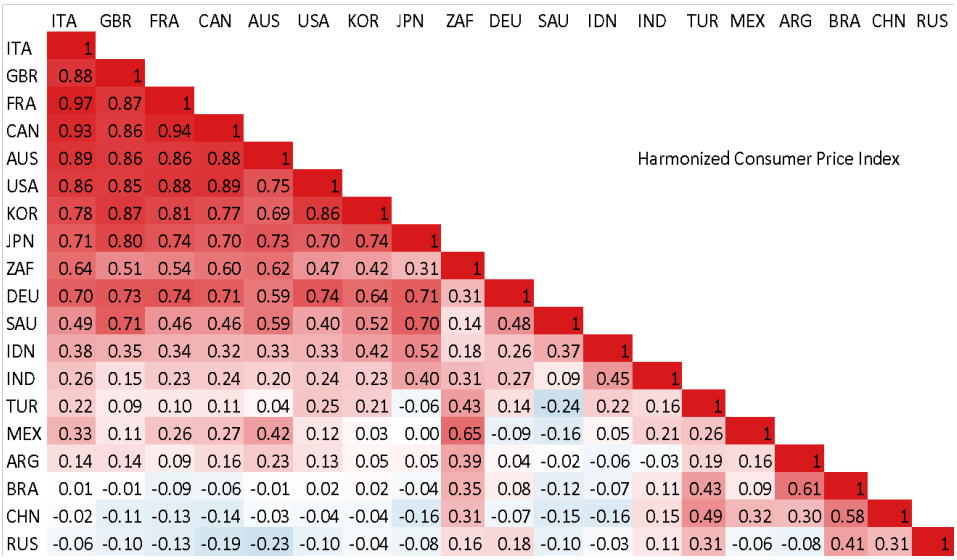
4. International inflation: evidence and debate

Global trends in inflation are easily visible in the data: as shown in Figure 1, inflation rates appear to be highly synchronized across countries. This suggests that inflation does not evolve independently within national borders but instead co-moves strongly across major economies. Without resorting to complex methods, simple correlations already illustrate the extent of this phenomenon. Figure 2 presents heatmaps of the pairwise correlations of annual inflation rates for G20 countries over the period 1970–2024, for three measures of inflation: the harmonized consumer price index (CPI), the producer price index (PPI), and the GDP deflator.[5] The purpose of this section is descriptive: to document the extent of this common component as a stylized fact, before considering alternative interpretations of its origin.

[4] The analysis was also replicated using bilateral exchange rates vis-à-vis the US dollar. The results, reported in Table S1 in the supplementary material, are broadly consistent with the NEER-based estimates but somewhat weaker and more sensitive to specification choices. In particular, while depreciations remain associated with higher inflation, the appreciation effect is small and only weakly significant in some specifications, confirming that bilateral exchange-rate movements provide only a partial and less robust account.

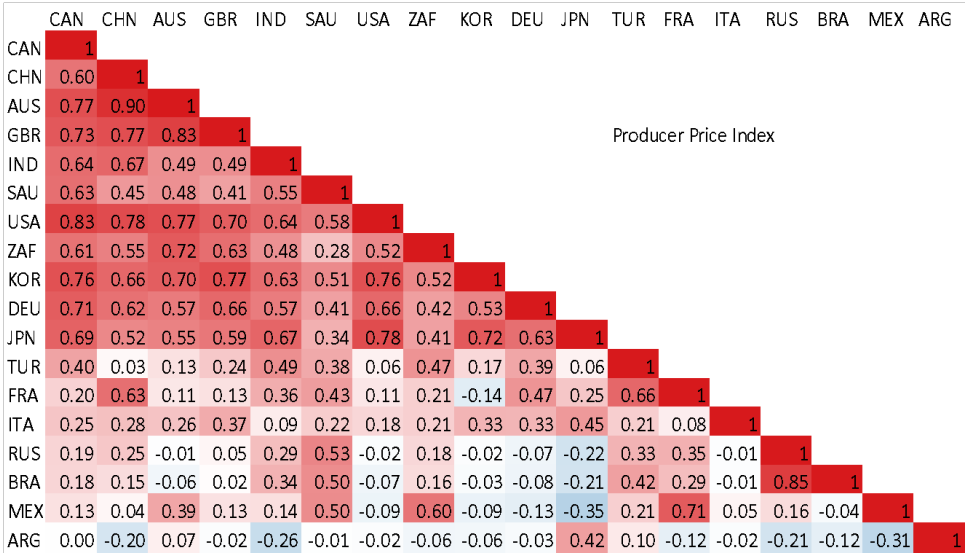
[5] The G20 heatmaps use available country-level G20 series from the World Bank Inflation Database. The EU aggregate is excluded from the CPI and PPI panels to avoid overlap with member countries; Indonesia is also excluded from the PPI panel because the series is incomplete.

Figure 2 – Correlation heatmaps for Harmonized Consumer Price Index, Producer Price Index, and GDP Deflator (G20 countries, 1970-2024).



	ITA	GBR	FRA	CAN	AUS	USA	KOR	JPN	ZAF	DEU	SAU	IDN	IND	TUR	MEX	ARG	BRA	CHN	RUS
ITA	1																		
GBR	0.88	1																	
FRA	0.97	0.87	1																
CAN	0.93	0.86	0.94	1															
AUS	0.89	0.86	0.86	0.88	1														
USA	0.86	0.85	0.88	0.89	0.75	1													
KOR	0.78	0.87	0.81	0.77	0.69	0.86	1												
JPN	0.71	0.80	0.74	0.70	0.73	0.70	0.74	1											
ZAF	0.64	0.51	0.54	0.60	0.62	0.47	0.42	0.31	1										
DEU	0.70	0.73	0.74	0.71	0.59	0.74	0.64	0.71	0.31	1									
SAU	0.49	0.71	0.46	0.46	0.59	0.40	0.52	0.70	0.14	0.48	1								
IDN	0.38	0.35	0.34	0.32	0.33	0.33	0.42	0.52	0.18	0.26	0.37	1							
IND	0.26	0.15	0.23	0.24	0.20	0.24	0.23	0.40	0.31	0.27	0.09	0.45	1						
TUR	0.22	0.09	0.10	0.11	0.04	0.25	0.21	-0.06	0.43	0.14	-0.24	0.22	0.16	1					
MEX	0.33	0.11	0.26	0.27	0.42	0.12	0.03	0.00	0.65	-0.09	-0.16	0.05	0.21	0.26	1				
ARG	0.14	0.14	0.09	0.16	0.23	0.13	0.05	0.05	0.39	0.04	-0.02	-0.06	-0.03	0.19	0.16	1			
BRA	0.01	-0.01	-0.09	-0.06	-0.01	0.02	0.02	-0.04	0.35	0.08	-0.12	-0.07	0.11	0.43	0.09	0.61	1		
CHN	-0.02	-0.11	-0.13	-0.14	-0.03	-0.04	-0.04	-0.16	0.31	-0.07	-0.15	-0.16	0.15	0.49	0.32	0.30	0.58	1	
RUS	-0.06	-0.10	-0.13	-0.19	-0.23	-0.10	-0.04	-0.08	0.16	0.18	-0.10	-0.03	0.11	0.31	-0.06	-0.08	0.41	0.31	1

Harmonized Consumer Price Index



	CAN	CHN	AUS	GBR	IND	SAU	USA	ZAF	KOR	DEU	JPN	TUR	FRA	ITA	RUS	BRA	MEX	ARG
CAN	1																	
CHN	0.60	1																
AUS	0.77	0.90	1															
GBR	0.73	0.77	0.83	1														
IND	0.64	0.67	0.49	0.49	1													
SAU	0.63	0.45	0.48	0.41	0.55	1												
USA	0.83	0.78	0.77	0.70	0.64	0.58	1											
ZAF	0.61	0.55	0.72	0.63	0.48	0.28	0.52	1										
KOR	0.76	0.66	0.70	0.77	0.63	0.51	0.76	0.52	1									
DEU	0.71	0.62	0.57	0.66	0.57	0.41	0.66	0.42	0.53	1								
JPN	0.69	0.52	0.55	0.59	0.67	0.34	0.78	0.41	0.72	0.63	1							
TUR	0.40	0.03	0.13	0.24	0.49	0.38	0.06	0.47	0.17	0.39	0.06	1						
FRA	0.20	0.63	0.11	0.13	0.36	0.43	0.11	0.21	-0.14	0.47	0.25	0.66	1					
ITA	0.25	0.28	0.26	0.37	0.09	0.22	0.18	0.21	0.33	0.33	0.45	0.21	0.08	1				
RUS	0.19	0.25	-0.01	0.05	0.29	0.53	-0.02	0.18	-0.02	-0.07	-0.22	0.33	0.35	-0.01	1			
BRA	0.18	0.15	-0.06	0.02	0.34	0.50	-0.07	0.16	-0.03	-0.08	-0.21	0.42	0.29	-0.01	0.85	1		
MEX	0.13	0.04	0.39	0.13	0.14	0.50	-0.09	0.60	-0.09	-0.13	-0.35	0.21	0.71	0.05	0.16	-0.04	1	
ARG	0.00	-0.20	0.07	-0.02	-0.26	-0.01	-0.02	-0.06	-0.06	-0.03	0.42	0.10	-0.12	-0.02	-0.21	-0.12	-0.31	1

Producer Price Index

	ITA	KOR	USA	ZAF	CAN	FRA	GBR	AUS	IND	DEU	JPN	SAU	RUS	IDN	MEX	TUR	BRA	ARG	CHN
ITA	1																		
KOR	0.84	1																	
USA	0.86	0.83	1																
ZAF	0.65	0.54	0.45	1															
CAN	0.80	0.77	0.91	0.47	1														
FRA	0.95	0.81	0.89	0.54	0.84	1													
GBR	0.86	0.87	0.88	0.49	0.78	0.89	1												
AUS	0.82	0.73	0.82	0.54	0.91	0.86	0.78	1											
IND	0.35	0.36	0.33	0.61	0.44	0.26	0.17	0.37	1										
DEU	0.50	0.53	0.54	0.42	0.45	0.49	0.52	0.36	0.44	1									
JPN	0.61	0.72	0.59	0.25	0.58	0.58	0.60	0.55	0.21	0.59	1								
SAU	0.39	0.50	0.49	0.23	0.63	0.38	0.36	0.56	0.42	0.23	0.39	1							
RUS	0.34	0.51	0.03	0.60	-0.09	-0.03	-0.01	-0.17	0.43	0.27	0.07	-0.09	1						
IDN	0.34	0.41	0.30	0.30	0.34	0.30	0.28	0.35	0.38	0.08	0.31	0.36	-0.01	1					
MEX	0.37	0.09	0.12	0.57	0.20	0.27	0.16	0.34	0.26	0.04	-0.03	-0.05	0.42	0.06	1				
TUR	0.18	0.15	0.18	0.39	0.06	0.07	0.10	0.00	0.32	0.17	-0.09	0.01	0.38	0.22	0.25	1			
BRA	-0.01	0.07	-0.05	0.33	-0.12	-0.12	-0.02	-0.10	0.28	0.10	-0.05	-0.08	0.85	-0.09	0.13	0.43	1		
ARG	0.15	0.09	0.11	0.37	0.09	0.09	0.19	0.18	0.12	0.03	0.08	-0.02	-0.21	-0.04	0.20	0.22	0.52	1	
CHN	-0.15	-0.11	-0.17	0.20	-0.19	-0.26	-0.19	-0.19	0.20	-0.10	-0.35	-0.10	0.63	-0.21	0.22	0.41	0.61	0.17	1

Deflator

Source: authors' elaboration on World Bank cross-country database of inflation.

For consumer prices, correlations are particularly high among the high-income economies (especially the USA, the euro area, Japan, Canada, and Australia) with values typically above 0.7–0.9. Several emerging economies, including Saudi Arabia, Turkey, Brazil, Russia and India, display stronger correlations among themselves than with the high-income economies, while Argentina shows more idiosyncratic movements, reflecting specific episodes of hyperinflation. Producer price indices display even stronger correlations and clearer clustering patterns. Countries deeply integrated into global value chains (such as Germany, Japan, Korea, China, the United States, and the United Kingdom) exhibit particularly strong co-movement, consistent with transmission through internationally integrated production networks and commodity cycles. Some dispersion remains: commodity exporters such as Mexico, Brazil, and South Africa show weaker alignment with this cluster. The GDP deflator shows more heterogeneous patterns. While correlations remain high among advanced economies, emerging economies display greater dispersion, partly reflecting episodes of instability or hyperinflation that disrupt co-movement.

Taken together, these patterns document a strong though uneven synchronization of inflation across countries (since the correlations are computed on inflation rates rather than on price levels, they do not reflect common trends in the indices). Such evidence is also visible in time-series data. Figures S1–S3 in the supplementary material show the year-on-year rates of change of the three indices for a selection of countries: the peaks of the mid-1970s, of 1980, of 2008 and of 2021–22, and the trough of 2009, are common to all of them.

The empirical importance of this synchronization has not gone unnoticed. A growing body of work has documented the existence of common inflation dynamics across countries, often using factor models or similar statistical approaches (Neely and Rapach, 2011; Eickmeier and Pijnenburg, 2013; Ascari and Fosso, 2024). Ciccarelli and Mojon (2010) show that a single factor explains a large share of inflation variation across OECD countries, a result extended by

Neely and Rapach (2011). Later works find that the importance of this global factor has increased over time (Mumtaz and Surico, 2012; Eickmeier and Pijnenburg, 2013), while Ha *et al*. (2023) document both the long disinflation phase and the recent synchronized inflation surge.

These works, however, remain largely empirical: the global inflation factor is treated as a statistical device to improve forecasting rather than as an object of theoretical explanation. Often, a Phillips curve remains the implicit framework, with the global component an exogenous additional variable that is left unexplained.

A notable exception to this general approach in the literature originates from few but significant analyses carried out especially by staff at the Bank for International Settlements. Borio and Filardo (2007) argue that prevailing economic models of inflation are overly "country-centric" and propose a "globe-centric" approach in which "global slack" influences domestic inflation. Similarly, Eickmeier and Pijnenburg (2013), and Ascari and Fosso (2024) show that global factors can play a dominant role in shaping inflation trends, including through slow-moving structural forces such as labor supply and demand, expectations, and technological change. This literature typically operates at an aggregated global level, often extending the Phillips curve framework to a single world economy. In doing so, it preserves the logic of the closed-economy model, simply redefining the relevant "domestic" conditions at a larger level of geographical aggregation. In this sense, the global factor is primarily analyzed as a characteristic of the world economy taken as a whole, rather than as an outcome of interactions among heterogeneous economies. Much less attention is paid to the possibility that inflation emerges as the outcome of interactions among distinct but interconnected economies. This is the focus of the next three sections, proceeding with the structure of table 1 by distinguishing three possible loci of inflation-generating mechanisms: the labor market, the real market, and the money and financial market. What the three loci have in common, and what distinguishes our reading from both the country-centric and the globe-centric views, is the question we ask of each: who bears the adjustment to a change in relative prices, who can avoid it, and how the international structure of the economy decides between the two.

5. International inflation I: labor markets and distribution

International integration affects inflation indirectly, through its impact on bargaining power and income distribution. This section examines how labor markets and distributive dynamics, typically treated as domestic phenomena, are shaped by global economic integration and may contribute to inflation outcomes.

Global integration reshapes domestic labor and product markets through specific mechanisms: most prominently, the internationalization of production via global value chains (GVCs), and the expansion of capital mobility that alters the balance of power between capital and labor. These changes are expected to affect wage-setting, income distribution, and ultimately inflation dynamics. Offshoring and global competition have been shown to weaken workers' bargaining

power in advanced economies, contributing to wage restraint and disinflation (Guschanski and Onaran, 2021), while international input-output linkages transmit shocks across countries and synchronize inflation (De Soyres and Franco, 2019; Chau *et al*., 2024). More broadly, these mechanisms suggest that labor markets cannot be understood exclusively as domestic arenas but are embedded in global production structures that shape inflation outcomes.

To provide a preliminary empirical assessment of these mechanisms, we focus on two institutional variables that capture key dimensions of global integration and its impact on distributive dynamics. Trade union density (UD), measured as the share of wage and salary earners who are union members, serves as a proxy for labor's bargaining power. Capital account openness (KAOPEN), based on the Chinn–Ito index, captures the *de jure* degree of international financial integration and thus the mobility of capital. The choice of these variables is motivated by the hypothesis that in open economies, wage-setting and distributive outcomes are shaped by the interaction between domestic labor institutions and firms' ability to relocate production or shift financial resources internationally. Other things being equal, inflation should be lower where capital is more mobile and higher where labor's bargaining position is stronger, and the effect of labor institutions should be weaker where capital is more mobile.

In this setting, inflation is measured by the annual log change in the consumer price index, while union density and capital account openness are included in levels. This specification reflects the fact that these variables represent slow-moving institutional features rather than short-run fluctuations. Accordingly, the empirical analysis estimates how structural conditions related to bargaining power and capital mobility shape inflation dynamics, rather than attempting to explain short-run variation using changes in institutional variables. The objective is to identify empirical regularities consistent with the proposed mechanism, rather than to establish causal effects. While specifications based on first differences were also explored, these yield weak and unstable results, reflecting the limited short-run variation in institutional variables, and are therefore not emphasized.

We estimate the following baseline panel specification:

$$\pi_{it} = \alpha_i + \tau_t + \beta_1 UD_{it} + \beta_2 KAOPEN_{it} + \varepsilon_{it} \qquad (2)$$

where π_{it} is the annual inflation rate in country i at time t; UD_{it} denotes trade union density, capturing labor's bargaining power; $KAOPEN_{it}$ is the Chinn-Ito index of capital account openness, capturing the degree of international financial integration; α_i are country fixed effects, controlling for time-invariant structural differences across countries; τ_t are year fixed effects, absorbing common cross-country shocks and other shared time components, while ε_{it} is the error term.

Our preferred specification includes both country and year fixed effects. The sample is dictated by the availability of comparable union density data: 23 European economies, 1997–2023, 543 country-year observations (after excluding annual inflation above 15 percent in absolute value;

standard errors are clustered by country). In the terms of Section 1, the exercise provides an illustrative association; the hypothesis it bears on is restated in Section 8 (*Hypothesis 1*). Table 3 reports the main results.[6] The most robust finding concerns capital account openness: across all specifications KAOPEN is negatively associated with inflation, and the standardized coefficient is stable (from −0.96 to −1.18; preferred two-way fixed-effects estimate: −1.18, with clustered standard error 0.20, $p < 0.01$).[7]

Table 3 – Bargaining power and consumer price inflation rates

	(1)	(2)	(3)	(4)	(5)
Union density	-0.106		-0.204*	0.520	1.364
	(0.176)		(0.113)	(0.894)	(1.038)
Capital account openness		-0.955***	-0.975***	-1.137***	-1.179***
		(0.152)	(0.123)	(0.376)	(0.196)
Observations	543	543	543	543	543
R^2	0.002	0.145	0.151	0.231	0.664
Adjusted R^2	-0.000	0.143	0.148	0.195	0.630
Country FE	*no*	*no*	*no*	*yes*	*yes*
Year FE	*no*	*no*	*no*	*no*	*yes*

*Notes: Standard errors clustered by country in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Inflation is measured as the annual log change in the CPI. Union density and capital account openness are standardized. Sample: 23 European countries, 1997–2023, excluding observations with |inflation| > 15.*

This pattern is consistent with the idea that capital mobility reduces labor's bargaining power by increasing firms' outside options and the credibility of relocation threats, and thereby

[6] The table reports the countries included in the panel regressions combining union density, capital account openness, and inflation. The sample is constructed by merging the three datasets and excluding countries with fewer than 10 complete observations. The final sample includes 23 countries over the period 1996–2024. The countries included are Austria, Belgium, Czechia, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Netherlands, Norway, Poland, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom. Because comparable union-density data are not available for a broader cross-country panel over the whole period, these estimates should be read as evidence from a mainly advanced European sample, not as a global test of the mechanism.

[7] Where this association comes from should be stated: thirteen of the 23 countries have a fully open capital account, at the maximum of the Chinn–Ito index, throughout the period; only 30 percent of the variance of KAOPEN is within countries, and with country fixed effects the coefficient is identified by 234 observations in the ten countries that liberalized during the sample, most of them transition economies in the years around EU accession. The coefficient does not depend on any single country (dropping one country at a time leaves it between −1.08 and −1.27) and it remains negative and significant, at −0.65, when the transition economies are excluded altogether; but it rests on a small number of liberalization episodes that coincided with disinflation, EU integration and the adoption of inflation targeting.

disciplines domestic wage and price dynamics. It is equally consistent with the reverse sequence: that countries liberalize the capital account after having stabilized inflation, and with the joint adoption of liberalization, inflation targeting and EU membership in the transition economies. The association therefore cannot be read as the effect of capital mobility on inflation; distinguishing the two directions requires the designs discussed in Section 8.

By contrast, the role of union density is weaker and more sensitive to specification. In simple regressions, the relationship between union density and inflation is not statistically significant. When both variables are included, union density is negatively associated with inflation, but this result disappears once country fixed effects are introduced. In the full specification with country and year fixed effects, the point estimate becomes positive (+1.36), but with standard errors clustered by country it is not statistically significant ($p = 0.19$), and the interaction between union density and capital openness, which the hypothesis stated above predicts to be negative, is indistinguishable from zero (Table S5). On this sample, union density does not measure labor's bargaining position well enough for the test; measures of bargaining coverage and of the coordination and centralization of wage setting are the natural next step, and we return to them in Section 8.

The inclusion of time fixed effects leads to a substantial increase in explanatory power, suggesting that much of the variation is captured by a common cross-country component. This finding is consistent with the results in Section 3 and reinforces the view that inflation dynamics are highly synchronized across countries. In this context, the effect of capital openness can be interpreted as a structural channel operating within a broader global environment, rather than as an independent driver of inflation.

The robustness analysis in Table S5 (supplementary material) completes the picture. Models in first differences indicate that short-run changes in the institutional variables are not associated with inflation, as expected for slow-moving variables. Specifications including lagged inflation reveal a significant degree of persistence (coefficient 0.42) and reduce the coefficient of capital openness to about a third of its size (-0.42, $p = 0.02$): part of the association operates through persistent inflation dynamics rather than through contemporaneous adjustment. None of these specifications alters the conclusion that capital account openness is the most robust institutional correlate of inflation in this sample.

Overall, the evidence points to a hierarchy in the share of variance accounted for: global common factors account for most of it, while among the slow-moving institutional variables capital-account openness is the most robust correlate of (lower) inflation and labor-market institutions a weaker, more context-dependent one. These preliminary findings again support a view of inflation as emerging from the interaction between global economic structures and domestic distributive dynamics, rather than as the outcome of purely domestic conditions or exogenous shocks.

6. International inflation II: globalization, currency asymmetry and price leadership

While the previous section focused on labor markets, this section explores one possible way in which the international monetary system shapes inflation through asymmetric adjustment mechanisms and monetary hierarchy.

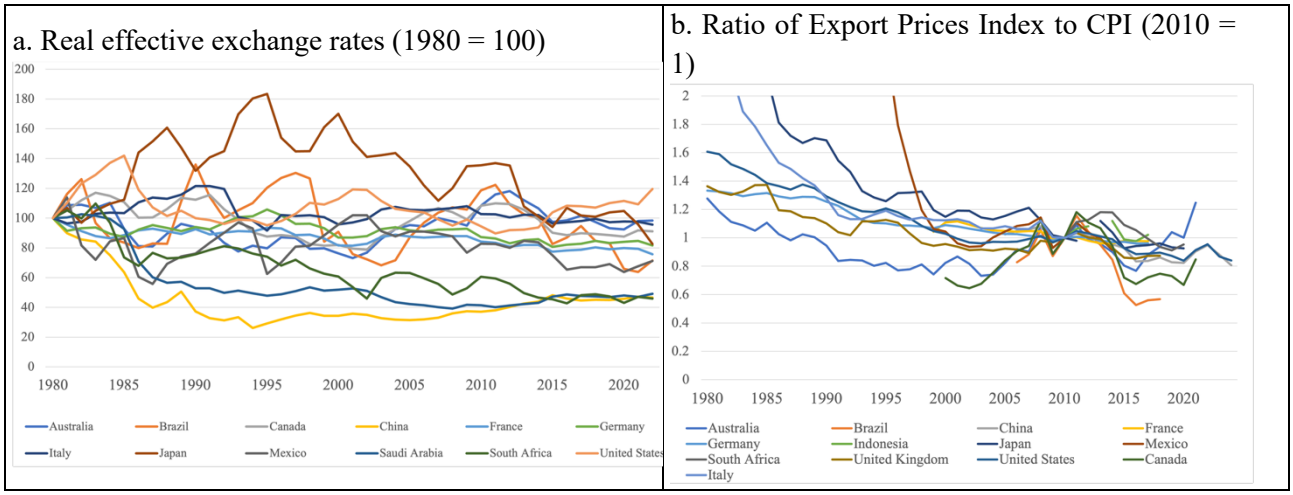
With respect to issues such as GVCs and reshoring, the functioning of the international monetary system remains less explored in relation to inflation, despite it being central to understanding how inflation dynamics propagate across countries. In the earlier inflation outburst related to energy price shocks, Biasco (1979) already noted that the global inflation of the 1970s coincided with the breakdown of the Bretton Woods system, challenging the idea that flexible exchange rates would insulate national economies from external shocks. A similar critique was advanced by Davidson (1972), who argued that exchange rate flexibility does not guarantee macroeconomic insulation in a world of financial integration and fundamental uncertainty.

The mechanism we propose can be stated with the classical theory of oligopoly. In Sylos Labini's (1962) analysis, the price in a concentrated industry is set by the firm with the lowest costs, at a level that keeps the entry of less efficient producers unprofitable; the other firms align to it, and the adjustment to changes in costs or demand falls on their margins and volumes rather than on the price. A similar structure may characterize the markets for tradable goods at the international level: the economies that lead in technology and in unit costs set the pace at which tradable prices rise; the other economies must align to it, since a faster increase in their export prices would be lost in market shares rather than passed on to buyers. We use the term 'international price ceiling' to denote this constraint imposed by the price leaders, and 'anchor countries' to denote the economies that set it. Causation thus runs from leadership to the external position: technological and price leadership translates into gains in market shares and hence, other things being equal, into a persistent current account surplus. This ceteris paribus clause is especially binding because the current account must obviously reflect the capital and financial accounts; where financial flows dominate, a technological leader can run persistent deficits (this is plausibly the case e.g. of the United States). What makes the analogy operative is the behavior of exchange rates. If nominal exchange rates offset inflation differentials promptly, the ceiling would bind on export prices in foreign currency while leaving domestic inflation free to differ across countries; where nominal rates are sticky over the relevant horizon, or where a deficit country cannot depreciate without importing inflation, the constraint falls on domestic prices, and on quantities where prices cannot adjust.

A clear example of the relevance of this channel is in the denomination of many commodities in US dollars: when the dollar appreciates, nearly all other economies face imported inflation unless the price of commodities itself decreases (see next section). More broadly, although over four decades nominal exchange rates have largely offset inflation differentials (relative purchasing power parity holds relatively well in the long run), the relevant question for our argument is whether they correct competitiveness and balance of payments imbalances within

the horizon over which prices are set. Figure 3 (panel a) suggests that they do not: real effective exchange rates (REERs) have moved within a relatively narrow band, with deviations that persist for a decade or more (China and Saudi Arabia follow peculiar trajectories, for different reasons[8]). Between 1980 and 2022 the real effective exchange rates of the major economies did not appreciate, and those of the persistent surplus economies least of all: Germany and Japan depreciated in real effective terms by roughly 20 percent and China by far more, France by close to 30 percent, while Italy, Canada and Australia were broadly unchanged. The one major currency to appreciate in real terms, by about 18 percent, was the US dollar, the currency of the largest deficit economy.

Figure 3 – The ceiling to international prices



Source: authors' elaboration on World Bank cross-country database of inflation and BIS data.

This limited adjustment may be indicative of an implicit ceiling on international prices, at least for tradable goods. In the terms of Section 1, the failure of the surplus economies' real effective exchange rates to appreciate and the slower growth of export prices relative to consumer prices are stylized facts; the price ceiling is our hypothesis about their origin, though it is not the only possible one. To some extent, global prices are set by the behavior of prices in the more 'stable' countries, those less prone to inflation. This can be seen by comparing export price indices with consumer price indices (where non-tradables are substantial). As shown in Figure 3 (panel b), the Export Price Index has increased more slowly than the CPI across the major economies, leading to a declining ratio over time. This suggests that internationally traded prices act as an anchor, constraining inflation dynamics across economies. Future studies should discriminate this interpretation from two alternative readings. One is compositional: consumer price indices

[8] China's REER reflects prolonged exchange-rate management and capital controls, while Saudi Arabia's long-standing dollar peg links its REER to oil prices and US policy; in both cases, stability is structural and policy-driven rather than the result of market adjustment.

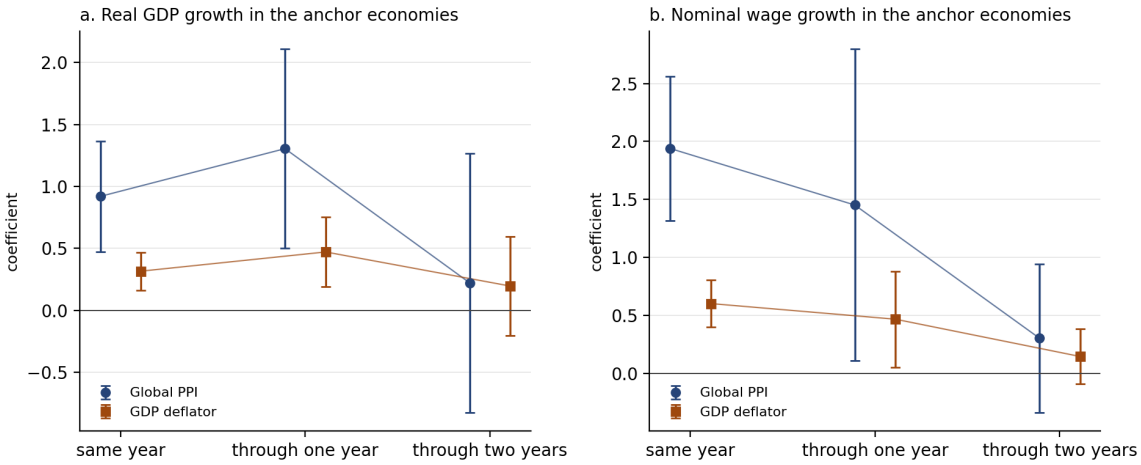
include non-tradable services, whose prices rise faster than those of tradables wherever productivity growth is concentrated in the tradable sector (the Balassa-Samuelson effect), so that a declining ratio of export to consumer prices could arise in the absence of an international constraint. The second is that tradable prices are disciplined by generalized international competition, with no particular role for a small group of countries. The price leadership hypothesis differs from both in one testable respect: it predicts that the export prices of a given economy track the export prices of the anchor countries more closely than that economy's own unit labor costs, and increasingly so the stickier its real exchange rate. Under the compositional reading, the ratio should decline similarly in the anchor countries and elsewhere, and should be unrelated to exchange rate behavior; under generalized competition, no subset of countries should lead.

In other words, exchange rates have not been sufficiently flexible to neutralize differences in competitiveness: stable economies have avoided excessive appreciation, while inflation-prone economies have not depreciated enough. This outcome reflects a broader failure of the flexible exchange rate regime to correct international current account imbalances and ensure symmetric adjustment (D'Ippoliti and Roncaglia, 2023). Surplus countries can prevent excessive appreciations by sustaining persistent financial outflows, typically through portfolio investments (including the accumulation of official reserves; see e.g. Dooley *et al*., 2003). In deficit countries, by contrast, full adjustment is constrained by a floor to domestic nominal prices, downward nominal rigidity that rules out a full-fledged deflation (Akyüz, 2013). The result is a structural asymmetry that generates a deflationary bias, manifested through lower growth, unemployment, and compressed domestic demand (a state of affairs that echoes Keynes's critique of the international monetary system and proposal for an International Clearing Union). The asymmetry is reinforced by the special role of the US dollar. As the dominant invoicing and reserve currency, the dollar creates a structural demand for US assets allowing the USA to sustain external imbalances more easily than other countries. As a consequence, adjustment pressures are unevenly distributed, further limiting the effectiveness of exchange rate flexibility as a stabilizing mechanism.

This framework, which clearly requires further development and empirical testing in future work, suggests a possible explanation of the post-Covid inflation surge. If a small number of stable surplus countries provide the ceiling that effectively anchors global prices, changes in their macroeconomic conditions may alter the global inflation environment. To illustrate this point, we consider the economies that most frequently appear among the three largest current account surpluses, in nominal US dollar terms, over the past four decades: Japan, Germany and China (in 38, 28 and 23 of the years 1980–2024; no other economy appears more than seven times). The rule has the advantages of being mechanical and not referring simply to the largest economies per se; it has the disadvantage of selecting on the symptom of leadership rather than on its causes (e.g. a large and stable share of world manufacturing exports and a low-inflation record), though arguably when considering just these three countries, the two criteria select the same economies. These countries' combined share of global GDP has ranged from 19% in

1982 to 28% in 1995, with the most recent figures around 25%. While they collectively constitute a relatively large component of the world economy, these figures do not imply that they have an overwhelming impact on global dynamics solely because of their size. Yet, these economies may play a role in shaping global price dynamics that is disproportionate to their size. Figure 4 reports a simple exercise. Panel a) regresses the rate of global inflation (considering PPI and GDP deflator) on the current and lagged values of real GDP growth in the three economies (aggregated with GDP weights), as a proxy of demand conditions there, and plots the cumulative coefficients; panel b) does the same for global PPI and GDP deflator and the growth of nominal wages in the three economies. The two panels show the same profile: faster growth in the anchor economies is associated with higher global inflation in the same year and the next: cumulatively, one point of additional growth goes with about 1.3 points of global PPI inflation and 0.5 points of the GDP deflator after one year; and faster wage growth with 1.5 and 0.5 points. In both cases, the association fades by the second year. In the terms of Section 1, the exercise is an illustrative association: stronger demand and wages in the anchor economies loosen the constraint on prices elsewhere, temporarily; but more analyses are clearly warranted: e.g. because the sample is small (27 annual observations), and growth and wages in the three economies move with the global cycle that also moves prices.

Figure 4 – Demand and wage growth in the anchor economies and global inflation: distributed-lag estimates



Notes: cumulative sums of coefficients, with 95 percent confidence intervals (Newey–West standard errors with two lags), from regressions of the rate of global inflation on the current and two lagged values of the explanatory variable. Anchor economies: Germany, Japan and China, aggregated with current-dollar GDP weights. Panel a: real GDP growth, constant prices (IMF World Economic Outlook), 1997–2023, 27 observations. Panel b: growth of average annual wages, computed within each country (OECD for Germany and Japan; National Bureau of Statistics, urban non-private units,

for China), 1998–2023, 26 observations. Source: authors' elaboration on IMF, OECD, NBS and World Bank data.

These associations are compatible with a hierarchical view of the international monetary system, where macroeconomic developments in a few 'anchor' economies may influence global inflation conditions. A relative stickiness of nominal exchange rates allows surplus countries to defend their competitiveness by preventing large changes in their real exchange rates. This way, a series of international prices are imposed on the more inflationary-prone deficit countries, effectively creating a ceiling to inflation rates 'everywhere'. Such asymmetry, in turn, produces a long-term deflationary bias in which deficit countries need to compress income to reduce imports. This mechanism offers one possible explanation for aspects of the long Great Moderation and perhaps the tendency to secular stagnation in several economies up to the Covid shock. Then, expansionary fiscal policies and possibly looser wage dynamics in these few countries could have been caused by the need to react to the global pandemic, at least temporarily. One hypothesis is that, if these countries return to their traditional low-inflation regime, a renewed inflation ceiling could emerge for other countries.

In conclusion, the international monetary system is not conducive to automatic balance of payments adjustments, which allows us to at least partly explain both the long 'disappearance' of inflation up to Covid and then its sudden return since 2022 in terms of the interaction between open economies. As in the other sections in this work, we are sketching the main arguments with some relevant examples and broad descriptive evidence, without providing an in-depth investigation of each causal nexus. However, the mere possibility of such a dynamic warrants systematic investigation, aimed at uncovering its empirical foundations, integrating it into theoretical frameworks, and assessing its policy relevance for the governance of globalization and the design of international monetary arrangements.

7. International inflation III: financialization

A full international theory of inflation must consider globalized money and finance. We focus here on how non-bank intermediaries and derivatives contribute to inflation synchronization through global liquidity and financialization.

Capital and current accounts are not mirror images (Borio and Disyatat, 2015). From an endogenous money view (Lavoie, 1984; McLeay *et al*., 2014), cross-border flows often drive trade balances, not the reverse (Kohler, 2022). Focusing solely on current accounts risks a partial view. The international dimension of financialization is especially pronounced in emerging economies (Bortz and Kaltenbrunner, 2018). Rey (2015) and others show that gross financial flows, via the global financial cycle (GFCy),[9] influence inflation through asset prices,

[9] The global financial cycle (GFCy) is the latent factor capturing how international financial conditions co-move, typically measured through common components of cross-border credit, portfolio flows, leverage, asset prices, and

credit, and expectations. Capital mobility constrains monetary policy, a relationship Rey calls a "dilemma not trilemma." Over 1980-2024, the annual GFCy factor and three measures of global inflation (HCPI, PPI, and GDP deflator[10]) are negatively correlated in levels, because the factor trends upward through the decades of disinflation, and mildly positively correlated in their year-on-year changes (0.09 for the HCPI, 0.32 for the PPI and 0.36 for the deflator, on 44 observations). Within sub-periods the sign of the correlation changes from decade to decade, negative in the 1980s and 1990s and positive from 2000 onwards. The association between global financial conditions and inflation is therefore unstable over time, and not of a kind that these correlations can pin down.[11]

Global liquidity, shaped by both central banks and endogenous dynamics, is a structural feature of financialized capitalism. Two contrasting interpretations have been drawn from this point. Monetarist views frame global liquidity as a mismatch between savings and investment, generating excess capital flows (Bernanke, 2005; Miranda-Agrippino and Rey, 2020). These interpretations have been challenged by alternative accounts emphasizing structural imbalances and asymmetries in the global economy (e.g. Taylor, 2020). Minskyan approaches instead emphasize endogenous cycles of risk and credit, with inflation linked to global finance's alternating phases of leverage and retrenchment, even absent monetary stimulus. Large volumes of private capital now flow not only through banks but also via non-bank intermediaries (hedge funds, investment firms, and asset managers) whose activities sustain securitization and speculative investment in structured products (Aldasoro and Ehlers, 2018; Caverzasi *et al*., 2019; Tori *et al*., 2023).[12] Following this last interpretation, inflation may become linked to the rhythm of global finance itself, alternating phases of leverage (optimism) and retrenchment, rather than to the timing of policy moves. It can therefore re-emerge even without any deliberate monetary expansion.

Financialization extends beyond securities to commodity markets, which are at the same time among the most intensively traded financial assets globally and key material inputs in production. This dual character makes commodity markets a crucial arena where financial liquidity meets material production, shaping inflation dynamics. This point was raised by Kalecki's prescient analysis (1971), which argued that raw materials and food prices are set

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risk spreads. Miranda-Agrippino and Rey (2020) show that a single factor – largely driven by U.S. monetary policy and global risk-taking – explains much of the variation in asset returns and capital flows. An increase in the GFCy indicates an easing of financial conditions, seen in higher equity prices, narrower spreads, and stronger cross-border flows.

[10] All inflation data are from the World Bank Inflation Database. The HCPI, the PPI, and the Deflator are global measures weighted for the GDP of the countries included in the sample.

[11] This constrains the effectiveness of inflation targeting – since central banks cannot fully shield price stability from global shocks even under flexible exchange rates – also shaping policy responses, as authorities must react to or anticipate pressures from international financial markets.

[12] Speculative dynamics are undoubtedly relevant to global liquidity and commodity price movements, but we do not treat speculation as an autonomous causal factor. Given the exploratory purpose of this paper, we focus instead on how broader financial conditions, including speculative flows, interact with inflation through leverage, credit, and expectations.

internationally, while finished goods prices depend on domestic supply and demand interactions indirectly shaped by these inputs.

Financial actors increasingly shape commodity markets. Index investment decouples futures from fundamentals (Tang & Xiong, 2012), weakening inventory–price links (Mayer, 2012). Benchmark-driven flows embed commodities in global cycles (Raddatz *et al*., 2017), with implications for financial power hierarchies (Petry, 2025). As Roncaglia (2015) shows, oil's rising reserves despite demand growth reflect how market structure limits the role of physical scarcity.

To understand commodity prices as emerging from international financial markets, it is useful to distinguish two financial mechanisms. The first concerns invoicing and exchange rate dynamics. Many commodities are priced in US dollars, so dollar appreciations and depreciations mechanically affect quoted prices (Krugman, 1979). In addition, the dollar follows medium-term cycles that influence global financial conditions and commodity pricing (Obstfeld and Zhou, 2022; D'Ippoliti and Venditti, 2024). Through these channels, exchange rate movements affect commodity prices even in the absence of changes in underlying supply and demand conditions. However, this mechanism alone cannot account for recent commodity price dynamics. A second, distinct channel is the financialization of commodity markets, whereby global liquidity, leverage, and portfolio allocation shape price movements. In this view, commodities are not only inputs in production but also financial assets, whose prices are influenced by investment strategies and market expectations. This implies a structural link between financial conditions and inflation, as changes in commodity prices feed into production costs across the economy.

Importantly, financialization operates even when exchange rates are relatively stable. For instance, Obstfeld and Zhou (2022) show that the correlation between the dollar's effective exchange rate and the global financial cycle is only partial, suggesting that commodity price dynamics cannot be reduced to currency movements alone. This raises the question of whether liquidity conditions, especially those linked to non-bank financial intermediaries, play an independent role in driving commodity price inflation.[13] We focus on the energy price index (EPI) because energy is an upstream, globally traded, relatively homogeneous cost driver, with faster pass-through to producer and consumer prices than many other commodity groups and a comparatively clear link to US dollar conditions.[14]

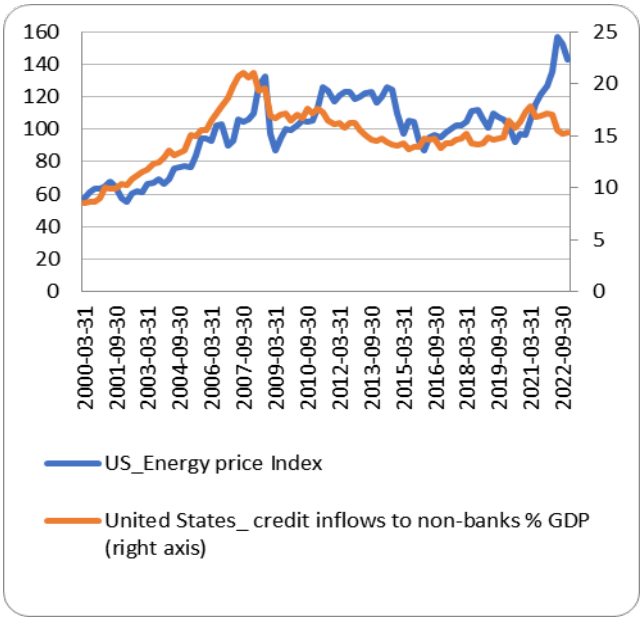
With respect to the PPI and CPI, discussed in Section 4, the EPI series exhibit even more clustering within our sample of countries (see Figure S4 in the supplementary material): on the one hand, the USA, Eurozone, and Japan experienced highly synchronized increases in energy prices; on the other hand, China and India appear to follow very different, albeit linked,

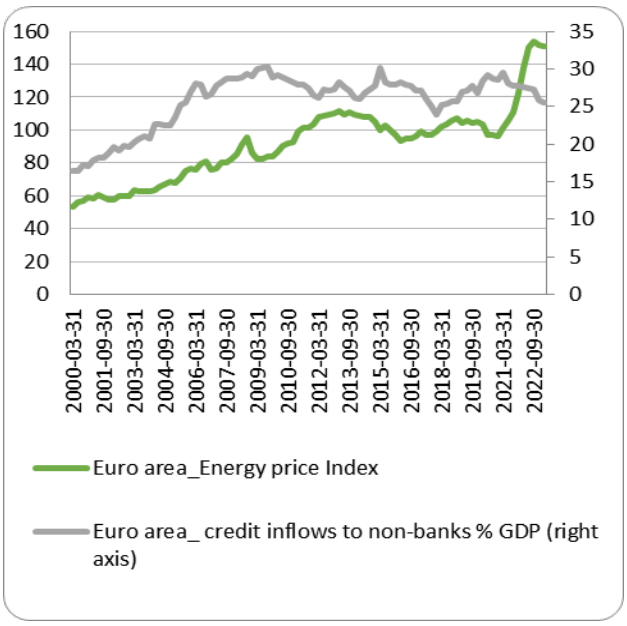
[13] Breman and Storm (2023) show that speculative activity in the crude oil market has been responsible for one quarter to half of the increase in the crude oil price in the period 2020–2022.

[14] Preliminary evidence employing the food inflation index provided by the World Bank suggests that in that case the link with global liquidity is less immediately visible.

patterns. The first panel in Figure 5 shows that, in the last 20 years, the EPI and credit inflows to non-banks in the USA have followed a similar trend.

Figure 5 – Price energy indexes and credit inflows to non-banks (quarterly, 2000Q1-2022Q1)



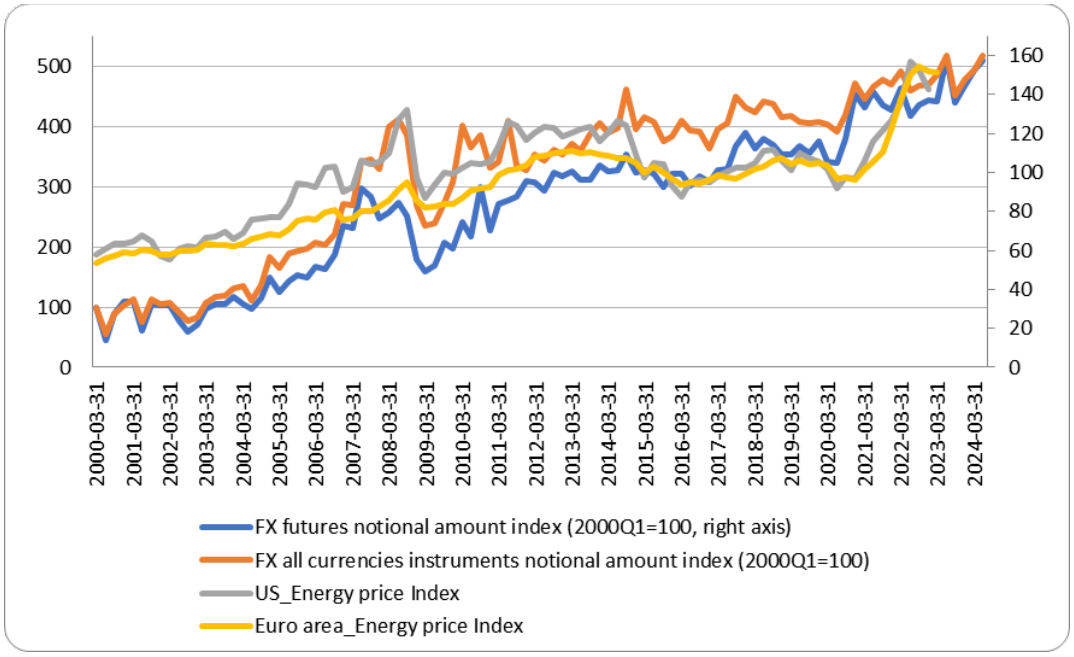


Source: authors' elaboration on World Bank cross-country database of inflation and BIS data.

We only see a diverging path at the very end of the period, when the EPI rose by about 30 percent between the first quarters of 2021 and 2022, and by 60 percent between the end of 2020 and mid-2022, while credit to non-banks was stable or slightly decreasing. The association between the two series is less visible in the case of the Eurozone (second panel in Figure 5). There too, the clearest divergence took place at the end of the period. In both cases, such late decoupling can clearly be associated with the exogenous shocks of Covid and the war in Ukraine, which dominated price dynamics in that phase. The implication is that the financial channel we describe operates most visibly in tranquil periods, and whether it amplified the 2021–22 shocks or was merely overwhelmed by them is the kind of question the research agenda sketched below is meant to settle.

FX futures volumes may provide a partial indicator of global liquidity. Their notional volumes co-move with energy prices (Figure 6); here too the co-movement is one of trends, and in the quarterly changes neither series systematically leads the other. The link may reflect hedging demand, trade effects, and speculative flows (Allayannis and Ofek, 2001; Avdjiev *et al*., 2019; UNCTAD, 2011).

Figure 6 – FX notional amounts and energy price indexes (quarterly 2000Q1-2024Q1)



Source: authors' elaboration on World Bank cross-country database of inflation and BIS data.

In a similar vein, in Figure S6 in the supplementary material we show the same co-movement between FX futures activity and the food price indices (FPIs), closer for the Eurozone and

China than for Japan. Overall, this evidence is consistent with reading the GFCy, used here as a proxy for global liquidity conditions rather than as a causal mechanism, as a state of financial markets in which asset prices, commodity prices and credit flows move together with risk appetite; it is equally consistent with commodity prices driving both. Financial regulation and leverage constraints shape how far credit expansion translates into asset-price and inflationary pressures across countries.

To distinguish arbitrage or fundamental trading, potentially aligned with real market trends, from momentum-driven speculation which can cause deviations from fundamental values (Gusella and Stockhammer, 2021) and following the evidence by Breman and Storm (2023), we offer one final piece of evidence. Sharp increases in trading volumes likely reflect speculative entry aimed at short-term gains. Unlike hedgers, non-commercial traders seek to profit from price swings. Figure S5 in the supplementary material shows that FX futures turnover tracks energy price indices (with some exceptions around the pandemic), in quarterly changes as well as in trend, which is consistent with the possibility that trading activity does not merely follow energy prices but amplifies them. These developments were facilitated by regulatory changes in the early 2000s, notably the deregulation of commodity derivatives markets in the United States following the Commodity Futures Modernization Act, which expanded access for financial investors and increased the role of intermediaries (UNCTAD, 2011; Irwin and Sanders, 2012).

Preliminary as it is, this evidence suggests that global liquidity and financial expectations co-move with inflation indicators, reinforcing the need for macro theories that integrate financial cycles, cross-border flows, and derivatives. In the terms of Section 1 these are illustrative associations; the hypothesis they bear on is stated in Section 8 (Hypothesis 3).

8. Final remarks

In this work, we argue for an extension and new conceptualization of inflation that moves beyond the constraints of domestic economies and looks at the interaction between distinct but open economies at a global level. This is an exploratory, agenda-setting paper. Our objective is to articulate a framework about how international conditions may enable or constrain domestic inflation. We present stylized facts and illustrative associations consistent with this thesis, in the sense set out in Section 1. We do not claim causal identification here; instead, we map the empirical terrain and propose specific falsifiable hypotheses to be tested in future work.

We suggest that inflation can usefully be understood as an international phenomenon, rather than primarily a national one, and as an outcome of the interaction between distinct but open economies, rather than simply arising from exogenous shocks. Of course, we do not wish to deny that shocks exist, and they may be symmetric, global and highly material; but our understanding of such a crucial problem of capitalist economies cannot entirely and exclusively

rely on the assumption of exogenous shocks. Historically, this would make for a very unsatisfactory explanation of the three and more decades of "Great Moderation". Indeed, previous literature and descriptive evidence seems to suggest that, if anything, the synchronization of inflation is even increasing over time, leaving a further crucial trend to be explained in future studies (for example, it could reflect the growing relevance of GVC, or a growing stickiness of real exchange rates).

Our analysis conceptually distinguishes three classes of theories on the origins of inflation, corresponding to the three main markets: labor, real, and money/finance markets; and we extend the same tripartition to the international economy. For each market we identified one exemplary mechanism through which international interdependence constrains or enables domestic inflationary dynamics, and in each the same question recurs: which agents, and which countries, can shift the burden of adjustment onto others, and which must absorb it in their own prices, incomes or output. The international distribution of this capacity, rather than any single theory of inflation, is the thread that ties the three mechanisms together. Clearly, many more mechanisms could be equally or more relevant (from the role of GVCs to the interdependence of monetary policy and currency hierarchy) and we hope that new research will be carried out on all of them. We now restate the three mechanisms as hypotheses, indicating for each the evidence presented in this paper, the observations that would count against it, and the kind of test that future work should carry out.

Hypothesis 1 (capital mobility and bargaining power). The international mobility of capital gives employers an exit option that workers lack, weakens the capacity of labor to defend its share and thereby disciplines wage and price dynamics: other things being equal, economies with more open capital accounts should display lower inflation, and the effect of domestic labor institutions on inflation should depend on the degree of openness. Section 5 offers an illustrative association, the negative and stable coefficient of capital account openness, and one negative result, since the interaction between openness and union density is not statistically significant. Evidence against the hypothesis would be a disciplining effect of openness that survives controls for monetary regimes, inflation targeting and financial development while remaining unrelated to any measure of labor's bargaining position, which would point to a channel other than bargaining power. A test requires richer institutional measures (e.g. coordination and centralization of wage setting), a sample extending beyond the advanced European economies, and explicit treatment of the endogeneity of capital account liberalization.

Hypothesis 2 (international price leadership). The economies that lead in technology and unit costs set the pace of tradable-goods price inflation; with sticky real exchange rates, this pace acts as a ceiling on inflation elsewhere, and changes in wages and demand in the anchor countries move the ceiling. Section 6 offers two stylized facts, the limited adjustment of real effective exchange rates and the slower growth of export prices relative to consumer prices, and one illustrative association, the long-run co-movement between the anchors' demand and wages and global price indices. Evidence against the hypothesis could be export price inflation

in non-anchor economies tracking their own unit labor costs rather than the anchors' export prices; a decline in the ratio of export to consumer prices of similar size in the anchor countries and elsewhere unrelated to exchange rate behavior; and, looking forward, a return of the anchor countries to low inflation with no re-emergence of a ceiling on inflation elsewhere. Testing these will require conditioning on the global cycle, and the use of differences in exposure: if leadership exists, economies more dependent on the anchors' tradables should respond more to the anchors' stance than economies less dependent.

Hypothesis 3 (global liquidity and commodity prices). Global liquidity, channeled increasingly through non-bank intermediaries and derivatives markets, shapes commodity prices independently of physical supply and demand and, since commodities are production inputs, the cost structure of all economies at once. Section 7 offers descriptive co-movement between measures of financial activity and energy and food price indices, with a divergence in 2021–22. The hypothesis bundles claims that must be tested separately: that financial and commodity prices co-move; that financial activity leads commodity prices; that it amplifies their movements; that it produces deviations from fundamentals; and that these deviations reach consumer prices.

Together, these mechanisms suggest that inflation is a systemic outcome of global capitalism, namely a manifestation of how power, prices, and liquidity interact across interconnected economies. Understanding inflation as an international and systemic phenomenon also has implications for debates on inequality, policy autonomy, and democratic accountability. If inflationary pressures are enabled or constrained by global financial and institutional structures, national governments face structural limits in managing distributive conflicts through conventional macroeconomic tools, and instruments aimed at one economy at a time are partly miscast: monetary tightening pursued simultaneously by all central banks, each defending its own currency, is individually rational and collectively self-defeating; no single importer can stabilize prices formed in global commodity and financial markets; and the burden of balance of payments adjustment falls on deficit economies alone. The policy counterpart of our reading is coordination among countries, over monetary policy, over the regulation of commodity and financial markets, and over the distribution of the adjustment burden, along the lines of Keynes's proposals for the post-war international order.

Future research should embed these dynamics in richer theoretical and empirical analyses, as well as in macroeconomic models that move beyond methodological nationalism. Reconceptualizing inflation as a global process means tracing how transnational bargaining power, institutionalized price anchors, and global liquidity regimes interact to shape when and how domestic inflation emerges.

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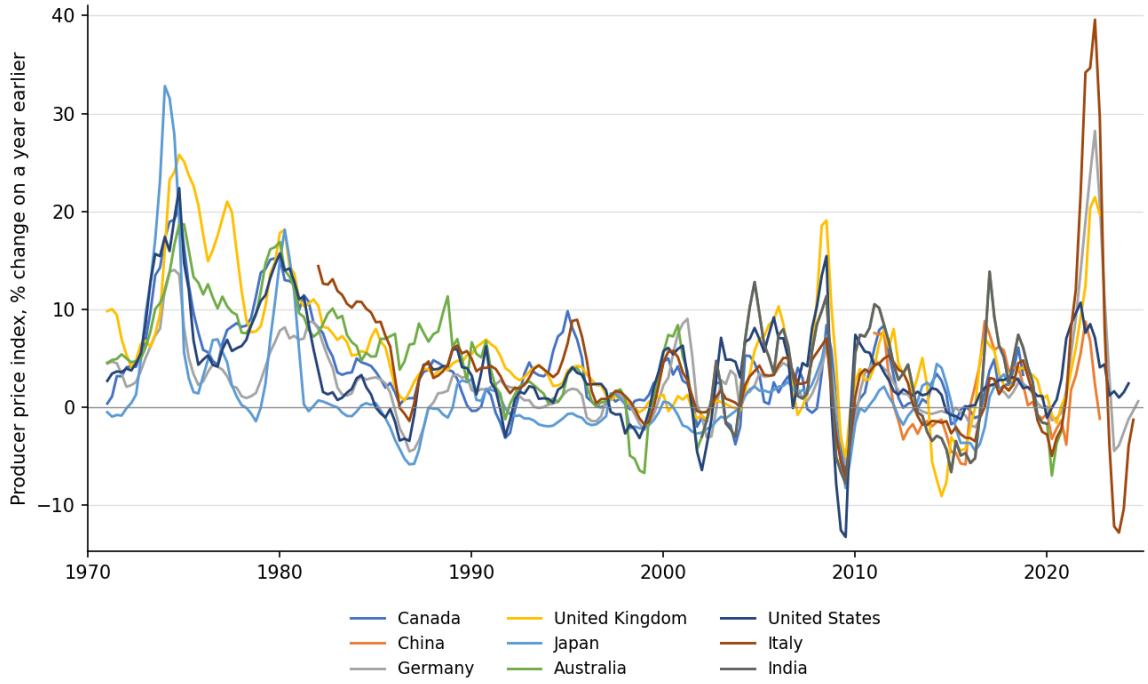
Supplement

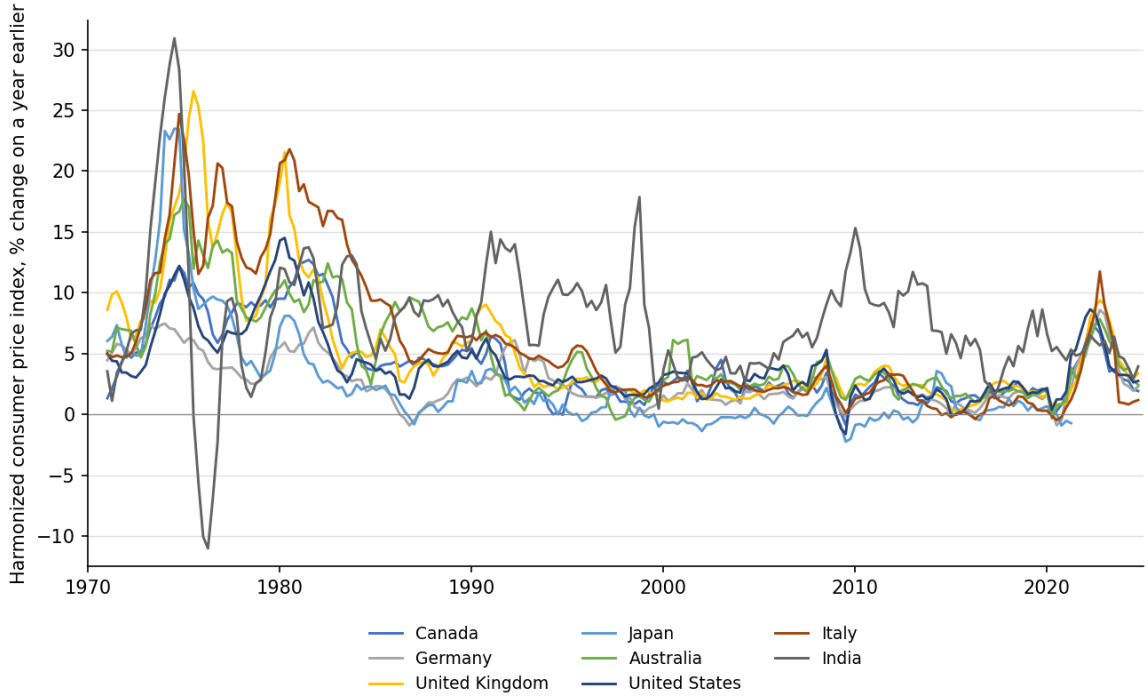
This appendix collects the supplementary figures and tables referred to in the paper: the time-series counterparts of the correlation heatmaps of Section 4 (Figures S1–S3), the figures on energy prices and derivatives markets of Section 7 (Figures S4–S6), the bilateral-dollar version of the exchange-rate exercise and the country coverage of Section 3 (Tables S1 and S2), two extensions of the same exercise (Tables S3 and S4), and the robustness analysis for Section 5 (Table S5).

Figure S1 – Producer price index for selected countries (percentage change on a year earlier, quarterly, 1970Q1–2024Q4)



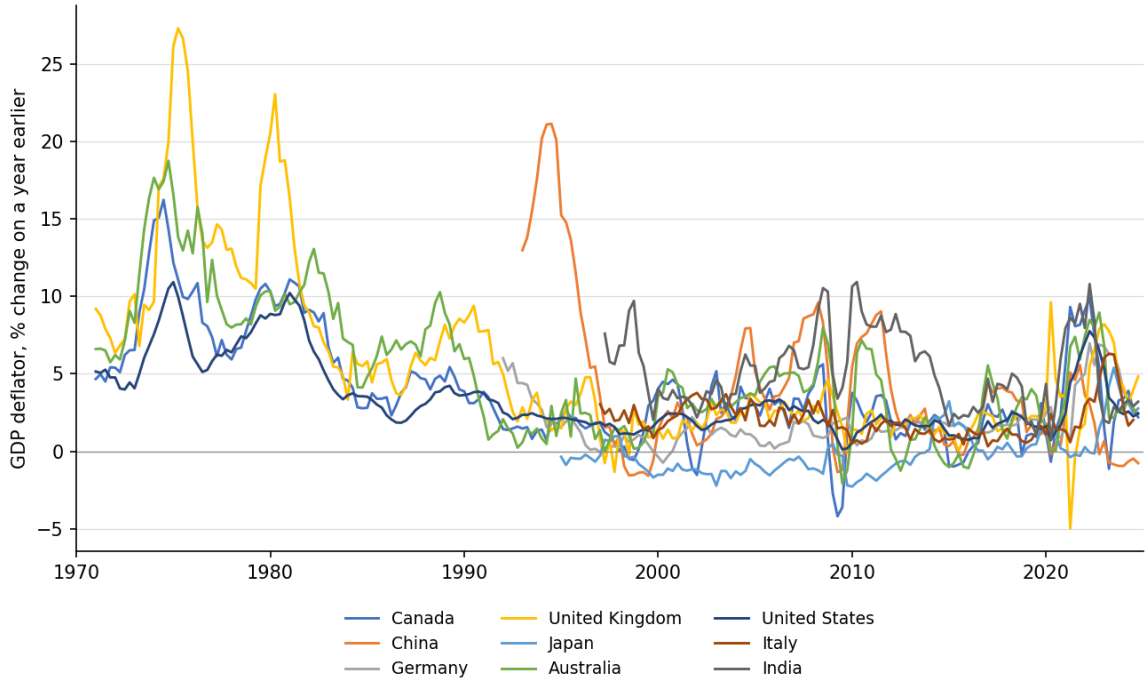
Source: authors' elaboration on World Bank cross-country database of inflation.

Figure S2 – Harmonized consumer price index for selected countries (percentage change on a year earlier, quarterly, 1970Q1–2024Q4)



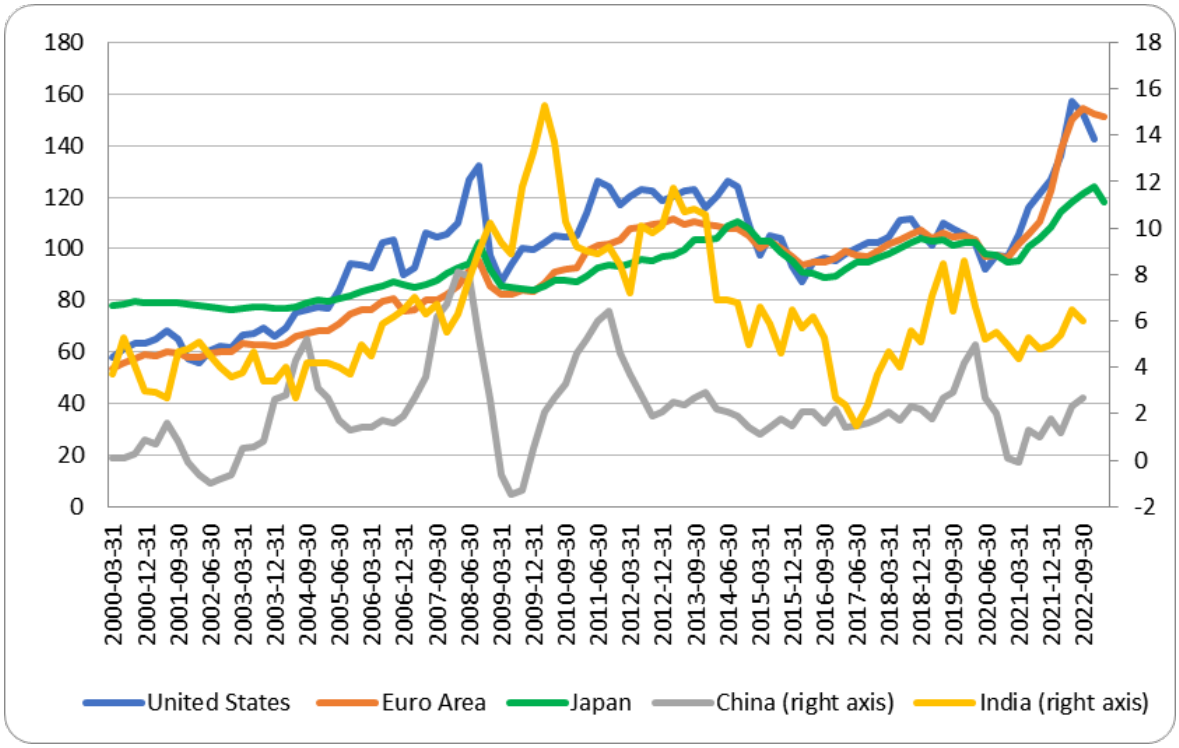
Source: authors' elaboration on World Bank cross-country database of inflation.

Figure S3 – GDP deflator for selected countries (percentage change on a year earlier, quarterly, 1970Q1–2024Q4)



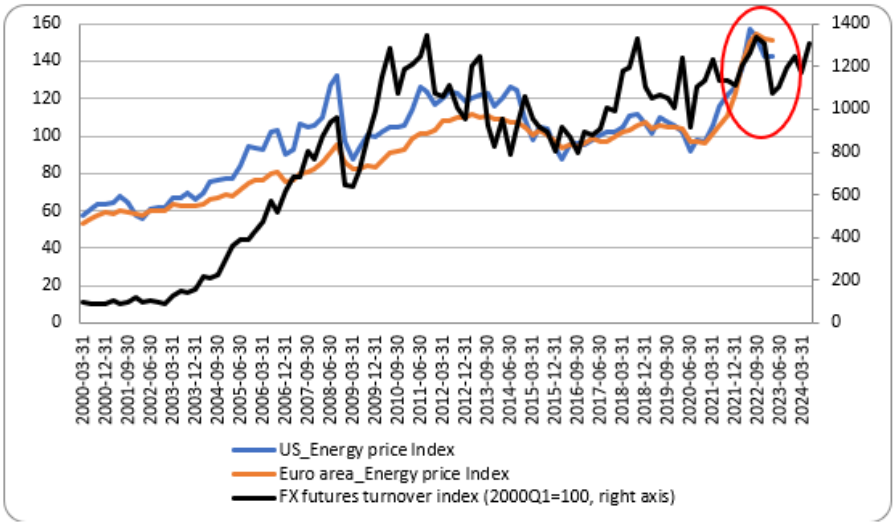
Source: authors' elaboration on World Bank cross-country database of inflation.

Figure S4 – Energy price indexes for selected countries (monthly, 03/2000-09/2022)



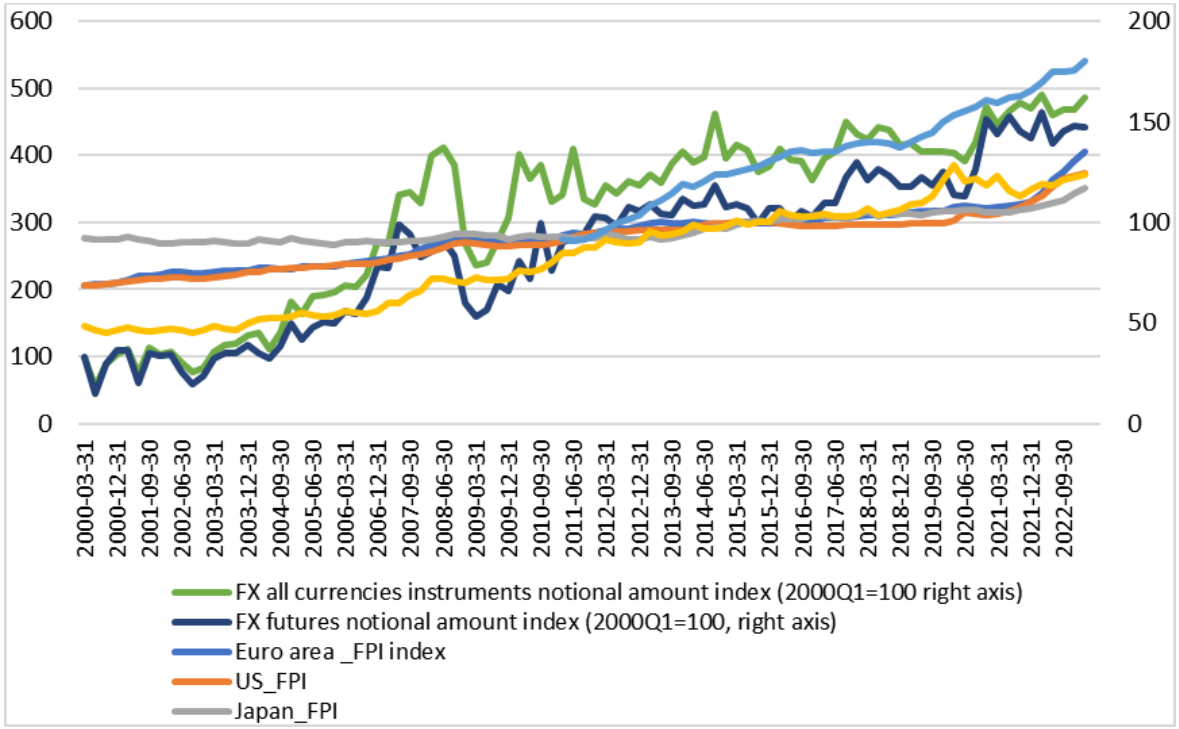
Source: authors' elaboration on World Bank cross-country database of inflation and BIS data.

Figure S5 – FX futures turnover index and energy price indexes (quarterly, 2000Q1-2024Q1)



Source: authors' elaboration on World Bank cross-country database of inflation and BIS data.

Figure S6 – FX notional amounts and food price indexes for selected countries (quarterly, 2000Q1-2023Q1)



Source: authors' elaboration on World Bank cross-country database of inflation and BIS data.

Table S1 – Exchange rate pass-through and global factors: bilateral exchange rates vis-à-vis the US dollar

	(1)	(2)	(3)	(4)
ΔUSDFX	-0.014**	-0.035**	-0.012	-0.041***
	(0.006)	(0.015)	(0.011)	(0.012)
ΔUSDFX × appreciation dummy		0.059**	0.028*	0.057***
		(0.028)	(0.016)	(0.018)
appreciation dummy		-0.050	-0.082	-0.049
		(0.085)	(0.083)	(0.084)
Observations	1483	1483	1483	1483
R^2	0.004	0.012	0.215	0.390
Country FE	no	no	yes	yes
Time FE	no	no	no	yes
Appreciation effect: $\beta1 + \beta2$		0.024	0.016	0.016
p-value Wald test: $\beta1 + \beta2 = 0$		0.175	0.227	0.224

Notes: * p < 0.10, ** p < 0.05, *** p < 0.01. Standard errors clustered by country in parentheses. Positive exchange-rate changes indicate appreciation. Quarterly CPI inflation (log change) is the dependent variable. Sample: 15 countries, 2000Q2–2025Q2. Observations with |inflation| > 10 or |exchange-rate change| > 20 are excluded.

Table S2 – Country coverage of the regression samples

Panel A. NEER sample (62 countries)

Algeria, Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Chile, China, Colombia, Croatia, Cyprus, Czechia, Denmark, Estonia, Euro area, Finland, France, Germany, Greece, Hong Kong SAR, Hungary, Iceland, India, Indonesia, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Malaysia, Malta, Mexico, Morocco, Netherlands, New Zealand, North Macedonia, Norway, Peru, Philippines, Poland, Portugal, Romania, Russia, Saudi Arabia, Serbia, Singapore, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Thailand, Türkiye, United Arab Emirates, United Kingdom, United States

Panel B. USD sample (15 countries)

Australia, Brazil, Canada, Chile, China, Colombia, France, Germany, India, Indonesia, Italy, Japan, Mexico, South Africa, United Kingdom

Notes: The NEER sample includes both advanced and emerging economies. The USD sample is more limited due to data availability for bilateral exchange rates.

Tables S3 and S4 extend the specification of equation (1) in the paper, estimated on the same sample (62 countries, 2000Q2–2025Q2, observations with |inflation| > 10 or |Δ exchange rate| > 20 excluded) with country and time fixed effects and standard errors clustered by country. Table S3 adds lags of the exchange-rate change, in the symmetric version and in the version with regime-specific slopes; the cumulative effects are the sums of the contemporaneous and lagged coefficients, with delta-method standard errors. Table S4 re-estimates the preferred specification of Table 2 separately for advanced and emerging economies.

Table S3 – Dynamic exchange-rate pass-through: contemporaneous and lagged effects (NEER)

	(1) Symmetric	(2) Asymmetric: depreciation	(2) Asymmetric: × appreciation
Δ exchange rate (t)	-0.041***	-0.063***	0.046**
	(0.011)	(0.019)	(0.021)
Δ exchange rate (t−1)	-0.045***	-0.072***	0.059**
	(0.009)	(0.022)	(0.028)
Δ exchange rate (t−2)	-0.030***	-0.036*	0.017
	(0.009)	(0.019)	(0.021)
Δ exchange rate (t−3)	-0.019***	-0.035*	0.042
	(0.007)	(0.018)	(0.028)
Δ exchange rate (t−4)	-0.034***	-0.048**	0.034
	(0.010)	(0.023)	(0.030)
Cumulative effect, 0–4 quarters	-0.169***	-0.253***	-0.054 (appreciation)
	(0.039)	(0.089)	(0.048)
Observations	5816	5816	
R^2	0.448	0.454	
Country and time FE	Yes	Yes	

Notes: dependent variable is quarterly CPI inflation (log change × 100); positive exchange-rate changes are appreciations. Column (1): symmetric distributed lag. Column (2): each lag enters with a regime-specific slope (depreciation coefficient, and its shift in appreciation quarters). The cumulative appreciation effect is the sum of all depreciation and interaction coefficients. Std. Err. clustered by country.

Table S4 – Asymmetric exchange-rate pass-through by country group (NEER)

	(1) All countries	(2) Advanced economies	(3) Emerging economies
Δ exchange rate	-0.089***	-0.040*	-0.106***
	(0.030)	(0.024)	(0.041)
Δ exchange rate × appreciation	0.087**	0.025	0.119**
	(0.038)	(0.031)	(0.056)
Appreciation dummy	-0.016	-0.023	-0.076
	(0.035)	(0.032)	(0.067)
Appreciation effect β1+β2	-0.002 (0.91)	-0.015 (0.35)	0.013 (0.62)
Observations	6061	3631	2430
Countries	62	36	26
R^2	0.410	0.448	0.372
Country and time FE	Yes	Yes	Yes

*Notes: Advanced economies: Australia, Austria, Belgium, Canada, Cyprus, Czechia, Denmark, Estonia, Euro area, Finland, France, Germany, Greece, Hong Kong SAR, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Malta, Netherlands, New Zealand, Norway, Portugal, Singapore, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom, United States. Emerging economies: Algeria, Argentina, Brazil, Bulgaria, Chile, China, Colombia, Croatia, Hungary, India, Indonesia, Malaysia, Mexico, Morocco, North Macedonia, Peru, Philippines, Poland, Romania, Russia, Saudi Arabia, Serbia, South Africa, Thailand, Türkiye, United Arab Emirates. Standard errors clustered by country in parentheses. * p<0.10, ** p<0.05, *** p<0.01.*

Table S5 reports alternative specifications of equation (2) in the paper, all with country and year fixed effects and standard errors clustered by country, on the sample of Table 3 (23 European economies, 1997–2023, 543 observations, annual inflation above 15 percent in absolute value excluded) unless otherwise indicated. Column (1) adds the interaction between union density and capital account openness; column (2) uses first differences of the institutional variables; column (3) adds lagged inflation; column (4) excludes the transition economies (Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia), which account for 41 of the 56 changes in capital account openness observed in the sample; column (5) uses the sample without trimming (546 observations). Union density and capital account openness are standardized.

Table S5 – Bargaining power and inflation: robustness

	(1) Interaction	(2) First differences	(3) Lagged inflation	(4) Excluding transition economies	(5) Full sample
Union density	1.352		0.600	-0.865	1.298
	(1.111)		(0.758)	(0.692)	(1.224)
Capital account openness	-1.200***		-0.417**	-0.652***	-1.344***
	(0.317)		(0.171)	(0.109)	(0.208)
Union density × capital openness	0.027				
	(0.221)				
Change in union density		-0.002			
		(0.088)			
Change in capital account openness		-0.178			
		(0.183)			
Lagged inflation			0.419***		
			(0.064)		
Observations	543	520	520	375	546
R^2	0.664	0.610	0.728	0.713	0.662
Country and year FE	Yes	Yes	Yes	Yes	Yes

*Notes: dependent variable is the annual log change in the CPI. Standard errors clustered by country in parentheses. * p<0.10, ** p<0.05, *** p<0.01.*