

## Inflation and Monetary Policy Cooperation

The duty of a central bank is to pursue monetary stability — customarily defined by low inflation and steady output growth. Recent inflation levels have run larger than ever in the last half-decade (Desilver, 2022). In response, central banks across the world are synchronously hiking interest rates without consulting each other (Moschella et al., 2022). This raises the question: what is the most effective way for Western central banks to tame inflation while limiting recessionary forces globally?

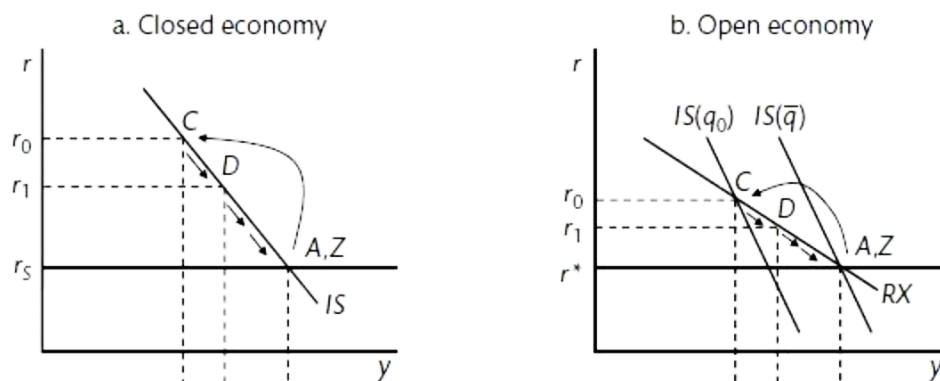
To answer, this essay makes three observations:

1. Owing to increased integration, trade flows, and global value chains, inflation operates on an international scale.
2. Given Observation 1, most integrated economies face similar inflationary threats, and all have incentive to individually tighten their monetary policies.
3. When Observation 2 occurs, and central banks amplify each other's policies without cautious cooperation, negative spillovers are created while a resulting mutually damaging cycle feeds both inflationary and recessionary forces.

Taking these three observations together, this essay concludes that it is uneconomical for monetary policies to differ but dangerous for monetary policies to blindly match one another. Monetary policies should resemble each other only to the extent that they are carefully calibrated and driven by central bank cooperation.

### Globalized Inflation

The Global Slack Hypothesis postulates that “domestic inflation rates have now become more a function of global, rather than domestic economic conditions” (Milani, 2009). Using the Phillips Curve, analysts find that global slack — unused economic resources — is as important as domestic slack in forecasting short-term inflation dynamics (Wynne, 2009; Borio et al., 2007). This is also considered an open-economy extension of the traditional closed-economy Phillips Curve (Garcia, 2012). When exchange rates are included in an open-economy model, the Philips Curve flattens, indicating that individual central banks hold less policy control over inflation behavior (see Figure 1, IS vs. RX curve).



Source: Carlin and Soskice, 2015.

In recent years, a scholarly consensus has agreed that globalization has a wide impact on nearly all economic activities (Frankel, 2000). In the United States, imports as a share of GDP increased from 4% in 1950, to more than 18 percent today (Wynne). In the E.U., imports as a share of GDP have grown from 20% in 1970 to over 46% in 2021 (World Bank). This means that the final consumption basket of an average citizen consists of *both foreign and domestic goods*, making global inflation a factor of domestic inflation.

Specific domestic causes of inflation certainly exist. However, this internal inflation can easily be imported to other nations via globalization. Global value chains (GVCs) exist when “different stages of the production process are located across different countries” (OECD). By virtue of a GVC, price inflation of an input produced in one country can translate to inflation in another country that imports this inflated input. For example, if prices increase for U.S. aerospace parts and the U.K. imports these inflated aerospace parts to build planes, the U.K. will also experience plane price inflation. Broadly, this trend assumes the massive effect of “importing” inflation from one country to another (Auer).

Given the globalized nature of inflation, tightening monetary policy cannot be one-dimensional. Price-level dynamics now respond to global forces, complicating the impact of domestic-focused monetary policy. Auer deduces that central banks must coordinate with each other to target specific causes of inflation (2017). Some factors causing inflation “are beyond the control of individual central banks” (Auer).

### Effects of Uncoordinated Monetary Policies

Applying their Open-Economy Macroeconomic Model, Obstfeld and Rogoff find risk in central banks conducting monetary policy centered only on a national, but not global perspective (2002). With inflation globalized (see Figure 2) and central banks all raising interest rates without any careful communication or coordination (see Figure 3), unintended negative consequences are in the wind. Central banks should adopt similar monetary policies, increasing interest rates to cool inflation, but they require a cautionary cooperation regime. This section identifies three effects of this absence of cooperation: a) overestimation, b) competitive appreciation cycle, c) spillovers into developing nations.

Figure 2: Similar Domestic Inflation Rates Over Time

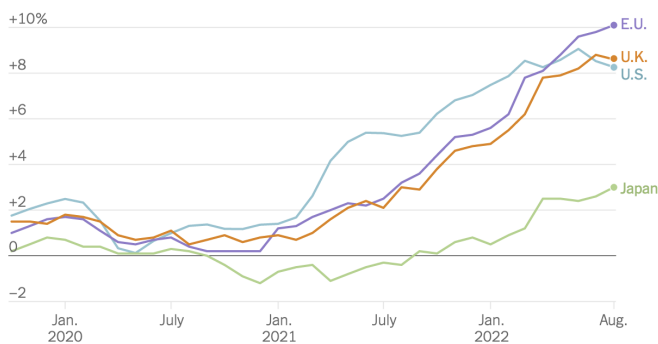
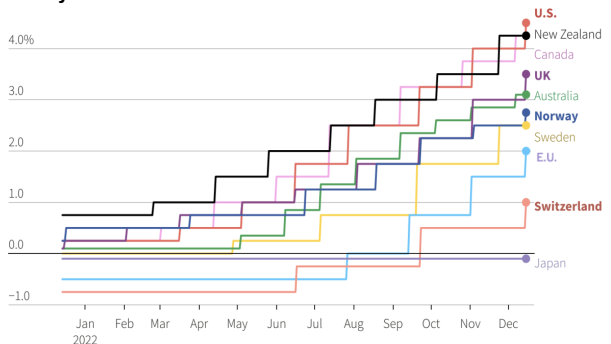


Figure 3: Interest Rate Increases via Central Bank Monetary Policy



Source: Bahceli, 2022.

Absent careful calibration, central banks could very well overestimate the monetary contraction needed to tame inflation. By aggressively pushing interest rates in the same direction, central banks amplify each other's policies without accounting for the feedback loop (Obstfeld, 2022). The World Bank recently warned that if monetary policies so sightlessly match each other, "they could be mutually compounding... and steepen the global growth slowdown" (Morris, 2022). Central banks must collaborate to assess their collective impact on global demand and lower the global recession risk. Monetary policies are misguided without cooperation as they cannot target the root cause of inflation, especially if it is imported through global value chains (Auer). Only through communicated policy calibration can individual central banks minimize avoidable economic slowdowns.

When the U.S. or any other developed economy tightens monetary policy, they strengthen their own exchange rate and mechanically export inflation into a trading partner nation. This competitive appreciation and beggar-thy-neighbor dynamic could result in an overtightening spiral. Take the case of the European Union and the United States. 1) When the Federal Reserve tightens, the Dollar appreciates against the Euro. 2) E.U. exports, and thereby inflation, increase in the Euro area. 3) The European Central Bank tightens in response, and the Euro appreciates against the Dollar. 4) U.S. exports, and thereby inflation increase in the U.S. and the Federal Reserve is prompted to tighten. *This feedback sequence repeats itself and dangerously reinforces inflation* (Moschella et al). After tightening, there is a short-run inflationary rise, but this effect fades due to recessionary pressures, leaving all countries in a suboptimal equilibrium with broader financial instability (Ca' Zorzi et al., 2020). Were central banks to cooperate, they could avoid these mutually destructive cycles and adjust their monetary stances to benefit both the E.U. and U.S. In game theory, this overtightening situation mirrors the Prisoner's Dilemma. Coordinating and communicating policies while shifting out of a non-cooperative Nash equilibrium would be a pareto-improvement.

The danger of international spillovers into developing, poorer economies also deserves increased attention. Saghil Amhed finds that emerging market economies are among the most vulnerable to the contractionary forces brought by tightening monetary policy, and subsequently, decreased U.S. exports (2021; Caldaro et al., 2022). Demand-driven monetary spillovers into these emerging economies often put downward pressure on GDP. However, Amhed's analysis observes that "better communication may alleviate the tradeoffs faced by emerging economies."

Most economies will need similar policies of monetary stringency to drive down rising inflation. Communicating intentions and collaborating, however, can facilitate a gentler tightening path that steers clear of excessive output sacrifices and still lowers inflation. Calibrating monetary policies across developed economies will help contain macroprudential policy leakages and resulting capital flows (Agénor et al., 2022). Mutual cooperation to end beggar-thy-neighbor cycles can similarly avoid multiple rounds of unnecessary tightening (Moschella).

## **Policy Suggestions**

Although central bank coordination has cemented its role in history, current collaboration is weak, if not absent (Clarida, 2016; Mohan, 2014; Taylor, 2013; Amhed). After the 2008 recession, the Federal Reserve announced a joint interest rate policy with five other developed economies (Arner, 2010). And what sustained the gold standard for so long was England-U.S.-France central bank cooperation. (Taylor). Facing sky-high inflation rates, today's central banks must renew cooperation through two avenues: information-sharing and monetary policy coordination.

Currently, central banks don't have a comprehensive information-sharing mechanism and only occasionally communicate (Schenk 2020; Clarida; Moschella). By sharing information about future policy plans and preferences, central banks can calibrate their monetary policies to most effectively cool inflation with the smallest output loss (Simmons, 2006). Clear communication will prevent overtightening and overestimations. Caldara finds that central banks often miscalculate spillovers when tightening synchronously, and information-sharing can help central banks more accurately detect and restrain spillovers (2022). National monetary authorities don't work from the same economic or theoretical models either (Frankel). In this way, information-sharing is an opportunity to draw on wider wisdom to better understand economic phenomena and optimize monetary policies.

Monetary policy coordination is more discretionary to central banks. Joint policies should: be calibrated to target specific causes of inflation such as GVCs, reorient current contractionary policies to minimize race to the bottom style competition, and communicate with emerging economies about spillovers. Table 1 shows how these monetary policy tools can broadly reverse engineer each issue brought by incoordination. Extensive coordination will require deep trust, but baseline cooperation, such as information-sharing, is mutually beneficial and feasible.

**Table 1: Types of Cooperation Needed**

Issue	Effect on Inflation	Effect on Output	Type of Cooperation Needed
<b>Competitive Appreciation</b>	+	-	Macroprudential Policy Coordination + Information Sharing
<b>Overestimation</b>	-	-	Coordinated Policy Action/Announcement + Information Sharing
<b>Emerging Economy Spillover</b>	-	-	Information Sharing

As inflation threatens to bring central banks to their knees, nations must realize that inflation is global and requires a global solution. Recent rounds of uncoordinated tightening policies carry the risk of recessionary collapse and go beyond what is needed to quell inflation. Because the Dollar plays such an outsized role in the West, U.S. monetary policy cooperation shows great potential in limiting spillovers and halting competitive appreciation. With countries working so closely to sanction Russia for its crimes in Ukraine, there is little doubt that their central banks can similarly unite against inflation.

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