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Against Monetary Primacy

Yair Listokin

Yale Law School

Rory Van Loo

Boston University School of Law

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AGAINST MONETARY PRIMACY

*Yair Listokin & Rory Van Loo**

Every passing month of high interest rates increases the chances of massive job cuts and a devastating recession that still might come if the Fed maintains interest rates at their current levels for long enough. Recessions impose not only widespread short-term pain but also lifelong harms for many, as vulnerable populations and those who start their careers during a downturn never fully recover. Yet hiking interest rates is the centerpiece of U.S. inflation-fighting policy. When inflation is high, the Fed raises interest rates until inflation is tamed, regardless of the sacrifice that ensues. We call this inflation-fighting paradigm monetary primacy. Despite its great risks, monetary primacy has remained unchallenged by either political party and largely ignored by legal scholars.

This Article exposes monetary primacy's incoherence and proposes precisely the opposite framework—one that relegates interest rates to a supporting role in the fight against inflation. Governments possess other policy tools for controlling inflation that are better situated to lead. Examples include strengthening antitrust and consumer law enforcement, allowing greater immigration, raising taxes, removing red tape in sectors experiencing bottlenecks, and reducing government spending. Between 2021 and 2023, the U.S. deployed many of these tools, albeit not necessarily motivated by inflation concerns. And while the Fed has received much of the attention for lowering inflation during this period, it likely had limited if any impact. Thus, our framework has descriptive power for the astonishing recent success in moderating excess inflation. But that reality has been missed, thereby increasing the chances that the Fed plows ahead with dangerously high interest rates.

Instead of monetary primacy, the Fed should set interest rates at a level that is best for long-term employment and price stability, known as the “natural” rate of interest. If inflation remains too high when interest rates equal the natural rate, then the Fed, the executive branch, and Congress should compare the sacrifice associated with raising interest rates above their natural rate to the alternative policy tools and choose the least-cost option. We assert that, in many but not all cases, the preferred option will not be elevated interest rates, and propose reforms to enable other institutions to respond effectively to inflation alongside the Fed. These proposals would move from monetary primacy to monetary pluralism, which means leveraging an array of economically beneficial tools. In both the short term and the long term, moving away from monetary primacy will help increase the chances of conquering inflation, avoiding a recession, and expanding economic opportunity.

* Professor, Yale Law School; Professor, Boston University School of Law. A coin flip determined authors' name order. [acknowledgements forthcoming]. Preetham Chippada, Tess Cushing, Ethan FitzGerald, Ashlee Fox and Fred Halbhuber provided excellent research assistance.

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INTRODUCTION

The United States and world economies have experienced an inflation roller-coaster. After over thirty years of relative price stability,¹ inflation returned with a vengeance in 2021 to 2023. In the United States, prices increased at an annual rate of over 7%, the highest level since the early 1980s.² Citizens resented the uptick in prices, with Americans in 2022 perceiving inflation as the “top problem facing our country today.”³ The historically high inflation quickly subsided, however. By early 2024, annual inflation fell to 3.4 percent.⁴

¹ We follow the Fed in defining annual inflation of approximately 2% as “consistent with ... price stability.” *Why Does the Federal Reserve Aim for Inflation of 2 Percent over the Longer Run?*, BD. OF GOVERNORS OF THE FED. RSRV. SYSTEM (Aug. 27, 2020), https://www.federalreserve.gov/faqs/economy_14400.htm.

² Rob Wile, *Inflation Remained Elevated in July at 3.2% — and Prices Are Unlikely to Return to Pre-Pandemic Levels Anytime Soon*, NBC NEWS (Aug. 9, 2023, 9:47 PM), <https://www.nbcnews.com/business/economy/inflation-rate-july-2023-how-high-low-will-interest-rates-rise-again-rcna99015>.

³ Carroll Doherty & Vianney Gómez, *By a Wide Margin, Americans View Inflation As the Top Problem Facing the Country Today*, PEW RSRCH. CTR. (May 12, 2022), <https://www.pewresearch.org/short-reads/2022/05/12/by-a-wide-margin-americans-view-inflation-as-the-top-problem-facing-the-country-today/>.

⁴ Jeanna Smialek, *Fresh Inflation Data Shows Intact, but Bumpy, Cool-Down*, N.Y. TIMES (Jan. 11, 2024), <https://www.nytimes.com/2024/01/11/business/inflation-cpi-report.html>.

Victory is not yet assured. At the end of January 2024, Fed Chair Jerome Powell announced that “inflation is still too high, ongoing progress in bringing it down is not assured, and the path forward is uncertain. I want to assure the American people that we are fully committed to returning inflation to our 2 percent goal.”⁵ The “last mile” will likely be the hardest, risking a crushing resurgence in inflation or a devastating economic downturn.⁶ But almost nobody predicted the economy would be where it was by early 2024, poised to conquer inflation without a recession or rising unemployment—a combination so miraculous that it is known to economists as “immaculate disinflation.”⁷

How did the United States achieve this stunning success that almost nobody saw coming?⁸ As a rhetorical matter, the American policy response to excess inflation was simple but potentially painful. The Federal Reserve Open Market Committee (FOMC) raised short term interest rates. A lot. Rates hovered near zero in March 2022.⁹ A year and a half later, by August 2023, they reached five percent.¹⁰ The rate hike represented the FOMC’s fastest monetary tightening since the 1980s.¹¹ As these rate hikes began in earnest, Fed Chair Jerome Powell warned that “[w]hile higher interest rates, slower growth, and softer labor market conditions will bring down inflation, they will also bring some pain to households and businesses. These are the unfortunate costs of reducing inflation.”¹² This Fed-centered inflation fighting paradigm amounts to “monetary primacy.”

This Article exposes monetary primacy as analytically flawed and socially reckless. It proposes a new macroeconomic regime called monetary pluralism. In monetary pluralism, the government leverages multiple policy levers rather than relying overwhelmingly on the Fed’s manipulation of interest rates. What’s more, we claim that monetary pluralism better characterizes the post-2021 policy success than the monetary primacy regime championed by the Fed.

Monetary pluralism does not ignore money. Indeed, it would require the Fed to target the “natural rate” of interest, which can be thought of as the optimal interest rate for

⁵ Bd. of Governors of the Fed. Rsrv. Sys., Transcript of Chair Powell’s Press Conference Opening Statement (Jan. 31, 2024), <https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20240131.pdf>.

⁶ Isabel Schnabel, *The Last Mile*, FED. RESERVE BANK OF ST. LOUIS REV. (forthcoming 2024), <https://files.stlouisfed.org/files/htdocs/publications/review/2024/01/10/the-last-mile.pdf>.

⁷ See John Cassidy, *Economists Struggle to Come to Terms with “Immaculate Disinflation,”* NEW YORKER (Nov. 17, 2023), <https://www.newyorker.com/news/our-columnists/economists-struggle-to-come-to-terms-with-immaculate-disinflation>.

⁸ See Paul Krugman, Opinion, *Beware Economists Who Won’t Admit They Were Wrong*, N.Y. TIMES (Dec. 18, 2023), <https://www.nytimes.com/2023/12/18/opinion/inflation-economists.html>.

⁹ Federal Funds Effective Rate, FED. RSRV. BANK OF ST. LOUIS, <https://fred.stlouisfed.org/series/FEDFUNDS> (Dec. 2023).

¹⁰ *Policy Tools*, Bd. of Governors of the Fed. Rsrv. (Jul. 26, 2023), <https://www.federalreserve.gov/monetarypolicy/openmarket.htm>.

¹¹ Jessica Dickler, *The Federal Reserve’s Period of Rate Hikes May Be Over. Here’s Why Consumers Are Still Reeling*, CNBC (Dec. 13, 2023, 2:16 PM), <https://www.cnbc.com/2023/12/13/the-federal-reserve-held-rates-steady-heres-what-that-means-for-you.html>.

¹² Jerome Powell, Chairman, Fed. Rsrv., Monetary Policy and Price Stability (Aug. 26, 2022), <https://www.federalreserve.gov/newsevents/speech/powell20220826a.htm>.

sustained overall economic health.¹³ If inflation nevertheless rises above a socially desirable rate, the Fed should not immediately jump into the fray with higher interest rates. Instead, government should consider other policies, such as permanent or temporary reforms that alleviate the bottlenecks holding back the supply of goods and services. Promoting immigration from workers in a sector with skyrocketing wages or removing regulatory red tape causing a supply shortage, for example, would target inflation reduction much more precisely than using the blunt hammer of high interest rates to bludgeon the broader economy. Even if these tailored responses fail, fiscal policy, most notably cutting back government spending, also offers a more effective and democratically legitimate means of curbing excess price pressures than interest rates alone.

Perhaps surprisingly, we argue that this pluralistic response to inflation reduction better characterizes U.S. policy in 2021 to 2023 than monetary primacy. The Fed's vaunted interest rate hikes amounted to "running to keep still," ending a period of very loose monetary policy and then keeping monetary policy at a level unlikely to reduce inflation. In real, inflation-adjusted terms, interest rates were low during this period.¹⁴ Indeed, since the Fed's interest rate hikes did not cause the sacrifice foretold by Chair Powell—especially a rise in unemployment necessary to drive down prices—they cannot be the cause of the decline in inflation.¹⁵ Unless we assume that the Fed's rhetoric, rather than its actions, has magical effects on public inflation expectations, we must look elsewhere for the cause of the "immaculate disinflation" of 2023.¹⁶

Recognizing the reality of what has been working is crucial to enabling the economy to continue to avoid the dire consequences of monetary primacy. Raising interest rates above the natural rate—hereinafter referred to as interest rate hikes—requires sacrifice in the form of excess unemployment.¹⁷ Other inflation fighting policies, by contrast, benefit the economy rather than hurt it.¹⁸ Monetary primacy thus demands a heavy sacrifice to the inflation gods, borne primarily by low-income households and workers in capital-hungry sectors of the economy, such as construction, real estate, and manufacturing.¹⁹ And while interest rates can in theory be raised quickly as an institutional matter, they affect the economy slowly.²⁰ This

¹³ *Infra* Part I.A. (summarizing the natural interest rate analysis, which seeks to balance full employment with stable inflation).

¹⁴ Rates were low especially when compared with interest rate benchmarks widely deployed to evaluate Fed policy. *Infra* Part I.B.

¹⁵ On those predictions, see *supra* note 12 and accompanying text.

¹⁶ *Cf.* Cassidy, *supra* note 7 (exploring the puzzlement over inflation's rapid decline).

¹⁷ See Horst Feldmann, *Real Interest Rate and Labor Market Performance around the World*, 79 SOUTHERN ECON. J. 659, 659 (2013).

¹⁸ *Infra* Part II.

¹⁹ See Daniel Ringo, *Monetary Policy and Home Buying Inequality* (Bd. of Governors of the Fed. Rsrv., Finance and Economics Discussion Series, 2023-006).

²⁰ More specifically, the higher interest rate announced refers to the rate that the Fed will pay banks holding money in its accounts and the rate that the Fed will charge banks to borrow money. Banks must then decide, based on the higher rates they receive from the Fed, to pay higher interest rates on customer deposits. Since the cost to banks of paying people for their deposits (or the Fed for loans) is now higher, and the appeal of simply storing money at the Fed is greater, banks then raise the interest rates they charge on mortgages and other loans. See *infra* Section I.A.

lag between institutional action and economic impact means that monetary policy can easily under- or over-tighten, sometimes allowing inflation to become entrenched while at other times inducing an unnecessarily deep recession.²¹

In short, high interest rates involve a greater overall risk of sacrifice than alternatives, borne disproportionately by a vulnerable portion of the population. Moreover, their assumed advantages are exaggerated. Now is the time to end the conceptual and institutional stranglehold of monetary primacy.

Before critiquing monetary primacy's heavy societal costs in Part I, we first critically examine how it got established. Despite its great risks, monetary primacy is not the product of a careful comparison between the social costs of different inflation fighting tools. Rather, monetary primacy is an outgrowth of the "Great Inflation" of the 1970s. Part I also establishes that actions outside the Fed better explain inflation fighting policy in 2021 to 2023.

After tracing those historical origins and summarizing the costs of monetary primacy, we begin to develop a new monetary pluralism framework in Part II. That discussion also shows why the appropriate monetary policy is for the Fed to stabilize inflation by hitting the natural interest rate. In addition to our framework's economic advantages, we argue that it is more consistent with the Fed's appropriate institutional role and statutory mandate than the status quo.

Part III then develops our pluralist alternatives for reducing inflation. The most attractive policies are reforms that lower inflation while avoiding sacrifice and strengthening the economy. For example, stronger consumer law enforcement and higher immigration raise the economy's capacity, accommodating the high demand for goods and services that otherwise fuels inflation when supply fails to keep up. If such capacity-expanding policies prove insufficient to fully bring inflation back to its target, interventions that reduce demand, such as cutting spending or raising taxes, can lower inflation with less harm than interest rate hikes. We also offer ways to design these alternatives to overcome political barriers.

To address the institutional factors reinforcing monetary primacy, Part IV develops reforms to make policies other than interest rate hikes more feasible and systematic. A central administrative bureau should help to coordinate inflation responses across diverse agencies, including the Federal Reserve. Better legislative design also makes monetary pluralism more feasible. Lawmakers should add triggers in legislation so that various areas—from tax policy to immigration—adjust automatically once certain inflation levels arrive. These clauses would prevent lawmakers from needing to act in the future, and thereby remove some of the institutional barriers that cause monetary primacy to be the default inflation response.

Whether through institutional reforms or a new legal analytic framework, monetary pluralism is important in both the short and long run. Throughout modern history, just when inflation seemed to be vanquished, it often has roared back even worse than before.²² And with every passing month of elevated interest rates, the overall risk of a recession increases.

²¹ See *What Are the Long and Variable Lags in Monetary Policy?*, FED. RSRV. BANK ST. LOUIS (Oct. 12, 2023), <https://www.stlouisfed.org/on-the-economy/2023/oct/what-are-long-variable-lags-monetary-policy>.

²² See generally PETER BERNHOLZ, *MONETARY REGIMES AND INFLATION: HISTORY, ECONOMIC, AND POLITICAL RELATIONSHIPS* (2d ed. 2015) (discussing the history of inflation).

Indeed, even as economists celebrated the surprisingly “soft landing” underway as of January of 2024, they still predicted a 39% chance of a recession within a year.²³ Adopting monetary pluralism would significantly lessen those chances of near-term economic disaster.

Regardless of what happens in the short run, however, inflation has proven a persistently pernicious threat to civilization. Historians cast inflation as contributing to the fall of the Roman Empire,²⁴ the onset of the French Revolution’s Reign of Terror,²⁵ and the rise of Hitler.²⁶ It is a question of when, not if, high inflation will return. When it does, monetary primacy counsels a deep recession as the cure. Although recessions harm a broad spectrum of the population, they hit vulnerable populations hardest. And the millions who lose their jobs or graduate during recessions never fully recover, with lifetime earnings significantly diminished even decades later.²⁷ To sustain and replicate the astonishing success of the early 2020s inflation bout, policymakers must resist the narrow allure of monetary primacy, and instead deploy the full arsenal that government has to offer.

I. THE RISE OF MONETARY PRIMACY

To understand the current legal architecture for fighting inflation, it is necessary to grasp not only the macroeconomics but also the accompanying human experiences. The human experience with inflation informs consumer spending behavior, leaders’ choice of policy, and the stakes to society. This Part provides a missing legal institutional account of how those economic and human pieces have interacted to produce the modern era of monetary primacy. It also explains why abandoning that framework is crucial for preventing widespread economic sacrifice in the future.

A. *The Law and Economics of Inflation*

As backdrop for our legal institutional analysis, we begin with the basic inflation

²³ Harriet Torry & Anthony DeBarros, *It Won’t Be a Recession—It Will Just Feel Like One* (Jan. 14, 2024, 5:30 AM), WALL ST. J. https://www.wsj.com/economy/it-wont-be-a-recession-it-will-just-feel-like-one-1919267a?mod=hp_lead_pos6 (surveying economists in academia, business, and finance and finding that the average chance of a recession within a year was 39%).

²⁴ BERNHOLZ, *supra* note 22, at 34, 114.

²⁵ See R.R. PALMER, *TWELVE WHO RULED: THE YEAR OF TERROR IN THE FRENCH REVOLUTION* 384 (2005).

²⁶ See Lewis E. Hill, Charles E. Butler, & Stephen A. Lorenzen, *Inflation and the Destruction of Democracy: The Case of the Weimar Republic*, 11 J. ECON. ISSUES 299, 299.

²⁷ See Hannes Schwandt, *Recession Graduates: The Long-lasting Effects of an Unlucky Draw*, STANFORD INST. FOR ECON. POLY RSRCH. (Apr. 2019), <https://siepr.stanford.edu/publications/policy-brief/recession-graduates-long-lasting-effects-unlucky-draw> (“Research shows that college graduates who start their working lives during a recession earn less for at least 10 to 15 years than those who graduate during periods of prosperity.”); Lisa B. Kahn, *The Long-Term Labor Market Consequences of Graduating from College in a Bad Economy*, 17 LABOUR ECON. 303, 304 (2010) (finding a nine percent wage loss persists even fifteen years after graduation for those graduating during an economic downturn).

framework.²⁸ Inflation has three primary determinants. The first determinant of inflation is what people expect inflation to be.²⁹ The second is how much spending occurs.³⁰ The third is the economy's ability to produce the things that people want to purchase, known as production capacity.³¹

The expectations of workers, employers, and consumers influence inflation.³² Workers and employers care about their “real wage,” meaning what they can buy with the salary they receive, often referred to as purchasing power.³³ When the price of what they need to buy increases by 5%, their real wage declines by that amount in the sense that they can now buy less with same wages they received before. Consequently, when workers expect that prices will rise, they will more aggressively negotiate for higher wages paid so that their real wages keep pace. When employers also expect prices to rise, they more readily agree to those wage requests since they expect to be able to charge higher prices to consumers. Having agreed to pay higher wages, the employer needs to increase consumer prices to retain its profit margins. High inflation expectations can thus be self-fulfilling. Prices and wages increase in this example because of expectations rather than anything happening in the real economy. Complicating matters, there is empirically compelling evidence that people often do not get their inflation expectations right.³⁴

The second major input into inflation, the level of spending, refers to the spending and

²⁸ This model is known as the “expectations augmented Phillips Curve” and is a staple of modern macroeconomics. See Kevin D. Hoover, *Phillips Curve*, ECONLIB, <https://www.econlib.org/library/Enc/PhillipsCurve.html>. For an instructional video, see Everything Econ, *Expectations Augmented Phillips Curve*, YOUTUBE (June 9, 2020), <https://www.youtube.com/watch?v=P9a1BEed6BSk>.

²⁹ See Hoover, *supra* note 28.

³⁰ Inflation expectations can also influence spending. See Mary A. Burke & Ali Ozdagli, *Household Inflation Expectations and Consumer Spending Evidence from Panel Data*, 105 REV. ECON. & STAT. 948, 948 (2023) (finding that “higher inflation expectations stimulate current consumption spending on durable goods for consumers . . .”).

³¹ See Pejman Bahramian & Andisheh Saliminezhad, *Does Capacity Utilization Predict Inflation? A Wavelet Based Evidence from United States*, 58 COMPUTATIONAL ECON. 1103, 1106 (2021) (finding “[a] positive causal relationship running from [an economy’s] capacity utilization to inflation . . .”).

³² See Hoover, *supra* note 28.

³³ The real wage is often contrasted with the nominal wage, or the literal amount paid as viewed independent of what it purchases.

³⁴ See Lloyd B. Thomas Jr., *Survey Measures of Expected U.S. Inflation*, 13 J. ECON. PERSPECTIVES 125, 133 (1999) (finding “a strong adaptive or backward-looking element in the formation of inflation expectations.”). There are two primary theories about the determinants of inflation expectations. Some argue that inflation expectations are “adaptive”—people expect inflation in the current year to equal last year’s inflation rate (or a weighted average of past years’ inflation rates). Others contend that inflation expectations are “rational”—that people account for all relevant information, like policy changes, when forming inflation expectations and get things right on average. See generally N. Gregory Mankiw, Ricardo Reis, & Justin Wolfers, *Disagreement about Inflation Expectations*, in 18 NBER MACROECONOMICS ANN. 209 (Mark Gertler & Kenneth Rogoff eds., 2003). We instead assume that current inflation rates affect the public’s expectations of future inflation, meaning that people are looking to their recent experiences with inflation to predict what will happen next. Besides being well supported empirically, this assumption enables us to be more precise about how current inflation affects future expectations. But at times we will consider how our conclusions depend upon this assumption.

investment plans of consumers, firms, and governments in a given period.³⁵ Many variables influence spending plans. How badly people want the latest electric vehicle, smartphone, or clothing will determine whether they are willing to spend money rather than save. How much money people have to spend depends on whether they have jobs. And shocks like a pandemic can cause people to not spend as much of their money on discretionary areas like travel and entertainment, leading to lower spending now and a sudden jump in spending after that period is over.³⁶ Importantly, interest rate levels influence these decisions because high interest rates encourage people to keep money in bank accounts to earn interest, while discouraging consumers from taking out expensive loans to buy cars or homes.

The relationship between spending and the third determinant, economic capacity, is critical.³⁷ If the economy could produce whatever consumers, firms, and government demand, then prices would not necessarily go up even in the face of great increases in spending. But the economy has a specific capacity at any given moment, meaning it has constrained ability to produce goods and services.³⁸ The economy's capacity is determined by its stock of technology, capital, and labor.³⁹

To tie these three determinants together, if the spending plans of consumers, firms, and governments exceed the economy's capacity to produce, then there are too many dollars chasing too few goods and services. Prices increase as a result.⁴⁰ At that point, inflation exceeds expectations because of the other two main determinants—excess spending relative to insufficient capacity.⁴¹ People may form expectations of that same level of high inflation for the following year. Consequently, even if capacity quickly caught up with spending, expectations could cause inflation to persist indefinitely.

The Federal Reserve's official goal is to keep inflation stable at 2%.⁴² Inflation stability happens when spending is balanced with economic capacity, and people expect that inflation level to persist. If inflation is significantly higher or lower, governments typically try to intervene to bring inflation back toward the target level.

Those interventions can operate through any of inflation's three determinants. If a policy succeeds in lowering spending levels without any change in capacity, then deflationary

³⁵ See Alfred G. Buehler, *The Problem of Inflation*, 326 ANNALS AM. ACAD. POL. & SOC. SCIENCE 1, 1 (1959) (describing spending by consumers and the government as causes of inflation).

³⁶ *Id.* at 3 (describing inflationary shocks after certain events, such as war).

³⁷ *Id.* at 2 (describing the supply of goods available as being a determinant of inflation).

³⁸ See Bahramian & Saliminezhad, *supra* note 31, at 1104.

³⁹ In the short run, capacity is somewhat flexible. High demand for labor, for example, may induce workers to work more or bring retirees back into the labor force. For simplicity, however, we will assume that capacity is fixed as a function of our model. Sustaining increased labor supply to offset an increase in demand requires a sustained increase in real wages, while demand-side factors trigger inflation that offset increased nominal wages and bring labor supply back to its previous equilibrium. In the long run, increases in labor supply requires changes in factors such as incentives to work, skills, or population growth.

⁴⁰ Prices must increase so that the nominal value of production (the price level times economic capacity) equal spending. See N. GREGORY MANKIW, *MACROECONOMICS* (7th ed. 2009).

⁴¹ Inflation depends on spending plans relative to capacity at the current level of expected inflation.

⁴² See Press Release, Bd. Of Governors of the Fed. Rsrv. Sys., Federal Reserve Issues FOMC Statement of Longer-Run Goals and Policy Strategy (Jan. 25, 2012), <https://www.federalreserve.gov/newsevents/pressreleases/monetary20120125c.htm>.

pressures ensue, causing prices to fall. This deflationary pressure typically results because lower demand for companies' goods leads to layoffs. The rise in unemployment means that workers have less ability to negotiate for raises and that consumers overall have less to spend. Examples of policies that target lower spending levels are raising taxes, lowering government spending,⁴³ and increasing interest rates.⁴⁴

Many policies might instead ease prices by increasing the economy's production capacity. Such policies include releasing petroleum reserves, allowing more immigration, granting more oil drilling licenses, and removing red tape that had gotten in the way of business operations.⁴⁵ Once a policy lowers spending or raises capacity, the resulting decrease in inflation can then establish new expectations at those lower levels of inflation.

Since monetary primacy relies almost exclusively on the Fed influencing interest rates, a deeper dive into that tool provides valuable conceptual background. By controlling the money supply, the Fed sets the short-term interest rate.⁴⁶ Macroeconomists think of interest rates relative to what is known as the "natural rate of interest."⁴⁷ The natural rate of interest is the level that balances spending and capacity, thereby keeping inflation stable.⁴⁸

To illustrate, if the government wants inflation to fall, then the Fed could increase interest rates above the natural rate. The "unnaturally" high interest rates would cause people to save more, thereby lowering spending. Since inflation typically results from spending outpacing capacity, unnaturally high interest rates can thereby bring spending down to a level that falls short of capacity, lowering prices relative to expectations.⁴⁹ If interest rates are unnaturally low, people have too little incentive to save, and too high of an incentive to spend, which risks overheating the economy and causing inflation above expectations. When the interest rate equals its natural rate, inflation and inflation expectations are stable because there are no

⁴³ This assumes that Ricardian Equivalence does not apply. In Ricardian Equivalence, consumers cut back on spending in perfect proportion to the government's largesse, so that total spending remains invariant to fiscal policy. See John J. Seater, *Ricardian Equivalence*, 31 J. ECON. LITERATURE 142, 144-45 (1993) ("[E]very new inflow is matched by an equal outflow, which means the lifetime budget constraint and the individual will not perceive the government's refinancing scheme as altering his wealth in any way.").

⁴⁴ Interest rates and the money supply are connected: See Koshy Mathai, *Monetary Policy: Stabilizing Prices and Output*, INT'L MONETARY FUND, <https://www.imf.org/en/Publications/fandd/issues/Series/Back-to-Basics/Monetary-Policy>.

⁴⁵ *Infra* Part III.

⁴⁶ Since 2008, the Fed has also used its balance sheet to influence long-term rates. When the Fed wants to stimulate the economy, it has purchased long-term bonds in large quantities, raising their price and lowering their yield. At present, the Fed is slowly reducing its balance sheet, raising long-term rates. But balance sheet operations move slowly and are not the focus of the Fed's inflation fighting policies. Brian Galle & Yair Listokin, *Monetary Finance*, 75 N.Y.U. TAX L. REV. 137 (2022). As a result, this paper focuses on the Fed's control over the short-term interest rate.

⁴⁷ Wicksell coined this term in the 19th century. See Knut Wicksell, *The Influence of the Interest Rate on Commodity Prices* (1898), reprinted in SELECTED PAPERS ON ECONOMIC THEORY BY KNUT WICKSELL 67-92 (Erik Lindahl ed. 1958). For a primer on the ongoing value of the natural rate of interest concept, see generally Jeffery D. Amato, *The Role of the Natural Rate of Interest in Monetary Policy* (Bank for Int'l Settlements, Working Papers No. 171, 2005), <https://www.bis.org/publ/work171.pdf>.

⁴⁸ See *supra* note 51.

⁴⁹ The increase in interest rates could also affect inflation in subsequent periods by changing inflation expectations.

interest rate imbalances pushing prices higher or lower.⁵⁰

If interest rate increases are high enough or last long enough, they cause unemployment as spending falls short of capacity. Wage inflation pressures diminish, lowering inflation. A reduction in inflation would thereby be achieved, but at a cost—lost economic output and employment. The costs required to achieve a given percentage of inflation reduction is called the sacrifice ratio.⁵¹

It should be clear from this discussion that many policy variables beyond interest rates have the potential to change expectations, total spending, or economic capacity, and thereby move inflation. So how did the U.S. arrive at monetary primacy? We now turn to that question.

B. *The Origins of Monetary Primacy*

Inflation was a “growing, pernicious problem” during colonial times,⁵² caused “untold human suffering” during the Civil War,⁵³ and then again plagued policymakers in the periods of World Wars I and II.⁵⁴ Although historical causal links are necessarily speculative, what is certain is that people hate inflation.

That hatred matters because it has made governmental leaders desperate to bring inflation under control, both as a matter of political pressure and for fear of repeating history’s catastrophes. Prior to 1980, that desperation typically prompted significant congressional and presidential action.⁵⁵ Concerns about inflation at least partly spurred Congress to return the U.S. currency to the gold standard following the Civil War.⁵⁶ As another example, in the midst of World War II, President Roosevelt created an Office of Price Administration and Congress gave it the authority to investigate and enforce price

⁵⁰ *Id.*

⁵¹ The sacrifice ratio depends on the sensitivity of the price level to inadequate demand.

⁵² See Owen F. Humpage, *Paper Money and Inflation in Colonial America*, FED. RSRV. BANK OF CLEVELAND (May 13, 2015), <https://www.clevelandfed.org/en/publications/economic-commentary/2015/ec-201506-paper-money-and-inflation-in-colonial-america>; ALBERT S. BOLLES, *THE FINANCIAL HISTORY OF THE UNITED STATES, FROM 1774 TO 1789: EMBRACING THE PERIOD OF THE AMERICAN REVOLUTION* 38 (1879) (attributing the problem to the legislature simply printing money to fund wars and other projects).

⁵³ See Michael Burlingame, *Abraham Lincoln: The American Franchise*, UNIV. OF VA. MILLER CTR., <https://millercenter.org/president/lincoln/the-american-franchise> (describing inflation during colonial times).

⁵⁴ See Milton Friedman & Anna Jacobson Schwartz, *World War II Inflation, September 1939-August 1948*, in *FROM NEW DEAL BANKING REFORM TO WORLD WAR II INFLATION* 152-53 (1980) (“In World War I inflation (1914-20), the total money stock increased \$6.92 for every dollar of government-created money (high-powered money minus the gold stock), in the World War II inflation (1939-48), \$4.74.”).

⁵⁵ See, e.g., Elmus Wicker, *Roosevelt’s 1933 Monetary Experiment*, 57 J. AM. HIST. 864, 868 (1971) (discussing President Roosevelt’s monetary policy actions, including taking the United States off of the gold standard).

⁵⁶ See James K. Kindahl, *Economic Factors in Specie Resumption the United States, 1865-79*, 69 J. POL. ECON. 30, 47 (1961) (noting that “[t]he relative rise in the American price level made the maintenance of the gold standard at the prewar parity rate impossible”). The United States returned to the gold standard with the Resumption Act of 1875, which required the Treasury to redeem greenbacks in specie on demand. See Resumption Act, 43 Cong. Ch. 15, 18 Stat. 296 (1875).

controls.⁵⁷ In terms of the current inflation framework, however, the significant moves made in the face of the Great Inflation of the 1970s form the most important historical backdrop.

Toward the end of the 1960s, an escalating Vietnam War pumped billions of dollars in governmental spending into the economy. Inflation steadily crept up, from under 2% for the first half of the decade to almost 6% by 1970.⁵⁸ As alarm about inflation grew, Congress felt pressure to take action. It responded by passing the Economic Stabilization Act, which granted the President extraordinary authority to freeze prices and wages.⁵⁹ A Democratic Congress assumed that Nixon, a Republican, would never take such extreme market interventions as freezing prices. Democrats believed that they could then use the President's inaction, in contrast to their own legislative leadership, to punish him in the upcoming elections. In the words of top White House official George Shultz, Democrats passed the Act in a "political dare."⁶⁰

Nixon called their bluff. He decided to use price controls because his close defeat a decade earlier to John F. Kennedy had haunted him ever since.⁶¹ Nixon had been Vice-President during the Eisenhower Administration, whose austerity in public spending contributed to high unemployment rates and recessions in 1957 to 1958, and again in 1960, the year of the Nixon-Kennedy election.⁶² There is good reason to think that President Eisenhower could have easily tipped the scales in candidate Nixon's favor had he done what almost every other President does in an election year—"use expansionary policies before the presidential election to reduce unemployment and reap the electoral rewards of an expanding economy."⁶³ Regardless, Nixon adamantly believed that the economy cost him the 1960 election.⁶⁴

Consequently, a decade later when President Nixon was faced with rising inflation, escalating unemployment, and an upcoming reelection, he was determined not to let an economic downturn doom his election prospects again. Thus, rather than tightening economic policy, as would have been called for in the face of rising inflation, Nixon took extreme expansionary initiatives. In 1971, he ended the gold standard, which left the dollar's value more dependent on people's faith and allowed the U.S. government more freedom to

⁵⁷ See, e.g., Meg Jacobs, "How About Some Meat?": *The Office of Price Administration, Consumption Politics, and State Building from the Bottom Up, 1941-1946*, 84 J. AM. HIST. 910, 914 (1997) (noting "[T]he burden of fighting inflation fell directly on price controls.").

⁵⁸ See U.S. Inflation Rate 1960-2023, MACROTRENDS, <https://www.macrotrends.net/countries/USA/united-states/inflation-rate-cpi>.

⁵⁹ See Economic Stabilization Act of 1970, Pub. L. 91-379, 84 Stat. 799. For a general discussion of the Economic Stabilization Act and the economic controls that it enabled, see John J. Rigby, Note, *The Administration of Economic Controls: The Economic Stabilization Act of 1970*, 29 CASE W. RES. L. REV. 458 (1979).

⁶⁰ George P. Shultz and Kenneth W. Dam, *Reflections on Wage and Price Controls*, 30 INDUS. & LAB. RELS. REV. 139, 141 (1977).

⁶¹ See JOHN A. FARRELL, RICHARD NIXON: THE LIFE 112-15 (2017).

⁶² See Ann Mari May, *President Eisenhower, Economic Policy, and the 1960 Presidential Election*, 50 J. ECON. HIST. 417, 419 (1990).

⁶³ See, e.g., *id.* at 417 (summarizing historical evidence of Eisenhower's inaction on Nixon's election); William D. Nordhaus, *The Political Business Cycle*, 42 REV. ECON. STUD. 169 (1975) (providing evidence of this presidential tendency).

⁶⁴ See RICHARD M. NIXON, SIX CRISES 310 (1962) (attributing his defeat in large part to the economy).

spend excessively.⁶⁵ He also pressured the Federal Reserve chair to *lower* interest rates.⁶⁶ These moves should have driven up inflation even further.

Instead, Nixon stunned the nation in the summer of 1971 by suddenly announcing on national television, “I am today ordering a freeze on all prices and wages throughout the United States.”⁶⁷ The move was by all accounts radical.⁶⁸ By executive order, every shopkeeper, manufacturer, and other business owner was forbidden from raising prices throughout the country.⁶⁹ For political purposes, the gambit worked. It brought inflation down to 3.3% in the year of the election.⁷⁰ Consumers seething about years of eroding purchasing power applauded the move.⁷¹ Nixon won in a landslide.⁷²

As predicted by leading economists at the time, Nixon’s collective policies would not bring lasting economic benefits.⁷³ Soon after his reelection, he ended the broad price controls, causing monthly inflation to shoot up to a yearly rate of 7.4%.⁷⁴ During the price freezes, demand had soared in a manner not unlike what might happen during a pandemic.⁷⁵ Yet the price freeze meant that businesses had not expanded capacity to produce more goods or offer more services, since higher profits would have been needed to justify those expenditures. Thus, as soon as the price controls ended, excess demand immediately ramped up prices, whereas ramping up supply would take years of hiring workers, building factories, and other investments. In other words, spending greatly exceeded economic capacity.

Further exacerbating the imbalance between supply and demand, in late 1973, influential members of the Organization of Petroleum Exporting Countries (OPEC) imposed an embargo against the U.S. for its support of Israel.⁷⁶ Oil is a highly visible and key input into inflation expectations and capacity, as it factors into the costs of delivery, travel,

⁶⁵ Address to the Nation Outlining a New Economic Policy: “The Challenge of Peace,” 1971 PUB. PAPERS OF PRESIDENT RICHARD M. NIXON 886, 888 (Aug. 15, 1971).

⁶⁶ See Burton A. Abrams, *How Richard Nixon Pressured Arthur Burns: Evidence from the Nixon Tapes*, 20 J. ECON. PERSPECTIVES 177, 178 (2006).

⁶⁷ Address to the Nation, *see supra* x, at 888.

⁶⁸ William N. Walker, *Nixon Taught Us How Not to Fight Inflation*, WALL ST. J. (Aug. 13, 2021, 5:11 PM), <https://www.wsj.com/articles/nixon-fight-inflation-price-controls-stagflation-gas-shortages-biden-democrats-reconciliation-bill-federal-reserve-11628885071>.

⁶⁹ See Exec. Order No. 11615, 36 Fed. Reg. 15727 (1971).

⁷⁰ MACROTRENDS, *supra* note 58.

⁷¹ And the accompanying tax cuts, federal spending, and low interest rates stabilized employment and boosted economic prospects. *Id.*

⁷² See Walker, *supra* note 68 (crediting Nixon’s “landslide re-election in 1972” to the price stabilization measures—including price and wage freezes—he implemented under the Economic Stabilization Act).

⁷³ See, e.g., Benjamin C. Waterhouse, *Mobilizing for the Market: Organized Business, Wage-Price Controls, and the Politics of Inflation, 1971-1974*, 100 J. AM. HIST. 454, 455 (2013) (noting that the wage-price freeze was “highly controversial among the president’s advisers.”).

⁷⁴ See *1973 CPI and Inflation Rate for the United States*, CPI INFLATION CALCULATOR, cpiinflationcalculator.com/1973-cpi-inflation-united-states; Paul W. McCracken, *Economic Policy in the Nixon Years*, 26 PRESIDENTIAL STUD. Q. 165, 175 (1996) (“Whatever its effects the controls program obviously did not restore a reasonably stable price level.”).

⁷⁵ McCracken, *supra* note 74, at 175.

⁷⁶ OFF. HIST., *Oil Embargo, 1973-1974*, U.S. DEP’T STATE, <https://history.state.gov/milestones/1969-1976/oil-embargo>.

manufacturing, and so many other expenditures throughout the economy.⁷⁷ Inflation reached 11% in 1974,⁷⁸ causing widespread alarm, as demonstrated by a New York Times article that year describing double-digit inflation as “a world from which there is no sure exit for a modern industrialized country without a major economic collapse or a very long recession.”⁷⁹

A key stretch in the institutional history of inflation then occurred. Leaders tried various policies throughout the 1970s—including more price freezes. Those policies ultimately had insufficient effect, however. The economy was in recession from 1974 to 1975, during which time inflation subsided somewhat but was still high.⁸⁰ Beginning in 1976, inflation steadily rose each year, hitting 13.5% in 1980.⁸¹ The economy also entered again into recession that year, seemingly demanding expansionary policies at a time when inflation required the opposite. After a decade of futile and counterproductive policy interventions, despair had begun to set in about the prospects of overcoming inflation.⁸²

It is against this backdrop of desperation that an economic folk hero was born.⁸³ Recently appointed cigar-smoking, taciturn Federal Reserve Chair Paul Volcker came to believe that a big part of the inflation problem was the public’s entrenched expectations that high inflation would persist.⁸⁴ With the inevitable threat of recessions looming, people assumed politicians would continue to do what Nixon did prior to his reelection—adopt expansionary policies to avoid political backlashes.⁸⁵

To counter that thinking, Volcker decided that the nation needed a kind of economic shock therapy. Over several years, he raised interest rates even as inflation persisted, saying in 1982, “At some point this dam is going to break and the psychology is going to change.”⁸⁶

⁷⁷ See, e.g., Ben S. Bernanke, Mark Gertler & Mark Watson, *Systemic Monetary Policy and the Effects of Oil Price Shocks* 124 (Brookings Papers on Econ. Activity, 1997) (summarizing the impact of oil shocks on the short run and long run).

⁷⁸ See *Inflation, Consumer Prices (Annual %) – United States*, WORLD BANK, <https://data.worldbank.org/indicator/FP.CPI.TOTL.ZG?locations=US>.

⁷⁹ Soma Golden, *U.S. Economists Divided on How to Curb Inflation*, N.Y. TIMES, Apr. 1, 1974, at 65, <https://www.nytimes.com/1974/04/01/archives/us-economists-divided-on-how-to-curb-inflation-economists-are.html>.

⁸⁰ See *1975 CPI and Inflation Rate for the United States*, CPI INFLATION CALCULATOR, cpiinflationcalculator.com/1973-cpi-inflation-united-states/ (indicating that the yearly inflation rate fell from 11.8% at the start of 1975 to 6.9% by the end of the year).

⁸¹ MACROTRENDS, *supra* note 58.

⁸² Many economists believe that part of the problem was that the public was not persuaded that the federal government was taking inflation seriously enough. See Riccardo DiCecio & Edward Nelson, *The Great Inflation in the United States and the United Kingdom: Reconciling Policy Decisions and Data Outcomes* 16 (Fed. Rsrv. Bank of St. Louis, Working Paper No. 14895, 2009).

⁸³ See generally JOSEPH B. TREASTER, PAUL VOLCKER: THE MAKING OF A FINANCIAL LEGEND (2004) (describing the ascent of Paul Volcker).

⁸⁴ See Scott Horsley, *Memories of the 1970s Haunt the Fed, Pushing Its Aggressive Rate Moves*, NAT’L PUB. RADIO (Sept. 29, 2022, 5:00 AM), <https://www.npr.org/2022/09/29/1125462240/inflation-1970s-volcker-nixon-carter-interest-rates-fed>.

⁸⁵ See Marvin Goodfriend & Robert G. King, *The Incredible Volcker Disinflation*, 52 J. MONETARY ECON. 981, 985 (2005) (“[T]he transcripts of the Federal Open Market Committee indicate that Volcker and other FOMC members thought that acquiring credibility for low inflation was central to the success of their disinflation.”).

⁸⁶ Horsley, *supra* note 84.

By the time he raised rates to over 20%, Volcker had proved himself correct, and inflation dropped to just over 3% by 1983.⁸⁷ The longest period of stable inflation in U.S. history followed, lasting four decades.⁸⁸ That resounding success against inflation not only established Paul Volcker as an economic legend, but also ushered in an era of Fed dominance, where interest rate hikes became the default option for combatting inflation.⁸⁹

Through most of the 1970s, the intellectual paradigm had been Keynesian economics, which emphasized tools other than monetary policy to combat inflation.⁹⁰ Keynes had once observed that inflation “engages all the hidden forces of economic law on the side of destruction, and does it in a manner which not one [person] in a million is able to diagnose.”⁹¹ Paul Volcker became seen as that one-in-a-million person.⁹² Since the 1970s, the public policy response to increased inflation and inflation expectations has been simple. When inflation rises above the 2% target, the Federal Reserve raises rates above the natural rate, causing excess unemployment and reducing inflation. In turn, lower inflation reduces inflation expectations, bringing inflation in future periods down to the Federal Reserve’s target level.⁹³ No longer do Congress or administrative agencies play any meaningful role in addressing inflation.⁹⁴ “It is the Fed’s job to bring inflation down to our 2 percent goal,” Federal Reserve Chair Jerome Powell said in 2023, “and we will do so.”⁹⁵

A central banker thus inaugurated a new intellectual and institutional framework centered on monetary primacy.⁹⁶ He did so by being viewed as using Federal Reserve interest rates to save the country from economic calamity when nothing else had worked.

C. The Enduring Rhetoric of Monetary Primacy in 2021-2024

⁸⁷ MACROTRENDS, *supra* note 58.

⁸⁸ Horsley, *supra* note 84.

⁸⁹ See Peter Conti-Brown, Yair Listokin, & Nicholas R. Parrillo, *Towards an Administrative Law of Central Banking*, 38 YALE J. ON REG. 1, 41 (2021) (stating that the Fed tried “to anchor low inflation expectations, which push inflation downwards, whatever happens to output and unemployment” by controlling interest rates.).

⁹⁰ See ROBERT L. HETZEL, *THE MONETARY POLICY OF THE FEDERAL RESERVE: A HISTORY* 150 (2008).

⁹¹ John Maynard Keynes, *Inflation (1919)*, in *THE COLLECTED WRITINGS OF JOHN MAYNARD KEYNES* 57, 57-58 (Elizabeth Johnson & Donald Moggridge eds., 2012).

⁹² See generally TREASTER, *supra* note 83 (providing a historical account of Volcker obtaining legendary status).

⁹³ The FOMC’s mandate prescribes monetary policy focused on both inflation and unemployment. The FOMC, however, issues a formal target for inflation (2%) but not unemployment, and insists that the “[t]he Committee’s employment and inflation objectives are generally complementary,” leaving it free to focus on inflation. See *Statement on the Longer-Run Goals and Monetary Policy Strategy*, BD. OF GOVERNORS OF THE FED. RSRV. SYS. (Jan. 24, 2012), https://www.federalreserve.gov/monetarpolicy/files/fomc_longerrungoals.pdf. For a discussion of how this approach conflicts with the Fed’s statutory mandate, see *infra* Section II.A.

⁹⁴ Conti-Brown, Listokin, & Parrillo, *supra* note 89.

⁹⁵ Jerome Powell, Chairman, Fed. Rsrv., Opening Remarks at the Jackson Hole Economic Policy Symposium (Aug. 25, 2023) (transcript available at <https://www.barrons.com/livecoverage/jackson-hole-meeting-jerome-powell-speech-today/card/transcript-read-jerome-powell-s-jackson-hole-speech-WVKhbYPJrWYI9GYj4hB>).

⁹⁶ See HETZEL, *supra* note 90, at 150.

Although the Fed continues to describe its inflation-fighting paradigm in terms consistent with monetary primacy, the reality has at times strayed from the rhetoric. When inflation began to rise in 2021, the Fed immediately flaunted its intention to raise interest rates and bring inflation down to its 2% target, even at the cost of excess unemployment.⁹⁷ And the Fed's interest rates indeed soared, going from zero in early 2022 to over 5% fifteen months later.⁹⁸

While the rise in interest rates was dramatic, as a demonstration of monetary primacy it amounted to much less than the Fed's tough rhetoric suggested. One way to measure the "toughness" of the Fed's monetary policy is to analyze the "real interest rate." The real interest rate equals the interest rate set by the Fed minus the inflation rate.⁹⁹ It reflects the true cost of money in inflation-adjusted terms. To illustrate, if the "nominal" interest rate set by the Fed is 5% and inflation is 5% as well, then a household is not going to be any better off by saving money in the sense that the money gained in interest will not allow for purchasing more than before those interest payments were made on the savings, because prices will go up by the same amount as the interest payments. It is only a nominal—in name only—interest rate of 5% because from the perspective of the person holding that money, and in terms of economics, this outcome amounts to a real interest rate of zero regardless of whatever the bank or the Fed said was the level of interest. Under these circumstances, the household would not have monetary incentives to save, as doing so would not improve one's monetary position. Spending becomes more appealing.¹⁰⁰

Real interest rates are thus a better benchmark for measuring the "toughness" of the Fed's policy than the prominently announced and widely disseminated interest rate figures set by the Fed. Figure 1 depicts the real interest rate.¹⁰¹ Figure 1 reveals that the real interest rate indeed increased quickly from early 2022 to late 2023—but from an extremely low base. In early 2022, the real interest rate was below -5%.¹⁰² This was well below the natural interest rate, which at that time would have required a real interest rate above zero.¹⁰³ Thus, Fed inflation policy was shockingly accommodative during the Covid pandemic and its aftermath, in the sense that the Fed's interest rates were encouraging people to spend rather than save.

Consequently, contrary to popular belief and its own rhetoric, the Fed's sharp increase in nominal interest rates did not reflect a functional turn to particularly tough monetary

⁹⁷ Jerome H. Powell, Chair, Bd. Governors Fed. Rsrv. Sys., Address at Reassessing Constraints on the Economy and Policy Symposium: Monetary Policy and Price Stability (Aug. 26, 2022), <https://www.federalreserve.gov/newsevents/speech/powell20220826a.htm>.

⁹⁸ See *supra* note 2.

⁹⁹ This calculation uses the expected rate of inflation. See MANKIW, *infra* note 146.

¹⁰⁰ See N. GREGORY MANKIW, MONETARY POLICY 4 (1994).

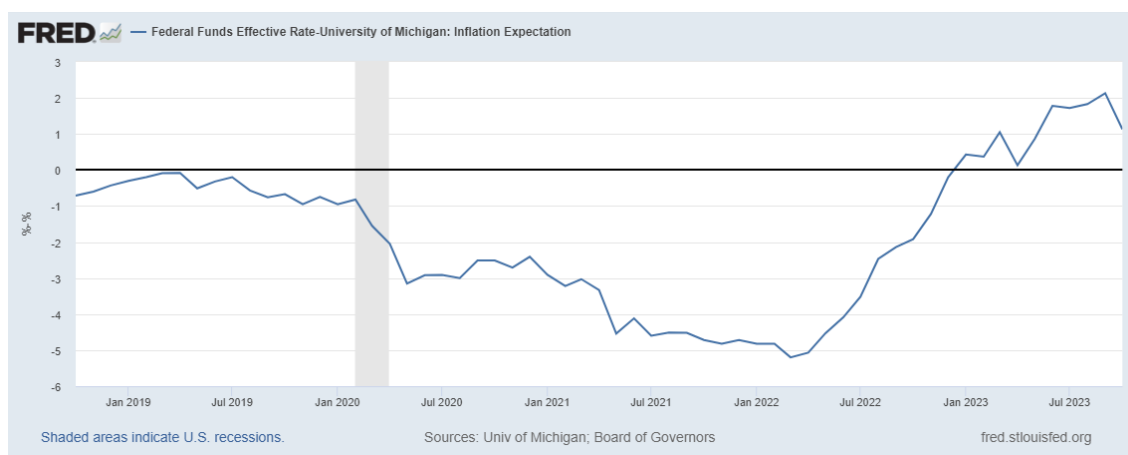
¹⁰¹ This is the short-term real interest rate, calculated as the nominal Federal Funds Rate minus a widely used measure of one year inflation expectations. See *Federal Funds Effective Rate [FEDFUNDS]*, FED. RSRV. BANK OF ST. LOUIS FRED (Nov. 28, 2023), <https://fred.stlouisfed.org/series/FEDFUNDS>; *University of Michigan: Inflation Expectation [MICH]*, FED. RSRV. BANK OF ST. LOUIS FRED (Nov. 28, 2023), <https://fred.stlouisfed.org/series/MICH> (showing the first series minus the second series).

¹⁰² See *supra* note 105.

¹⁰³ For comparison, the estimated natural real rate of interest during this period was roughly .5%, meaning that the Fed's policy was more than 5% below the natural rate. See Measuring the Natural Rate of Interest, FED. RSRV. BANK OF N.Y., <https://www.newyorkfed.org/research/policy/rstar> (describing HLW estimates).

policy. Rather, the increase was necessary to shift monetary policy from that remarkably accommodative policy closer to the natural interest rate. The Fed's monetary stance only approached the natural rate of interest in mid to late 2023.¹⁰⁴ One implication of this is that the Fed's interest rate policies would not be expected to begin putting downward pressure on spending until at least mid-2023, yet inflation had already begun to stabilize and drop by then.¹⁰⁵

Figure 1



Another way to assess monetary policy is the Taylor Rule.¹⁰⁶ The Taylor Rule offers a well-established economic formula for evaluating monetary policy under monetary primacy, in which the Fed's interest rates are assumed to be appropriately deployed as the primary tool to manage inflation.¹⁰⁷ Under the Taylor Rule, the Fed's interest rates should exceed the natural rate when inflation is high and unemployment is low, as was the case in 2021 to 2023.¹⁰⁸ If the Fed's interest rate targets are below the Taylor Rule benchmark, then the Fed's policy is more accommodative, at least temporarily, than would be expected by a widely expected benchmark.

Figure 2 compares the Fed's interest rates (the Federal Funds Rate, in purple), with three different estimates for Taylor Rule rate benchmarks for the years 1985 to 2023—the era of

¹⁰⁴ *Infra* Figure 2.

¹⁰⁵ *See supra* note 4.

¹⁰⁶ *See* Ben S. Bernanke, *The Taylor Rule: A Benchmark for Monetary Policy?*, BROOKINGS (Apr. 28, 2023), <https://www.brookings.edu/articles/the-taylor-rule-a-benchmark-for-monetary-policy/>.

¹⁰⁷ More precisely, the Taylor Rule prescribes that the nominal interest rate set by the Fed should be a function of the natural interest rate, the inflation rate relative to the target inflation rate, and the unemployment rate. Unlike the real interest rate presented above, the Taylor Rule formula adjusts for the state of the economy, allowing monetary policy to be “graded on a curve.” *Id.*

¹⁰⁸ When the economy is slumping, by contrast, the real interest rate should be lower than the natural rate. *Id.*

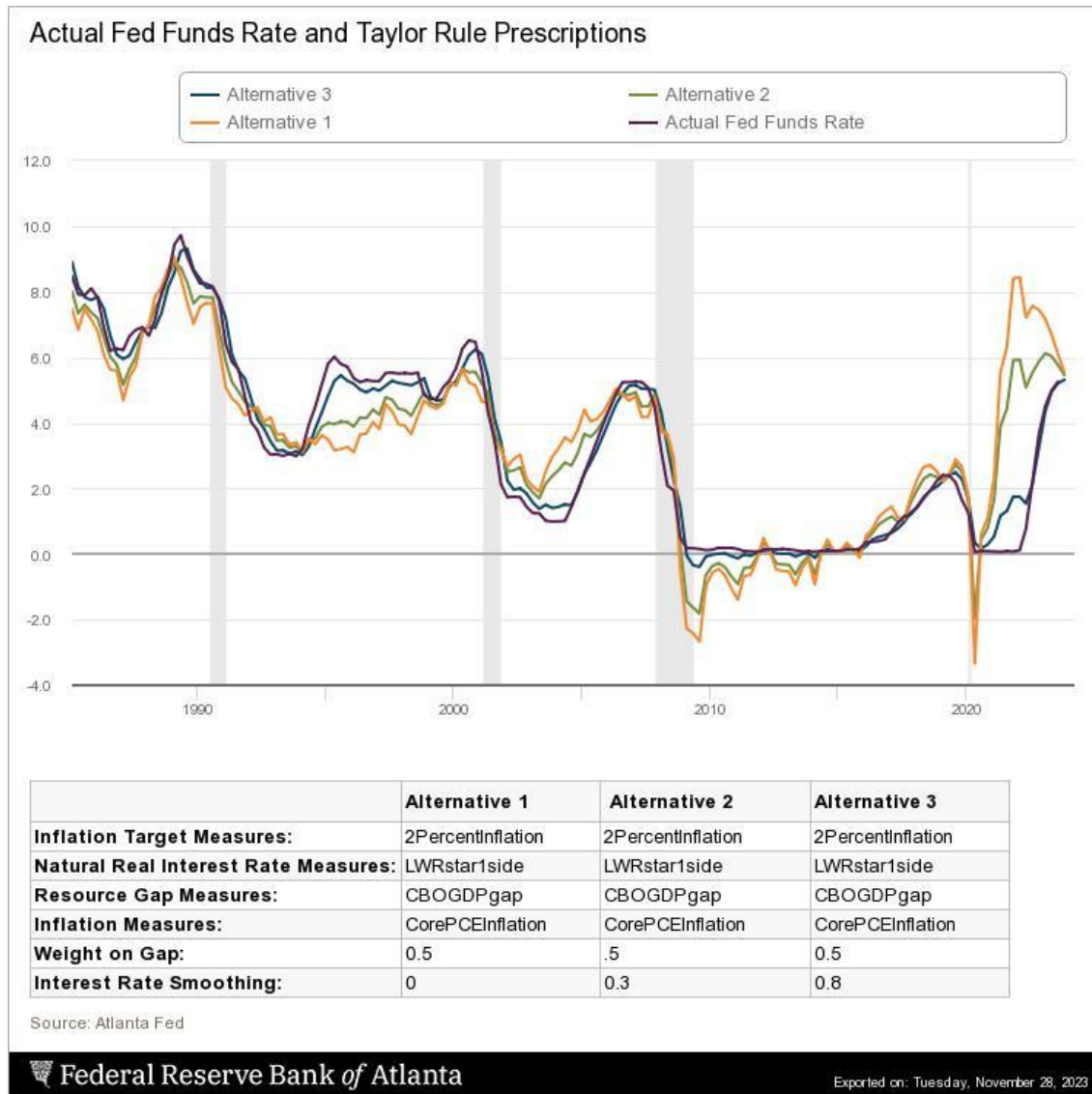
monetary primacy.¹⁰⁹ Note the similarity between all three series and the path of the Federal Funds Rate—indicating the Taylor Rule’s efficacy as a benchmark for evaluating interest rate policy. From 2021 to mid-2023, however, the Federal Funds Rate sat below, and often well below, the Taylor Rule benchmarks. This means that for these two years, as inflation was rising at an unprecedented rate and the Fed was talking tough, the Fed’s policy lagged well behind the rates prescribed by the rates of inflation and employment. Indeed, the Fed’s monetary policy equaled the rate prescribed by these Taylor Rule formulas *only in late 2023*.¹¹⁰ Since it takes about a year for interest rate hikes to meaningfully impact inflation,¹¹¹ it is unclear whether the Fed’s policies made any contribution to the stunning drop in inflation. In the post-pandemic world, the Fed spoke loudly but carried a small stick.

¹⁰⁹ The three alternatives use identical estimates for the natural rate of interest, the Fed’s inflation target, and the economy’s non-inflationary maximum employment/output capacity. The estimates for each of these quantities are described in the chart. Alternative estimates can be explored using the Federal Reserve Bank of Atlanta’s “Taylor Rule Utility.” See Taylor Rule Utility, FED. RSRV. BANK OF ATLANTA (Dec. 12, 2023), <https://www.atlantafed.org/cqer/research/taylor-rule#Tab1>. These three benchmarks differ with respect to several considerations. See *infra* note x and accompanying text.

¹¹⁰ See Fig. 1.

¹¹¹ See Tomas Havranek & Marek Rusnak, *Transmission Lags of Monetary Policy: A Meta-Analysis*, 33 INT’L J. CENT. BANKING 39, 57 tbl.6 (2013).

Figure 2



Why was monetary policy so tame despite widespread perceptions to the contrary? First, Fed interest rates started so low in 2021 that the Fed needed to tighten markedly to return merely to the natural rate of interest.¹¹² Second, rising inflation meant that interest rates needed to increase to stay in place in real terms. As inflation over the next year increased from 2% in the beginning of the pandemic to over 5% in mid-2022, the nominal Federal Funds Rate needed to increase by the same amount simply to keep the real rate in place.

¹¹² See Fig. 1.

Third, Figure 2 indicates that the Fed's policy is not a creature of macroeconomic fundamentals, which is reflected in Alternatives 1 and 2.¹¹³ Instead, the Fed's monetary policy after the pandemic is best approximated by Alternative 3, in which the most important consideration for interest rates setting is keeping interest rates smooth.

In other words, the Fed eventually reached a position consistent with monetary primacy, but took a very slow path. The reason for this delay is that the Fed prioritized a smooth transition to interest rates that would begin to tighten the economy. Despite this departure from monetary primacy, inflation fell markedly. While the annual inflation rate exceeded 8% in June 2022, it only slightly exceeded 3% for the latter half of 2023.¹¹⁴ If we can't attribute this inflation success to monetary primacy and decisive monetary tightening, what worked?

To some extent, the fall in inflation in the United States and globally reflects the resolution of supply-side shocks that drove inflation up in the first place. The pandemic wreaked havoc on global supply chains, driving up the prices of many goods.¹¹⁵ As these supply chain problems resolved themselves, price pressures subsided of their own accord. In part, inflation fixed itself.¹¹⁶

But this is only part of the story. The supply-side expansion reflects not only the natural resolution of supply chain disruptions, but also government policies. Immigration rose considerably post-pandemic after falling significantly during the Trump Administration and pandemic, mitigating labor force bottlenecks.¹¹⁷ The Biden Administration and Congress reacted decisively to mitigate other bottlenecks, reforming port rules that slowed delivery of goods¹¹⁸ and outlawing a threatened strike by railroad workers that would have thrown supply

¹¹³ They differ in terms of the "smoothing rule" they use for interest rate adjustment. Alternative 1 (gold) is the interest rate that the Taylor Rule prescribes based exclusively on the macroeconomic fundamentals and no smoothing. Alternative 2 and 3, by contrast, prescribe interest rates based on two broad considerations—macro fundamentals and last period's interest rate. This formula "smooths" interest rate movements by anchoring this period's interest rate with last period's rate. Alternative 2 weights macroeconomic fundamentals and interest rate smoothing equally, while Alternative 3 places much greater weight on last period's interest rate than on macroeconomic fundamentals, producing a much smoother interest rate series.

¹¹⁴ See U.S. BUREAU OF LAB. STAT., *Consumer Price Index for All Urban Consumers: All Items in U.S. City Average [CPIAUCSL]*, FED. RSRV. BANK OF ST. LOUIS FRED (Nov. 28, 2023), <https://fred.stlouisfed.org/series/CPIAUCSL>.

¹¹⁵ See Veronica Guerrieri, Guido Lorenzoni, Ludwig Straub & Ivan Werning, *Macroeconomic Implications of Covid-19: Can Negative Supply Shocks Cause Demand Shortages?*, 112 AM. ECON. REV. 1437 (2022); Julian di Giovanni, *How Much Did Supply Constraints Boost U.S. Inflation?*, FED. RSRV. BANK OF N.Y. (Aug. 24, 2022), <https://libertystreeteconomics.newyorkfed.org/2022/08/how-much-did-supply-constraints-boost-u-s-inflation>.

¹¹⁶ For a popular summary of this conclusion, see Nick Timiraos, *The Hidden Hero Fueling Soft-Landing Hopes: A Boost in Supply*, WALL ST. J. (Nov. 19, 2023), <https://www.wsj.com/economy/central-banking/the-hidden-hero-fueling-soft-landing-hopes-a-boost-in-supply-3a32bf3e>.

¹¹⁷ See Evgeniya A. Duzhak, *The Role of Immigration in U.S. Labor Market Tightness*, FRBSF NEWSLETTER (Feb. 27, 2023), <https://www.frbsf.org/wp-content/uploads/sites/4/el2023-06.pdf>.

¹¹⁸ See *Fact Sheet: Biden Administration Efforts to Address Bottlenecks at Port of Los Angeles and Long Beach, Moving Goods from Ship to Shelf*, WHITE HOUSE (Oct. 13, 2021), <https://www.whitehouse.gov/briefing-room/statements-releases/2021/10/13/fact-sheet-biden-administration-efforts-to-address-bottlenecks-at-ports-of-los-angeles-and-long-beach-moving-goods-from-ship-to-shelf/>.

chains into turmoil.¹¹⁹ The White House also pushed hard on an all-of-government policy to improve competition, and appointed heads of the Federal Trade Commission and Consumer Financial Protection Bureau willing to enforce consumer protection and antitrust laws aggressively.¹²⁰ As oil prices rose, President Biden released supply from the Strategic Petroleum Reserve, temporarily reducing gas prices at the pump by as much as 40 cents per gallon.¹²¹

Government policy also reduced spending pressures. Fiscal policy became tighter, as pandemic era stimulus programs expired.¹²² Finally, student payments on federal loans that had been stalled during the pandemic restarted in the fall of 2023, removing billions of dollars that could have gone toward purchasing various goods and services.¹²³ Such policies reduced discretionary income and spending.

Due to the Fed's rhetoric, many economists and others nonetheless mistakenly believe that it was the Fed's interest rate hikes that stamped out inflation.¹²⁴ While some might argue that the Fed's tough rhetoric kept inflation expectations in check, there is limited evidence to support that position.¹²⁵ Policies built on cheap talk are unlikely to be robust.

Concerningly, the rhetoric appears to be more than cheap talk. In the past, when the Fed's interest rates diverged from the Taylor Rule's smooth version of monetary primacy, interest rates soon converged with that approach.¹²⁶ More tellingly, the Fed's actions now finally reflect its words, with real interest rates in late 2023 at their highest point in decades. True to that history, the Fed continues to emphasize its mission to bring inflation to 2%, despite the pain that may result.¹²⁷

¹¹⁹ See Katy Stech Ferek & Tarini Parti, *Biden Signs Legislation Preventing Railroad Strike*, WALL ST. J. (Dec. 2, 2022, 4:31 PM ET), <https://www.wsj.com/articles/biden-signs-legislation-preventing-railroad-strike-11669996971>.

¹²⁰ See Exec. Order No. 14036, 86 Fed. Reg. 36987 (July 9, 2021).

¹²¹ See Benjamin Harris & Catherine Wolfram, *The Price Impact of the Strategic Petroleum Reserve Release*, U.S. DEP'T TREASURY (July 26, 2022), <https://home.treasury.gov/news/press-releases/jy0887>.

¹²² See Katie Lobosco & Tami Luhby, *These Covid-19 Pandemic-Era Relief Programs Are Expiring Soon*, CNN (July 25, 2023, 5:04 AM EDT), <https://www.cnn.com/2023/07/25/politics/covid-19-relief-programs-ending/index.html>.

¹²³ See Gabriel T. Rubin & Joe Pinsker, *Student Loan Restart Threatens to Pull \$100 Billion Out of Consumers' Pockets*, WALL ST. J. (Sept. 16, 2023, 9:00 PM ET), <https://www.wsj.com/personal-finance/student-loan-repayment-consumers-economy-2218ca25> ("The restart of student-loan payments could divert up to \$100 billion from Americans' pockets over the coming year, leaving consumers squeezed and some of the nation's largest retailers fearing a spending slowdown.").

¹²⁴ See James Surowiecki, *Don't Read His Lips*, ATLANTIC (Feb. 8, 2023), <https://www.theatlantic.com/ideas/archive/2023/02/jerome-powell-federal-reserve-interest-rates/672990/> ("Investors have been betting that the Fed's tough talk is just a bluff . . ."); Peyton Fore & Emily Graffeo, *Wall Street Shrugs Off Fed's Tough Talk to Cheer Smaller Hikes*, BLOOMBERG (Feb. 1, 2023, 3:37 PM EST), <https://www.bloomberg.com/news/articles/2023-02-01/wall-street-shrugs-off-fed-s-tough-talk-to-cheer-smaller-hikes>.

¹²⁵ See *supra* note 7 and accompanying text; Karl Evers-Hillstrom, *The Fed Can't Fix Inflation. Here's Why*, HILL (Feb. 1, 2023, 11:00 PM ET), <https://thehill.com/business/3839773-the-fed-cant-fix-inflation-alone-heres-why/> (describing how the Fed alone cannot curb inflation).

¹²⁶ *Supra* Figure 2.

¹²⁷ See Fed. Rsrv., *supra* note 5.

All of this suggests that tough monetary policy and elevated interest rates will endure until that 2% goal is reached. The pain predicted by the Fed may lie in the future, risking a repeat of the approach taken by Volcker. Thus, it is vitally important to understand the consequences of monetary primacy and examine whether it is the best we can do.

D. *The Costs of Monetary Primacy*

The historical narrative of Volcker's legacy is incomplete without acknowledging the untold human suffering that resulted in the 1980s from high interest rates.¹²⁸ Those interest rates drove the U.S. economy into two recessions.¹²⁹ Over four million jobs were directly lost.¹³⁰ Many children went hungry, students dropped out of school, and families lost their homes.¹³¹

The indirect costs are more subtle but nonetheless significant. Workers who keep their jobs are not insulated from the pain because they tend to receive lower pay after more unemployed people sit on the sidelines ready to take their jobs.¹³² Job loss figures also do not communicate the better job opportunities and upward mobility that never materialized. Even a few years of missed opportunities during a recession can last a lifetime. For instance, students who graduate in a recession have lower total earnings even decades later compared to comparable students who graduated before and after them in normal economic times.¹³³

Volcker was well aware of the pain his policies caused. Automotive dealers mailed him car keys inside coffins to communicate what high interest rates were doing to their sales.¹³⁴ Others sent death threats.¹³⁵ Lawmakers in both parties assailed him in hearings, with one member of Congress saying, "We are destroying the small business. We are destroying

¹²⁸ See Lois M. Plunkert, *The 1980s: A Decade of Job Growth and Industry Shifts*, 8 MONTHLY LAB. REV. 3, 4 (1990) (stating that 4.2 million total jobs were lost, with a net loss of 3.9 million jobs, in 1980 and 1981).

¹²⁹ *Id.*

¹³⁰ *Id.*

¹³¹ See William S. Woodside, *Hunger in America Is Real: Millions Go Hungry Because the Government Has Cut Back Too Far on Food Programs*, FORTUNE MAG. (June 24, 1985), https://money.cnn.com/magazines/fortune/fortune_archive/1985/06/24/65980/index.htm ("We found abundant evidence of increased hunger in America, due partly to continuing unemployment"); Patrick Jackman, *Consumer Prices in the 1980s: The Cooling of Inflation*, 8 MONTHLY LAB. REV. 19, 19 (1990) ("The reduction in the inflation rate from 1979 through 1983 was not costless. Two recessions (January 1980-July 1980 and July 1981-November 1982), the second a particularly severe one, resulted in double-digit unemployment rates, reduced incomes, and a decline in output.").

¹³² See William D. Ferguson, *Explaining the Rising Wage-Productivity Gap of the 1980s: Effects of Declining Employment and Unionization*, 28 REV. RADICAL POL. ECON. 77, 79 (1996) (finding that "declining employment within unionized industries explains 18% of the post-1981 increase in the [wage-productivity] gap."); Lawrence Mishel, Elise Gould & Josh Bivens, *Wage Stagnation in Nine Charts*, ECON. POL'Y INST. (Jan. 6, 2015) ("Excessive unemployment, not only during and after the Great Recession but over most years since 1979, has suppressed wage growth, adversely affecting low-wage workers").

¹³³ See Schwandt, *supra* note 27; Kahn, *supra* note 27, at 304.

¹³⁴ See Tim Todd, *Fighting Inflation, Congress and the White House*, in THE BALANCE OF POWER: THE POLITICAL FIGHT FOR AN INDEPENDENT CENTRAL BANK, 1790-PRESENT 43 (2012).

¹³⁵ See ALAN S. BLINDER, A MONETARY AND FISCAL HISTORY OF THE UNITED STATES, 1961-2021, 123 (2022).

Middle America. We are destroying the American dream.”¹³⁶

Despite this widespread discontent, however, lawmakers were hesitant to intervene due to the failed legislative attempts of the 1970s, especially the extension of price control authority to President Nixon.¹³⁷ Elected officials were also politically insulated from the Fed’s moves, whereas if they had taken legislative action and failed, they would be held responsible. Thus, despite bills circulating around Congress to reign in the Fed, lawmakers ultimately did nothing to stop Volcker from plunging the economy into a deep recession.¹³⁸

Although some job losses and a recession may have been unavoidable given the economic challenges of the 1970s, there are institutional reasons to think that the default to interest rates does not minimize economic harms as much as possible. Importantly, nowhere does the Fed justify the harms it is inflicting on the economy through cost benefit analysis. It does not announce why the sacrifice ratio of its chosen policy tool is better than that of alternatives. Nor is it clear that anyone in government ever engaged in such a comprehensive analysis of society’s best interests to inform the move to monetary primacy. Instead, as explained above, the regime resulted from the dysfunctions and happenstance of history, especially the resolute will of a single central banker.

It bears emphasis that monetary primacy is insensitive not only to the total sacrifice required compared to alternatives, but also to the distribution of sacrifice. Recessions hit vulnerable groups hardest, including underrepresented minority and poor households.¹³⁹ If one tool for fighting inflation disproportionately burdens the most vulnerable portions of the population, that provides an additional reason to try to avoid it. Yet the Federal Reserve does not explain how interest rates compare to other tools in terms of the extent of harm to vulnerable groups.

Another way of thinking about the distribution of sacrifice is by asking how broadly that sacrifice is distributed. The spreading of costs throughout society is a fundamental tenet of good governance, and is the basis, for instance, of the tax system. To illustrate, a million dollars is a lot for a random household to pay in an arbitrary fine but distributed across a million households each paying one dollar, the fine is negligible in terms of societal harm. Interest rates fail on this measure of good governance, in that they disproportionately hit sectors of the economy sensitive to interest rates, such as construction, real estate, and manufacturing.¹⁴⁰

Another reason to think that the harms of Volcker’s approach may have been greater

¹³⁶ Todd, *supra* note 134, at 44.

¹³⁷ See, e.g., Andrew H. Bartels, *Volcker’s Revolution at the Fed*, 28 CHALLENGE 35, 38 (1985) (“Members of Congress apparently decided that the requirement of periodic Fed reports to them on monetary policy offered enough influence over policy without the onus of actually having to make decisions on monetary tightening or easing.”).

¹³⁸ See, e.g., BLINDER, *supra* note 135, at 121-28 (summarizing the historical policy responses).

¹³⁹ See Fabian T. Pfeffer, Sheldon Danziger & Robert F. Schoeni, *Wealth Disparities Before and After the Great Recession*, 650 ANNALS AM. ACAD. POL. & SOC. SCI. 98, 102 (2013) (“Less educated, minority, and low-wage workers typically experience greater increases in unemployment and reductions in work hours and earnings during recessions.”).

¹⁴⁰ See Abigail J Chiodo & Michael T. Owyang, *Monetary Policy: The Whole Country Gets the Same Treatment, but Results Vary*, FED. RSRV. BANK OF ST. LOUIS (Jan. 1, 2003).

than they needed to be is that interest rates are not well calibrated to adjust when the problem of inflation is solved. To see why, consider again the main appeal of interest rates—their institutional speed.

Figure 2 suggests this vaunted advantage may be less important than many think. While the Fed can act quickly, it is committed to interest rate smoothing, limiting the size of any interest rate changes. When inflation surged in 2021-22, this commitment meant that the Fed did not respond decisively to the surge, even if it could have. The Fed's commitment to interest rate smoothness constrained its policy, at precisely the moment when a decisive response was most urgently needed. Instead, the Fed moved slowly in the sense that they reached a contractionary monetary policy with positive real interest rates only in late 2023, when inflation had already subsided.

Moreover, even this account of the Fed's institutional swiftness is deceptive. Importantly, there is a significant gap between when the Fed decides to raise interest rates and when that policy change reduces inflation.¹⁴¹ The reason for this lag is that those rates only hit the real economy through commercial banks deciding to subsequently pay higher interest rates on deposits and increase the interest rates they charge for loans.¹⁴² Those responses mean that fewer people will want to take out such higher priced loans, and more people will want to save money to earn higher interest. Thereafter, people spend less of their deposits, and take out fewer loans to buy things like cars and homes.¹⁴³ Many businesses that subsequently earn lower revenues cut hiring and give fewer raises, which further decreases spending. The average time between a central bank's announcement of interest rate changes and peak impact on inflation is 29 months.¹⁴⁴

That long economic lag means it is easy for the Fed to overshoot its rate increases and impose more pain than necessary to reduce inflation. Also, high inflation persists for some time before interest rates work, creating the risk that inflation expectations become entrenched.¹⁴⁵ Consequently, to bring this inflation back down, the FOMC may need to go well above the interest rate that would be needed to solely reduce spending as a matter of basic money supply and might need to raise rates even higher to counter people's established expectations that inflation will persist.¹⁴⁶

Indeed, although Volcker did not at the time admit this to the public, it later emerged that he believed that the main purpose of his interest rate gambit was changing people's expectations. Asked by a friend years later whether he had believed the interest rate cuts were

¹⁴¹ Economists refer to this as the inside and outside lag “between a shock to the economy and the policy action responding to that shock.” MANKIW, *supra* note 40, at 447.

¹⁴² See *supra* Section I.A.

¹⁴³ MANKIW, *supra* note 40, at 447-48.

¹⁴⁴ See Havranek & Rusnak, *supra* note 111, at 57 tbl.6 (finding also that a meaningful impact on inflation does not occur for a year).

¹⁴⁵ See *id.* at 39 (finding the transmission lag of monetary policy to be twenty-five to fifty months in developed economies); Tom Fairless, *Higher Interest Rates Can Take a Long Time to Bring Down Inflation*, WALL ST. J. (Oct. 23, 2022), <https://www.wsj.com/articles/higher-interest-rates-can-take-a-long-time-to-bring-down-inflation-11666517405>.

¹⁴⁶ See MANKIW, *supra* note 40.

necessary for reducing spending levels, he answered, “Nah, I just wanted to shake ’em up.”¹⁴⁷ In other words, he needed to overshoot the amount that would be normally necessary to bring spending into line with full employment and capacity, or overshoot the natural interest rate, in order to dislodge people’s entrenched expectations about inflation.¹⁴⁸ A rigorous weighing of economic suffering was simply not part of the decision. Rather the decision was based in a belief that tight monetary policy and excess unemployment is the only recourse.

The sudden rise in interest rates also can cause harmful economic distortions to asset prices. The most straightforward example of this is that buying homes becomes considerably more expensive for most consumers, as the monthly mortgage payments go up considerably with the interest rate increases. After leading the interest rate hikes, Volcker “read heartbreaking letters that people wrote to him – about how they had saved for years to buy a house for their parents, but now, because of the high rates, could not.”¹⁴⁹ Interest rate hikes can also lead to a dramatic decline in available homes, as happened in 2023,¹⁵⁰ because so many owners are benefitting from lower interest rates than they would get if they sold and repurchased. Thus, the interest rate increases lower the supply of homes and artificially increase the borrowing costs, making many homes out of reach arbitrarily depending on when someone happens to choose or be able to purchase a home.

Asset price distortions also compromise the stability of the financial system. One of the major reasons Silicon Valley Bank collapsed in 2023 is that the bank held significant assets in treasury bonds purchased when interest rates were low,¹⁵¹ and when many of the bank’s struggling tech entrepreneur customers withdrew their deposits, the bank was forced to sell treasury bonds when interest rates were high. As a result, the bank was forced to sell them at a significant loss.¹⁵² The Silicon Valley Bank failure, as well as the related failure of First Republic Bank around the same time, not only necessitated a costly bailout, but also increased the likelihood of a financial crisis moving forward.¹⁵³ Financial crises are dangerous in part because they can spark major economic downturns, as did the 2008 financial crisis.¹⁵⁴

To summarize, the near exclusive reliance on interest rates for combatting inflation

¹⁴⁷ BLINDER, *supra* note 135, at 127.

¹⁴⁸ Goodfriend & King, *supra* note 85, at 985 (summarizing evidence from historical Federal Reserve transcripts).

¹⁴⁹ *Id.*

¹⁵⁰ See *Economic, Housing and Mortgage Market Outlook – August 2023*, FREDDIEMAC (Aug. 17, 2023), <https://www.freddiemac.com/research/forecast/20230817-economic-housing-and-mortgage-market-outlook-august-2023> (noting that the “[housing] market remains undersupplied” owing to high interest rates); Nicole Friedman, *Higher Interest Rates Hit Home Prices Again*, WALL ST. J. (June 22, 2023), <https://www.wsj.com/articles/higher-interest-rates-hit-home-prices-again-e6f57f55>.

¹⁵¹ See Abdulla Saif, S. S. Al-Sowaidi & Ahmad M. W. Faour, *Causes and Consequences of the Silicon Valley Bank Collapse: Examining the Interplay Between Management Missteps and the Federal Reserve’s Floundering Decisions*, 12 J. WORLD ECON. RSCH. 38, 40-41 (2023). Better regulation might have enabled this issue to be identified and addressed. *Id.*

¹⁵² *Id.* at 41.

¹⁵³ See generally Graciela L. Kaminsky & Carmen M. Reinhart, *The Twin Crises: The Causes of Banking and Balance-of-Payment Problems*, 89 AM. ECON. REV. 473, 474, 486 (1999) (finding that banking crises are often associated with subsequent financial crises and later, recessions).

¹⁵⁴ See Kaminsky & Reinhart, *supra* note 153, at 474.

causes great harm and risks. Yet no part of government gives an explanation for why these harms and risks are justified in light of the alternatives. Instead, political leaders now simply default to following the lead of the Federal Reserve Chair Powell, who has confidently reiterated that interest rates are the solution to inflation, even while saying, in the summer of 2023, “[a]s is often the case, we are navigating by the stars under cloudy skies.”¹⁵⁵ Since the full economic effects of interest rate increases above the natural rate may not be felt for years, monetary primacy sets an economy up for years of forging ahead in the dark with the possibility of, at any moment, falling off of a recessionary cliff.

II. A FRAMEWORK FOR MONETARY PLURALISM

So far, we have shown how monetary primacy risks imposing great sacrifice, with the already vulnerable suffering the most pain. Rapid interest rate movements also distort the economy in unpredictable ways, potentially causing more indirect harms to society in the form of financial crises and fewer economic opportunities. Monetary primacy imposes this sacrifice for the sake of expediency, bypassing the mechanisms of government that would allow people to have more of a say in the heavy sacrifices thrust on them to combat inflation. In this Part, we develop an alternative framework that offers the prospect of inflation control with less sacrifice and greater responsiveness to markets, people, and the law.

A. A “Natural” Framework for Monetary Policy Pluralism

The starting point for thinking about how to address inflation should not be interest rate hikes. Policymakers should instead comprehensively consider which policy paths available are best situated to lower inflation with the least sacrifice to society. That initial diagnosis maintains a role for the Fed’s interest rates, but we assert that lowering inflation should not be the exclusive province of the Fed. The alternatives to interest rate adjustments are discussed in Part III. Some of them, such as expanding economic capacity by allowing more immigration, reduce inflation without net sacrifice or even provide net economic benefits that society would want even if inflation were not an issue. Other policies, such as increasing taxes, entail some sacrifice, but may still be preferred to interest rate hikes because the overall sacrifice is less, and they involve smaller total sacrifice—and spread out across more of the population. In short, policymakers should use the lowest cost policy for achieving their target inflation rate.

As straightforward as this may sound, our proposal differs significantly from the diagnostic process currently undertaken. Currently, the Fed’s main diagnosis examines the immediate causes of inflation, such as a pandemic, war, oil embargo, or stimulus spending.¹⁵⁶

¹⁵⁵ Powell, *supra* note 97.

¹⁵⁶ See *What Is Inflation and How Does the Federal Reserve Evaluate Changes in the Rate of Inflation?*, BD. OF GOVERNORS OF THE FED. RSRV. SYS., https://www.federalreserve.gov/faqs/economy_14419.htm (Sep. 9, 2016) (describing the process Federal Reserve policymakers undertake to understand the rate of inflation, including examining “unique events”) [hereinafter “BOARD OF GOVERNORS”]. The Fed also looks at the magnitude of inflation. *Id.*

However, the purpose of that diagnosis is to determine what level of inflation is likely to persist and thus whether and how far to raise interest rates.¹⁵⁷ For instance, if the main cause of inflation was a post-pandemic spending increase likely to return back to normal, little if any interest rate hike might be needed because the inflation would be seen as transitory. In the alternative, if the causes are likely to persist then the Fed would conclude it needs to raise interest rates in response. What's missing from this process is that the Fed does not undertake an analysis of the potential inflation responses beyond interest rates.¹⁵⁸

In contrast, our proposal would analytically begin with looking beyond the immediate contributors to inflation to also consider areas of law and policy—ranging from inflation to consumer protection—that may seem at first to have nothing to do with rising inflation. This broad purview may seem counterintuitive at first glance because it means looking beyond the policies and world events that most immediately cause inflation. However, it often is not possible to address the immediate causes of rising inflation, such as by ending an OPEC oil embargo, stopping a war in Ukraine, or making people pay back the stimulus checks they received two years prior. Indeed, interest rates adjustments do not directly address the causes of inflation, yet they are currently used as the solution, which helps to demonstrate that policymakers cannot limit the analysis to only the immediate causes of inflation in identifying solutions. A major difference in our approach is that it would emphasize an object of study often missing or covered only in small part in inflation analyses: the legal system, ranging from consumer law to taxing and spending.

Within this framework, what is the role for the Fed's interest rate instrument? Our simplest proposal is that the Federal Reserve set interest rates at their natural rate—the rate at which spending equals capacity over the long run, creating no pressure for inflation to differ from expectations. Although there is some debate as to what the natural rate of interest should be,¹⁵⁹ the Fed has pegged it as a real interest rate of slightly below 1%.¹⁶⁰ Thus, with its expected inflation target level of 2%, the Fed should aim to set interest rates at slightly below 3%, thereby yielding a real rate just below 1%.

This proposal differs significantly from the Fed's current policy. Most importantly, the goals in raising interest rates are distinct. Under a natural interest rate framework, the Fed would raise interest rates when doing so is necessary to reach the most productive economic level. It would not, as it currently purports to do, increase them as the first response to fight inflation and until the point at which inflation is vanquished. The result would generally be a smaller increase in interest rates in response to inflation.

As we demonstrated in Figure 1, the Fed's post pandemic interest rate policy was, for a sustained period, not inconsistent with our proposal, despite the Fed's tough rhetoric.¹⁶¹ The

¹⁵⁷ *Id.*

¹⁵⁸ *Id.*

¹⁵⁹ See, e.g., James D. Hamilton, Ethan S. Harris, Jan Hatzius & Kenneth D. West, *The Equilibrium Real Funds Rate: Past, Present, and Future* (Nat'l Bureau of Econ. Rsrch., Working Paper No. 21476, 2015), <https://www.nber.org/papers/w21476> (finding that there is uncertainty in the equilibrium rate).

¹⁶⁰ Or slightly below 1%, but this figure varies over time, and the Federal Reserve Bank of Dallas indicated that the natural rate of interest was 1.5 percent in the first quarter of 2023. See *Measuring the Natural Rate of Interest*, FED. RSRV. BANK OF NY (December 12, 2023), <https://www.newyorkfed.org/research/policy/rstar>.

¹⁶¹ See *supra* Section I.C.

real interest rate only exceeded 1% in mid-2023, and until that point the Fed was functionally returning interest rates to the natural rate. At that point, our natural rate framework would have called for the Fed to stop increasing real interest rates, even faced with inflation above the target rate. The Fed's policy, by contrast, continued to raise interest rates in response to inflation. Since inflation was above the 2% target, the Fed kept interest rates high to slow down economic activity and eliminate the excess inflation. It further expects to continue to exceed the natural rate in 2024.¹⁶² This tight monetary stance may bring inflation down to 2%, at the cost of excess unemployment and possibly a recession, even if there are means of reducing inflation that entail less sacrifice.

Under our framework, interest rates would only be raised above the natural rate if that is determined to be the best way to address inflation. For instance, after exhausting other options, or if Congress is politically unable to pass inflation-fighting reforms, then the Fed may determine that interest rates exceeding the natural rate are the policy with the least economic sacrifice.

We focus here on the analytic side of our proposal, but as an institutional matter this framework could be implemented either through coordination among existing entities, including the Federal Reserve and White House, or led by a new macroeconomic policy coordinating body we propose in Part IV.¹⁶³ Either way, the decision to raise interest rates should be made only in conjunction with other executive branch economic policymakers. Absent such a collective determination, the Fed would not move away from the natural interest rate as a reflexive response to inflation.

While we have focused on the effect of our natural interest rate in responding to inflation, the proposal would also affect monetary policy when the economy needs a boost. Instead of a heroic Fed keeping nominal interest rates at zero for extended periods of time, offering a feeble stimulus to the economy at the cost of distorting asset prices and promoting bubbles such as the cryptocurrency fad of 2020-2022, our policy prescribes positive nominal interest rates in weak economies. To promote employment, macroeconomic policy should instead rely on fiscal and regulatory policy, which are much more effective stimulus tools when interest rates are low.¹⁶⁴

A strict adherence to pure natural interest rates is not the only way to shift the U.S. inflation-fighting regime away from monetary primacy. Any lessening of reliance on interest rates to combat inflation would be an improvement over the traditional regime. Given the institutional constraints facing the alternatives to interest rates—most notably, a Congress that faces difficulty passing any new legislation—a more moderate approach that still relies

¹⁶² See Bd. of Governors of the Fed. Rsrv. Sys., *supra* note 5.

¹⁶³ *Infra* Part IV.

¹⁶⁴ See, e.g., Silvana Teneyro & Gregory Thwaites, *Pushing on a String: US Monetary Policy Is Less Powerful in Recessions*, 8 AM. ECON. J.: MACROECONOMICS 43 (2016) (arguing that monetary policy is not as effective during economic downturns). See also YAIR LISTOKIN, *Expansionary Legal Policy Options*, in LAW AND MACROECONOMICS: LEGAL REMEDIES TO RECESSION 175 (2019) (noting that advocates the use of fiscal and regulatory stimulus when monetary policy is constrained by the zero lower bound). Here, we argue for the use of these alternatives even when nominal interest rates exceed zero. *But see* Galle & Listokin, *supra* note 46, at 137 (arguing that there is a fiscal effect of low interest rates that makes the two policy tools interdependent when the Fed's balance sheet grows sufficiently large).

somewhat on interest rates may be more realistic. Since every fraction of a percent of interest rate increase can translate into significant job losses and heighten the risk of recession,¹⁶⁵ even a more moderate reliance on interest rates could yield tremendous societal benefits. For simplicity, our discussion below focuses on a pure natural interest rate target, even if this proposal is more extreme than it needs to be to change the status quo. This proposal should, however, be viewed as just one of a menu of alternatives that all restructure the inflation-fighting framework away from monetary primacy.

B. Advantages of Monetary Pluralism

The causes of inflation are complex.¹⁶⁶ Inflation depends on economic capacity, desired spending, and inflation expectations, each of which depend on many other factors.¹⁶⁷ Despite this complexity, monetary primacy prioritizes one tool (interest rate hikes) for controlling inflation while neglecting others. Our framework, by contrast, integrates monetary policy with the many other policy tools available to fight inflation. This integration brings many benefits. First, our framework brings design improvements to the U.S.'s institutional inflation response and potentially elsewhere in the legal system. Second, it creates the promise of fighting inflation with less sacrifice and a more widely spread burden. Finally, our framework would enhance the legitimacy of the U.S. inflation-fighting regime.

1. Improving Legal System Design

A natural framework for interest rates has the potential to improve the legal system's architecture in two main ways: creating a more robust diagnostic process and leveraging inflation to spur policy makers to pursue valuable legal reforms that might not otherwise happen due to political dysfunction.

On the first of these, the Fed's default to interest rates prevents a robust diagnosis from taking place. A fundamental problem-solving skillset taught in law schools, medical schools, and beyond involves moving from analyzing the problem to generating possible solutions.¹⁶⁸ Only after the alternative solutions are identified should the best solution be chosen.¹⁶⁹ Monetary primacy's knee-jerk default to interest rates skips the step of generating options and goes directly from a basic identification of a problem (inflation) to a solution (interest

¹⁶⁵ See *supra* note 12 & Section I.D. See also N. Gregory Mankiw, *Alan Greenspan's Tradeoff*, FORTUNE (Dec. 8, 1997), <https://scholar.harvard.edu/mankiw/content/alan-greenspan-tradeoff> (“[W]hen the Fed wants to fight inflation, it reduces growth in the money supply. Yet this causes a rise in interest rates, which depresses spending and increases unemployment.”).

¹⁶⁶ See, e.g., *Causes of Inflation*, RSRV. BANK OF AUSTL., <https://www.rba.gov.au/education/resources/explainers/causes-of-inflation.html> (describing the many factors influencing inflation).

¹⁶⁷ *Supra* Section I.A.; *What is the money supply? Is it important?*, FED. RSRV. BD. (Dec. 16, 2015), https://www.federalreserve.gov/faqs/money_12845.htm (explaining the role of the creation of money in inflation).

¹⁶⁸ Stephen Nathanson, *The Role of Problem Solving in Legal Education*, 39 J. LEGAL EDUC. 167, 168 (1989).

¹⁶⁹ *Id.*

rate hikes).

The default to a single tool ignores the possibility that other responses are better suited to the inflation problem and leave the economy healthier. Our proposed framework moves closer toward that ideal legal institutional design. Rapid economy-wide price increases would signal that something is wrong, a diagnosis would follow considering all options, and then the best package of interventions would be chosen. That package would consider short-term steps, such as those that the President and administrative agencies could immediately implement, as well as medium-term options that might require legislation. If the first best approach does not work or is unattainable, other options are considered—including, when necessary, relying on interest rates.

Additionally, well-designed systems have backup plans in case the standard response to a problem is unsuccessful. Monetary primacy puts all our inflation fighting eggs in the Fed's basket. If something interferes with the Fed's ability to raise interest rates to control inflation, then monetary primacy means the policy regime fails. And there are many factors that could constrain monetary primacy. These include a breakdown in the relationship between interest rates and economic activity, Fed concerns about other objectives such as financial stability, exchange rates and the cost of public debt,¹⁷⁰ or even Fed organizational dysfunction. As a result, monetary primacy leaves inflation control dangerously exposed to institutional idiosyncrasies. Since our natural interest rate framework charges multiple policy levers with inflation control, if the Fed cannot respond to inflation for any reason, other policymakers can respond before inflation runs amok.

A secondary institutional advantage of allowing for diverse solutions is that the diagnosis may identify policy improvements that are valuable for society but have not been adopted due to political dysfunction. In other words, a natural framework institutionalizes the advice to “never let a good crisis go to waste.”¹⁷¹

Thus, the institutional problem with relying solely on the Fed's interest rates is that it disconnects the problem from the solution. Regardless of the source of the problem, the Fed addresses inflation with a single tool that may have little to do with either the causes of that problem or the best of available solutions. This is a breakdown in the process of thinking about how to address problems. By failing to undertake a holistic consideration of solutions, monetary primacy deprives society of the chance to build legal rules that effectively respond to inflationary distress signals and create a stronger economy.

2. Reducing Sacrifice and Distortions

By better diagnosing the problem and tailoring the solution, monetary pluralism would prevent the economic distortions that often arise from monetary primacy. As mentioned above, the overreliance on interest rates introduces numerous new distortions into the economy with varied harmful effects—unemployment, asset price fluctuations, and lower

¹⁷⁰ See Galle & Listokin, *supra* note 46 (discussing the Fed's role in managing the cost of public debt).

¹⁷¹ Winston Churchill is credited with this quote. He made the remark during the creation of the United Nations following the Second World War. See Guillaume Guère, *Never Let a Good Crisis Go to Waste*, OECD (Mar. 21, 2019), <https://www.oecd.org/agriculture/never-waste-a-good-water-crisis/>.

economic capacity.¹⁷² Each of those effects then causes risks and harms, such as increased poverty and lower standards of living along with the possibility of recessions and financial crises.

If interest rate hikes were easily the best among inflation-fighting alternatives in terms of costs and benefits, then the prevailing monetary primacy regime would perhaps be justified. Since interest rate hikes entail significant costs, however, our framework opens the possibility of clearly superior options for inflation control. The best alternative inflation reduction policies expand economic capacity.¹⁷³ For example, higher immigration rates—particularly in sectors experiencing labor shortages—enable higher production and lower prices.¹⁷⁴ We give more examples in Part III. Such supply-side reforms not only lower inflation without sacrifice, but they also simultaneously enhance efficiency.¹⁷⁵

In addition, interest rate hikes impose particular pain on construction, housing, banks, and more generally all firms, workers, and owners of financial assets in interest rate sensitive sectors of the economy.¹⁷⁶ The recessions often caused by sudden interest rate hikes also disproportionately harm vulnerable populations.¹⁷⁷ In contrast, many of the policy tools described below can be more targeted or broadly spread out. Income taxes can be raised only on middle-income households and above, for instance, thereby sparing the most vulnerable. Additionally, these approaches may provide a more effective way to lower inflation.¹⁷⁸ After all, a family at the poverty line spends most of its household income on bare essentials, such as housing and food.¹⁷⁹ Those essentials would need to be supplied by government spending or some other source anyways, so a lost low-income job might not lower spending as much as, say, a household whose discretionary spending on travel or high-end purchases was suddenly smaller due to higher taxes.¹⁸⁰

By choosing options other than interest rates, policymakers can spread a lower magnitude of pain across more households rather than devastating certain households through job losses. Likewise, even for individual alternative policies whose sacrifices might

¹⁷² *Supra* Section I.C.

¹⁷³ See, e.g., Marc Jarsulic, *Effective Inflation Control Requires Supply-Side Policy 2* (Univ. of Mass. Amherst Pol. Econ. Rsrch. Inst. Working Paper, 2022), https://peri.umass.edu/images/jarsulic_PERI_Conf_WP.pdf (arguing that supply-side policies can help combat inflation).

¹⁷⁴ See Stephan-Götz Richter, *The Immigration Safety Valve: Keeping a Lid on Inflation*, 79 FOREIGN AFFS. 13, 14 (2000) (discussing that immigration levels enabled the Federal Reserve avoid raising interest rates to “dampen inflation”).

¹⁷⁵ See Lyle E. Gramley, *The Role of Supply-Side Economics in Fighting Inflation*, 23 CHALLENGE 14, 15 (1981) (arguing that “[s]teps to increase the potential output of our economy and to improve productivity can make a vital contribution to dealing with inflation.”).

¹⁷⁶ See *supra* Part I.

¹⁷⁷ See *supra* Section I.D.

¹⁷⁸ See Cloyne, James, Joseba Martinez, Haroon Mumtaz, & Paolo Surico, *Do Tax Increases Tame Inflation?*, 113 AEA PAPERS & PROCEEDINGS 377, 377 (2023) (finding that increases in income taxes lower inflation).

¹⁷⁹ See Lisa A. Gennetian, Jordan Conwell, & Becca Daniels, *How Do Low-Income Families Spend Their Money?*, ECONOFACT (Nov. 15, 2021), <https://econofact.org/how-do-low-income-families-spend-their-money>.

¹⁸⁰ See, e.g., Peter Ganong & Pascal Noel, *Consumer Spending During Unemployment: Positive and Normative Implications*, 109 AM. ECON. REV. 2383 (2019) (describing consumer spending habits during periods of unemployment).

be concentrated, the use of multiple policies each doing a smaller part means that the losses will still be spread out. This ability to spread out the pain is true for some of the individual policy levers we highlight.

Thus, our proposed framework would lower the overall sacrifice needed to address a given level of inflation, sometimes by improving the economy and at other times by minimizing the sacrifice. Moreover, when there must be a sacrifice it raises the question of how to distribute the sacrifice across the population. Monetary primacy is blind to both to the question of the overall sacrifice and to the question of who must bear the burden.

3. Time-Sensitive Responses to Inflation

Our framework also offers greater promise for swiftly acting on inflation. Recall that interest rates create the illusion of acting on inflation quickly because the Fed can immediately call a meeting, but, in reality, it takes years for the policy changes introduced at that meeting to reach full impact.¹⁸¹ The temporal problems with interest rates run even deeper than that. Although it is true that the Federal Reserve can quickly meet and decide to change interest rates, as a practical matter the Fed must usually wait even after observing high inflation. For instance, when inflation shot up to 4.2% in April of 2021, and then 6.2% by November of 2021, the Fed did not decide to raise interest rates until March of 2022—almost a year after the first signs of inflation.¹⁸² At that point, it only raised the rate from zero by a quarter of a percentage point.¹⁸³ It then increased rates by fractions of a percentage point in a series of meetings, only reaching 5% interest in May of 2023.¹⁸⁴ Once this decision-making delay is added to the 29-month delay between an interest rate decision and full reduction on inflation,¹⁸⁵ interest rates are overall slow.

The array of alternatives we explore in Part III have varying timelines. Some can be deployed immediately to keep inflation from going up in the first place, such as establishing strategic reserves for inflation prone goods and services.¹⁸⁶ Others would operate on similar timelines as inflation but simply at a lower sacrifice level.

Moreover, the length of time needed between first observing inflation and fully raising interest rates highlights a potentially meaningful temporal advantage for our framework that is missing from inflation conversations. The reason the Fed did not immediately raise rates

¹⁸¹ *Supra* Part I.C.

¹⁸² See *Consumer Prices Increase 6.2 Percent for the Year Ended October 2021*, U.S. BUREAU LAB. STAT. (Nov. 19, 2021), <https://www.bls.gov/opub/ted/2021/consumer-prices-increase-6-2-percent-for-the-year-ended-october-2021.htm> (indicating inflation reached 4.2% in April 2021 and 6.2% in October 2021); Press Release, Bd. of Governors of the Fed. Rsrv. Sys. Implementation Note Issued March 16, 2022 (Mar. 16, 2022), <https://www.federalreserve.gov/newsevents/pressreleases/monetary20220316a1.htm>.

¹⁸³ See *supra* note 25.

¹⁸⁴ See *supra* note 10.

¹⁸⁵ See Havranek & Rusnak, *supra* note 111, at 39.

¹⁸⁶ There is evidence that existing reserves, such as the Strategic Petroleum Reserve, have effectively controlled prices. See, e.g., Lutz Kilian & Xiaoqing Zhou, *Does Drawing Down the US Strategic Petroleum Reserve Help Stabilize Oil Prices?*, 35 J. APPLIED ECON. 673 (2020) (finding that use of the Strategic Petroleum Reserve has effectively controlled prices). The cost of establishing such reserves may be lower than the sacrifice entailed by inducing a recession to lower interest rates. See *infra* Part III.

in April of 2021 was that it wanted to see if inflation would endure.¹⁸⁷ That wait makes sense when the sole tool available would harm the economy. However, when other tools exist that are beneficial for the economy or neutral—such as releasing oil reserves, improving consumer protection enforcement, or removing occupational licensing barriers—policy makers could begin to act on those reforms immediately, even if they are unsure about how long inflation will last. Some of those policy options rely on legislatures acting, but others can be immediately pursued by administrative agencies or executive decisions.

To be sure, at times a reform that expands the economy will be so institutionally slow as to make it an infeasible inflation reduction policy. However, even alternatives to interest rates that are slower should not be dismissed for that reason alone. When this occurs, some sacrifice may become inevitable. The key question becomes achieving inflation reduction at the lowest sacrifice ratio, rather than defaulting to interest rates under the mistaken assumption that they are necessary because they are fast.

Moreover, since inflation battles often last years, deploying a variety of policy levers allows some to act immediately, others to act in the medium term, and others to act in the longer term on prices. Thus, a natural interest rate framework allows for a staged temporal response to enduring inflation and opens the possibility of nipping inflation in the bud rather than requiring sacrifice to bring down inflation that has already become entrenched.

4. Legitimacy and Legality

The Federal Reserve has long faced criticisms about its independence and lack of legitimacy. Its approach to inflation has contributed significantly to that perception. For instance, as Volcker was beginning his massive interest rate hikes, lawmakers criticized the Fed's independence. One Senator summarized the discontent at a press conference, saying, "It's inconsistent with representative democracy—and contrary to consistent fiscal policy—to have seven people appointed to 14-year terms with vast sweeping powers over the lives and fortunes of the American people who are accountable to no one, not the President, not the Congress, not the people."¹⁸⁸ By contrast, monetary pluralism comports better with the Federal Reserve's statutory objectives than the monetary primacy status quo.

As a matter of law, nowhere does a statute clearly specify that the Federal Reserve should prioritize inflation over employment.¹⁸⁹ Thus, the default to fighting inflation by imposing great sacrifice on an arbitrary subset of the population was never vetted by any representative political body or even candidly communicated to the public.¹⁹⁰

In contrast, the natural rate framework follows from a straightforward interpretation of the Fed's statutory objectives. Its tripartite mandate provides that it should adjust the money supply to "promote effectively the goals of maximum employment, stable prices, and

¹⁸⁷ See Jerome Powell, Chairman, Bd. of Governors of the Fed. Rsrv. Sys., Press Conference 13-15 (Apr. 28, 2021), <https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20210428.pdf>.

¹⁸⁸ Todd, *supra* note 134, at 46.

¹⁸⁹ See Conti-Brown, Listokin, & Parrillo, *supra* note 89, at 45.

¹⁹⁰ On the absence of Federal Reserve explicit consideration of comparable sacrifice ratios, see *supra* Section I.C.

moderate long-term interest rates.”¹⁹¹ At the natural rate of interest, employment is at the highest it can be without causing inflation to increase, a reasonable interpretation of maximum employment in this context.¹⁹² At the natural rate of interest, inflation is stable.¹⁹³ While this is not the same as stable prices, it is a reasonable modern equivalent, just as plausible as the Fed’s interpretation that “stable prices” means 2% inflation.¹⁹⁴ Finally, the natural rate of interest framework gives meaning to the oft-neglected third prong of the mandate: “moderate long-term interest rates.”¹⁹⁵ Focusing the Fed’s interest rate policy on achieving the natural rate moderates interest rate swings.

A natural interest rate target also contributes to legitimacy by providing a clearer objective and thus less open-ended discretion. Although the use of interest rates thereby becomes more limited, the natural interest rate framework still leaves a role for Fed expertise. Interest-rate expertise is still required to identify the natural interest rate, which varies over time. Instead, the Fed currently chooses how much unemployment to sacrifice to reduce inflation—the kind of tradeoff best left to the legislative actors and more politically accountable elements of the executive branch, unless they have explicitly delegated the responsibility for that decision.

Under our framework, the Fed only raises rates above the natural rate once it has the blessing of the political branches. Rather than having the Fed unilaterally impose economic sacrifice to lower inflation, the monetary path under our framework is explicitly backed by the executive branch and implicitly backed by Congress (through its inaction in the face of opportunity). This gives the resulting sacrifice democratic vetting that current unilateral Fed interest rate choices do not enjoy.

This is not to say that Congress could not choose to enact monetary primacy. If Congress wishes to impose an inflation targeting regime for the Fed, in which the Fed’s primary objective is achieving a target rate of inflation, then Congress is free to do so. In this context, the Fed would be imposing sacrifice blessed by the legislature in order to control inflation. Congress has not, however, explicitly sanctioned the prioritization of inflation over the risk of recessions and unemployment—except perhaps through inaction in the face of Volcker’s then-radical moves in the 1980s.¹⁹⁶

One final dimension to our proposal would enhance legitimacy. Currently, the Fed’s approach to inflation lacks transparency. What it says it is doing does not necessarily match what it actually does. Recall how Volcker had not actually believed that raising interest rates above 20% was necessary as an economic matter to subdue spending, and instead had a

¹⁹¹ See Federal Reserve Reform Act of 1977, Pub. L. No. 95-188, § 2A, 91 Stat. 1387 (1977) (codified at 12 U.S.C. § 225a).

¹⁹² David Wessel & Peter Olson, *The Hutchins Center Explains: The Natural Rate of Interest*, BROOKINGS INST. (Oct. 19, 2015), <https://www.brookings.edu/articles/the-hutchins-center-explains-the-natural-rate-of-interest>.

¹⁹³ *Id.*

¹⁹⁴ See, e.g., *Why Does the Federal Reserve Aim for Inflation of 2 Percent Over the Longer Run?*, BD. OF GOVERNORS OF THE FED. RSRV. SYS. (2020), https://www.federalreserve.gov/faqs/economy_14400.htm.

¹⁹⁵ See Federal Reserve Reform Act of 1977, Pub. L. No. 95-188, § 2A, 91 Stat. 1387 (1977) (codified at 12 U.S.C. § 225a).

¹⁹⁶ See *supra* Section I.B.

psychological goal and “just wanted to shake ’em up.”¹⁹⁷ In 2022, while the Fed talked tough by emphasizing its willingness to subdue inflation through high interest rates, it did not set interest rates accordingly.¹⁹⁸ Since its actions mapped more closely onto a natural interest rate framework,¹⁹⁹ adopting such a framework would increase transparency.

Even if the Fed’s tough talk kept a lid on inflation expectations, which is debatable,²⁰⁰ over the long term that policy is unsustainable as the public becomes wise to the Fed’s double talk.²⁰¹ Thus, there is no strong economic justification for making an exception to the democratic norm of governmental transparency.

These issues of legitimacy are potentially even more important at a time when the Supreme Court is increasingly inclined to curtail agency discretion.²⁰² Whether in adherence to centuries old principles of good governance or to meet evolving perceptions of legitimacy, the Fed should consider adopting a natural interest rate framework that adheres more closely to its statutory authority.

III. CASE STUDIES OF INTEREST RATE ALTERNATIVES

Many other alternatives to interest rate increases can be imagined for fighting inflation. The case studies below illustrate the array of policy options available that have the potential to lower inflation with significantly lower sacrifice than raising interest rates.

A. Antitrust and Consumer Law

The best inflation-fighting techniques expand the economy’s capacity. This type of reform is the most attractive because it lowers inflation not by causing risks and sacrifice, but through policies that overall would benefit society. More people benefit in this scenario because the economy overall has more jobs and for a given level of income people can purchase more goods and services. In other words, these reforms overall increase societal prosperity. We begin with two categories of capacity-expanding reforms that would stop private actors from engaging in harmful practices: antitrust and consumer law.

A threshold question is whether consumer law and antitrust would be able to lower prices at a significant enough magnitude across the economy to matter for inflation. One helpful perspective on the possible magnitude comes from the research showing how in 1980 the average business priced its goods at 21% above costs, while by 2016 the average business set

¹⁹⁷ BLINDER, *supra* note 135, at 127.

¹⁹⁸ See *supra* Section I.C.

¹⁹⁹ See *supra* Section II.A & Section I.C.

²⁰⁰ See James Surowiecki, *Don’t Read His Lips*, ATLANTIC (Feb. 8, 2023), <https://www.theatlantic.com/ideas/archive/2023/02/jerome-powell-federal-reserve-interest-rates/672990/> (“Investors have been betting that the Fed’s tough talk is just a bluff . . .”).

²⁰¹ Maren Blanchard, *Dynamic Inconsistencies and Economic Lies*, MICH. J. ECON. (May 7, 2023), <https://sites.lsa.umich.edu/mje/2023/05/07/dynamic-inconsistencies-and-economic-lies/>.

²⁰² See, e.g., *Loper Bright Enters. v. Raimondo*, 143 S. Ct. 2429 (2023) (considering the question of agency discretion).

its price at 61% above costs.²⁰³ Thus, in recent decades businesses have arguably become more able to markup their products than should be necessary for the business to operate profitably. Those forty percentage points of increased markup since 1980 are relevant to inflation because they suggest that there are ways to significantly lower the prices paid while still allowing businesses to be profitable. To illustrate, consider again how inflation was about 7% between 2021 and 2023, or five percentage points above the Fed's target.²⁰⁴ If consumer law and antitrust were to lower markups by five percentage points in 2021 and 2022, it would keep inflation in check on a substantial portion of the economy, while still allowing businesses to have markups well above those that existed in 1980. Thus, the rise in markups suggest that large-scale reductions in inflation over a sustained period are possible through consumer law and antitrust.

Turning now to the specific reforms that might be pursued to halt anticompetitive business conduct, we begin with the most familiar of these, antitrust. Antitrust law seeks to address problems such as monopoly power and collusion by competitors to fix prices at an elevated level. Monopoly power may result from mergers. The studies on the price effects of various anticompetitive practices face methodological limitations, but there is some evidence suggesting that antitrust overall could do more.²⁰⁵ For instance, a longitudinal study of ninety-seven hospital mergers concluded that they increased prices on average 40%.²⁰⁶ One cross-industry study of fifty questionable mergers found that they increased prices by about 10%.²⁰⁷ Assuming a higher percentage of anticompetitive mergers could be blocked without blocking beneficial mergers, or that prior consummated mergers could be undone, antitrust would have the possibility to hold down some portion of inflation that would otherwise result.

Stopping existing monopoly power is more difficult. Breakups may take years to implement and are difficult to get right.²⁰⁸ Other remedies, such as mandating interoperability to allow competitors to access platforms, can occur more quickly but also face limitations.²⁰⁹ Nonetheless, antitrust interventions to reduce monopoly power have in some contexts brought down prices. For instance, the requirement that customers be able to keep their own phone number while switching carriers was found to significantly lower prices paid for cell phone services.²¹⁰ After gas stations were randomly split up, the prices subsequently lowered

²⁰³ Jan De Loecker, Jan Eeckhout & Gabriel Unger, *The Rise of Market Power and the Macroeconomic Implications*, 135 Q.J. ECON. 561, 562 (2020).

²⁰⁴ See *supra* note 25 and accompanying text.

²⁰⁵ JOHN KWOKA, MERGERS, MERGER CONTROL, AND REMEDIES: A RETROSPECTIVE ANALYSIS OF U.S. POLICY 39-46 (2015).

²⁰⁶ See Leemore Dafny, *Estimation and Identification of Merger Effects: An Application to Hospital Mergers*, 52 J.L. & ECON. 523, 528, 530, 544 (2009).

²⁰⁷ See KWOKA, *supra* note 205, at 39-46.

²⁰⁸ The extent of difficulty is, however, exaggerated. See Rory Van Loo, *In Defense of Breakups: Administering a "Radical" Remedy*, 105 CORNELL L. REV. 1955, 1955-56 (2020).

²⁰⁹ See Herbert Hovenkamp, *Antitrust Interoperability Remedies*, 123 COLUM. L. REV. F. 1, 11 (2023) (noting limits and successes of interoperability mandates).

²¹⁰ See Minjung Park, *The Economic Impact of Wireless Number Portability*, 59 J. INDUS. ECON. 714, 728-29 (2011) (finding that cell phone plan prices decreased as a result of the portability mandates, with high volume users experiencing the largest price decreases but prices decreased across plans).

by 1.3% to 2.3%.²¹¹

Collusion is also possibly widespread in today's economy. Antitrust scholars have estimated that cartels raise prices in various U.S. industries by between 18% and 37%.²¹² Moreover, the magnitude of collusion may be becoming more acute as companies rely on artificial intelligence pricing algorithms, which would be expected to discover mechanisms for collusion and thereby help to move prices toward monopoly levels.²¹³ For instance, when gas station owners moved to algorithmic pricing, the prices they charged were estimated to have gone up by between 9% and 28%.²¹⁴ Yet most cartels go undetected,²¹⁵ and antitrust law has yet to invest in prosecuting algorithmic collusion.²¹⁶

Unlike antitrust, consumer law is less commonly associated with expanding economic capacity and reducing prices. A large body of literature, however, has shown how businesses have become adept at exploiting consumer behavioral biases to charge higher prices.²¹⁷ Businesses commonly make it less likely consumers will weigh the full price, such as by shifting some of the price to add-on fees for checking baggage or late fees for credit card payments.²¹⁸ Other times, businesses subtly steer consumers to higher priced items, as financial institutions did to home buyers during the mortgage crisis and Amazon does currently by burying the best deals deep in the search results.²¹⁹ The consequences can be

²¹¹ See Adriaan R. Soetevent, Marco A. Haan & Pim Heijnen, *Do Auctions and Forced Divestitures Increase Competition? Evidence for Retail Gasoline Markets*, 62 J. INDUS. ECON. 467, 467-70 (2014).

²¹² See John M. Connor & Robert H. Lande, *The Size of Cartel Overcharges: Implications for U.S. and EU Fining Policies*, 51 ANTITRUST BULL. 983, 983 (2006).

²¹³ See Emilio Calvano, Giacomo Calzolari, Vincenzo Denicolò, & Sergio Pastorello, *Artificial Intelligence, Algorithmic Pricing, and Collusion*, 110 AM. ECON. REV. 3267, 3280-81 (2020).

²¹⁴ See Stephanie Assad, Emilio Calvano, Giacomo Calzolari, Robert Clark, Vincenzo Denicolò, Daniel Ershov, Justin Johnson, Sergio Pastorello, Andrew Rhodes, Lei Xu, & Matthijs Wildenbeest, *Autonomous Algorithmic Collusion: Economic Research and Policy Implications*, 37 OXFORD REV. ECON. POL'Y 459, 463-64 (2021). This study faced limitations in knowing the date of the adoption of algorithmic pricing.

²¹⁵ See Peter G. Bryant & E. Woodrow Eckard, *Price Fixing: The Probability of Getting Caught*, 73 REV. ECON. & STAT. 531, 535 (1991).

²¹⁶ See Michal Gal, *Limiting Algorithmic Coordination*, 38 BERKELEY TECH. L.J. (forthcoming 2023) (manuscript at 10) (“[A]lgorithmic sophistication may also help facilitate deviations from the market equilibrium (“cheating”) that are not easy to detect.”); Michal S. Gal & Niva Elkin-Koren, *Algorithmic Consumers*, 30 HARV. J. L. & TECH. 309, 345 (2017) (“[Algorithms] may create a higher risk of detecting deviations, given their data analysis abilities.”). See also ARIEL EZRACHI & MAURICE E. STUCKE, *VIRTUAL COMPETITION: THE PROMISE AND PERILS OF THE ALGORITHM-DRIVEN ECONOMY* (2016) (discussing “data-driven monopolies”).

²¹⁷ See, e.g., Timothy J. Richards, Gordon J. Klein, Celine Bonnet, & Zohra Bouamra-Mechemache, *Strategic Obfuscation and Retail Pricing*, 57 REV. INDUS. ORG. 859, 860-62 (2020) (summarizing the literature and finding that “strategic price obfuscation” leads to higher profits).

²¹⁸ See, e.g., Paul Adams, Benedict Guttman-Kenney, Lucy Hayes, Stefan Hunt, David Laibson & Neil Stewart, *Do Nudges Reduce Borrowing and Consumer Confusion in the Credit Card Market?*, 89 ECONOMICA 178 (2022) (finding that consumers underestimate how long it will take to repay credit card debt but that nudges would help consumers make more informed estimations).

²¹⁹ See, e.g., Xavier Gabaix & David Laibson, *Shrouded Attributes, Consumer Myopia, and Information Suppression in Competitive Markets*, 121 Q.J. ECON. 505, 506 (2006) (creating a model to demonstrate that firms have an incentive to “hide information from consumers”); Rory Van Loo, *Helping Buyers Beware: The Need for Supervision of Big Retail*, 163 U. PA. L. REV. 1311, 1335-47 (2015) (discussing how Amazon and other retailers charge higher prices through obfuscation).

significant, with studies finding price increases of 8% on cell phone plans,²²⁰ 21% on ticket payments on StubHub,²²¹ and by several percentage points even in relatively straightforward online retail settings.²²²

There is also evidence that consumer law interventions can significantly lower prices. As a few examples, Medicare recipients paid 5% less for out-of-pocket expenses after receiving more helpful messages,²²³ drivers paid 20% less following mandatory highway billboards displaying the gas prices of nearby stations,²²⁴ and borrowers paid 11% less in payday loan debt costs from disclosures next to the counter.²²⁵

Perhaps more promising are interventions that might either lessen businesses' ability to algorithmically exploit consumer biases, or even support third-party digital intermediaries that could help consumers to find the best deals. For instance, an Israeli statute mandated that stores make their price and product information digitally available.²²⁶ Prices were estimated to have subsequently declined by 4% to 5%.²²⁷ But those magnitudes may be low because they did not necessarily result in sophisticated digital intermediaries using that information to guide consumers to the best deals, and may have depended on more indirect information improvements, such as websites listing prices.²²⁸ As an example of what more forceful interventions might accomplish, one study of eBay's search algorithm found that changing the computer code saved consumers 5% to 15%.²²⁹

Once these various antitrust and consumer law interventions are added together, it becomes possible to see how investments in such reforms could reach reductions of 5% or more across much of the economy—savings that would be relevant to inflation.²³⁰ Thus, although consumer law interventions are not always successful, when designed well they have the potential to significantly lower prices.

Additionally, consumer law interventions can be implemented on a helpful timeframe.

²²⁰ See Oren Bar-Gill & Rebecca Stone, *Pricing Misperceptions: Explaining Pricing Structure in the Cell Phone Service Market*, 9 J. EMPIRICAL LEGAL STUD. 430, 453-54 (2012).

²²¹ These higher payments were driven by moving purchasers to higher-priced options. See Tom Blake, Sarah Moshary, Kane Sweeney & Steve Tadelis, *Price Salience and Product Choice*, 40 MKTG. SCI. 619, 619, 625 (2021).

²²² See Glenn Ellison & Sara Fisher Ellison, *Search, Obfuscation, and Price Elasticities on the Internet*, 77 ECONOMETRICA 427, 428-29 (2009).

²²³ See Jeffrey R. Kling, Sendhil Mullainathan, Eldar Shafir, Lee C. Vermeulen & Marian V. Wrobel, *Comparison Friction: Experimental Evidence from Medicare Drug Plans*, 127 Q.J. ECON. 199, 201, 215 (2012).

²²⁴ See Federico Rossi & Pradeep K. Chintagunta, *Price Transparency and Retail Prices: Evidence from Fuel Price Signs in the Italian Highway System*, 53 J. MKTG. RSCH. 407, 409 (2016).

²²⁵ See Marianne Bertrand & Adair Morse, *Information Disclosure, Cognitive Biases, and Payday Borrowing*, 66 J. FIN. 1865, 1865 (2011).

²²⁶ See Itai Ater & Oren Rigbi, *Price Transparency, Media and Informative Advertising*, 15 AM. ECON. J.: MICROECONOMICS 1, 2 (2023).

²²⁷ *Id.*

²²⁸ *Id.*

²²⁹ See Michael Dinerstein, Liran Einav, Jonathan Levin & Neel Sundaresan, *Consumer Price Search and Platform Design in Internet Commerce*, 108 AM. ECON. REV. 1820, 1821 (2018).

²³⁰ Cf. Rory Van Loo, *Broadening Consumer Law: Competition, Protection, and Distribution*, 95 NOTRE DAME L. REV. 211, 229 (2019) (summarizing the magnitude of consumer law and competition laws in the context of the distribution of wealth and concluding that they are relevant to macroeconomic conversations).

For instance, the Israeli retail store price disclosure statute began to lower prices within eight months of enactment and reached peak price effects at around two years. Prior research has also concluded that within three months of the filing of an antitrust complaint in court, commodity prices lowered 1% to 2%, and within nine months they lowered 2% to 4%.²³¹ Although the institutional delays in getting to these points must also be considered, in some circumstances antitrust and consumer law may begin to lower prices faster than inflation.²³²

Most importantly, unlike using interest rate hikes and some other anti-inflation alternatives, consumer and competition laws do not depress jobs or wages.²³³ Indeed, a more likely outcome of improving markets would be more goods and services produced, which could create jobs.²³⁴ Thus, regardless of uncertainty about the magnitude of price reductions, interventions that would prevent private parties from introducing market failures should be higher priority than interest rates.

B. Immigration, Licensing, and Oil Reserves

Other reforms expand capacity but not by restraining private actors' harmful conduct, as do consumer law and antitrust. Instead, these other categories of reforms rely either on the government itself supplying capacity, such as by releasing petroleum reserves, or on removing government barriers to capacity, including by lowering immigration restrictions. These types of reforms also differ from consumer law and antitrust in that they are more conducive to being implemented temporarily to keep their overall impact neutral.²³⁵ Among policies fitting this description, strategic reserves, immigration, and occupational licensing are of a potentially large enough magnitude to merit further discussion.

Strategic reserves. Commodity prices are notoriously volatile.²³⁶ Significant swings in the prices of energy or food often play an outsized role in causing inflation to increase.²³⁷ Increases in oil prices, for example, are highly correlated with increases in inflation expectations.²³⁸

²³¹ GEORGE J. STIGLER & JAMES K. KINDAHL, NAT'L BUREAU ECON. RSCH., *THE BEHAVIOR OF INDUSTRIAL PRICES* 92 (1970).

²³² For a more in-depth discussion of timing, see *infra* Section III.D.

²³³ See, e.g., Bar-Gill & Stone, *supra* note 220, at 453-54 (summarizing the market effects of behavioral interventions).

²³⁴ This could mean that the overall effect on inflation is less as a result, although the literature does show price reductions from various consumer law and competition-related interventions at least in specific industries.

²³⁵ Consumer law and antitrust could also be implemented on a temporary basis, especially by ramping up and down enforcement. However, one would not refund the fines or allow the monopoly broken up to later recreate monopolies.

²³⁶ See Adil Mohommad, Mehdi Raissi, Kyuho Lee, & Chanpheng Fizzarotti, *Volatile Commodity Prices Reduce Growth and Amplify Swings in Inflation*, IMFBLOG (Mar. 28, 2023), <https://www.imf.org/en/Blogs/Articles/2023/03/28/volatile-commodity-prices-reduce-growth-and-amplify-swings-in-inflation>.

²³⁷ See Drew Desilver, *As Inflation Soars, A Look at What's Inside the Consumer Price Index*, PEW RSCH. CENTER (Jan. 24, 2022), <https://www.pewresearch.org/short-reads/2022/01/24/as-inflation-soars-a-look-at-whats-inside-the-consumer-price-index>.

²³⁸ This correlation is as measured by the market prices of inflation-protected assets. See *Oil Prices and Breakeven Inflation Rates Revisited*, FRED BLOG (June 3, 2019), <https://fredblog.stlouisfed.org/2019/06/oil-prices-and-breakeven-inflation-rates-revisited/>.

Rather than responding to inflation caused by commodity price fluctuations by raising or lowering interest rates, a more direct policy response seeks to intervene in these markets to moderate price fluctuations.

Strategic reserves, such as the U.S. Strategic Petroleum Reserve, can dampen commodity price fluctuations and mitigate inflationary pressures when commodity prices are rising. Research estimates that strategic petroleum reserve releases have on average lowered the price of oil by nearly 10%.²³⁹ And if the strategic petroleum reserve was expanded so that it could respond even more decisively to oil price spikes, then the effect could be even larger. If strategic reserves were created for other volatile commodities, especially food, then the cumulative impact on inflation would be still greater. Note that these are temporary rather than structural because the economy's capacity to produce oil would not be increased, for instance. Once the reserves are released during a given inflation fight, this lever is exhausted.

Immigration. Immigration laws prevent workers from adding their skills and labor to the workforce. In turn, increases in legal immigration would increase labor supply and therefore expand capacity.²⁴⁰ Studies have found that increases in immigration lead to lower consumer prices.²⁴¹ Another way of thinking about the benefits of this move is as allowing new ideas, skills, and availability to bring more people the goods and services they want at lower prices. Moreover, immigration policies can target the sectors in which workers are in particularly short supply—thus expanding capacity where it is hitting inflation hardest. Thus, instead of using interest rates to destroy jobs and harm the economy, immigration would improve the economy and create jobs.²⁴²

Note that while immigration is a politically controversial topic, the use of immigration to combat inflation need not be controversial. The same overall level of immigration could be maintained, only with immigration being increased when labor markets are tight and then lowered during periods of high unemployment. Those high and low periods of immigration could be designed to offset each other. Additionally, surveys have found that voters in both political parties care more about inflation than immigration.²⁴³ Thus, the dislike of inflation may allow for at least temporary relaxation of immigration restrictions.

Occupational licensing. About 25% of occupations require someone to obtain a license

²³⁹ See Lutz Kilian & Xiaoqing Zhou, *Does Drawing Down the US Strategic Petroleum Reserve Help Stabilize Oil Prices*, 35 J. APPLIED ECONOMETRICS 673, 684 tbl. 2 (2020) (taking average of releases).

²⁴⁰ See, e.g., Adam M. Zaretsky, *A Burden to America? Immigration and the Economy*, FED. RES. BANK ST. LOUIS (Sept. 30, 1997), <https://www.stlouisfed.org/publications/regional-economist/october-1997/a-burden-to-america-immigration-and-the-economy> (explaining the economic benefits of immigration).

²⁴¹ See, e.g., Saul Lach, *Immigration and Prices*, 115 J. POL. ECON. 548 (2007) (finding .5% lower prices in a broad array of store items); Patricia Cortes, *The Effect of Low-Skilled Immigration on U.S. Prices: Evidence from CPI Data*, 131 J. POL. ECON. 381, 381 (2008) (finding 2% lower prices for immigration-intensive services); see also Zaretsky, *supra* note 240 (summarizing economists' views that in "many instances, immigrants both cause prices to fall, which benefits all consumers, and enable the economy to domestically produce a wider variety of goods than natives alone could").

²⁴² See, e.g., Zaretsky, *supra* note 240 (summarizing the benefits of immigration).

²⁴³ See, e.g., Alec Phillips, *Could More Immigration Make a Dent in the Jobs-Workers Gap?*, GOLDMAN SACHS (May 23, 2022, 5:11 AM EDT), <https://www.gspublishing.com/content/research/en/reports/2022/05/23/e3c25903-8133-4647-91a0-db1c867e026c.html> ("Inflation ranks as a higher priority than immigration among voters of all parties . . .").

before working.²⁴⁴ For instance, some states require licenses of fortune tellers, beekeepers, librarians, and manicurists.²⁴⁵ Such requirements creates barriers that keep people from contributing their skills to the economy, whether because they do not have the money, time, knowledge, or even political connections to navigate the approval process.²⁴⁶ One estimate, which is rough but viewed as conservative, puts the price increase at 15%, or well over two hundred billion dollars annually.²⁴⁷

Some occupational licensing surely protects consumers, but there is reason to think that some schemes go too far, essentially functioning like cartels.²⁴⁸ In one study of the removal of occupational licensing laws for casket makers, for instance, prices not only lowered by 15% but resulted in no measurable decrease in the quality of funeral services.²⁴⁹ The industry’s warnings of “significant threats to the public health, safety and welfare” never materialized.²⁵⁰ If there are legitimate concerns about licensing providing quality control, one way to address the issue is to ease licensing restrictions only temporarily. For instance, during the pandemic some states removed nursing licensing requirements to address insufficient supply of nurses.²⁵¹

C. Taxing and Spending

The failure of government taxing and spending to respond decisively to the Great Inflation of the 1970s diminished the perceived utility of fiscal policy in fighting inflation.²⁵² In particular, fiscal policy’s long institutional lag—the time required for Congress to pass countercyclical fiscal policy—rendered it particularly suspect.²⁵³

While this critique is a valid one when applied to passing new legislation in response to changing macroeconomic circumstances, fiscal policy should still play an important role in

²⁴⁴ See Morris M. Kleiner & Evgeny Vorotnikov, *Analyzing Occupational Licensing Among the States*, 52 J. REGUL. ECON. 132, 134 (2017).

²⁴⁵ See Alan B. Krueger, *Do You Need a License to Earn a Living? You Might Be Surprised. at the Answer*, N.Y. TIMES (2006), <https://www.nytimes.com/2006/03/02/business/yourmoney/do-you-need-a-license-to-earn-a-living-you-might-be.html>.

²⁴⁶ See generally Kleiner & Vorotnikov, *supra* note 244.

²⁴⁷ See *id.*; Aaron Edlin & Rebecca Haw, *Cartels by Another Name: Should Licensed Occupations Face Antitrust Scrutiny?*, 162 U. PA. L. REV. 1093, 1102 (2014) (describing Kleiner and Krueger’s 15% estimates for price increases as “[c]onservative”).

²⁴⁸ See *supra* note 46.

²⁴⁹ Brandon Pizzola & Alexander Tabarrok, *Occupational Licensing Causes a Wage Premium: Evidence from a Natural Experiment in Colorado’s Funeral Services Industry*, 50 INT’L REV. L. & ECON. 50, 52, 59 (2017).

²⁵⁰ *Id.*

²⁵¹ See Lauren Bauer, Aidan Creeron, Joy Dada & Luiza Macedo, *Nurse Licensure Compacts Before, During, and After COVID*, BROOKINGS INST. (Feb. 8, 2023), <https://www.brookings.edu/articles/nurse-licensure-compacts-before-during-and-after-covid/>.

²⁵² See Marvin Goodfriend, *How the World Achieved Consensus on Monetary Policy*, 21 J. ECON. PERSPECTIVES 47, 57 (2007) (“As a variety of nonmonetary options for controlling inflation failed—including wage and price controls, credit controls, and fiscal policy—the monetarist option looked increasingly attractive.”).

²⁵³ See 8 JAMES M. BUCHANAN AND RICHARD E. WAGNER, *DEMOCRACY IN DEFICIT: THE POLITICAL LEGACY OF LORD KEYNES* 85-87 (1997).

fighting inflation. Congress could, as a routine matter, implement “automatic” adjustments into spending laws, which would raise taxes and lower spending when inflation accelerates without any need for passing laws. And the unpopularity of inflation may accelerate the normally long legislative institutional lag. There is a reason that the “Inflation Reduction Act’s” mentioned inflation even if the primary purpose of the law was not inflation reduction.²⁵⁴ That law introduced major spending on clean energy and reductions to the deficit,²⁵⁵ suggesting that discretionary fiscal policy adjustment in the face of inflation may not be as unrealistic as conventionally assumed.

Fiscal policy expansions and contractions can have meaningful effects on inflation. The increased U.S. government spending in response to the Covid-19 pandemic is estimated to have raised inflation by 2.5%.²⁵⁶ Assuming that fiscal contractions have a similar effect, as would be expected, fiscal contraction offers an effective means of reducing excess inflation without assistance from monetary policy.²⁵⁷

Like interest rate hikes, fiscal contractions can cause recessions and thus offer a costly means of inflation control. There are reasons, however, to suspect that fiscal policy’s sacrifice ratio is lower than that of monetary policy. First, fiscal policy has a shorter “outside lag” than monetary policy. When the government collects more taxes or reduces benefit payments, disposable incomes go down immediately. Interest rate hikes, by contrast, affect spending with a much longer lag, reducing the precision of monetary policy and raising the risk of under- or over-stimulation. Second, monetary policy hammers interest rate sensitive sectors but otherwise leaves spending mostly unaffected. Contractionary fiscal policy, by contrast, spreads the pain of belt-tightening throughout the economy, reducing the toll on any one sector. And if contractionary fiscal policy is targeted at the sectors that are the most overheated, then it can reduce inflation pressures with even less sacrifice by applying the brakes in areas where they are most needed.

Student loan payments on government debt offer a “quasi-fiscal” means of inflation control. Like taxes, student loan repayments to the government reduce disposable income and shrink spending.²⁵⁸ Indeed, one study estimates that restarting loan payments reduces spending by \$100 billion per year.²⁵⁹ The Biden Administration missed the opportunity to

²⁵⁴ See Inflation Reduction Act of 2022, Pub. L. No. 117-169, 136 Stat. 1818 (2022).

²⁵⁵ See, e.g., *Estimated Budgetary Effects of H.R. 5376, the Inflation Reduction Act of 2022*, CONG. BUDGET OFF. (Aug. 3, 2022), <https://www.cbo.gov/publication/58366> (estimating that the IRA reduced ten-year deficits by \$90 billion).

²⁵⁶ See *Fiscal Policy and Excess Inflation During Covid-19: A Cross-Country View*, BD. OF GOVERNORS OF THE FED. RESRV. SYS. fig. 5 (July 15, 2023), <https://www.federalreserve.gov/econres/notes/feds-notes/fiscal-policy-and-excess-inflation-during-covid-19-a-cross-country-view-accessible-20220715.htm#fig5> (estimating spending relative to expectations).

²⁵⁷ Cf. Philip Arestis & Malcom Sawyer, *On the Effectiveness of Monetary Policy and Fiscal Policy*, 62 REV. SOC. ECON. 441, 444 (2004) (discussing the economic implications of fiscal policy).

²⁵⁸ See Claire Ballentine, *Student Loan Bills Will Cut \$100 Billion from Consumer Spending*, BLOOMBERG (July 21, 2023, 8:45 AM CDT), <https://www.bloomberg.com/news/articles/2023-07-21/student-loan-payments-will-cut-consumer-spending-increase-recession-odds>.

²⁵⁹ Nancy Vanden Houten, *Student Loan Relief is Ending—What’s Next*, OXFORD ECON. (July 20, 2023), https://info.oxfordeconomics.com/1/1022713/2023-07-20/9gw7/1022713/1689875907bDofpoL1/US_Student_loan_relief_is_ending_whats_next.pdf.

use this inflation fighting technique when inflation accelerated in late 2021. At the time, student loan repayments were paused due to Covid.²⁶⁰ If loan repayments had been reinstated when inflation accelerated, it would have introduced a powerful contractionary force into the economy at a time when spending pressures were excessive. Instead of resuming loan repayments, the Biden Administration delayed the repayment of student loans as long as it could, thereby encouraging spending.²⁶¹ By timing loan repayment resummptions to coincide with periods of heightened price pressures, the U.S. Department of Education can have a powerful fiscal effect.

To be clear, debt relief is an important policy tool, and it is unfortunate that “many governments have forgotten how to forgive debt.”²⁶² But timing matters, and we argue that when the labor market is strong and inflation is rising, as it was in 2021, it is a bad time to pursue such policies. Indeed, in such tight labor markets borrowers are in a stronger position to pay off loans than they would be during periods of high unemployment.²⁶³ More importantly, the failure to recognize or prioritize the inflationary dimensions of pausing student loan payments meant the Fed had greater need to use interest rates hikes. Higher interest rates have the potential to hurt vulnerable student loan debtors even harder than the resumption of payments, by raising their costs of other debt and possibly taking away jobs and lowering salaries.²⁶⁴ Under monetary primacy, policy makers do not compare these sacrifice tradeoffs.

D. Deciding Among Policy Tools

How can policymakers avoid decision paralysis in deciding among such a dizzying array of possibilities, each with various political and economic complications? At a minimum, they should more systematically use the basic economic tool that is designed to express the costs of interest rates: the sacrifice ratio.²⁶⁵ The idea here would be to calculate the sacrifice ratio for a range of inflation alternatives. This application of the sacrifice ratio would mark a shift from the monetary primacy regime, under which no part of the government compares

²⁶⁰ See Press Release, U.S. Dep’t of Educ., Biden-Harris Administration Continues Fight for Student Debt Relief for Millions of Borrowers, Extends Student Loan Repayment Pause (Nov. 22, 2022), <https://www.ed.gov/news/press-releases/biden-harris-administration-continues-fight-student-debt-relief-millions-borrowers-extends-student-loan-repayment-pause>.

²⁶¹ *Id.*

²⁶² LISTOKIN, *supra* note 164, at 185 (summarizing the history of debt relief in the United States and observing it was once a more routine policy expansionary policy lever).

²⁶³ See generally Roberto Quercia, Anthony Pennington-Cross, & Chao Yue Tian, *Differential Impacts of Structural and Cyclical Unemployment on Mortgage Default and Prepayment*, 53 J. REAL ESTATE FIN. & ECON. 346 (2016) (describing how mortgage rate defaults are impacted by unemployment).

²⁶⁴ See *supra* Section I.D. (summarizing the costs of high interest rates).

²⁶⁵ See LAURENCE BALL, *What Determines the Sacrifice Ratio?*, in MONETARY POLICY 155, 155-93 (Gregory Mankiw ed., 1994) (quantifying the sacrifice ratio for the first time); Joseph P. Daniels, Sandeep Mazumder & David D. VanHoose, *Expected Inflation and the Sacrifice Ratio*, 22 INT’L FIN. 307, 307-09 (2019) (providing a brief overview of the sacrifice ratio).

sacrifice ratios.²⁶⁶ Interest rates would then be used only when the sacrifice ratio suggested it was the best option available.

Since the goal is to build a broader portfolio of anti-inflation responses, different combinations of policies would need to be compared to one another. One package might, for instance, involve one percentage point of increase in interest rates alongside stronger consumer law, more immigration, and various other tools. The total expected magnitude of reduction in inflation would then be considered along with the total expected impact on economic capacity. The portfolio with the most attractive sacrifice ratio and the chance to significantly lessen inflation would be chosen.

To illustrate how the sacrifice ratio might be applied more systematically, consider how the comparison might work between investing in petroleum reserves and raising interest rates. According to one traditional estimate of the monetary policy sacrifice ratio, monetary policy needs to impose excess unemployment of 0.2% for one year to lower inflation by 0.1%.²⁶⁷ To accomplish that same level of inflation reduction, the federal government could instead invest in building up its strategic oil reserves. In deciding between these two options, the decisionmaker should compare the social costs of excess unemployment of 0.2% with those billions of dollars that would be spent maintaining the strategic petroleum reserve. If the costs of maintaining the reserve are lower, then the reserve should be expanded and it should be used as an inflation control device. Even simply calculating the sacrifice ratio for each of the leading candidates for reducing inflation would be a significant step forward in the analysis of inflation.

We propose going further by using a more systematic, comprehensive, and updated application of the sacrifice ratio. A more comprehensive deployment of the sacrifice ratio would mean analyzing the full set of tradeoffs involved in these various policy tools beyond the straightforward magnitude of the reduction in inflation and economic costs of the intervention. One of the most important of these additional factors to consider is the administrability of the solution. Administrability refers to (1) how long it takes to implement a given policy and (2) how likely that policy is to succeed.²⁶⁸ There is reason to think that assumptions about administrability drove the rise of monetary primacy.²⁶⁹

The first of these components of administrability, the timing of the anti-inflationary policy, is not as straightforward as it may appear. Interest rates tend to be viewed as faster

²⁶⁶ At least no part of the government discloses such an analysis; given the transparency surrounding Federal Reserve meetings and analyses, it would be surprising if such an analysis occurred in secret. See, e.g., Eric T. Swanson, *Have Increases in Federal Reserve Transparency Improved Private Sector Interest Rate Forecasts?*, 38 J. MONEY, CREDIT & BANKING 791 (2006) (describing increases in Fed transparency since the 1990s).

²⁶⁷ See Robert J. Tetlow, *How Large is the Output Cost of Disinflation?*, 1-23 (Bd. Governors Fed. Rsrv. Sys., Finance and Economics Discussion Series Paper No. 2022-079, 2022), <https://www.federalreserve.gov/econres/feds/files/2022079pap.pdf>. See also LAURENCE BALL, *What Determines the Sacrifice Ratio?*, in MONETARY POLICY 155-93 (1994). For modern applications of the sacrifice ratio, see Jordan Weissmann, *Why Larry Summers Thinks We Need Massive Unemployment to Beat Inflation*, SLATE (July 7, 2022, 11:25 AM), <https://slate.com/business/2022/07/larry-summers-massive-unemployment-fed-inflation.html>.

²⁶⁸ See Van Loo, *Inflation, Market Failures, and Algorithms*, 96 S. CAL. L. REV. 825, 863-66 (discussing administrability).

²⁶⁹ *Supra* Part I.

than alternatives because the Federal Reserve can execute them quickly through a simple committee meeting.²⁷⁰ But some alternatives are similarly fast because the President can immediately take action to change immigration and the release of petroleum reserves.²⁷¹ More importantly, a comprehensive view of the timing must consider the approximately two years for the interest rates to affect inflation fully.²⁷² Once that full timeline is considered, many of the alternatives to interest rates become economically faster than interest rates, such as consumer law and the removal of occupational licensing.²⁷³

The second major factor in administrability, the likelihood of success, speaks to the chances that the reduction in inflation will be realized. The perception that interest rates vanquished inflation in the 1980s after everything else failed creates an aura of a much greater likelihood of success for monetary primacy.²⁷⁴ If likelihood of success is the criterion, however, all of the alternatives explored above are supported by evidence that they have worked in the past to lower prices.²⁷⁵ Additionally, it bears emphasis that even interest rates are unpredictable in terms of the magnitude of their impact on inflation.²⁷⁶ The default to interest rates is supported by an irrationally high assumption of likelihood of success relative to alternatives.

Given the likely combination of high-priority and low-priority policy tools, it would be ideal to design the inflation portfolio in a dynamic manner. For instance, once it becomes clear that the deployment of consumer law and immigration increases as part of the portfolio is met with success it would be preferable to immediately scale back any of the sacrifice-heavy policies, such as interest rate hikes.

Note that the administrability gap between interest rates and some alternatives are largely a product of the institutional framework. Yet Congress created the Federal Reserve long before monetary primacy took hold, in an era of a more pluralistic vision for combatting inflation.²⁷⁷ Key constraints on alternatives to inflation, such as Congressional gridlock and deregulatory pressures on competition and consumer law agencies, unfolded later without any relationship to inflationary considerations.²⁷⁸ Thus, while the administrability benefits of monetary primacy are exaggerated, they are the product of an institutional design never intended for its current purpose. We turn now to the question of how to improve that design for an era of monetary pluralism.

²⁷⁰ *Supra* Part I.

²⁷¹ See generally Adam B. Cox & Cristina M. Rodríguez, *The President and Immigration Law*, 119 YALE L.J. 458 (2009) (detailing the Executive Branch's power over immigration).

²⁷² See FED. RSRV. BANK ST. LOUIS, *supra* note 21 (estimating the timing of interest rates).

²⁷³ See *supra* Section III.A.

²⁷⁴ *Supra* Part I.

²⁷⁵ *Supra* Section III.A, B, & C.

²⁷⁶ See, e.g., Anna Cieslak, Stephen Hansen, Michael McMahon & Song Xiao, *Policymakers' Uncertainty* (Nat'l Bureau of Econ. Rsrch., Working Paper No. 31849, 2023) (discussing how the FOMC makes decisions under uncertain conditions).

²⁷⁷ *Supra* Part I. For the leading historical account of the Federal Reserve's power and independence, see generally PETER CONTI-BROWN, *THE POWER AND INDEPENDENCE OF THE FEDERAL RESERVE* (2017) (discussing the history of the Federal Reserve and how it became independent).

²⁷⁸ See Federal Trade Commission Improvements Act of 1980, Pub. L. No. 96-252, 94 Stat. 374 (codified as amended at 15 U.S.C. § 57(h)) (curtailing the FTC's authority).

IV. INSTITUTIONAL DESIGN

We have so far shown how monetary primacy is economically undesirable but institutionally expedient. Yet that expediency is largely the product of institutional design.²⁷⁹ Some of the alternatives explored above, such as immigration and the release of energy reserves, already individually rival interest rates in terms of expediency.²⁸⁰ This section examines reforms that could improve the broader institutional design of macroeconomic policy. Automatically adjusting laws would enable Congress and the executive to sharply reduce the institutional delays that currently plague non-monetary responses to rising inflation. And a coordinating federal office would bring rigor and consistency to inflation fighting measures implemented by federal agencies. Moving away from monetary primacy does not depend on these reforms, but they would enhance monetary pluralism's ability to realize its promise.

A. Automatic Stabilizers

Since Congress may face delays and an inability to pass new laws needed in the face of inflation, it should instead design laws to respond automatically when inflation sets in. Congress already often deploys automatic adjustment mechanisms, also known as dynamic lawmaking, for other purposes such as environmental regulation.²⁸¹ The main idea would be for inflation of some level to serve as the trigger causing the anti-inflation law to spring forth and become operative. The broader point is to design laws in a way that is sensitive to the macroeconomic context, such that the overall impact of laws in the long run remains the same but the costs are borne in good times while the benefits come in bad times.

The most straightforward category of automatic laws is taxing and spending.²⁸² To illustrate, Congress could establish that if inflation grows above a certain threshold for three months, then the marginal tax rate of higher income groups would increase by three percentage points. By removing more of households' discretionary funds during inflationary periods, taxes would thereby reduce spending. Above we explored other potential areas for automating laws, such as allowing more annual immigration when inflation rises and less

²⁷⁹ *Infra* Part IV.

²⁸⁰ *Supra* Part III.

²⁸¹ See Richard J. Lazarus, *Super Wicked Problems and Climate Change: Restraining the Present to Liberate the Future*, 94 CORNELL L. REV. 1153, 1226 (2009) (describing the automatic standards put into place if the EPA fails to promulgate regulations by the time set forth by statute); see also Rebecca M. Kysar, *Dynamic Legislation*, 167 U. PA. L. REV. 809, 811-15 (2019); David Kamin, *Legislating for Good Times and Bad*, 54 HARV. J. ON LEG. 201, 207-20 (2017).

²⁸² Note that the income tax already functions incidentally as an automated stabilizer. As incomes rise in booms, more people move into higher tax brackets. Means-tested welfare programs also function as automatic stabilizers. When incomes rise in a boom, fewer qualify for a means-tested benefit, decreasing government expenditures in booms characterized by inflationary spending pressures. *Cf.* Kamin, *supra* note 289, at 203-10 (discussing the tax code).

when inflation is low.²⁸³

These automatic laws would thus act to address inflation without requiring Congress to pass a new law. As a result, they do not suffer from the prolonged institutional delays that otherwise plague some alternatives to interest rates for fighting inflation. Indeed, because interest rates take so long to have an economic effect, automatic triggers may enable alternatives to overall lower inflation more rapidly than would interest rates.

Some automatic laws would impose sacrifices, such as through increased tax rates for some households and increased competition for jobs in areas subject to increased immigration. To be clear, lawmakers would ideally design these laws by rigorously comparing sacrifices required of the various approaches, as proposed above.²⁸⁴ The temporary strains on household budgets for those subject to higher income taxes would need to be compared to the hundreds of thousands of jobs that might otherwise be lost, and chances of a recession, resulting from the alternative of interest rates. And the ideal would still be to use as many of the capacity enhancing policy levers, like consumer law and immigration, as possible.

By pursuing automatic stabilization systematically, Congress could thus fashion a robust response to rising inflation that minimizes or even eliminates the need for the Fed. Moreover, such an inflation policy framework would be more democratically legitimate by relying on clear statutory mandates to minimize and more broadly spread out any sacrifice.

B. A Macro Coordinating Office

Not every inflation fighting policy can be automated by statute. As a result, an office with supervisory authority over other administrative agencies on macroeconomic matters could help address some of the primary institutional barriers to fighting inflation effectively with non-monetary means. This Office would be charged with assisting all parts of the federal government in developing policies to respond to recessions, inflation, and other important macroeconomic problems. Such an office has been proposed before in the context of recessions,²⁸⁵ but the importance of such an office in addressing inflation has not been fully articulated.

A coordinating office is desirable for at least three reasons. First, unlike the Fed, other agencies do not have an explicit inflation control mission. While these agencies can take steps to fight inflation as part of a “whole of government approach”²⁸⁶ to an important policy aim,²⁸⁷ inflation fighting is not their primary mission. Simply asking an agency to consider

²⁸³ *Supra* Section III.B.

²⁸⁴ *Supra* Part III.

²⁸⁵ See LISTOKIN, *supra* note 164, at 202.

²⁸⁶ The “whole of the government approach” is often used in international economic development contexts. See, e.g., *Opportunities for All: A Framework for Policy Action on Inclusive Growth*, OECD (2018), <https://www.oecd-ilibrary.org/sites/9789264301665-4-en/index.html?itemId=/content/component/9789264301665-4-en> (discussing the need for “a whole-of-government approach to the implementation, monitoring and evaluation of inclusive growth”).

²⁸⁷ Indeed, in 1974 the Ford Administration required “all major legislative proposals, regulations, and rules emanating from the executive branch of the Government include a statement certifying that the inflationary

inflation in addition to their primary mission is unlikely to generate a determined response from overburdened administrators focused on other goals. A macroeconomic policy coordinating body, by contrast, will be focused on inflation much like the Fed. As a result, it will be motivated to work with otherwise reluctant agencies to take actions that quell price pressures.

Second, a macroeconomic policy coordinating body can offer expertise to agencies that lack it. Since most agencies are not directed to consider inflation, they have understandably not developed the expertise to evaluate how their policy decisions affect prices. Rather than have each agency redundantly develop this expertise, they can tap the expertise housed within a professional coordinating body to evaluate how different actions affect inflation. In addition to assisting agencies in evaluating how their policies perform in inflationary boom times, the macroeconomic experts at the coordinating office will also indicate when agencies should begin to apply policies that relieve inflationary pressures, freeing each agency of the need to conduct real time macroeconomic evaluations.

Third, non-monetary inflation control levers need to be coordinated. While interest rates are a powerful macroeconomic policy tool that affect every sector of the economy, the policy alternatives discussed above can be deployed in a more targeted manner. Inflation control levers should be activated primarily in the sectors suffering from the highest inflation, mitigating their negative effects on the broader economy. A macroeconomic coordinating body would evaluate which sectors are suffering from the strongest inflationary pressures and direct relevant agencies to implement inflation fighting measures in these sectors, an impossible task for any agency acting alone. The body could also prioritize those markets that are most likely to influence inflation expectations, since addressing those areas would have a greater impact on inflation.

To illustrate the office's role, consider a burst of inflation triggered by a rise in energy prices. When inflation is stable, the macroeconomic coordinating office should assist the Department of Energy, FTC, and other agencies in identifying policies that can mitigate energy price rises. Policies might include the release of oil from the strategic petroleum reserve, regulatory changes to mitigate supply bottlenecks in the energy supply industry, and heightened antitrust enforcement against energy supply cartels. Studies should estimate how much each policy might reduce inflation and the accompanying sacrifices. When energy price shocks start affecting overall inflation and inflation expectations, the office should direct the relevant agencies to implement the cheapest inflation reducing policies that affect the primary cause of inflation. Policies with worse expected sacrifice ratios than monetary policy should be avoided even in these inflationary periods.

The macroeconomic coordinating body would function much like today's Office of

impact of such actions on the Nation has been carefully considered." Exec. Order No. 11821, 39 Fed. Reg. 41,501 (Nov. 27, 1974). The purpose of these statements was to encourage agencies to adopt policies that eased price pressures rather than exacerbating them. *See* President Gerald R. Ford, Address to a Joint Session of Congress on the Economy (Oct. 8, 1974). The inflation impact statements were a forerunner of cost benefit analysis. *See* Edward P. Fuchs & Janes E. Anderson, *The Institutionalization of Cost-Benefit Analysis*, 10 PUB. PRODUCTIVITY REV. 25, 27-28 (1987). The importance of inflation impact statements and the cost benefit analysis that followed them-- in the absence of explicit Congressional authorization for agencies to consider such economic policies, provides ample precedent for the coordinating office we propose here.

Information and Regulatory Affairs (OIRA). Just like an executive order directs agencies to conduct cost-benefit analyses of major actions,²⁸⁸ so too would a new executive order instruct agencies to identify how different regulatory measures affects inflation. Like OIRA reviews cost benefit analyses and ensures that they are well-executed and taken seriously, so too would a macroeconomic coordinating office ensure that these macroeconomic reviews are well executed and taken seriously. In addition, the office would direct agencies to take inflation reducing actions when inflationary pressures are elevated in a relevant sector. Like OIRA, the macro coordinating office would be a part of OMB.

The similarity between the macro coordinating office and OIRA's role in cost benefit analysis represents history coming full circle. In 1974, the Ford Administration required, "all major legislative proposals, regulations, and rules emanating from the executive branch of the Government include a statement certifying that the inflationary impact of such actions on the Nation has been carefully considered."²⁸⁹ The purpose of these "inflation impact statements" was to encourage agencies to adopt policies that eased price pressures rather than exacerbating them.²⁹⁰ Inflation impact statements became a forerunner of cost benefit analysis.²⁹¹ And the administrators charged with evaluating inflation impact statements formed the nucleus of OIRA when it was created in 1981.²⁹² In a new era of inflation, the time has come to learn from history and build price-easing tools more subtle and nimble than the brute force method of using interest rate hikes as the exclusive solution to inflation.

CONCLUSION

The reliance on a singular economically destructive inflation policy despite the existence of many more attractive options has deep roots. Monetary primacy rescued the nation from endemic high inflation in the early 1980s. The end of that Great Inflation was so monumental, despite great sacrifice, that in its aftermath neither political party has dared interfere with the Federal Reserve's monetary policy independence and the assumption that it alone is responsible for managing inflation by manipulating interest rates. That rich history is accompanied by the intuitive appeal of a policy tool that seems to offer unparalleled speed and power to subdue inflation.

The reality of monetary primacy is far less heroic. For high interest rates to lower inflation, they typically raise unemployment and heighten the risk of recessions. Many vulnerable households and employees, especially those who are young during the recessions, suffer greatly and many never fully recover in terms of their lifelong salaries.

We propose precisely the opposite framework from monetary primacy. The Fed should aim for the natural rate of interest with its monetary policy. The other parts of the government should try to do the bulk of the inflation fighting—as long as the sacrifice ratio

²⁸⁸ See Exec. Order No. 12866, 58 Fed. Reg. 51735 (Sept. 30, 1993).

²⁸⁹ *Id.*

²⁹⁰ See President Gerald R. Ford, Address to a Joint Session of Congress on the Economy (Oct. 8, 1974).

²⁹¹ See Edward P. Fuchs & Janes E. Anderson, *The Institutionalization of Cost-Benefit Analysis*, 10 PUB. PRODUCTIVITY REV. 25, 26-28 (1987).

²⁹² *Id.*

is better for those alternatives. This framework aims to recenter our legal-economic institutional design in a more comprehensive analysis beginning with diagnosing the problem fully and then choosing the best policy intervention.

Monetary pluralism better explains the incredible successes of 2021 to 2023. The Fed's interest rate hikes had less of an impact than monetary primacy's advocates claim, as they only were above the natural rate at the end of 2023. That means their full effect has not yet been felt by the economy. In contrast, many of our recommended policies were implemented throughout this period by a variety of parts of government. Unfortunately, this successful policy response was unintentional and ad hoc, rather than deliberate or anchored in good institutional design.

Moreover, there is no sign that these pluralistic legal and institutional contributions to inflation's reductions are appreciated. A big part of the problem is that the Fed's real impact on inflation is shrouded. The Fed's institutional speed in raising interest rates is highly salient, whereas the subsequent lengthy economic delays are obscured. Also, the intense attention to the Fed's interest rates means that those moves may receive intuitive credit for lowering inflation even when they had no real economic impact. The shrouded nature of interest rates risks further entrenching monetary primacy moving forward.

A better institutional design would ensure that the U.S. acts more deliberately next time. Automatic laws can fight inflation while bypassing the political constraints that might otherwise block Congress and dispersed administrative agencies from acting. And a central macroeconomic office would ideally coordinate anti-inflation policies across government.

Above all, however, we aim to contribute to a vital paradigm shift away from monetary primacy. Monetary primacy is analytically deficient and perilous for society. Rather than relying on the Fed to acutely and indiscriminately harm households, monetary pluralism offers a more legitimate path toward reducing unnecessary sacrifice by vulnerable populations and greater prosperity for all.

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